Agenzia Nazionale per le Nuove Tecnologie,
l'Energia e lo Sviluppo Economico Sostenibile

Ministero dello Sviluppo Economico

RICERCA DI SISTEMA ELETTRICO

"SVILUPPO E MESSA A PUNTO DI METODOLOGIE DIAGNOSTICHE PER LO STUDIO DELLE PRINCIPALI VARIABILI FISICHE DEL PROCESSO DI OSSI-COMBUSTIONE"

Romano Bruschi

Report RdS/2011/206

"SVILUPPO E MESSA A PUNTO DI METODOLOGIE DIAGNOSTICHE PER LO STUDIO DELLE PRINCIPALI VARIABILI FISICHE DEL PROCESSO DI OSSI-COMBUSTIONE"

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Report Ricerca di Sistema Elettrico
Accordo di Programma Ministero dello Sviluppo Economico – ENEA
Area: Produzione di energia elettrica e protezione dell'ambiente
Progetto: 2.2 – Studi sull'utilizzo pulito dei combustibili fossili, cattura e sequestro della CO_2

Responsabile Progetto: Antonio Calabrò, ENEA

CAMPAGNA MISURE SU IMPIANTO IPFR
IFRF LIVORNO
12-14/APRILE/2011

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1.1. Presentazione sintetica impianto IPFR

L'impianto IPFR è una facility utilizzata da ENEL ed IFRF per la caratterizzazione del polverino di carbone (grana media 40-125 μm) in contenuto di parti combustibili identificandone le concentrazioni di componenti TAR (volatile) e CHAR (solido). L'impianto è costituito da un bruciatore (gas metano, premix) e da un reattore verticale (4 mt). Il polverino di carbone viene dosato tramite una coclea ed immesso nella parte alta del reattore via flussaggio di azoto. La parte di ossigeno necessario alla combustione del carbone viene fornita come eccesso d'aria nel combustore. La temperatura del reattore è omogenea e tenuta intorno ai 900 °C. La parte volatile, TAR, del carbone brucia e si esaurisce subito, mentre la parte solida brucia lentamente ed il residuo incombusto dipenderà dal tempo di permanenza nel reattore (gestibile tramite la regolazione della portate aria, gas e gas combusti) . Stimando il peso delle scorie residue ed il tempo di permanenza nel reattore, si definiscono le caratteristiche del CHAR. Conoscere la dinamica del processo combustivo permettebbe di stimare meglio la struttura del carbone (TAR e CHAR). Le sonde ODC usate in questa esperienza sono per alta temperatura (Max working temperature1800 °C) e vengono inserite direttamente nell'ambiente del processo (camera di combustione e reattore). La sonda inserita in Camera di Combustione (CC) viene attenuata in modo che le due sonde producano un segnale equivalente in ampiezza al fine di ottimizzare la conversione AD (evitare saturazione o bassa risoluzione). In contemporanea vengono registrate le variabili di processo in modo da valutare (off-line) la coerenza.
Attualmente, il monitoraggio del processo è delegato solo ad una sensoristica convenzionale.
Gli obiettivi dell'uso del sistema diagnostico ODC sono:

- Stato funzionale del combustore dal punto di vista termo-fluidodinamico: tipo (premix, mild) e stabilità di combustione
- Individuazione del flusso delle particelle di carbone in combustione lungo l'asse del reattore, al fine di quantificarne in modo più preciso i tempi di permanenza (velocità del flusso).

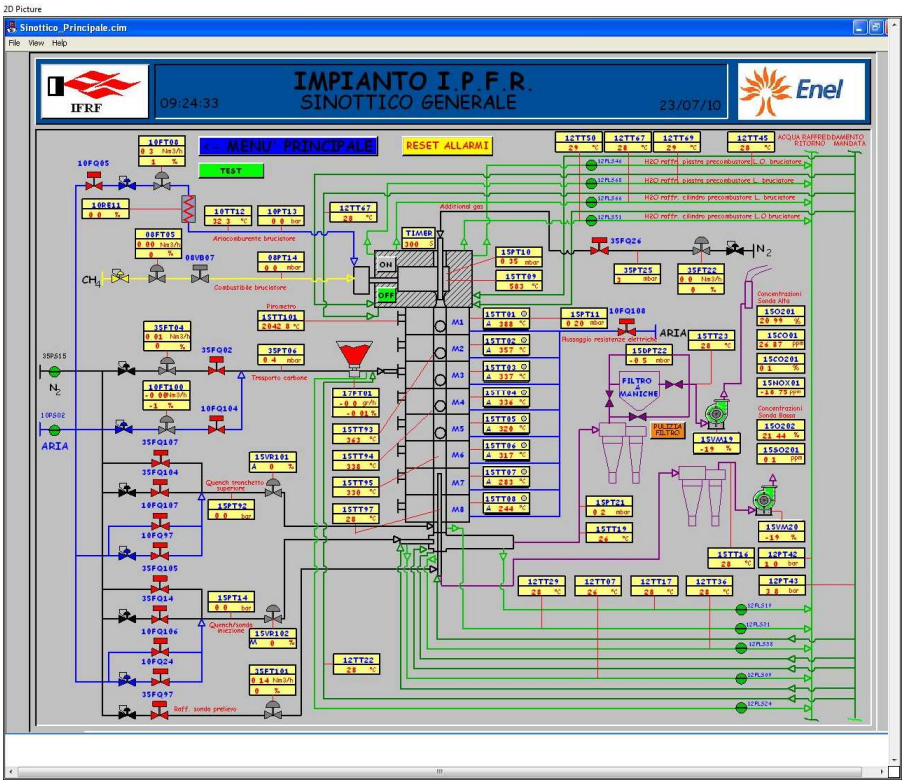


Figura 1 Sinottico del sistema di gestione e controllo impianto

1.2. Monitoraggio dello stato combustivo

Attualmente si cerca di far lavorare il combustore in modalità mild per ottenere un flusso di gas più stabile sia dal punto di vista termico che fluidodinamico. Il monitoraggio e la diagnostica dello stato combustivo sono ottenuti utilizzando due sonde ODC ad alta temperatura affacciate direttamente nella camera di combustione in modo da avere una prospettiva assiale (frontale al bruciatore) ed una radiale in prossimità della fiamma. Lo scopo della dislocazione è osservare:

- l'integrale delle fluttuazioni radiative della combustione, sonda assiale
- le fluttuazioni locali della fiamma, sonda radiale (collimata sulla fiamma)

Figura 2 Camera di combustione, posizione sonda radiale e assiale

La combinazione delle due informazioni permette di identificare lo stato combustivo:

- La sonda radiale individua la presenza della fiamma e permette di qualificarne (quantificarne), tramite analisi spettrale, lo stato turbolento.
- La sonda assiale verifica la presenza di fiamma lungo tutto l'asse della camera. Avendo una vista frontale è in grado di rilevare, anche in condizione di combustione mild, la fiamma che, a causa dell'elevata pressione parziale della miscela comburente/combustibile, si ha in prossimità del bruciatore.

1.3. Metodologia per l'identificazione della tipologia dello stato combustivo

Il forno è stato gestito in modo da creare le condizioni di combustione mild (flameless)

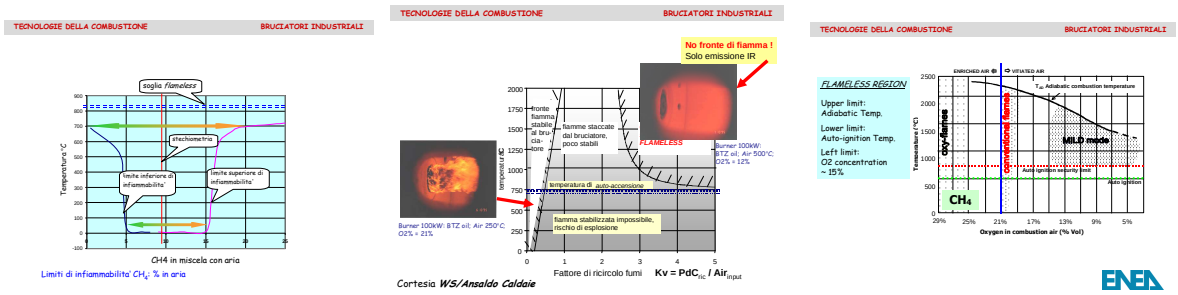


Figura 3 Diagrammi standard degli stati combustivi

ossia

- la temperatura media interna in CC è stato portata ad un valore (1050 °C) superiore a quella di autoaccensione del metano (750 °C)
- è stata ridotta la portata aria compensandola con gas combusti ricchi di CO2 in modo da ottenere una consistente diluizione della miscela e riduzione dell'ossigeno disponibile.

Nella figura 5 sono riportati gli andamenti delle variabili di processo con cui si è gestito il combustore IPFR per passare dalla condizione premix a quella mild e viceversa

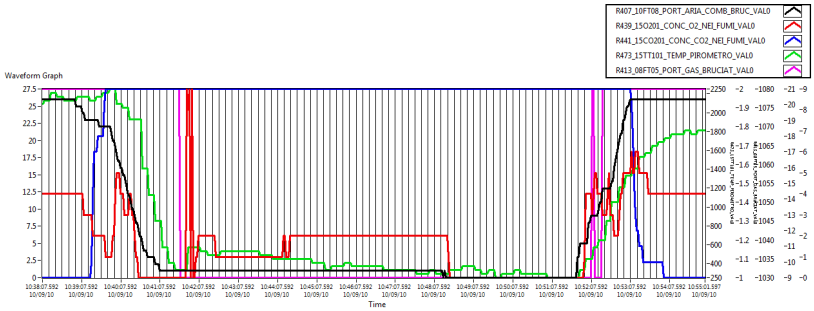


Figura 4 Andamenti delle variabili di processo relative all'entrata e uscita oxycombustione

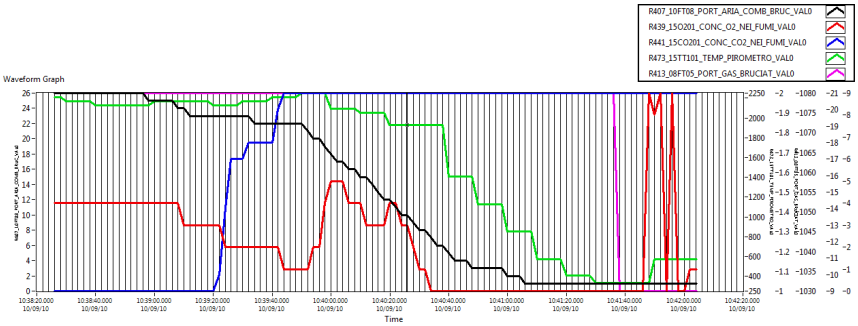


Figura 5 Zoom della fase transitoria diffusivo-oxy

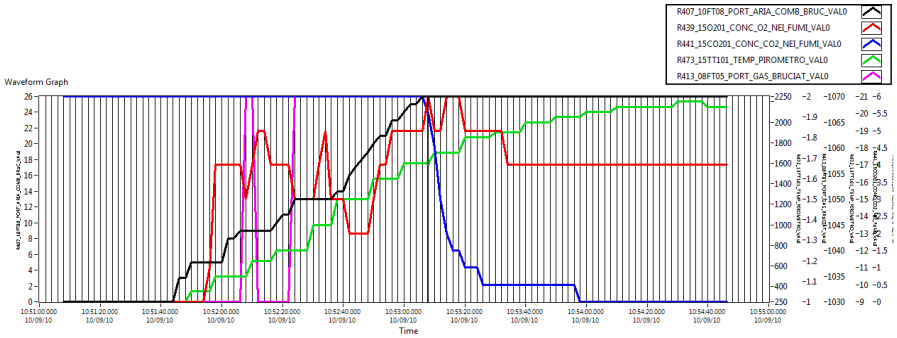


Figura 6 Zoom della fase transitoria oxy-diffusivo

2. Obbiettivi delle campagne di misura.

In riferimento alla qualificazione dello strumento ODC per il monitoraggio e la diagnostica dei processi combustivi legati all'uso di carbone, sia come polverino che come slurry acquoso, è' stata predisposta una campagna di misure, coordinata dallo IFRF, su facilities del centro sperimentale ENEL di Livorno. L' impianto di interesse è stato individuato in: IPFR, reattore ad alta temperatura per la caratterizzazione TAR-CHAR del polverino di carbone.

L'obiettivo è duplice:

- verificare *l'osservabilità* del processo di combustione del carbone e verificarne la consistenza informativa contenuta nei segnali rilevati tramite le sonde ODC
- caratterizzare la dinamica dei processi combustivi implicati:
  - diffusivo o oxycombustivo nella camera di combustione, fornendo una diagnostica on-line della stato funzionale in atto.
  - combustione della sostanza in uso all'interno della colonna del reattore ad alta temperatura, mettendo a punto delle procedure per la stima:
    - delle velocità del flusso,
    - tempi di esposizione,
    - dei tempi di innesco dei processi combustivi relativi alle due fasi costituenti la sostanza immessa, ovvero fase solida e liquida,
    - durata dei processi combustivi.

L’acquisizione dei dati è stata eseguita in modo da poter osservare le fenomenologie con uno spettro più ampio possibile sia per quanto riguarda le condizioni di processo combustivo che per quanto attiene le modalità del flusso di immissione nel reattore delle sostanze da caratterizzare.
Per quanto riguarda il processo combustivo sono state fatte acquisizioni in condizione di:

- diffusivo
- diffusivo-oxy e oxy-diffusivo
- oxy

Per quanto riguarda il flusso di immissione nel reattore delle sostanze da caratterizzare:

- “bianco”, immissioni nulle, per l’identificazione delle condizioni di “zero”,
- “continuo”,
- “pulsato”, immissione periodica di un certo volume di sostanza,
- “transitorio”, sequenze “nullo-continuo-nullo” e “nullo-pulsato-nullo”,

Per quanto riguarda le variabili chimico-fisiche nel reattore:

- temperatura,
- tasso di ossigeno,
- composizione dei gas di trasporto.

La notevole variabilità delle condizioni di misura è necessaria per renderle più leggibili (identificabili) e ridurre al minimo le possibili false interpretazioni.

3. Descrizione del set-up strumentale: ODC

Il sistema ODC (Optical Diagnostics of Combustion) permette di osservare, tramite sonde ottiche per alta temperatura, direttamente i processi combustivi che hanno luogo in una camera di combustione, di rilevarne la fluttuazione radiativa (nel range UV-IR) e di fornirne, tramite elaborazione diretta, informazioni qualitative/quantitative sullo stato termo-fluidodinamico del processo osservato. La possibilità dello strumento di gestire, ad alta velocità di scansione (10Msamples/sec), ed in parallelo (sfasamento temporale nullo) più sonde (4, estendibili ad 8) permette di fornire informazioni sia sullo stato termofluidodinamico locale che sul livello di coerenza tra punti diversi dello spazio di processo; una ricaduta consistente di questa peculiarità è la stima della velocità media dei gas combusti tra punti traguardati (anemometria on-line). Lo strumento, a bassa intrusività, è installabile su impianti industriali (ambienti ostici), opera on-line e fornisce informazioni in real-time. La velocità di risposta del sistema diagnostico (< 1 sec) lo rende suscettibile alla integrazione nei loops di controllo dei processi di impianto.

Figura 7 Sonde per alta temperatura, in zaffiro. Fibra ottica in quarzo (45 mt) per remotizzare il segnale ottico delle sonde

Figura 8 Box di interfaccia per la trasduzione ottica-elettrica

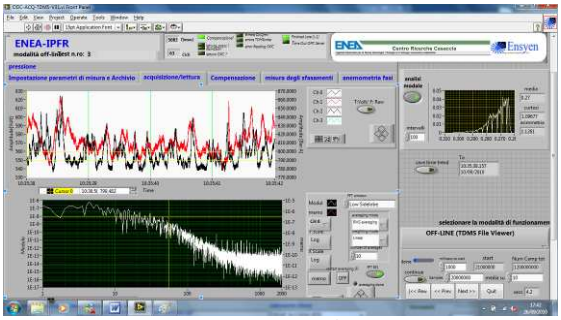


Figura 9 Pannello interattivo nella fase di rilettura dati

Per ottimizzare la risoluzione dei convertitori - ADC a 12bit - sulla componente dinamica del segnale, il sistema realizzato permette compensarne, a coppie di due (CH0-CH2 e CH1 e CH3), la componente. La compensazione, volutamente non è automatica, i due valori di compensazione, una volta impostati sono costanti; questa procedura è stata decisa per non introdurre segnali indesiderati. I probe delle sonde ottiche hanno una struttura finale diversificata in modo da gestire il campo visivo che quindi può essere:

- La proiezione di un angolo solido (circa 10°)
- Collimata sull'asse ottico del probe

La prima configurazione è meno risolutiva della seconda, ma quest'ultima risente più della prima delle condizioni termiche locali (se la temperatura è molto alta aumenta il livello di fondo).

4. Descrizione del contenuto dei file di archivio delle misura. Struttura e format

Note:

- Allatto delle misure i sistemi di acquisizione vengono sincronizzati in modo da avere una coerenza temporale (limitata a ±1 sec.)
- l'archivio delle variabili di processo prodotto dal sistema di monitoraggio e gestione impianto IPFR è disponibile.
- Di seguito è riportato il format dei file di archivio processati
- Il file è formato txt con carattere di tabulazione TAB
- Le colonne riportano rispettivamente:
- 1) data e time con 4 cifre decimali (non tre come mostrato), 2) il tempo in formato UTC, 3) CH0, 4) CH1, 5) CH2. 6) CH3 (formato floating .3f

12/04/2011 17:37:30.380

PROVE SU FORNO IPFR
CHO PORTA 6
CH2 PORTA 7
CH1 PORTA 8
CH3 PORTA 9
MISURA PORTATA CARBONE pulsata 250 mmc
O2 6.2 %
TEMP 1100⁻
TRANSITORIO

Date Time	UTC	CH 0	CH 1	CH 2	CH 3
12/04/2011 17:37:34.139	3385467454.1385	-80.951	-93.125	85.523	61.969
12/04/2011 17:37:34.140	3385467454.1395	-81.072	-93.231	85.483	61.896
12/04/2011 17:37:34.141	3385467454.1405	-81.102	-93.479	85.498	61.679

5. Matrice sperimentale campagna di misure su impianto IPFR 12-14/APRILE/2011

La matrice sperimentale è stata configurata in modo da valutare le potenzialità diagnostiche del sistema ODC per :

- identificare le caratteristiche della modalità di combustione di due tipologie di combustibile solido granulare: carbone Sud-Africano -ENEL, semi di girasole spremuti e macinati.
- identificare ed analizzare il processo di combustione in atto: diffusivo, oxy-combustivo.

I combustibili solidi di tipo granulare considerati sono:

- Carbone sudafricano ENEL, sia nella qualità di "TalQuale" (ossia di TAR -parte liquida- + CHAR-parte solida) che di solo CHAR
- Semi di girasole spremuti e macinati

Le matrici sperimentali, per ciascuna tipologia e relativa granulometria disponibile, implicano:

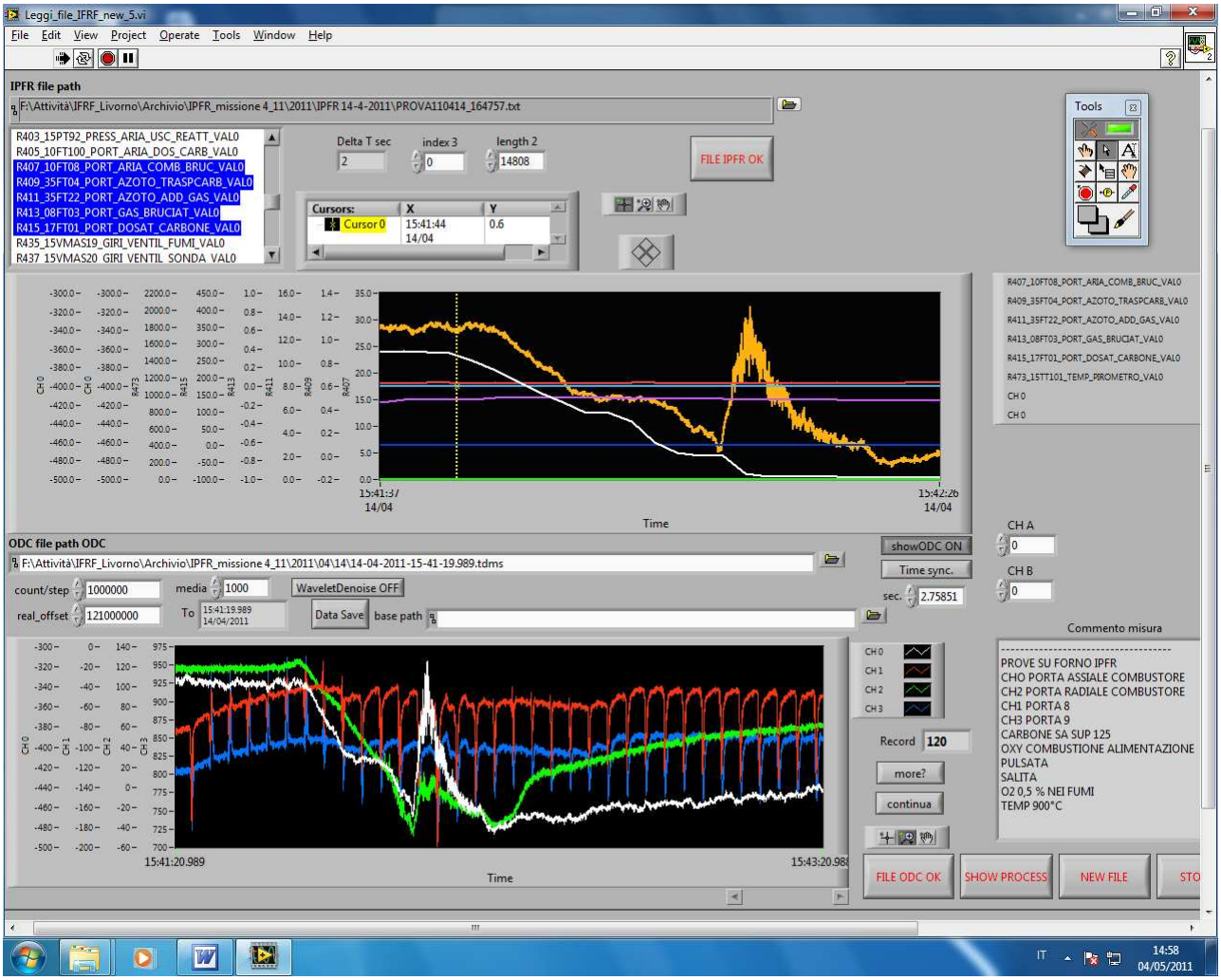
- la variazione di variabili di processo al fine di valutarne la rispondenza combustiva in funzione dell'ambiente chimico-fisico (temperatura reattore, % di O2 nei gas combusti in ingresso al reattore, miscela aria-azoto del gas di trasporto).
- la modulazione del flusso di immissione (nella colonna di reazione) in modo da permettere la stima della loro dinamica (velocità, tempi di residenza, durata della combustione, distinzione dei tempi di combustione delle diverse fasi, liquida e solida)

Matrice sperimentale è riportata in Appendice (9.2).

5.1. Misure ODC IPFR 2011\04\12

Processamento dati: lettura, media, rifasamento (dovuto alla asincronia tra i due sistemi)

- I dati vengono riletti dai source-file .tdms a blocchi da 1 megasample (corrispondente al numero di campionamenti effettuati dal sistema di acquisizione ODC, un sample viene realizzato con un tempo di integrazione di 20 nanosec)
- Mediati a blocchi di 1000 dati. Si ottengono mille dati per secondo, il tempo di integrazione totale per ogni campionamento va considerato sempre di 20 nanosec.
- La sincronizzare, con risoluzione uguale a quella del sistema di archiviazione del processo (2 sec), tra i dati ODC e quelli di Processo è ottenuta gestendo il parametro Time sync. che viene utilizzato dal sistema di processamento dati come parametro di traslazione temporale dei dati ODC. Questo parametro è stato messo a 2.75851 sec e tenuto costante. L'impostazione del valore viene ottenuta sovrapponendo su stessa base di tempi i segnali ODC (con le due sonde CH0 e CH2 poste rispettivamente in posizione assiale e radiale sul combustore) e di Processo e sincronizzando, tramite variazione di "time sync", trend caratteristici rivelati da entrambe i sistemi. E' comunque consigliabile ricorrere a procedure dinamiche di sincronizzazione basate sull'individuazione coerente di eventi transitori per ottenere un allineamento temporale ottimale.
- Per ottenere l'allineamento temporale perfetto dei due sistemi occorrerebbe che questi possano condividere lo stesso clock di base (la procedura è implementabile essendo disponibile come risorsa di rete)

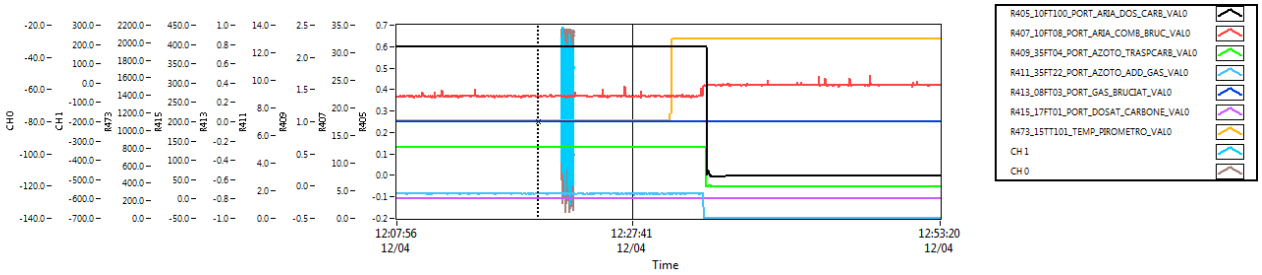

Leggi_file_IFRF_new_5.vi
File Edit View Project Operate Tools Window Help
IPFR file path
F:\Attività\IFRF_Livorno\Archivio\IPFR_missione 4_11\2011\IPFR 14-4-2011\PROVA110414_164757.txt
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0
Delta T sec
index 3
length 2
FILE IPFR OK
Cursors:
Cursor 0
Tools
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 0
CH 0
Time
ODC file path ODC
F:\Attività\IFRF_Livorno\Archivio\IPFR_missione 4_11\2011\04\14\14-04-2011-15-41-19.989.tdms
showODC ON
Time sync.
sec.
2.75851
CH A
CH B
count/step
1000000
media
1000
WaveletDenoise OFF
real_offset
121000000
To
Data Save
base path
Commento misura
PROVE SU FORNO IPFR
CH0 PORTA ASSIALE COMBUSTORE
CH2 PORTA RADIALE COMBUSTORE
CH1 PORTA 8
CH3 PORTA 9
CARBONE SA SUP 125
OXY COMBUSTIONE ALIMENTAZIONE
PULSATA
SALITA
O2 0,5 % NEI FUMI
TEMP 900°C
CH 0
CH 1
CH 2
CH 3
Record
120
more?
continua
15:41:20.989
Time
FILE ODC OK
SHOW PROCESS
NEW FILE
IT
14:58
04/05/2011

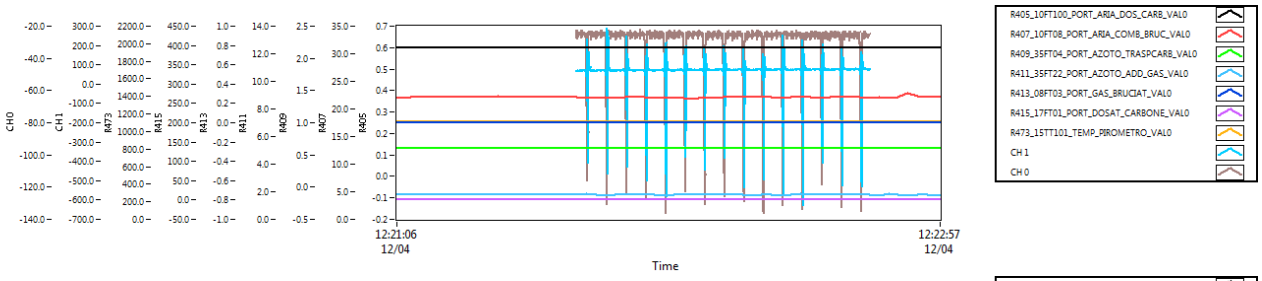
6. Panoramica sul contenuto informativo delle misure effettuate: 12 Aprile 2011

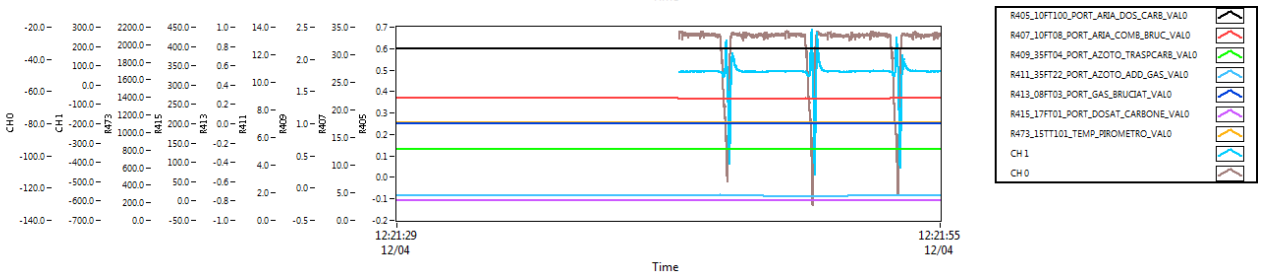
Misura 1: 12-04-2011-12-21-39.276.tdms

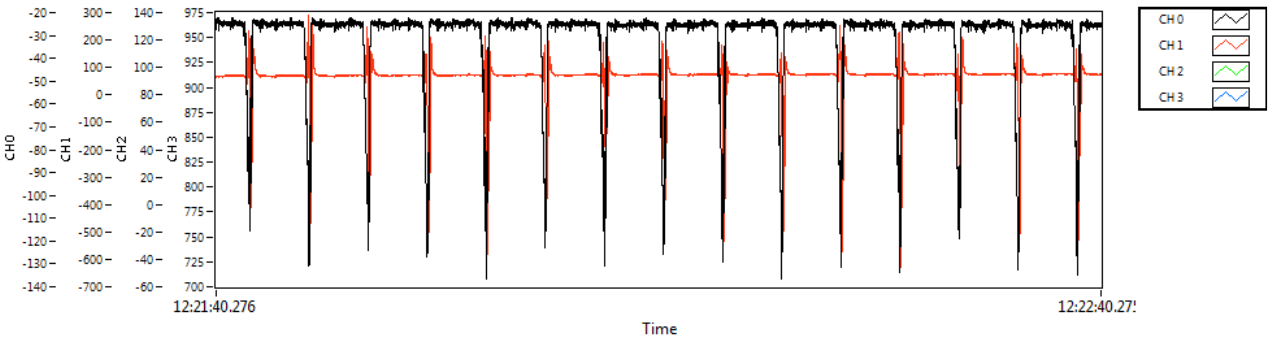
Misura effettuata per il test funzionale degli apparati e loro “tuning” parametrico.

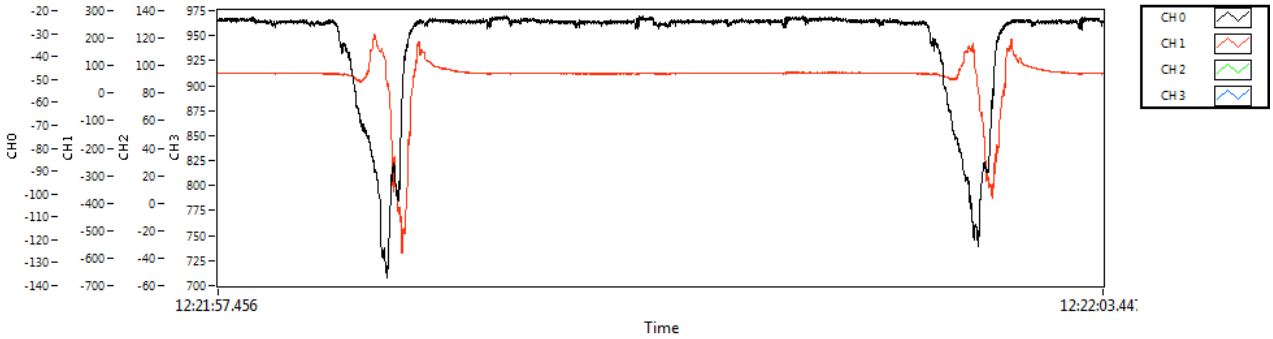
PROVE SU FORNO IPFR
CHO PORTA 6
CH1 PORTA 8
CH2 PORTA 7
CH3 PORTA 9
CARBONE S..A. TQ > 125 micron
CONDIZIONE DI ZERO
TEMP 1100











Misura 2: 12-04-2011-13-59-17.017.tdms

Carbone S.A. TQ >125 micron
ALIMENTAZIONE pulsata 250mmc
Trasporto aria+azoto
O2 0.5 % nei fumi
TEMP 1100°

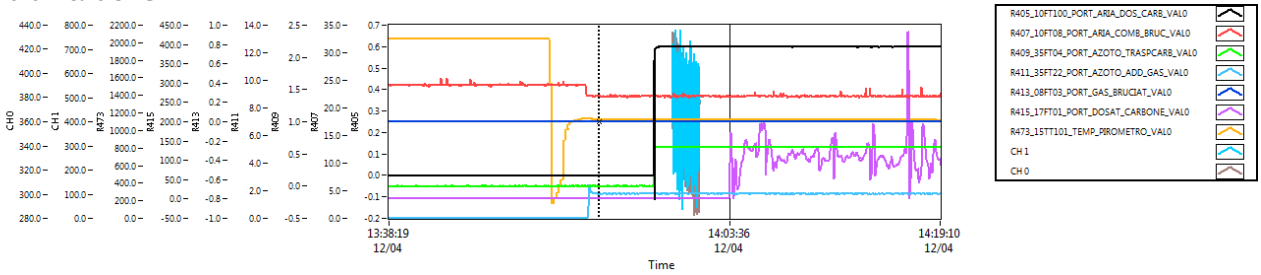
Condizioni di misura

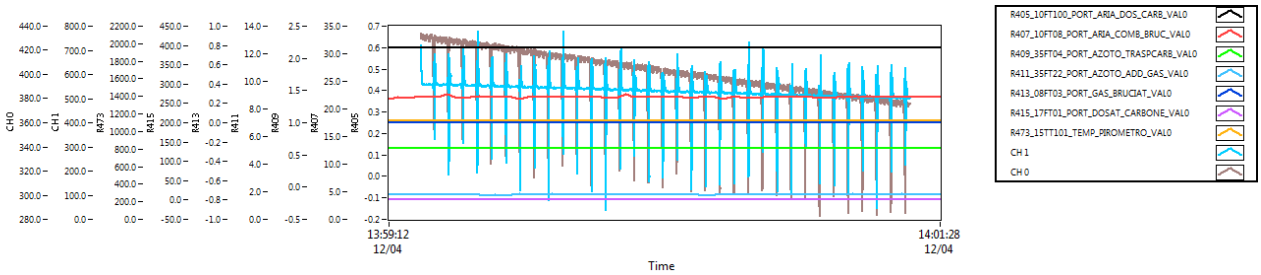
data e ora inizio prova	12/4/11 13:59:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ >125 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1081
Pirometro portina 5 15TT101	1121
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1152
TMOD6[°C] (15TT95)	1092
Tquench [°C] (15TT97)	85
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [g/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	0
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.1
CO (ppm)	4.801
O2 IN [%vol]	0.53
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P8
POSIZIONE SONDE	CH0 P6-CH1 P8

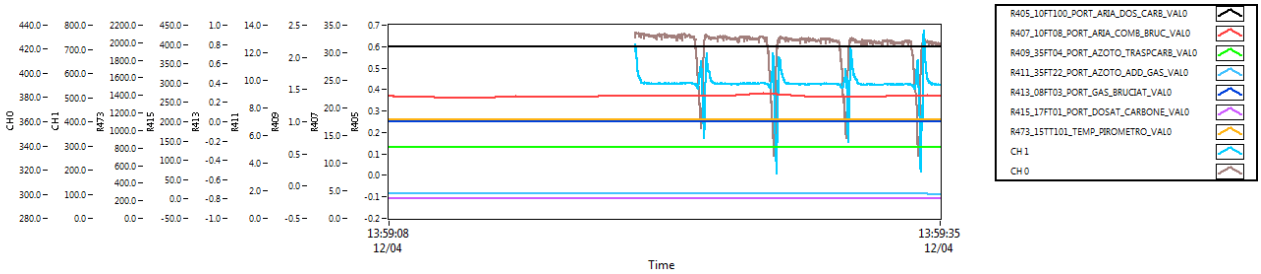
Valori medi variabili di processo

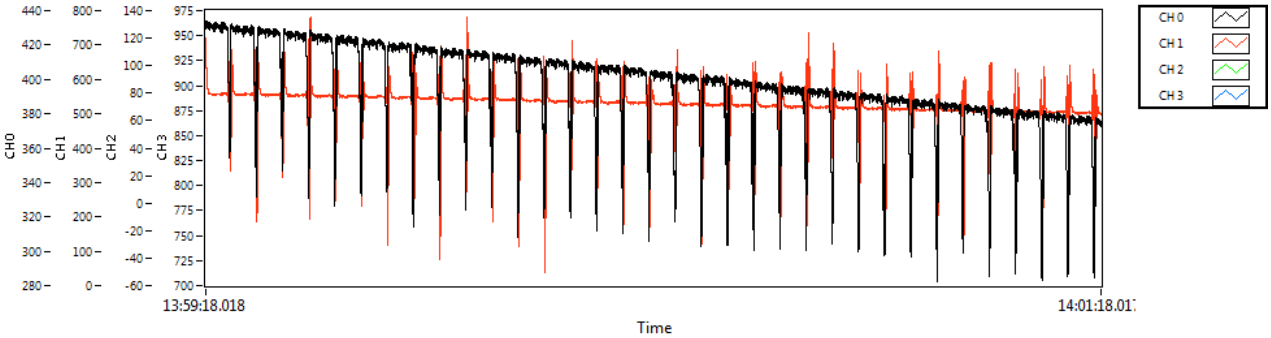
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.27
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	84.97
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1152.54
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.20
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1092.38
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1081.93
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.93
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	24.71
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	105.65
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	24.34
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.90
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.35
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.70
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.00
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.83
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.52
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.64
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.98
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.09
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.08
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	707.85
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.53
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.16
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.55
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.78
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.54
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.39
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.98
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.89
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1039.34
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1075.07
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.04
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.24
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1119.89
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

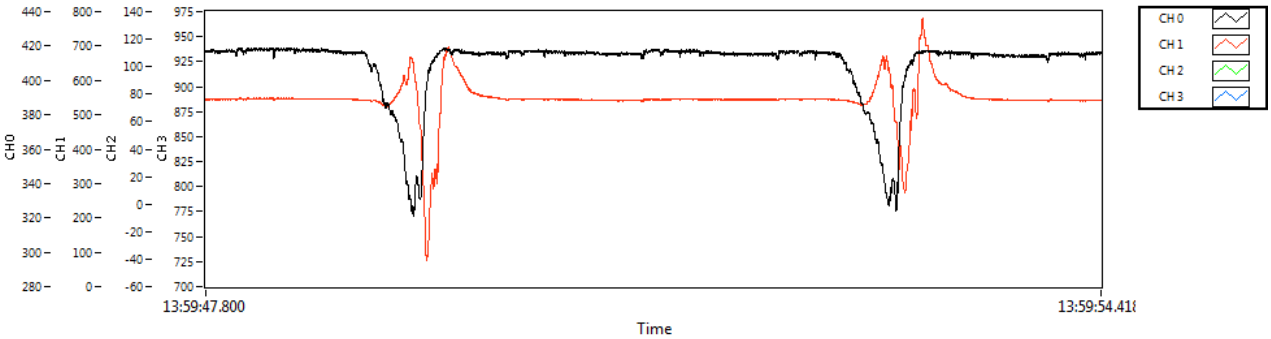
Visione Misure ODC











Misura 3: 12-04-2011-14-05-07.917.tdms

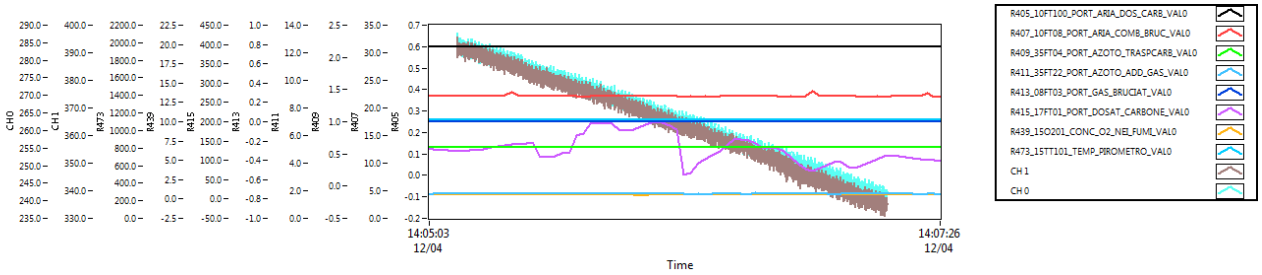
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 0.5 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 14:05:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ >125 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1084
Pirometro portina 5 15TT101	1117
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1157
TMOD6[°C] (15TT95)	1092
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	217
Portata carbone(set point) [g/h]	110
N2quench_sonda [Nm3/h] 35ft101	0
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	3.6
O2 IN [%vol]	0.52
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P8
POSIZIONE SONDE	CH0 P6-CH1 P8

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.31
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	291.92
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1155.51
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.28
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1091.67
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1083.17
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	208.09
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	24.92
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	104.73
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.06
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.90
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.40
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.81
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.05
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.86
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.58
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	33.55
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.03
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.61
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.12
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	134.89
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	641.18
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	143.26
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.53
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.18
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.59
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.22
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.71
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.96
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.66
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.76
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1039.41
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1075.11
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1096.12
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.24
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1118.27
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
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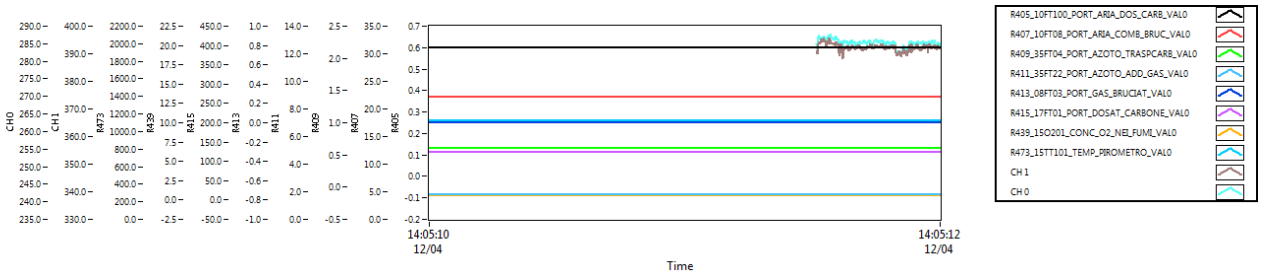
12/04
14:07:26
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
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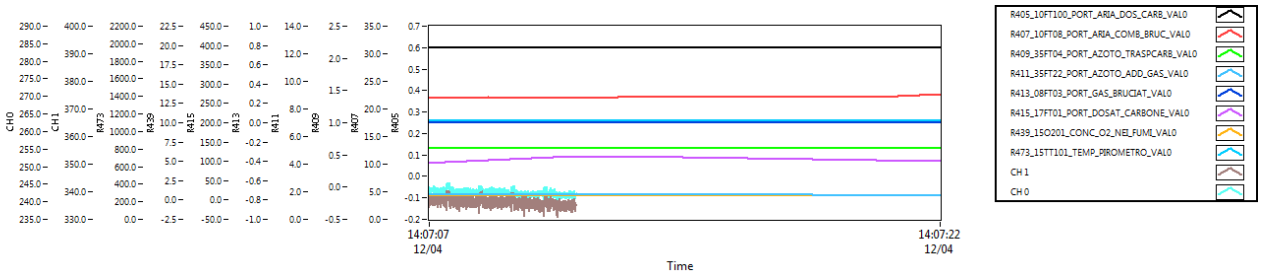
CH 0
14:05:10
12/04
14:05:12
12/04
Time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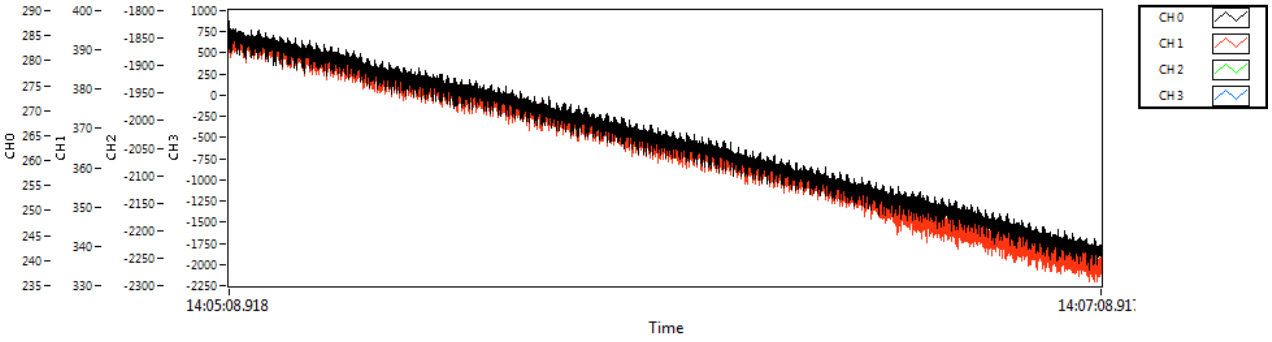
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
14:07:07
12/04
14:07:22
12/04
Time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CH 2
CH 3
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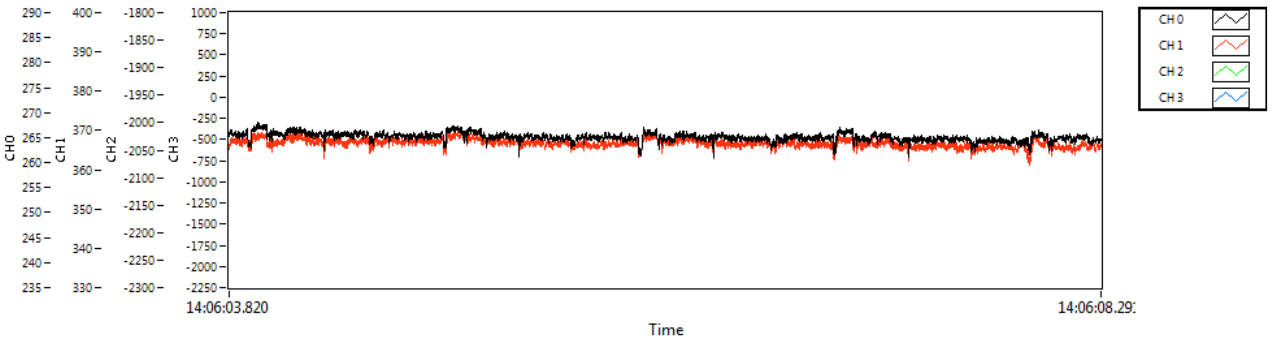
14:07:08.91
Time


CH 0
CH 1
CH 2
CH 3
14:06:03.820
14:06:08.29
Time

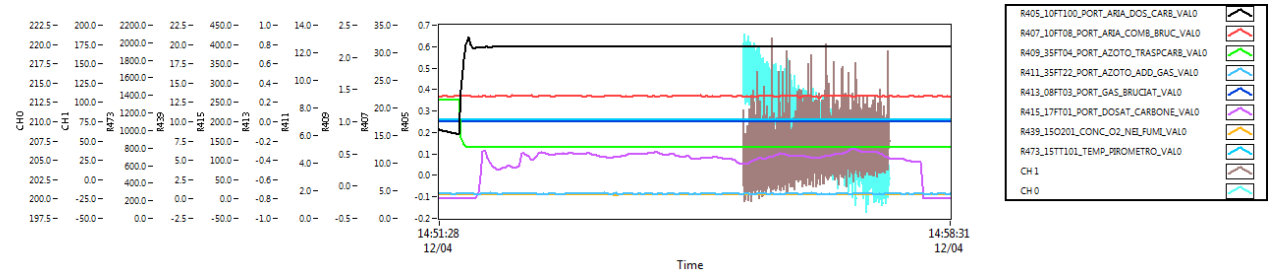
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 0.5 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 14:55:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1089
Pirometro portina 5 15TT101	1119
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1130
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	220
Tvalle_quench [°C] (15TT19)	151
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	20.41
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	3.73
O2 IN [%vol]	0.54
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P8 P9
POSIZIONE SONDE	CH0 P6-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.32
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	354.06
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1156.12
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.28
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1091.62
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1083.41
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	206.95
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	24.95
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	104.17
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.12
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.87
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.40
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.87
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.06
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.85
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.58
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	33.54
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.03
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.59
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.12
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	123.72
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	611.19
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	423.57
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.53
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.18
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.58
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.17
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.61
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.91
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.64
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.75
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1039.39
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1075.09
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1095.89
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.24
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1118.19
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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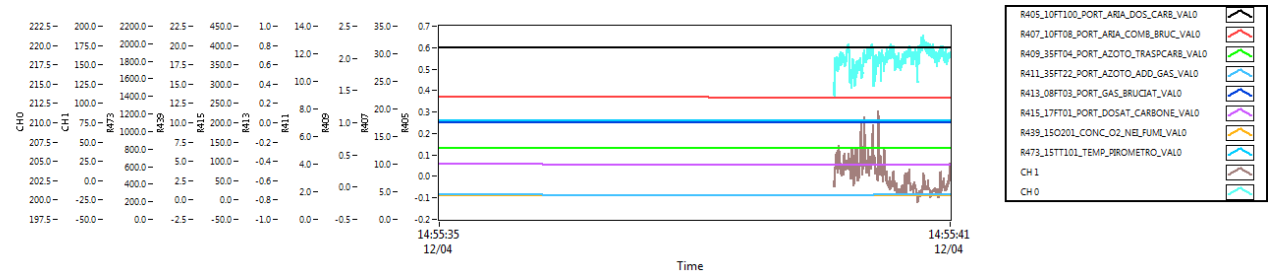
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
14:51:28
12/04
14:58:31
12/04
Time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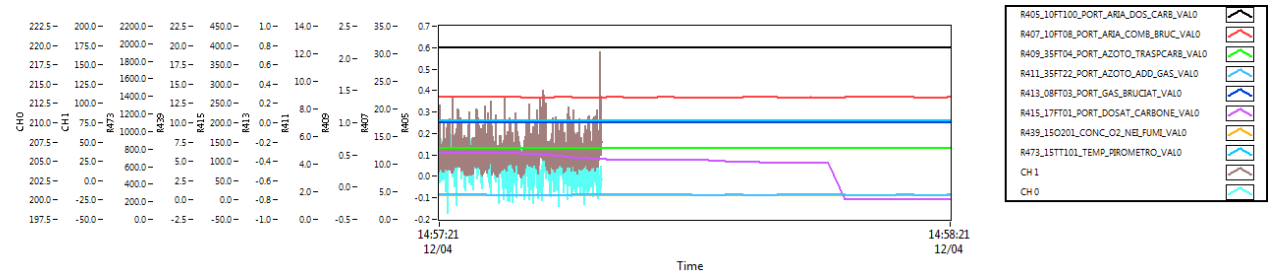
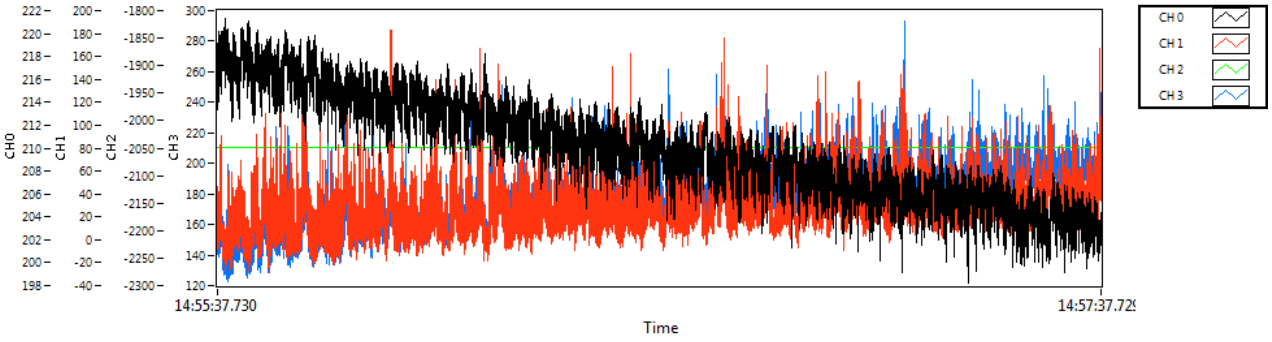
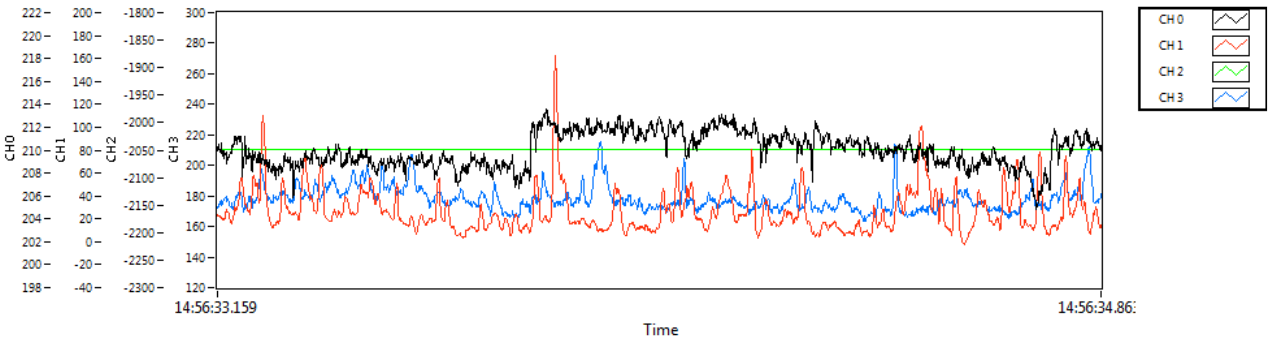
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
14:55:35
12/04
14:55:41
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
14:57:21
12/04
14:58:21
12/04
Time


CH 0
CH 1
CH 2
CH 3
14:55:37.730
14:57:37.72
Time


CH 0
CH 1
CH 2
CH 3
14:56:33.159
14:56:34.86
Time

Misura 5: 12-04-2011-15-00-47.568.tdms

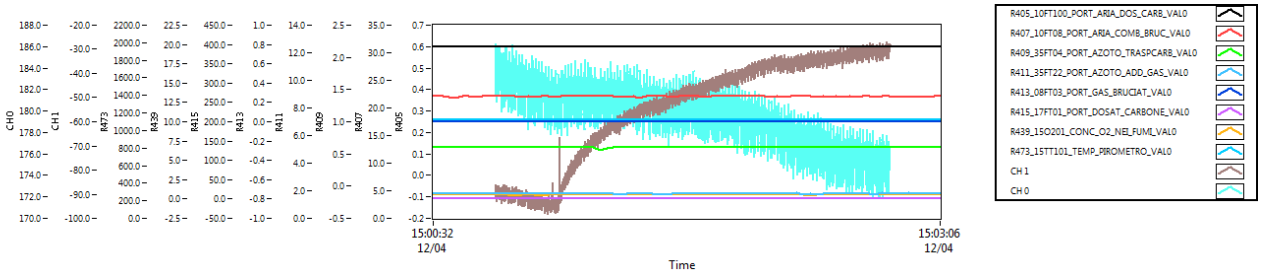
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua senza carbone
Trasporto aria+azoto
O2 0.5 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 14:55:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1089
Pirometro portina 5 15TT101	1119
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1130
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	220
Tvalle_quench [°C] (15TT19)	151
Portata carbone(set point) [g/h]	110
N2quench_sonda [Nm3/h] 35ft101	20.41
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	3.73
O2 IN [%vol]	0.54
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P8 P9
POSIZIONE SONDE	CH0 P6-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.32
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	354.06
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1156.12
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.28
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1091.62
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1083.41
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	206.95
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	24.95
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	104.17
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.12
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.87
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.40
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.87
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.06
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.85
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.58
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.54
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.03
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.59
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.12
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	123.72
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	611.19
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	423.57
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.53
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.18
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.58
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.17
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.61
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.91
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.64
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.75
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1039.39
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1075.09
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1095.89
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.24
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1118.19
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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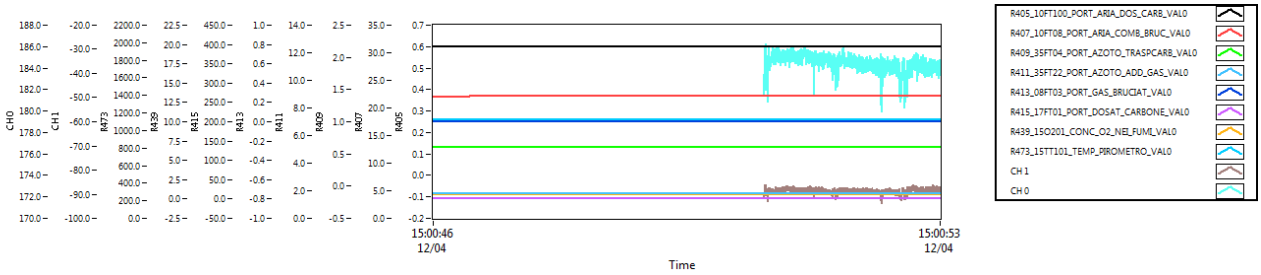
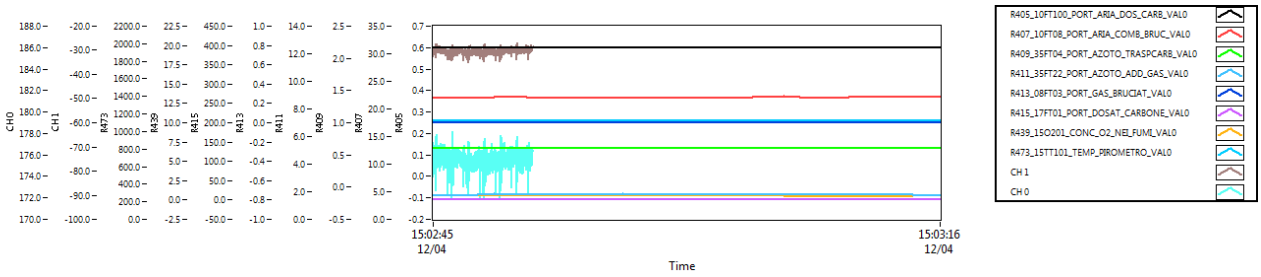
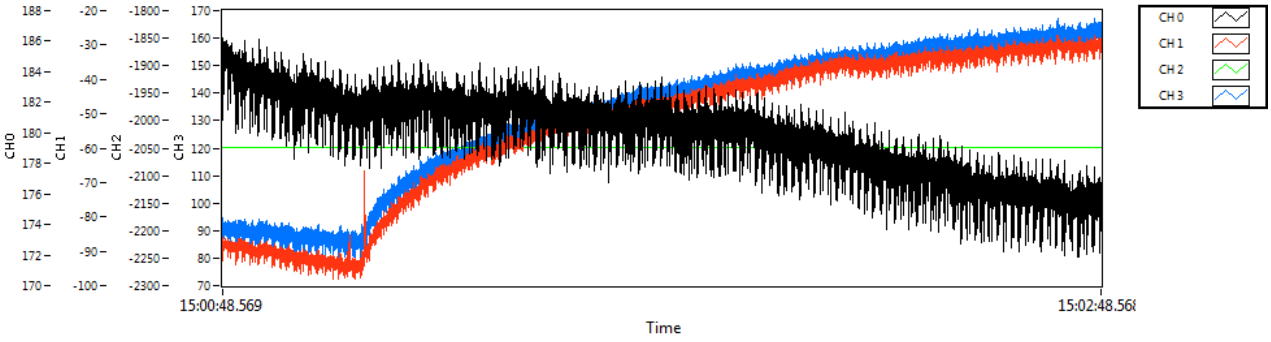
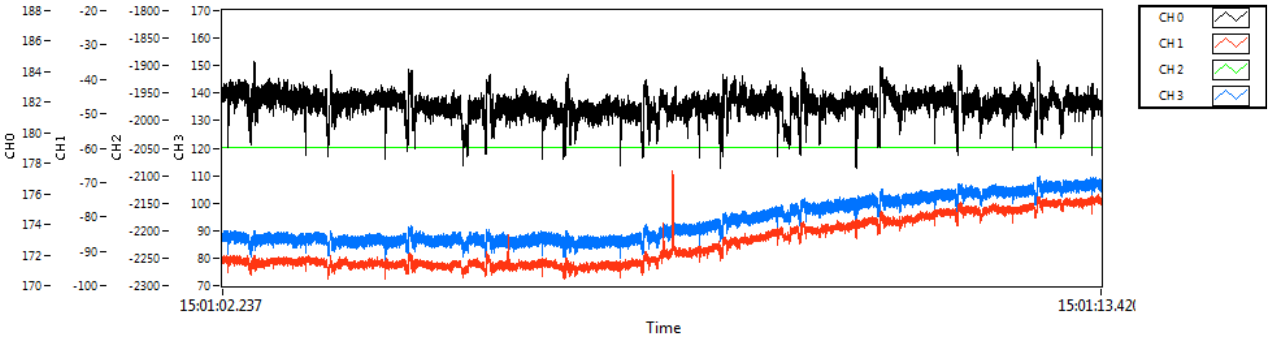
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
15:00:32
12/04
15:03:06
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
15:00:46
12/04
15:00:53
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
15:02:45
12/04
15:03:16
12/04
Time


CH 0
CH 1
CH 2
CH 3
15:00:48.569
15:02:48.568
Time


CH 0
CH 1
CH 2
CH 3
15:01:02.237
15:01:13.420
Time

Misura 6: 12-04-2011-15-06-49.389.tdms

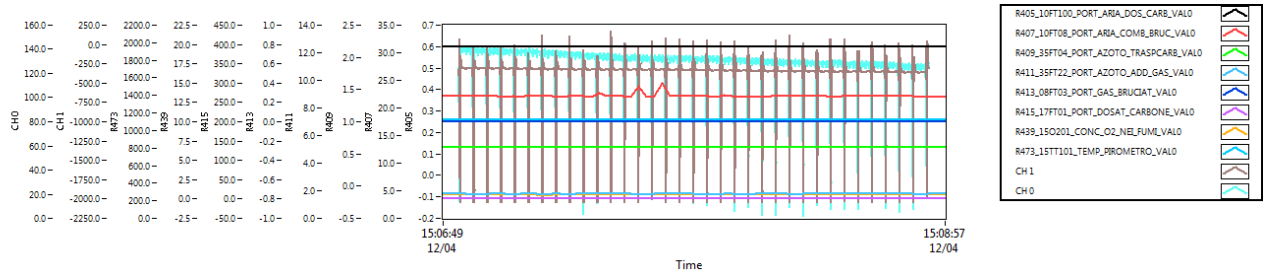
Carbone S.A. TQ >125 micron
ALIMENTAZIONE pulsata 250mmc
Trasporto aria+azoto
O2 0.5 % nei fumi
TEMP 1100°

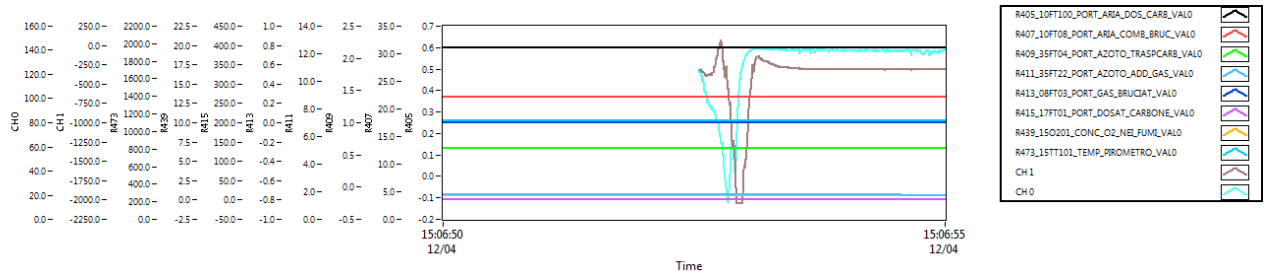
Condizioni di misura

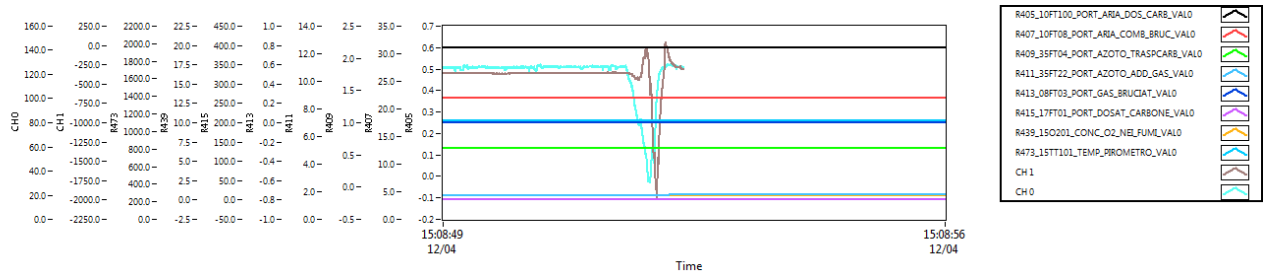
data e ora inizio prova	12/4/11 15:07:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqgio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1090
Pirometro portina 5 15TT101	1119
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1126
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	153
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	21.67
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	3.72
O2 IN [%vol]	0.55
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P8 P9
POSIZIONE SONDE	CH0 P6-CH1 P8-CH3 P9

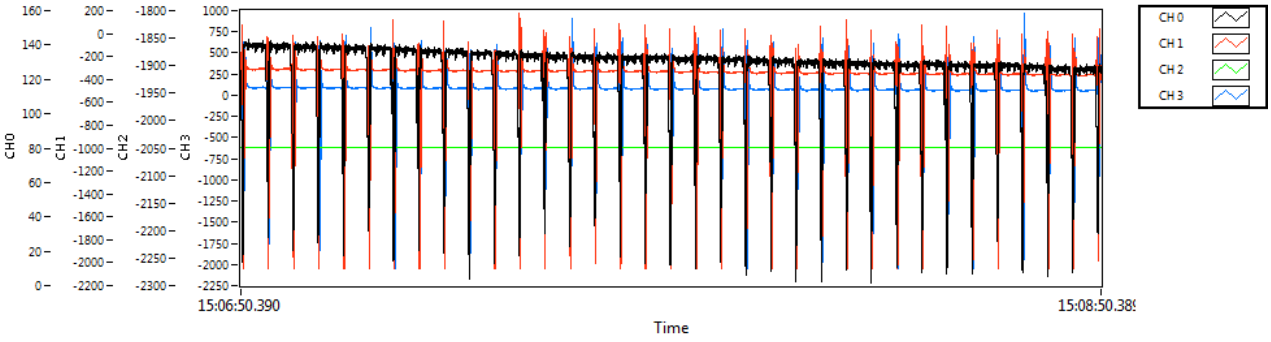
Valori medi variabili di processo

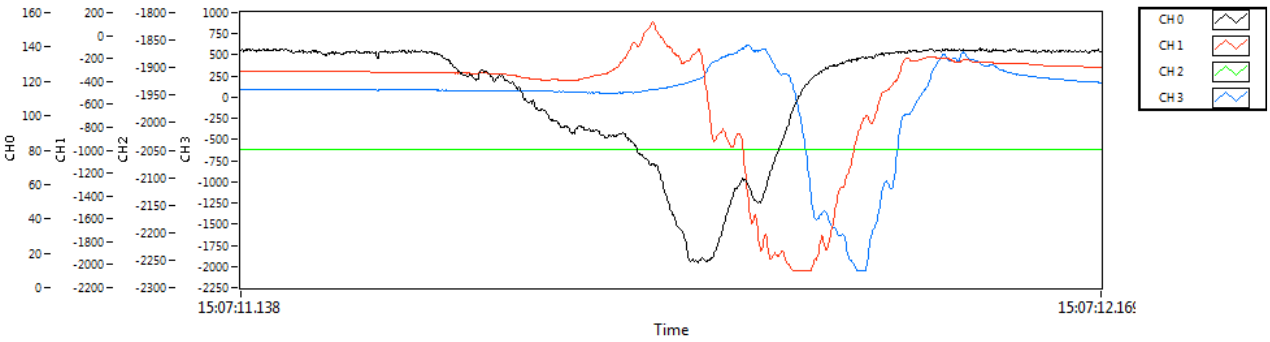
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.19
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.31
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.65
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.42
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1091.50
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1090.33
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	153.21
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	188.97
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	77.81
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	24.56
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.11
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.60
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	33.11
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.28
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.88
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.79
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.44
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.23
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.16
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.11
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	199.44
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2839.89
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.54
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.22
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.72
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1101.01
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.81
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.63
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.94
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.85
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1038.90
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1077.04
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.49
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.63
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1119.30
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
15:06:49
12/04
15:08:57
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
15:06:50
12/04
15:06:55
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 1
CH 0
15:08:49
12/04
15:08:56
12/04
Time


CH 0
CH 1
CH 2
CH 3
15:06:50.390
Time


CH 0
CH 1
CH 2
CH 3
15:07:11.138
Time

Misura 7: 12-04-2011-15-29-47.085.tdms

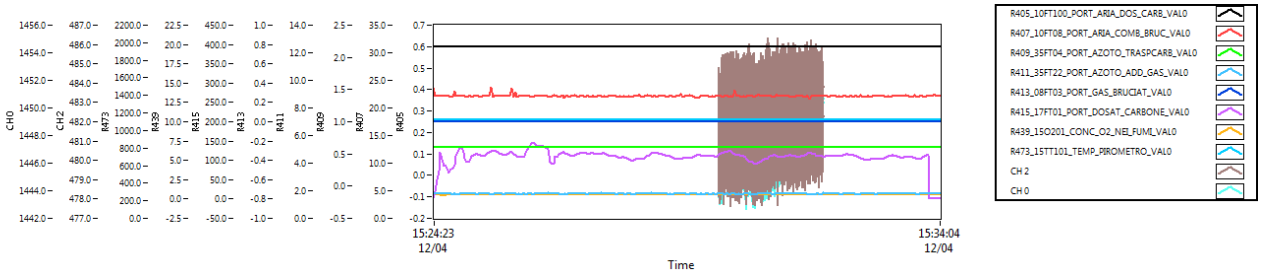
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 0.5 % nei fumi
TEMP 1100°

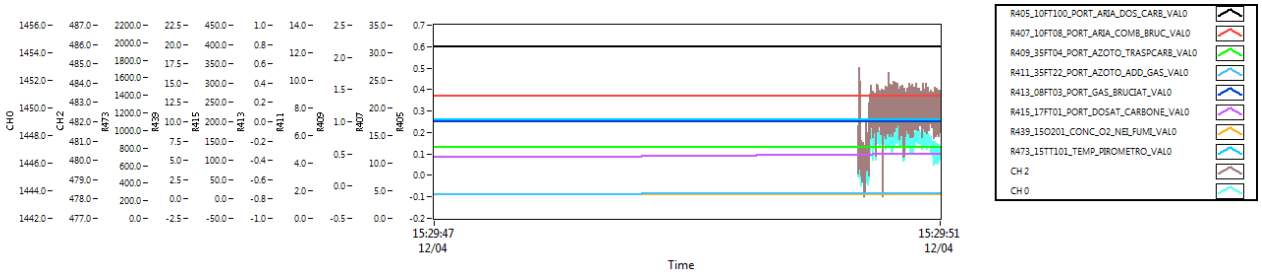
Condizioni di misura

data e ora inizio prova	12/4/11 15:30:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1091
Pirometro portina 5 15TT101	1119
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1122
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	198
Tvalle_quench [°C] (15TT19)	157
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	21.27
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	3.58
O2 IN [%vol]	0.55
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.28
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	195.25
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1122.24
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.50
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.63
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1091.92
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	159.98
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	178.50
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	76.87
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.16
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.29
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.66
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	33.14
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.33
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.96
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.87
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.46
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.31
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.68
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.11
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.76
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	109.04
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	210.38
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.07
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.56
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.20
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.67
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1099.67
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.15
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.17
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.88
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.82
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1039.22
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1078.75
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.85
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.20
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1119.27
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:24:23
12/04
15:34:04
12/04
Time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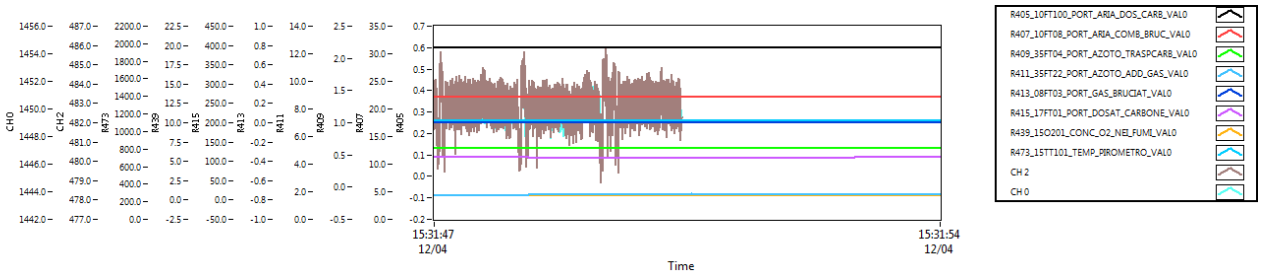
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:29:47
12/04
15:29:51
12/04
Time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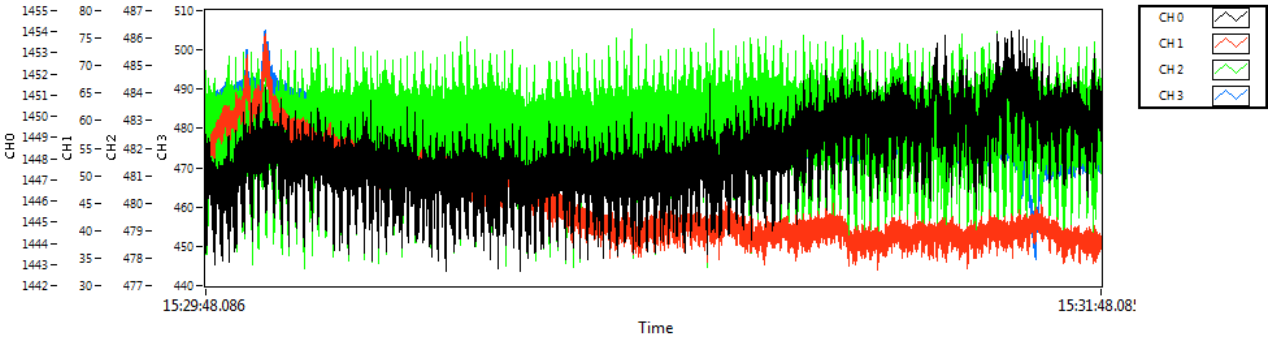
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:31:47
12/04
15:31:54
12/04
Time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CH 1
CH 2
CH 3
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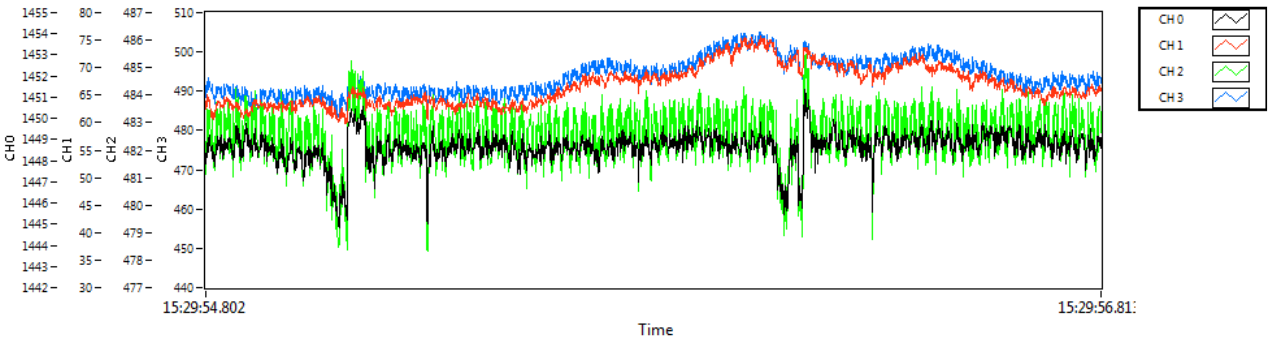
15:31:48.08
Time


CH 0
CH 1
CH 2
CH 3
15:29:54.802
15:29:56.81
Time

Misura 8: 12-04-2011-15-50-40.239.tdms

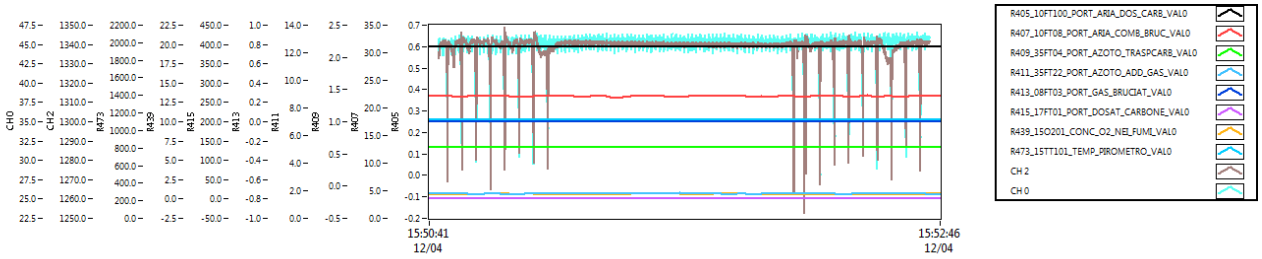
Carbone S.A. TQ >125 micron
ALIMENTAZIONE pulsata 250mmc
Trasporto aria+azoto
O2 0.5 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 15:51:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1092
Pirometro portina 5 15TT101	1119
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1125
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	205
Tvalle_quench [°C] (15TT19)	155
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	21.3
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	3.7
O2 IN [%vol]	0.55
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.33
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.76
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1126.85
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.51
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.94
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1093.01
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	156.37
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	191.61
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	75.39
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	24.67
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.28
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.70
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	33.20
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.35
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.98
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.91
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.47
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.34
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.08
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.11
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	210.41
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2839.06
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.62
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.17
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.59
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1099.48
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.75
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.69
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.32
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.22
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1039.44
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1080.17
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.39
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.66
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1119.77
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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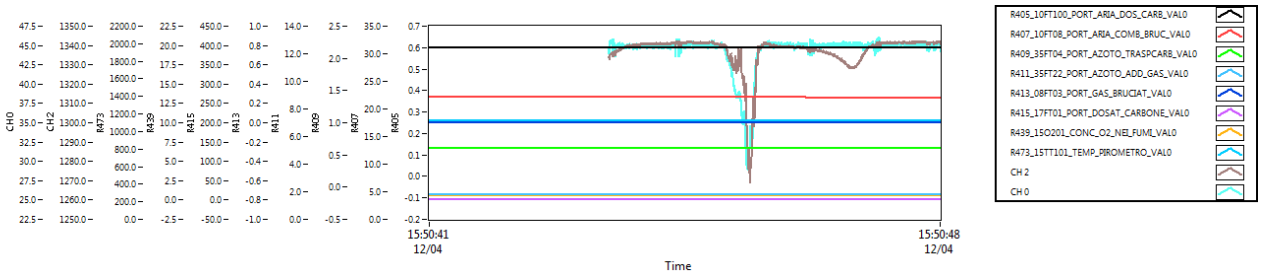
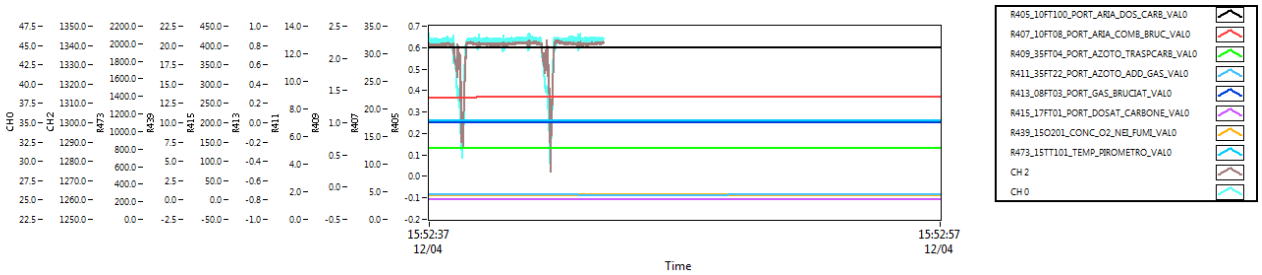
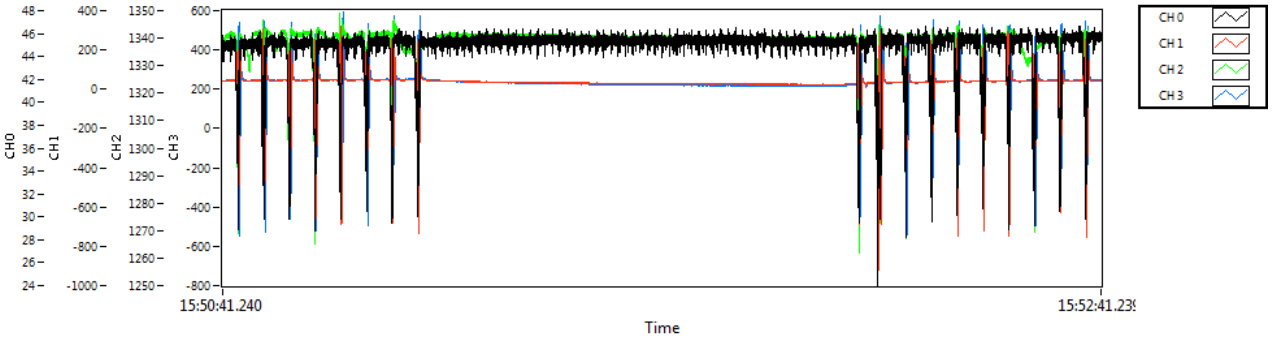
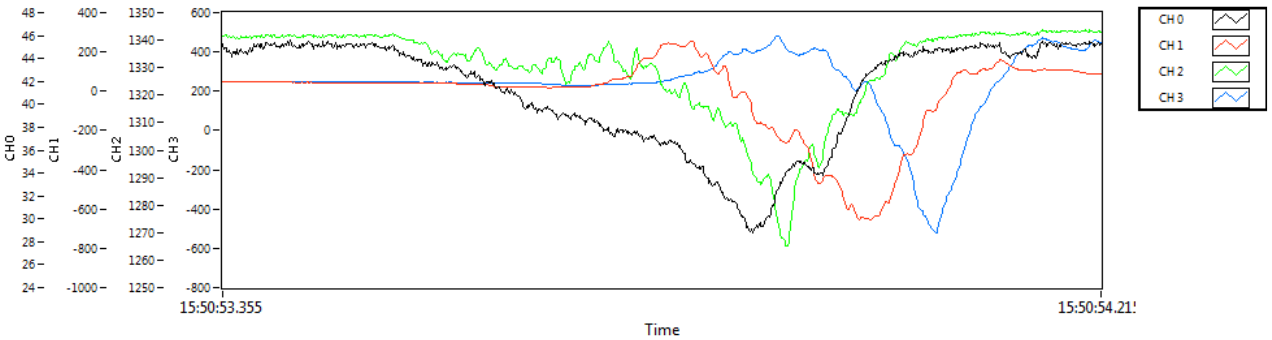
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:50:41
12/04
15:52:46
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:50:41
12/04
15:50:48
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:52:37
12/04
15:52:57
12/04
Time


CH 0
CH 1
CH 2
CH 3
15:50:41.240
Time


CH 0
CH 1
CH 2
CH 3
15:50:53.355
Time

Misura 9: 12-04-2011-16-01-44.149.tdms

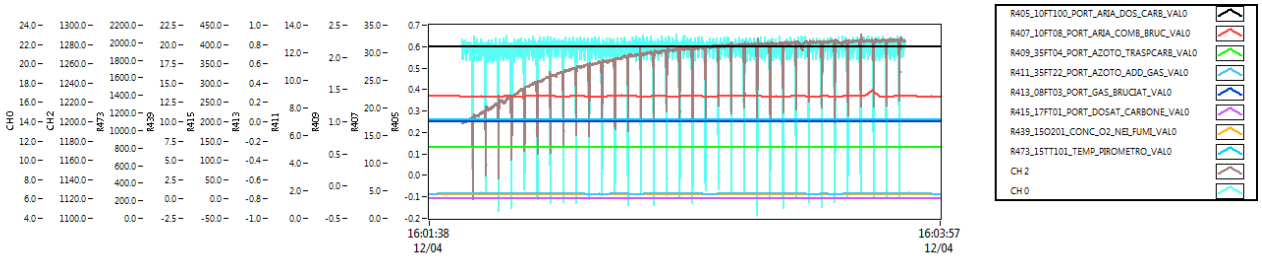
Carbone S.A. TQ >125 micron
ALIMENTAZIONE pulsata 250mmc
Trasporto aria+azoto
O2 0.6 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 16:01:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1093
Pirometro portina 5 15TT101	1120
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1124
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	155
Portata carbone(set point) [g/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	21.6
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.1
CO (ppm)	3.57
O2 IN [%vol]	0.6
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.11
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.14
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1124.32
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.53
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1091.28
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1093.06
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	154.43
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	191.96
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	74.61
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	24.29
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.27
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.71
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	33.20
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.37
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.00
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.90
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.47
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.34
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.09
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.11
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	211.05
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2839.60
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.61
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.16
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.58
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1099.74
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.41
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.76
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.83
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.93
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1039.62
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1080.68
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.25
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.55
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1120.67
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
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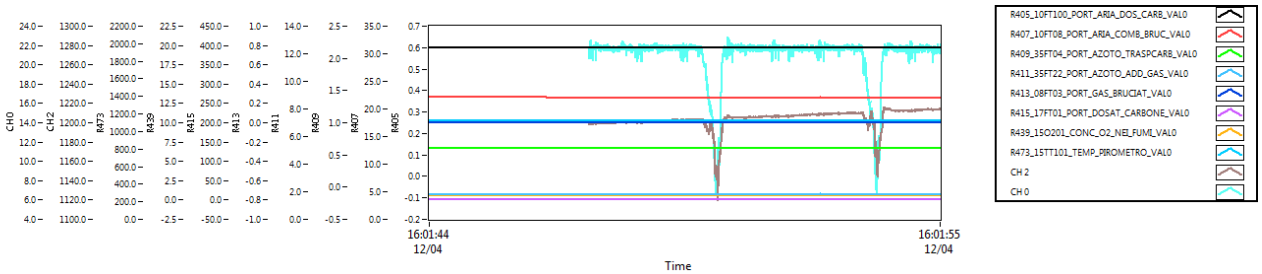
CH 2
CH 0
16:01:38
12/04
16:03:57
12/04
Time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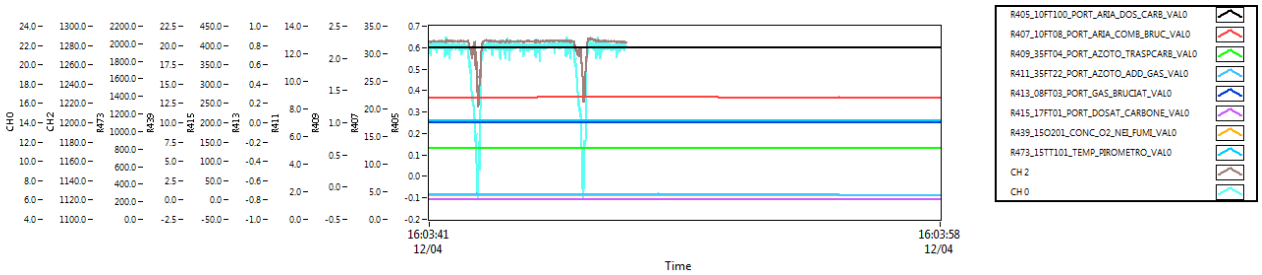
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:01:44
12/04
16:01:55
12/04
Time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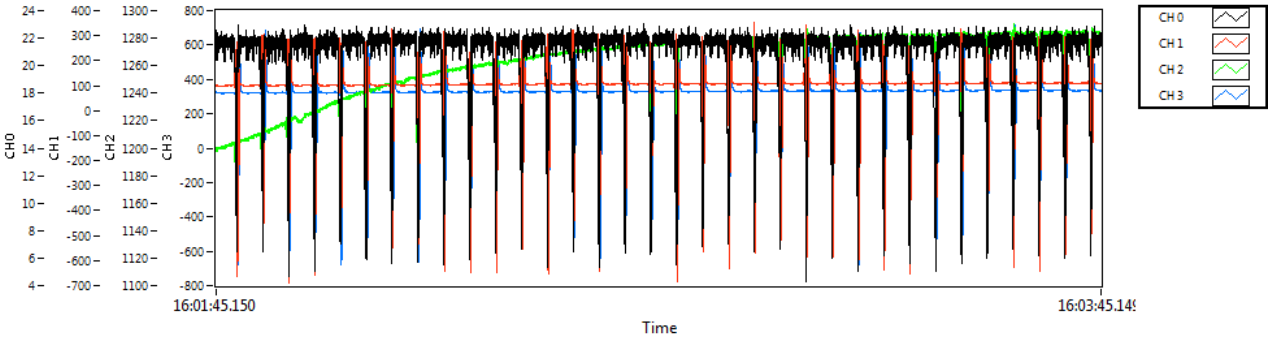
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:03:41
12/04
16:03:58
12/04
Time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CH 2
CH 3
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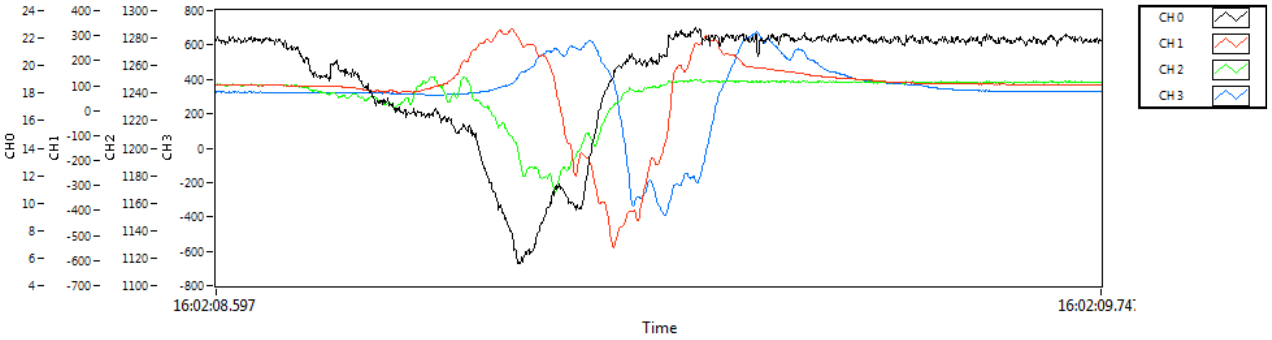
16:03:45.149
Time


CH 0
CH 1
CH 2
CH 3
16:02:08.597
16:02:09.747
Time

Misura 10: 12-04-2011-16-15-23.040.tdms

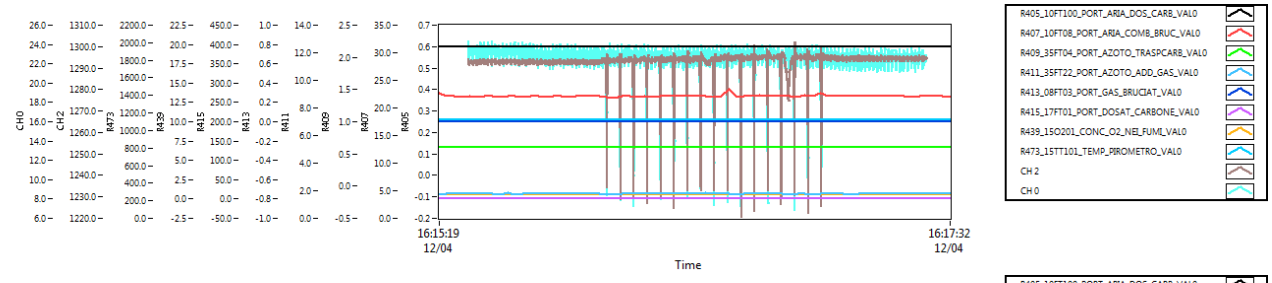
Carbone S.A. TQ >125 micron
ALIMENTAZIONE nulla-pulsata-nulla 250mmc
Trasporto aria+azoto
O2 0.6 % nei fumi
TEMP 1100°

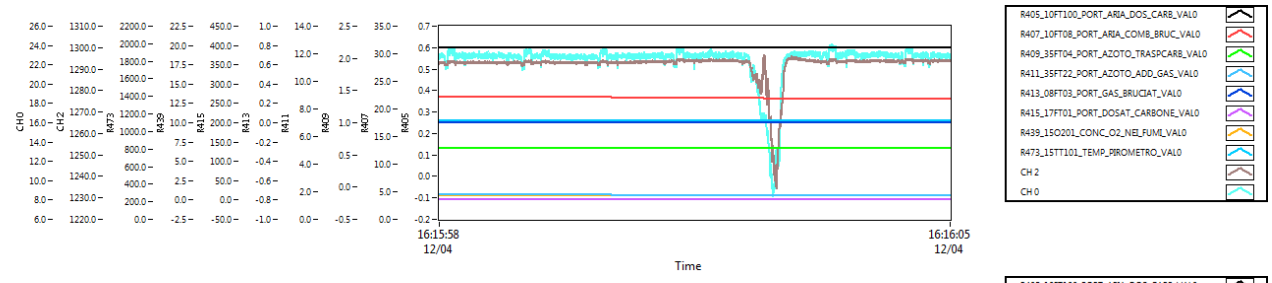
Condizioni di misura

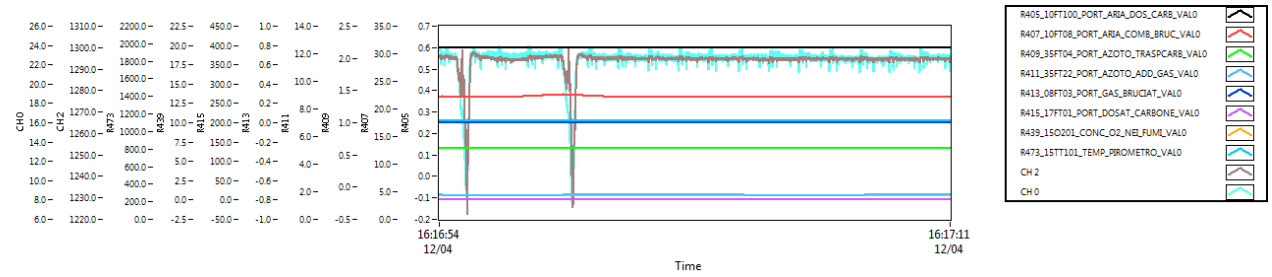
data e ora inizio prova	12/4/11 16:15:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1095
Pirometro portina 5 15TT101	1120
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1124
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	209
Portata carbone(set point) [q/h]	off-pulse-off
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	3.57
O2 IN [%vol]	0.6
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

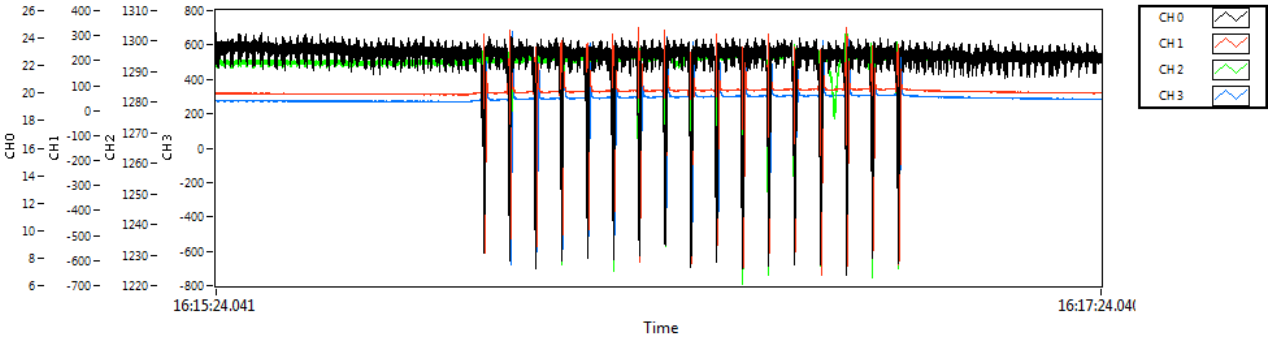
Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.10
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	203.66
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1123.91
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.56
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.19
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1094.28
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.56
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	120.01
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	88.76
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.29
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.34
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.70
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.36
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.38
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.39
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.90
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.47
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.35
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.86
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.13
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.08
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	739.79
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.58
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.17
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.63
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1100.70
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.46
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.87
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.95
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.05
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.10
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1082.22
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.25
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.33
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1120.95
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:15:19
12/04
16:17:32
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:15:58
12/04
16:16:05
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:16:54
12/04
16:17:11
12/04
Time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CH 2
CH 3
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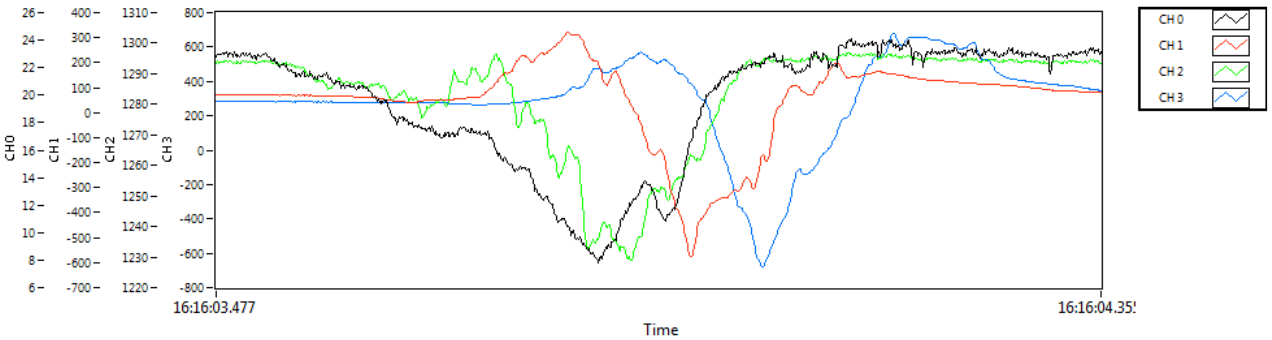
16:17:24.04(
Time


CH 0
CH 1
CH 2
CH 3
16:16:03.477
16:16:04.35!
Time

Misura 11: 12-04-2011-16-19-18.125.tdms

Carbone S.A. TQ >125 micron
ALIMENTAZIONE nulla-continua-nulla 110 g/h
Trasporto aria+azoto
O2 0.57 % nei fumi
TEMP 1100°

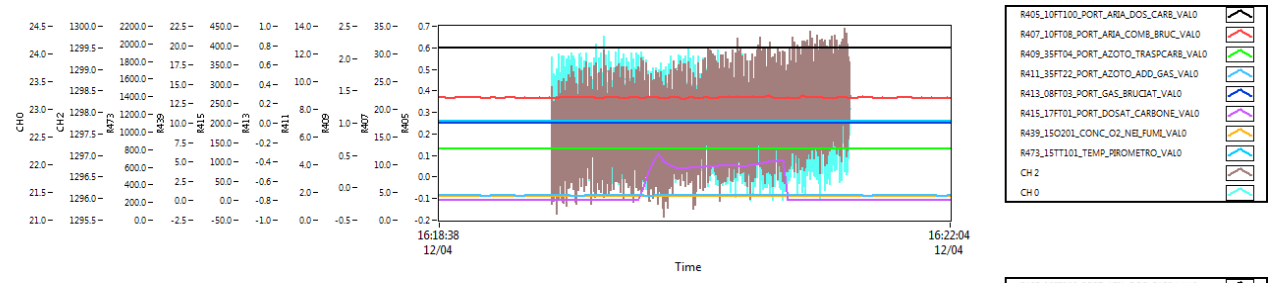
Condizioni di misura

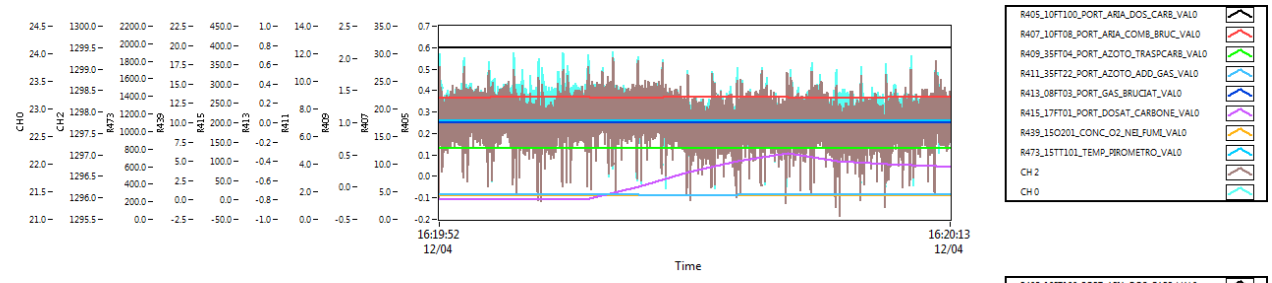
data e ora inizio prova	12/4/11 16:19:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1094
Pirometro portina 5 15TT101	1121
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1124
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [g/h]	off-110-off
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	3.61
O2 IN [%vol]	0.57
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

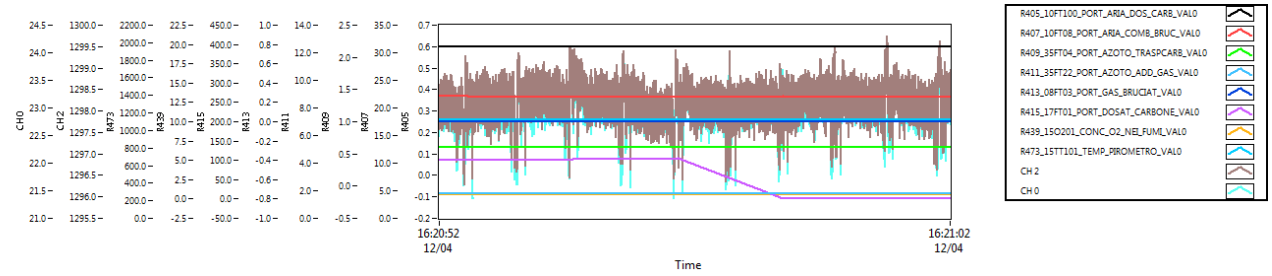
Valori medi variabili di processo

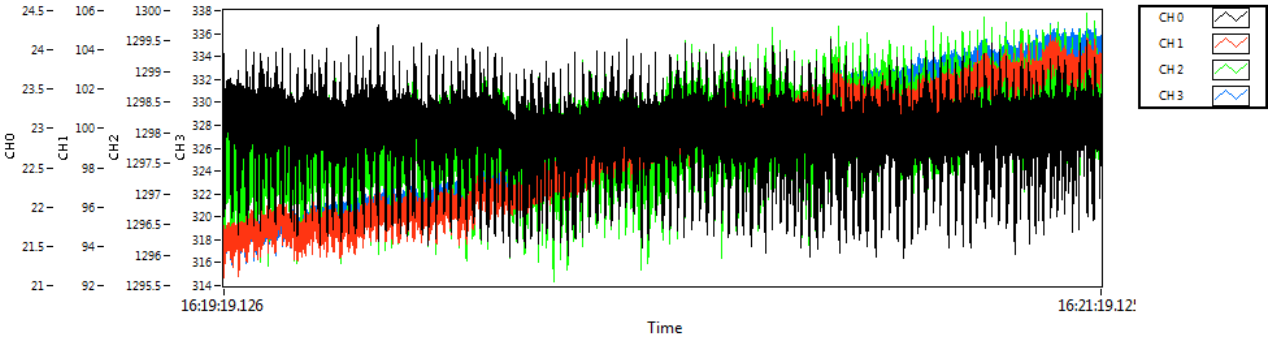
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.10
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	161.92
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1124.37
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.59
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.32
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1093.89
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.41
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	96.23
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	92.99
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.61
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.35
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.72
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.25
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.41
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.44
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.91
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.50
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.36
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.69
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.86
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.09
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.77
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	43.69
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	713.69
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.58
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.16
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	3.61
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1100.69
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.25
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.53
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.65
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.78
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.08
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1082.41
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.12
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.30
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1121.18
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

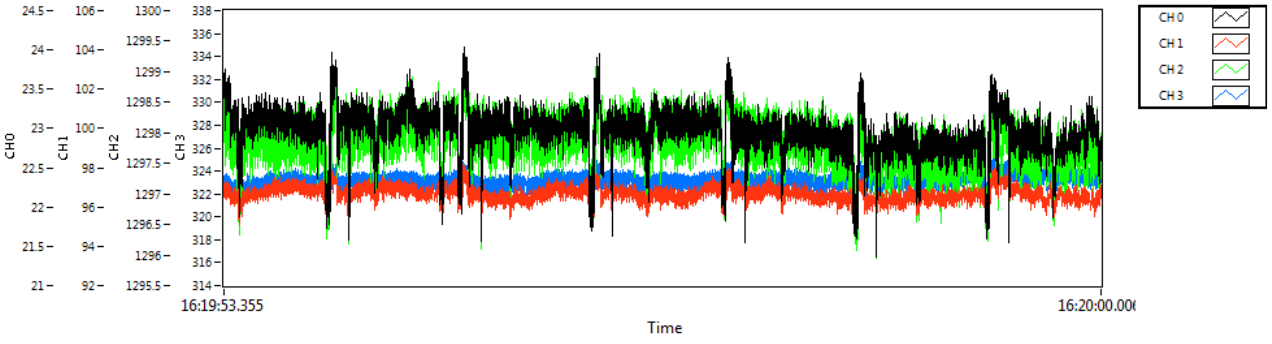
Sync 5 sec











Portata nulla??

Misura 12: 12-04-2011-16-33-27.019.tdms

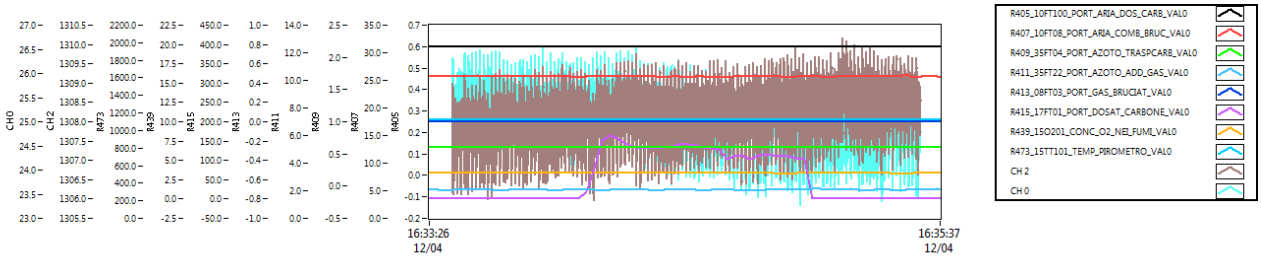
Carbone S.A. TQ >125 micron
ALIMENTAZIONE nulla-continua-nulla 110 g/h
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 16:33:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqgio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	25.7
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	2.1
Tbruc [°C] (15TT09)	1080
Pirometro portina 5 15TT101	1125
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1124
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	off-110-off
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.5
CO (ppm)	2.13
O2 IN [%vol]	3.3
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1280
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.06
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	150.20
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.14
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.65
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.53
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1080.37
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.62
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	68.45
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	102.82
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.55
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.61
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.77
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.22
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.44
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.53
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.96
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.57
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.41
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.75
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.86
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	25.68
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	57.01
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	924.34
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.32
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.53
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.22
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1100.87
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.35
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.85
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.18
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.08
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.08
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1083.24
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.17
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.24
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1118.55
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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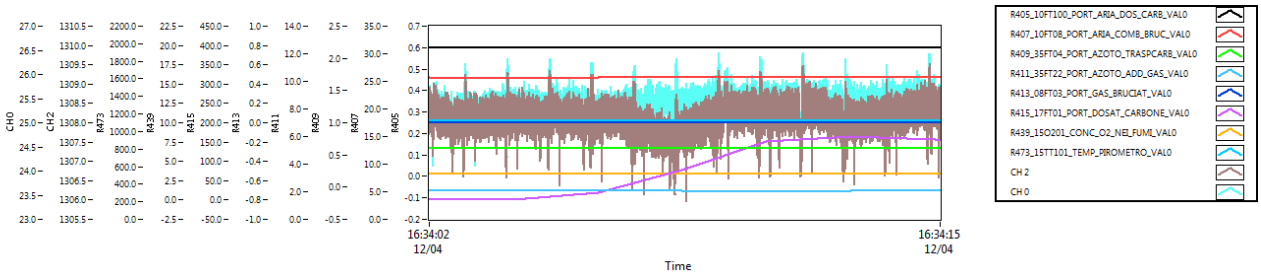
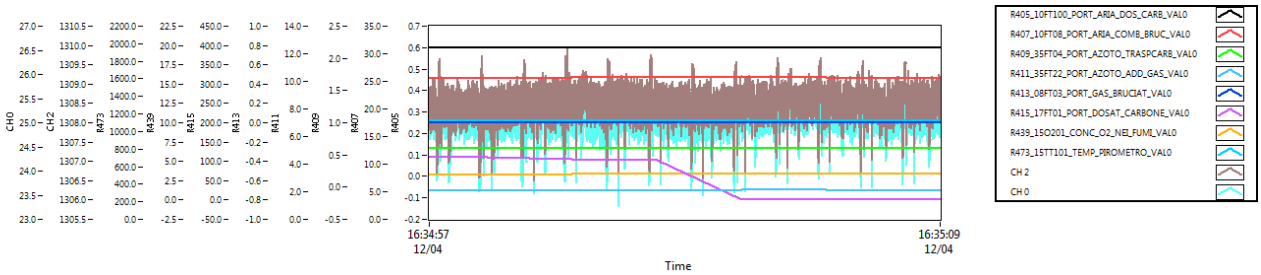
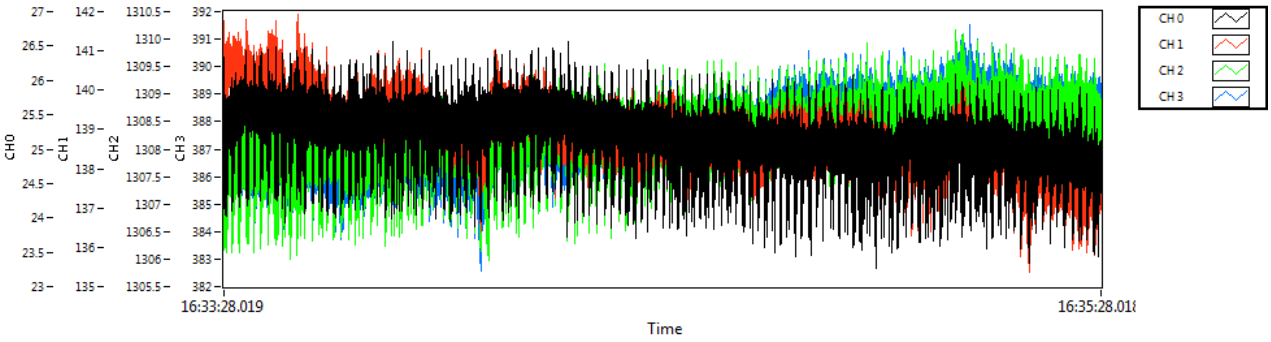
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:33:26
12/04
16:35:37
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:34:02
12/04
16:34:15
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:34:57
12/04
16:35:09
12/04
Time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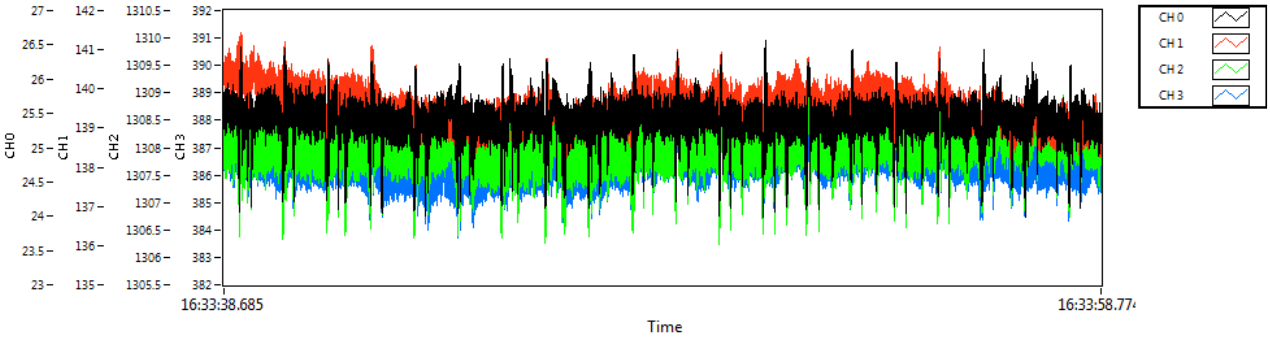
CH 1
CH 2
CH 3
16:33:28.019
16:35:28.018
Time


CH 0
CH 1
CH 2
CH 3
16:33:38.685
16:33:58.774
Time

Misura 13: 12-04-2011-16-36-37.080.tdms

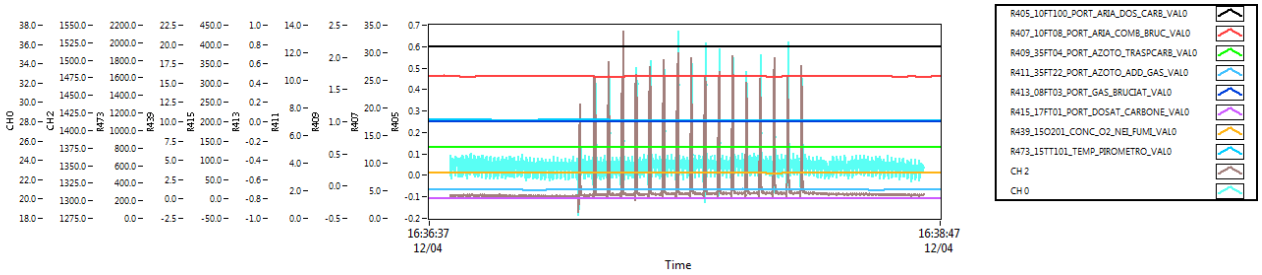
Carbone S.A. TQ >125 micron
ALIMENTAZIONE nulla-pulsata-nulla 250mmc
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°

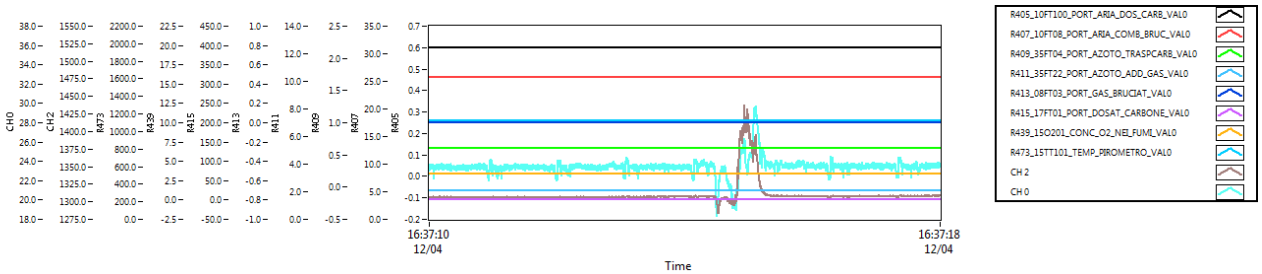
Condizioni di misura

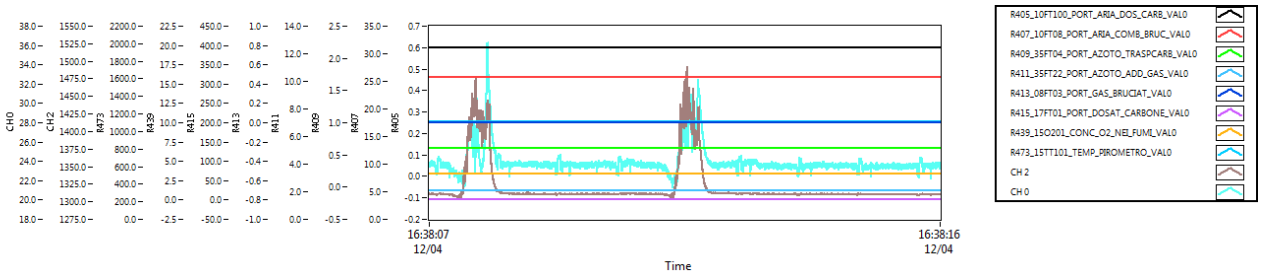
data e ora inizio prova	12/4/11 16:36:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	25.7
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	2.1
Tbruc [°C] (15TT09)	1078
Pirometro portina 5 15TT101	1116
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1125
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	211
Portata carbone(set point) [g/h]	off-pulse-off
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.5
CO (ppm)	2.23
O2 IN [%vol]	3.3
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1280
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.03
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	139.13
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.11
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.65
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.52
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1077.69
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.59
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	61.36
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	104.22
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.65
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.65
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.79
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.22
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.47
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.56
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.97
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.67
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.42
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.86
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	25.67
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.07
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	952.08
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.33
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.53
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.19
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1100.74
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.38
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.93
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.12
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.19
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.10
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1083.42
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.21
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.23
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1116.96
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:36:37
12/04
16:38:47
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:37:10
12/04
16:37:18
12/04
Time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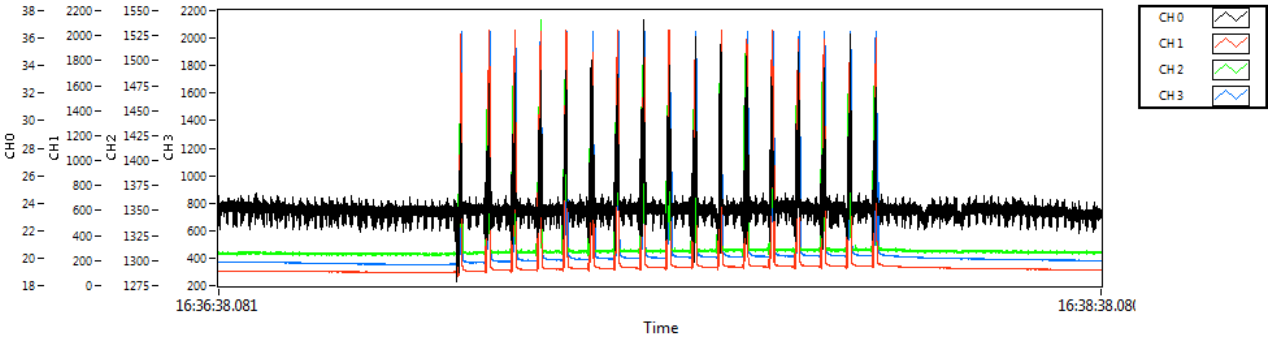
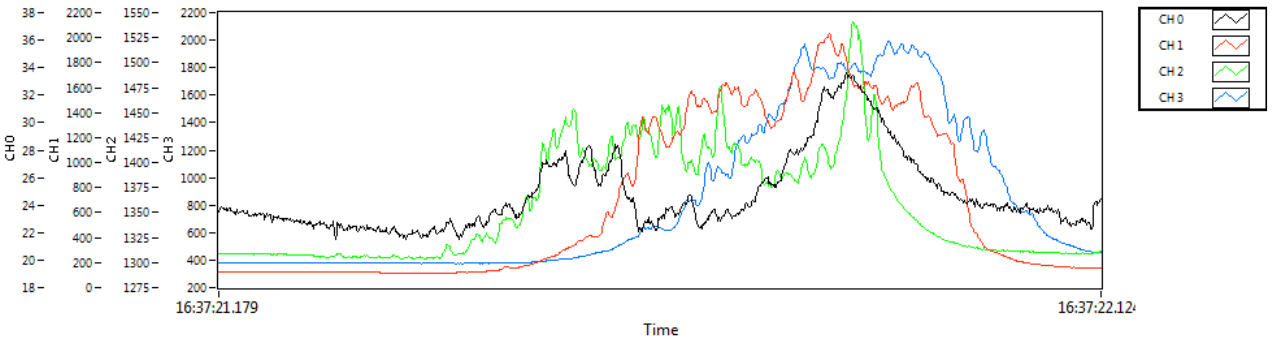
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:38:07
12/04
16:38:16
12/04
Time


CH 0
CH 1
CH 2
CH 3
16:36:38.081
16:38:38.08(
Time


CH 0
CH 1
CH 2
CH 3
16:37:21.179
16:37:22.12(
Time

Misura 14: 12-04-2011-16-39-01.059.tdms

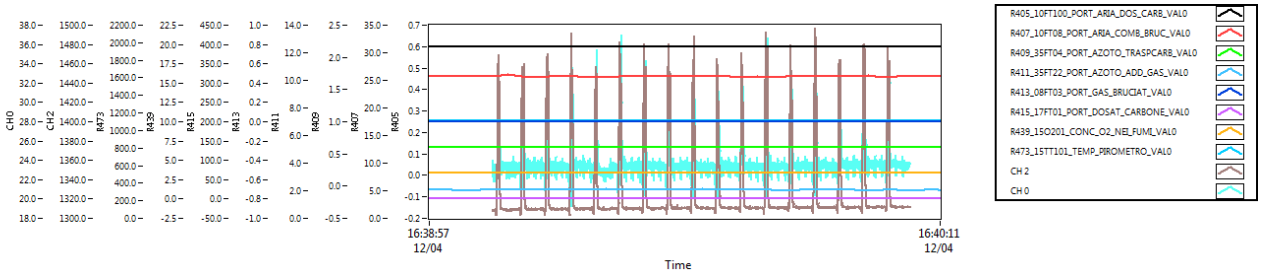
Carbone S.A. TQ >125 micron
ALIMENTAZIONE pulsata 250mmc
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 16:40:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	25.7
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	2.1
Tbruc [°C] (15TT09)	1076
Pirometro portina 5 15TT101	1116
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1125
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.5
CO (ppm)	2.19
O2 IN [%vol]	3.3
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1280
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.06
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	130.90
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.49
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.66
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	1090.88
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1075.38
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.86
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	57.00
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	105.23
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.58
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.64
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.80
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.24
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.47
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.58
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.99
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	33.65
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.44
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.85
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	25.67
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	36.97
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	957.79
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.35
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.51
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.15
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1100.44
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.43
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.98
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.89
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.21
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.15
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1083.66
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.31
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.22
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1115.71
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
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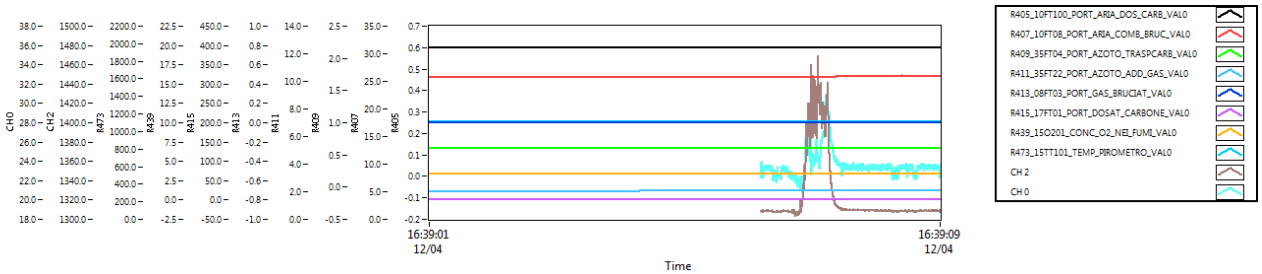
12/04
16:40:11
12/04
Time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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
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R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
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CH 0
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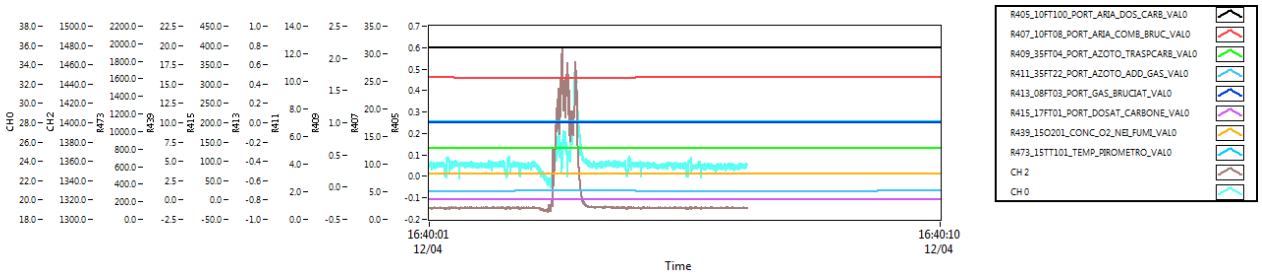
12/04
16:39:09
12/04
Time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R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
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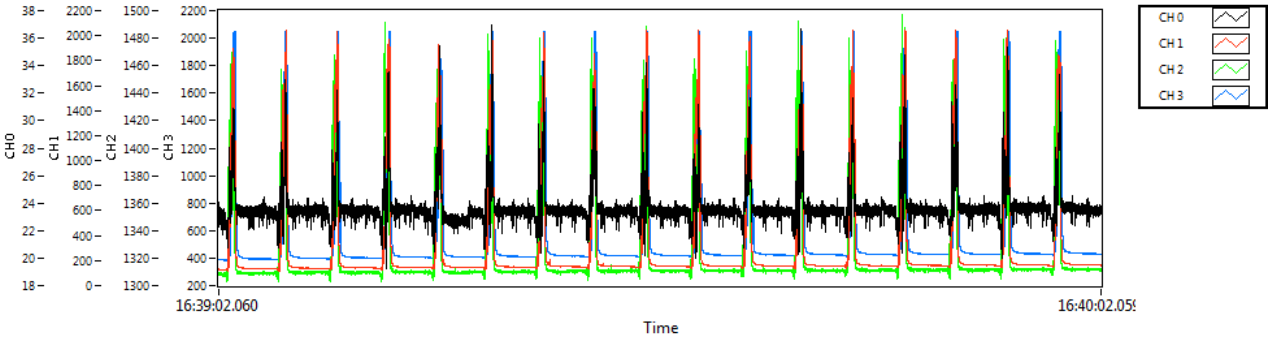
CH 0
16:40:01
12/04
16:40:10
12/04
Time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CH 2
CH 3
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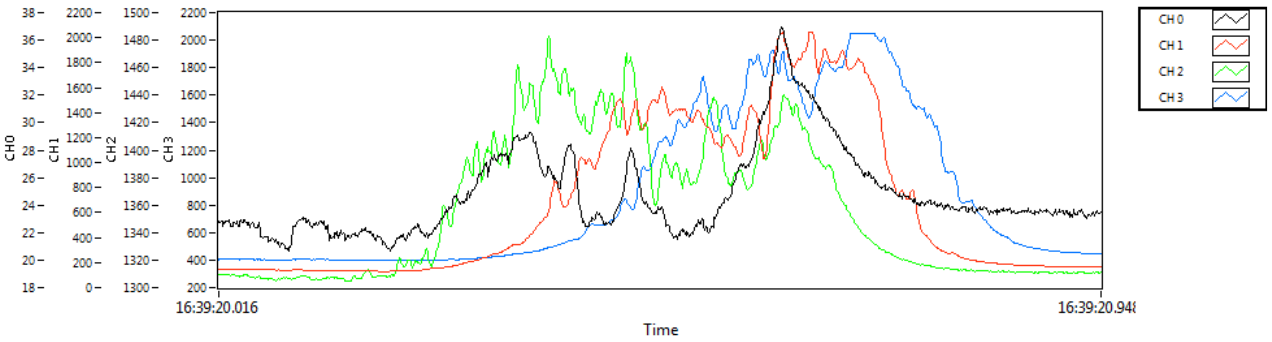
Time


CH 0
CH 1
CH 2
CH 3
16:39:20.016
16:39:20.94
Time

Misura 15: 12-04-2011-16-56-12.226.tdms

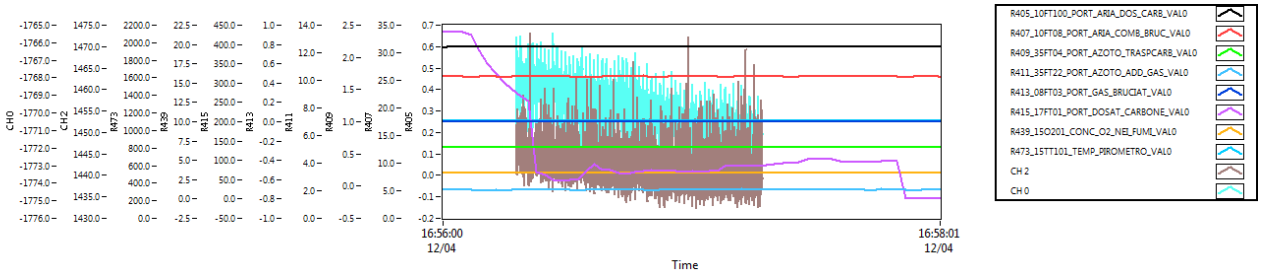
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 16:56:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	25.7
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	2.1
Tbruc [°C] (15TT09)	1072
Pirometro portina 5 15TT101	1113
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1125
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	211
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.5
CO (ppm)	2.07
O2 IN [%vol]	3.3
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1280
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.08
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	135.19
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.30
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.72
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.88
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1071.58
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.65
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	38.19
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	109.94
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.79
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.67
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.84
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.29
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.50
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.65
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	32.04
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.63
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.48
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.74
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.85
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	25.67
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	118.04
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	1022.39
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.37
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.48
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.09
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1099.06
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.12
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.86
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.96
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.93
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.37
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1084.47
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.33
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.18
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1113.64
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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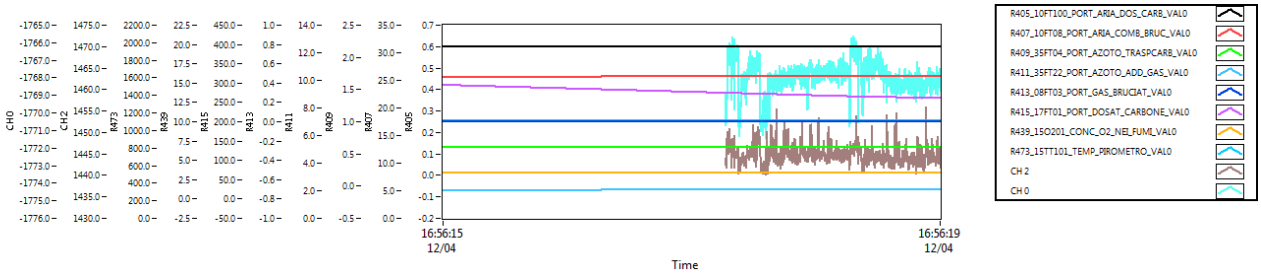
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:56:00
12/04
16:58:01
12/04
Time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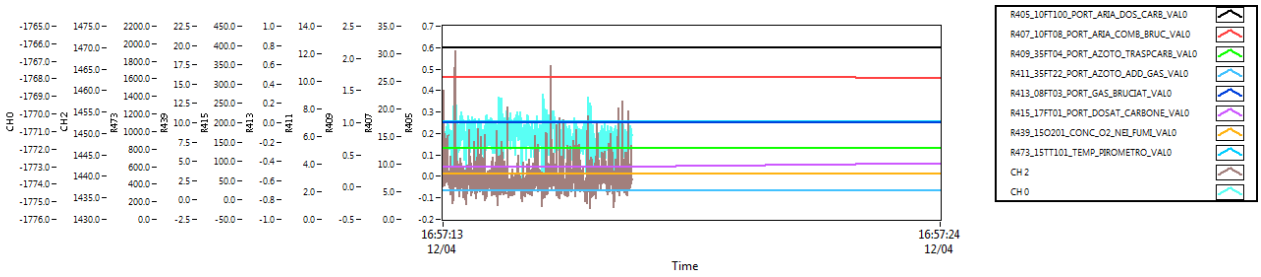
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:56:15
12/04
16:56:19
12/04
Time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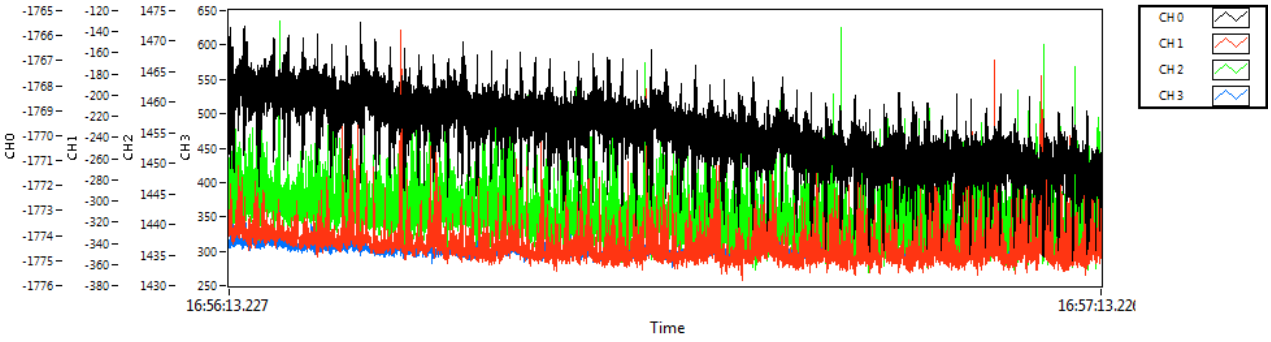
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:57:13
12/04
16:57:24
12/04
Time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CH 3
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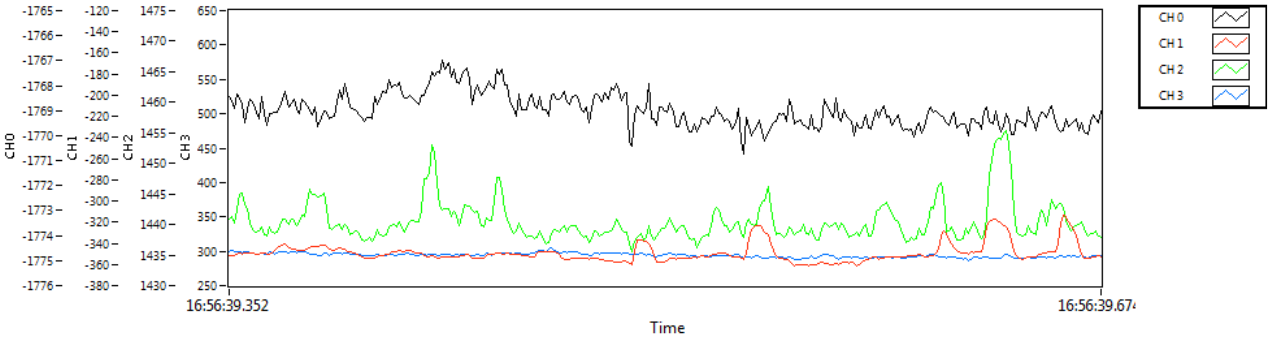
16:57:13.22(
Time


CH 0
CH 1
CH 2
CH 3
16:56:39.352
16:56:39.67(
Time

Misura 16: 12-04-2011-17-02-27.212.tdms

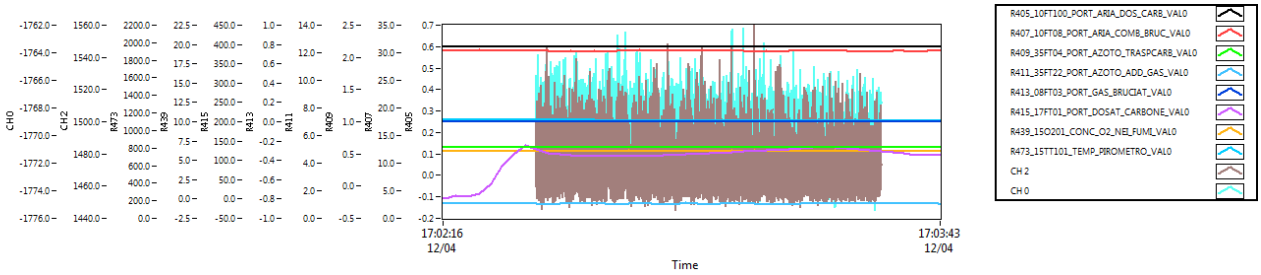
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 6.2 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	12/4/11 17:02:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1050
Pirometro portina 5 15TT101	1115
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1125
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [g/h]	110
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.2
CO (ppm)	1.7
O2 IN [%vol]	6.2
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.04
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	139.63
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.10
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.73
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.67
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1052.42
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.65
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	33.22
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	111.43
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.79
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.86
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.84
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.33
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.52
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.70
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	32.03
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.59
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.48
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.76
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.84
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.31
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	94.94
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	1208.56
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.22
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.25
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.71
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.76
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.82
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.56
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.28
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.75
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.35
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1084.48
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.68
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.17
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1116.51
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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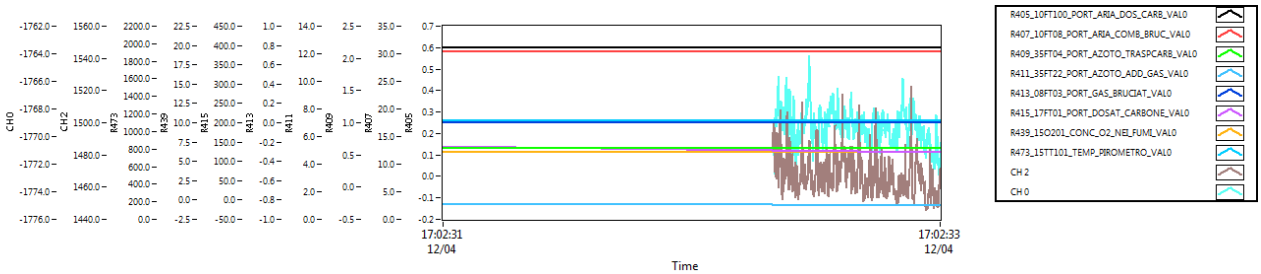
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:02:16
12/04
17:03:43
12/04
Time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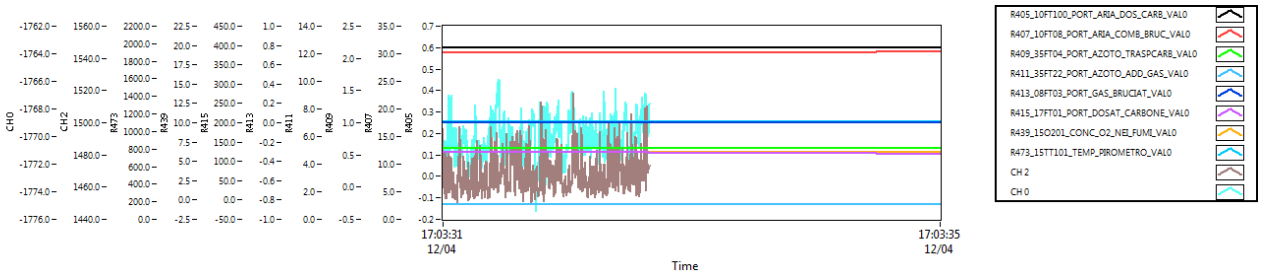
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:02:31
12/04
17:02:33
12/04
Time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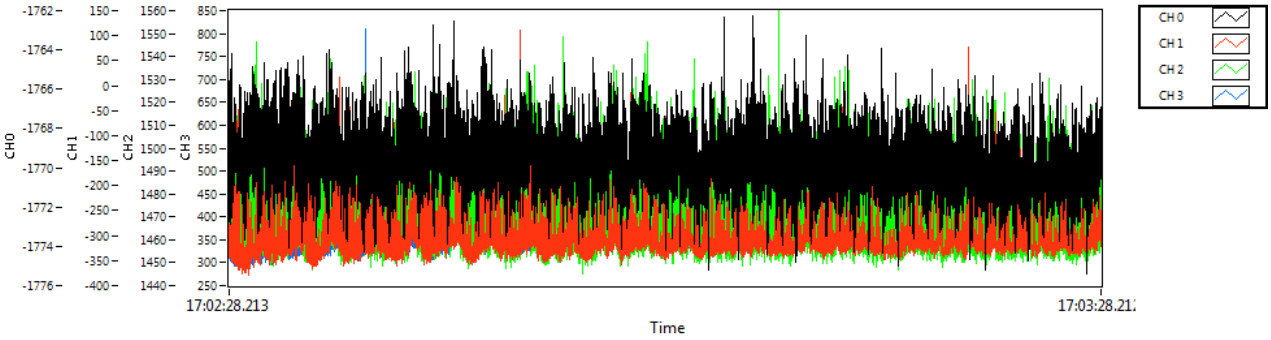
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:03:31
12/04
17:03:35
12/04
Time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CH 1
CH 2
CH 3
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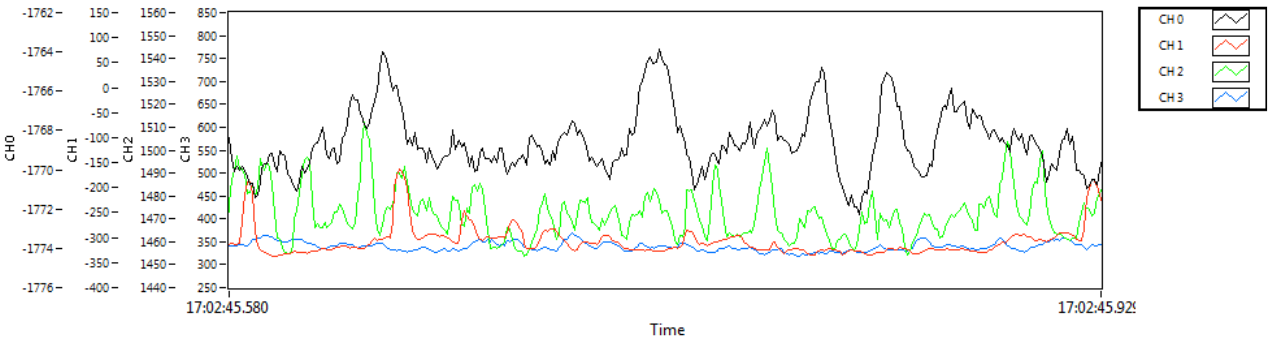
17:03:28.21
Time


CH 0
CH 1
CH 2
CH 3
17:02:45.580
17:02:45.92
Time

Misura 17: 12-04-2011-17-05-28.194.tdms

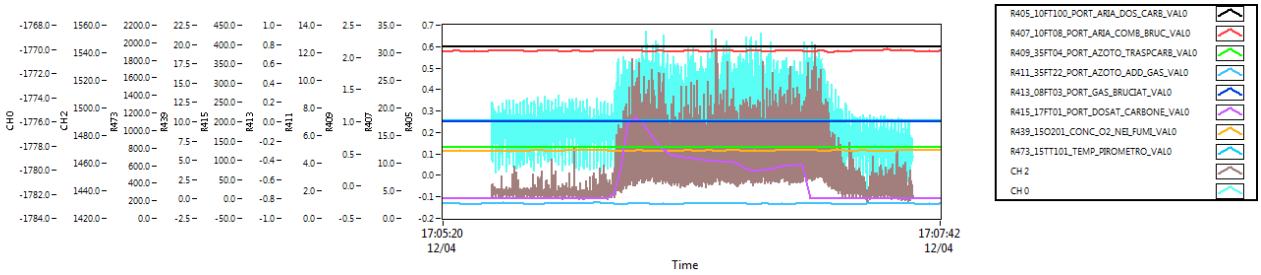
Carbone S.A. TQ >125 micron
ALIMENTAZIONE nulla-continua-nulla 110 g/h
Trasporto aria+azoto
O2 6.2 % nei fumi
TEMP 1100°

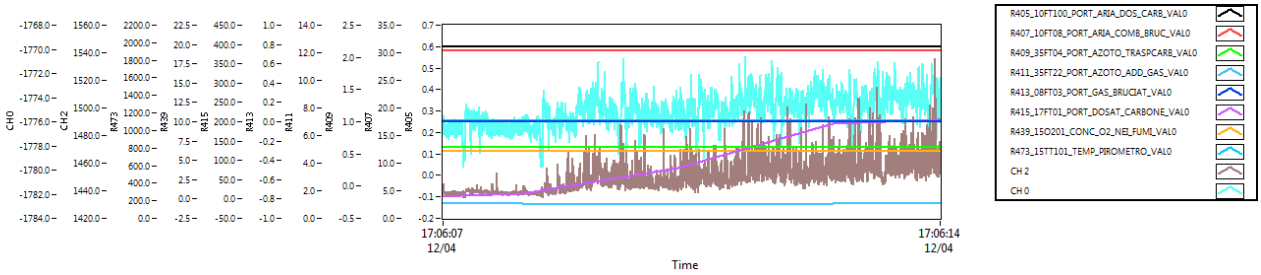
Condizioni di misura

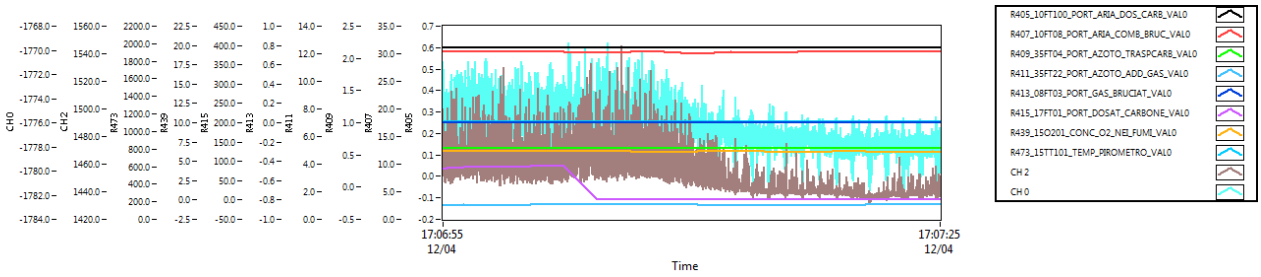
data e ora inizio prova	12/4/11 17:05:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1049
Pirometro portina 5 15TT101	1112
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1125
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	off-110-off
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.3
CO (ppm)	1.66
O2 IN [%vol]	6.24
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

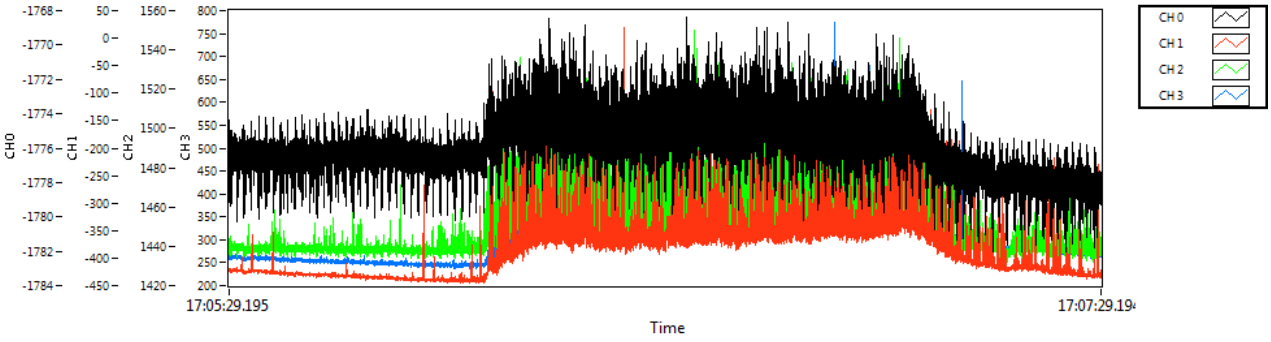
Valori medi variabili di processo

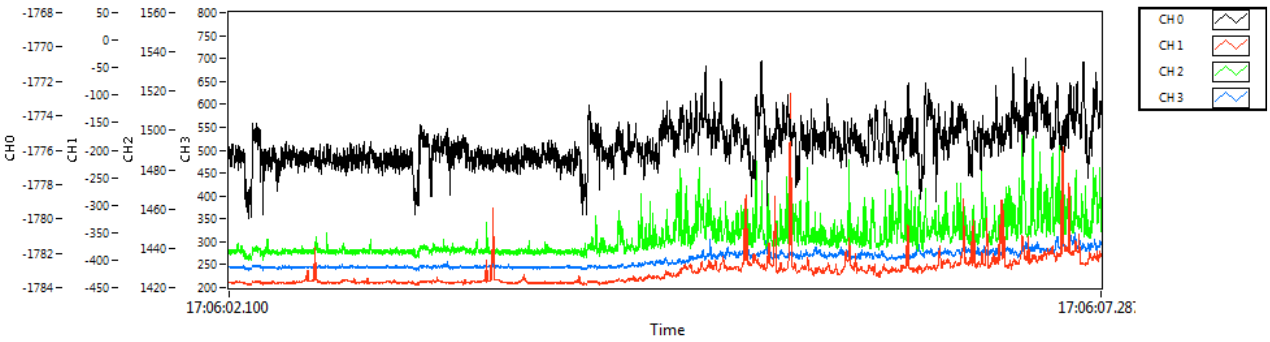
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.06
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	128.62
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.25
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.74
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.84
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1049.09
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.78
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	32.27
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	111.97
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.89
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.90
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.84
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.34
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.52
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.71
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	32.05
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.60
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.49
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.84
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.30
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	48.40
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	1218.34
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.24
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.24
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.72
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.83
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.69
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.42
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.44
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.88
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.29
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1084.49
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.46
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.17
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1112.61
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:05:20
12/04
17:07:42
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:06:07
12/04
17:06:14
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:06:55
12/04
17:07:25
12/04
Time


CH 0
CH 1
CH 2
CH 3
17:05:29.195
17:07:29.19
Time


CH 0
CH 1
CH 2
CH 3
17:06:02.100
17:06:07.28
Time

Misura 18: 12-04-2011-17-35-45.976.tdms

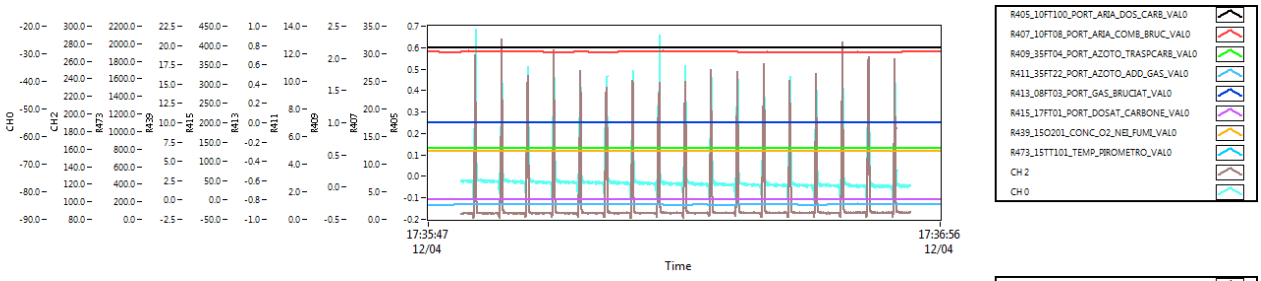
Carbone S.A. TQ >125 micron
ALIMENTAZIONE pulsata 250 mmc
Trasporto aria+azoto
O2 6.6 % nei fumi
TEMP 1100°

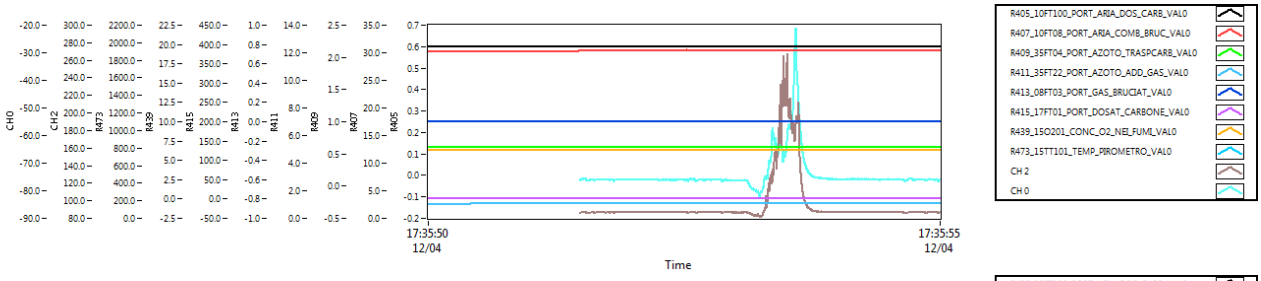
Condizioni di misura

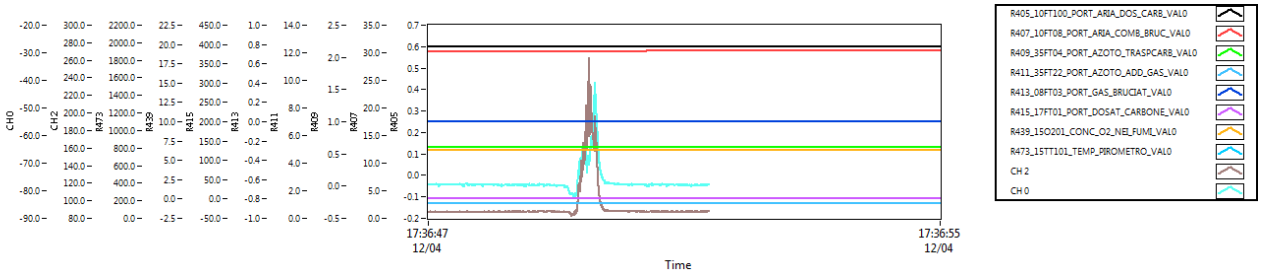
data e ora inizio prova	12/4/11 17:35:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1037
Pirometro portina 5 15TT101	1104
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1124
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.2
CO (ppm)	1.57
O2 IN [%vol]	6.25
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

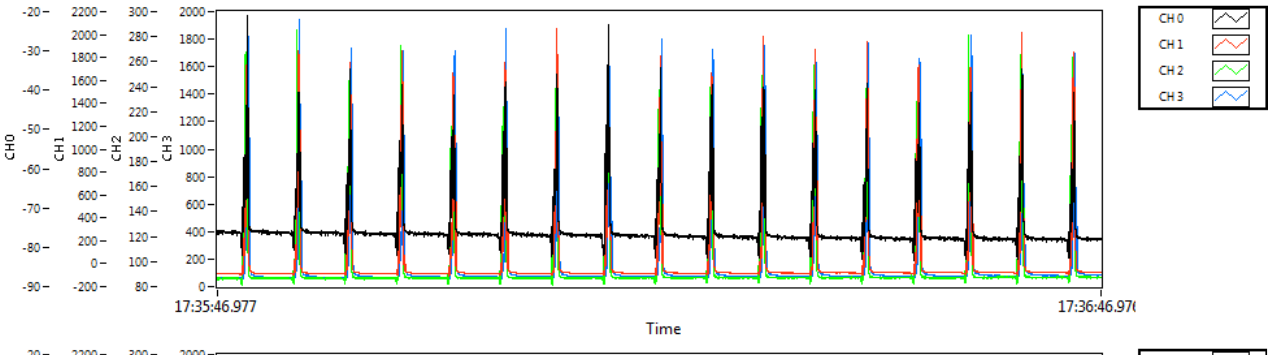
Valori medi variabili di processo

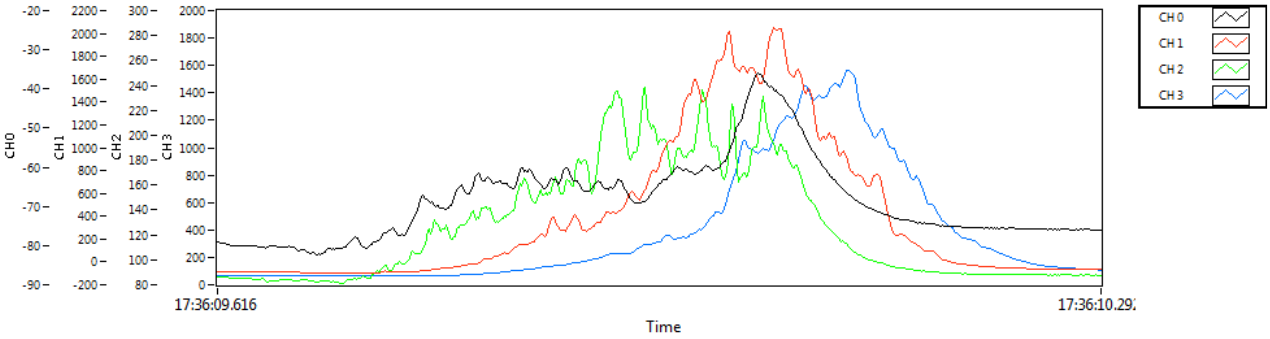
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	27.49
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	112.41
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1123.83
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.77
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	1090.23
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1037.67
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.37
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	28.12
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	113.97
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.85
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.98
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.87
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.37
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.53
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.76
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	32.07
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	33.58
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.51
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.84
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.31
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	1256.07
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.26
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.22
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.56
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.73
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.97
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.66
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.99
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.24
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.34
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1085.62
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.66
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.12
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1104.85
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:35:47
12/04
17:36:56
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:35:50
12/04
17:35:55
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:36:47
12/04
17:36:55
12/04
Time


CH 0
CH 1
CH 2
CH 3
17:35:46.977
17:36:46.97(
Time


CH 0
CH 1
CH 2
CH 3
17:36:09.616
17:36:10.29(
Time

Misura 19: 12-04-2011-17-37-30.379.tdms

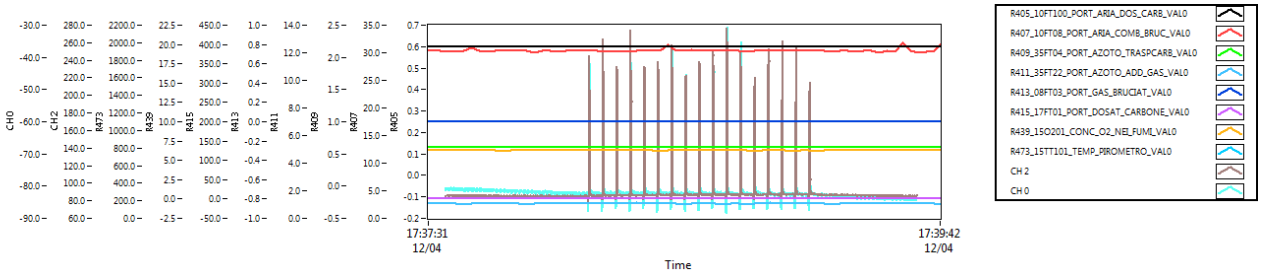
Carbone S.A. TQ >125 micron
ALIMENTAZIONE nulla-pulsata-nulla 250 mmc
Trasporto aria+azoto
O2 6.2 % nei fumi
TEMP 1100°

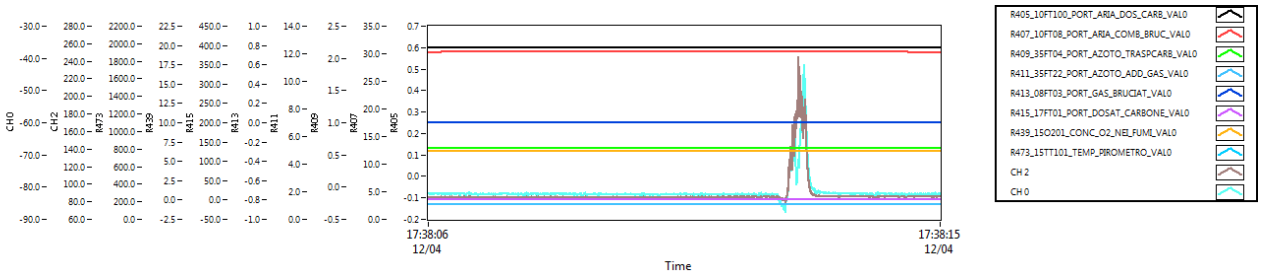
Condizioni di misura

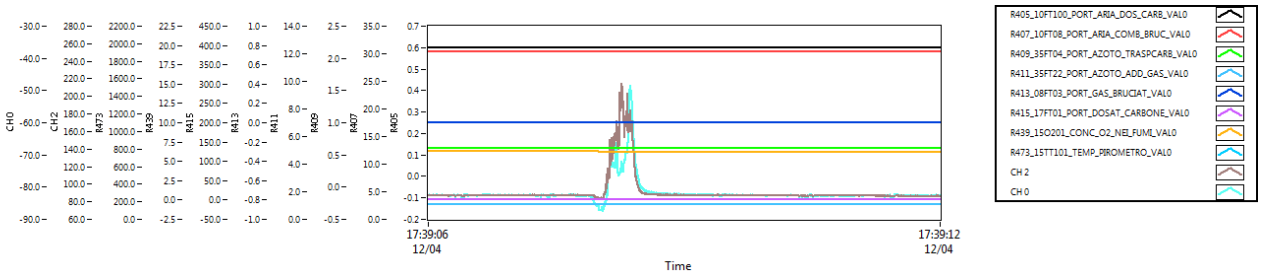
data e ora inizio prova	12/4/11 17:37:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1038
Pirometro portina 5 15TT101	1105
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1124
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	off-pulse-off
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.2
CO (ppm)	1.58
O2 IN [%vol]	6.24
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

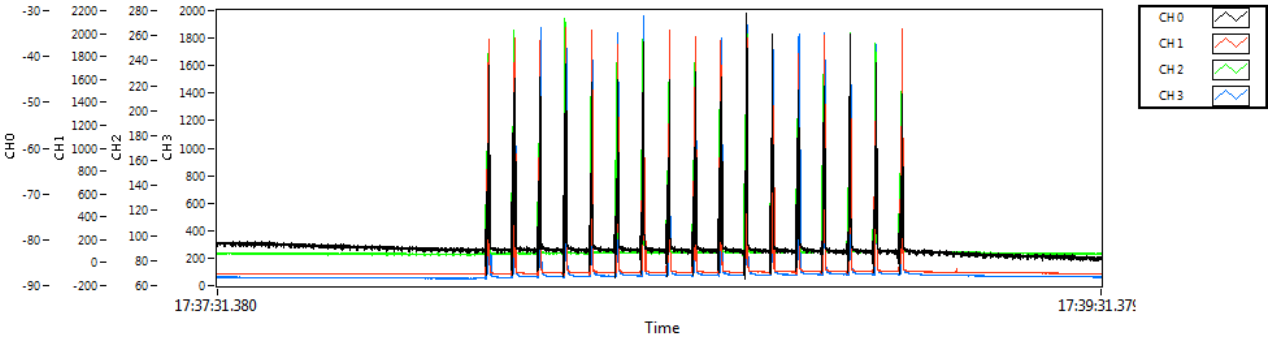
Valori medi variabili di processo

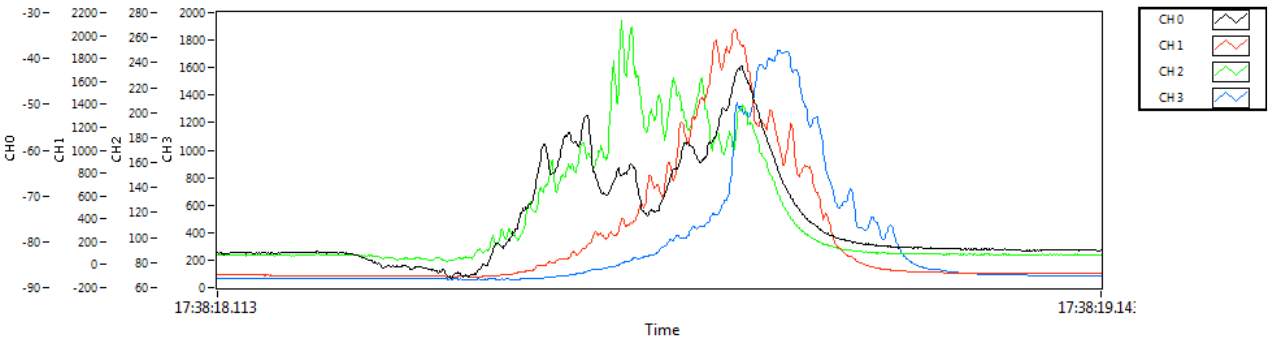
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	27.49
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	111.30
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1123.94
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	29.78
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.35
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1037.61
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.31
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	29.37
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	114.45
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	25.93
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	33.98
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	31.87
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.37
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	32.54
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	32.76
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	32.04
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	33.59
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	32.52
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.74
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.84
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.60
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.33
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.60
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	1256.75
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.26
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.22
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.57
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.74
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.00
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.67
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.82
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.16
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1040.27
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1085.64
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.67
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.12
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1104.85
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:37:31
12/04
17:39:42
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:38:06
12/04
17:38:15
12/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
17:39:06
12/04
17:39:12
12/04
Time

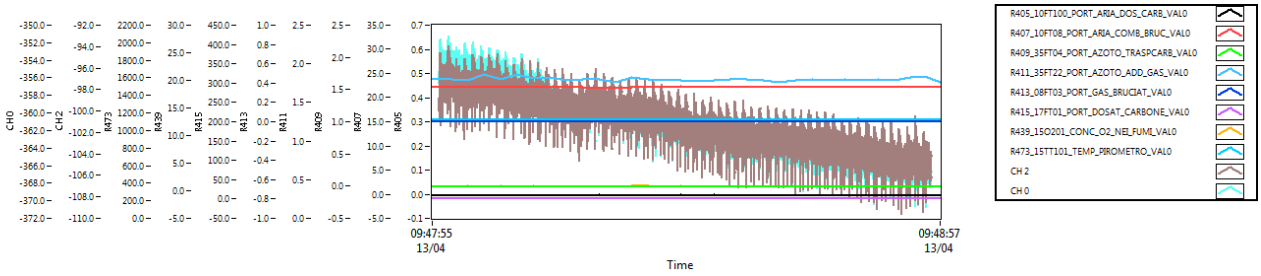

CH 0
CH 1
CH 2
CH 3
17:37:31.380
17:39:31.37
Time

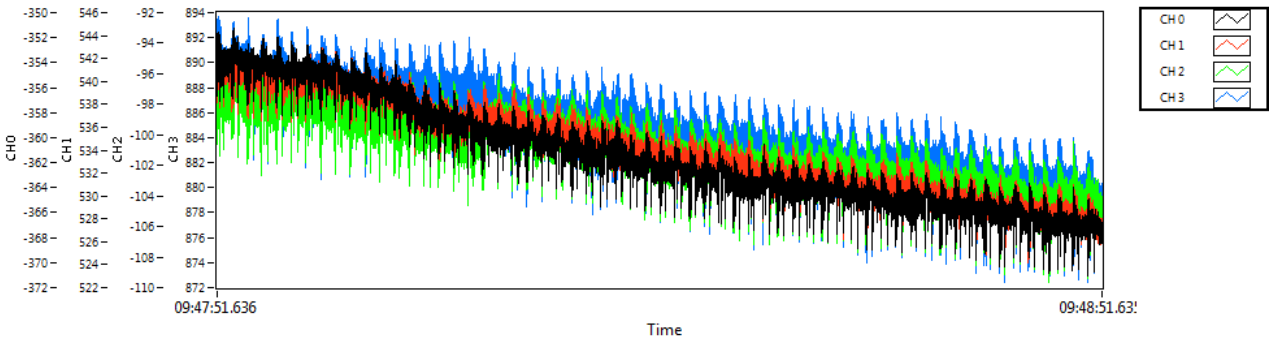

CH 0
CH 1
CH 2
CH 3
17:38:18.113
17:38:19.14
Time

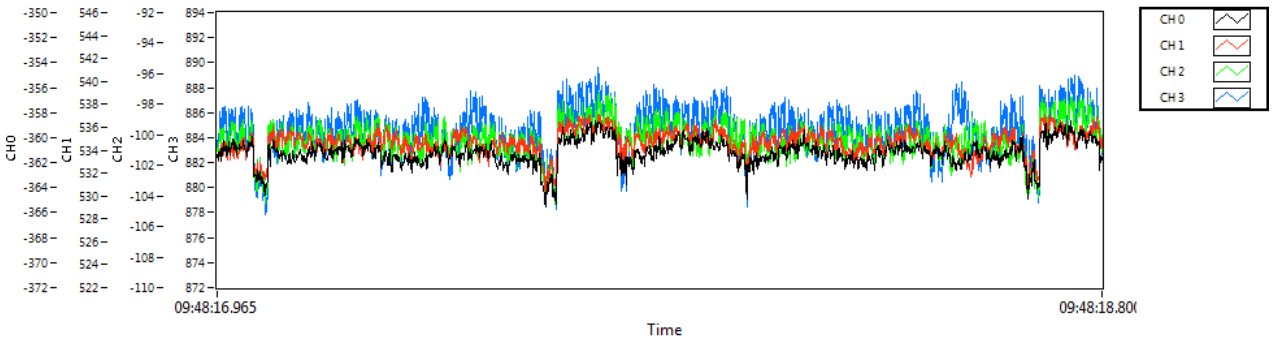
7. Panoramica sul contenuto informativo delle misure effettuate: 13 Aprile 2011

Misura 1: 13-04-2011-09-47-50.636.tdms
Tempo di sync 2 sec

Misura di fondo
ALIMENTAZIONE nulla
Trasporto aria+azoto
O2 0.5 % nei fumi
TEMP 1100°







Misura 2: 13-04-2011-09-55-56.956.tdms

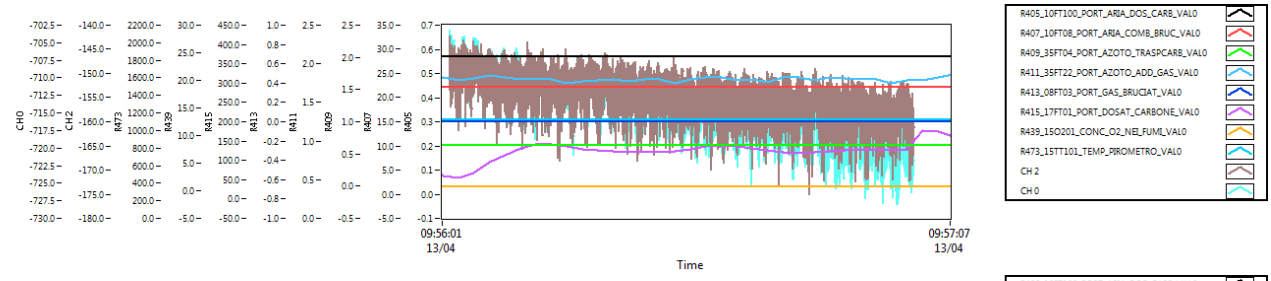
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 0.7 % nei fumi
TEMP 1100°

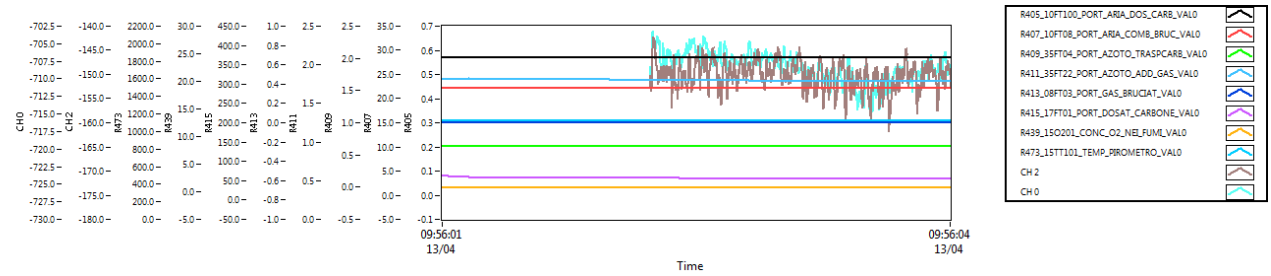
Condizioni di misura

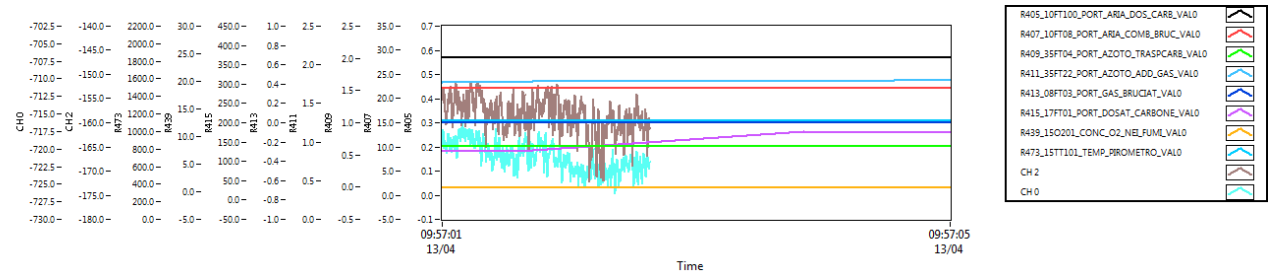
data e ora inizio prova	13/4/11 9:55:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1110
Pirometro portina 5 15TT101	1118
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1142
TMOD6[°C] (15TT95)	1092
Tquench [°C] (15TT97)	203
Tvalle_quench [°C] (15TT19)	150
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	22
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.1
CO (ppm)	2.3
O2 IN [%vol]	0.7
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	1.4
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

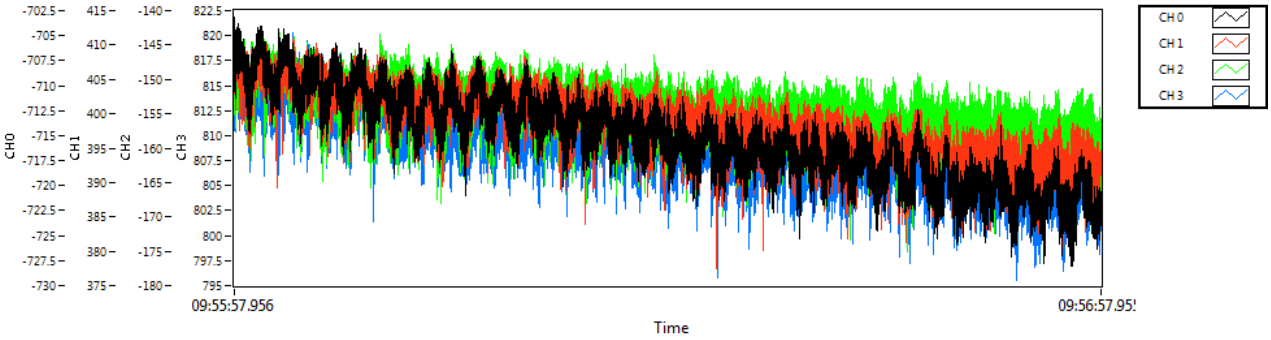
Valori medi variabili di processo

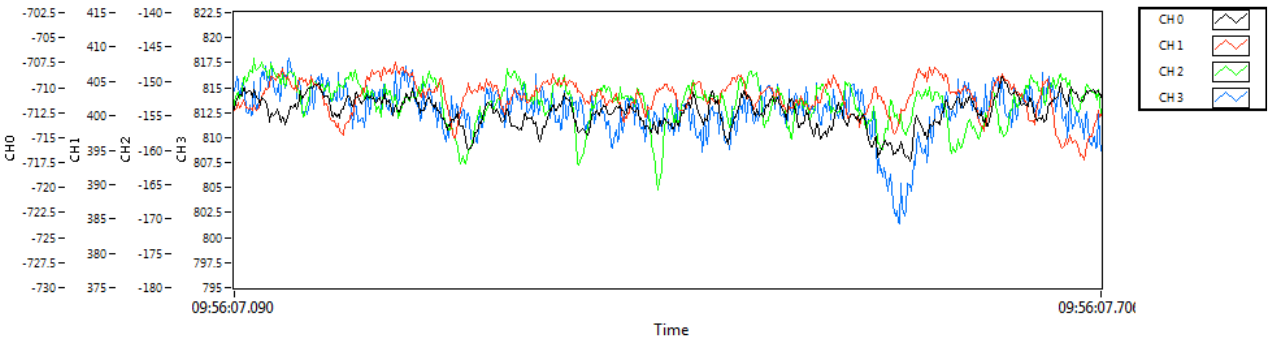
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.19
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.57
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1141.60
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.00
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1091.93
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1111.94
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	153.21
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	165.27
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	86.56
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.13
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	27.63
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.11
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	28.69
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	27.95
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.44
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.27
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	29.04
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	27.66
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.68
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.13
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.79
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	61.37
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	183.08
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.81
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.75
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.03
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.28
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1095.08
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1097.60
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.55
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1098.78
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.56
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1053.01
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1099.34
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.04
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.86
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1120.07
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
09:56:01
13/04
09:57:07
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
09:56:01
13/04
09:56:04
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
09:57:01
13/04
09:57:05
13/04
Time


CH 0
CH 1
CH 2
CH 3
09:55:57.956
09:56:57.95
Time


CH 0
CH 1
CH 2
CH 3
09:56:07.090
09:56:07.70
Time

Misura 3: 13-04-2011-09-57-53.338.tdms

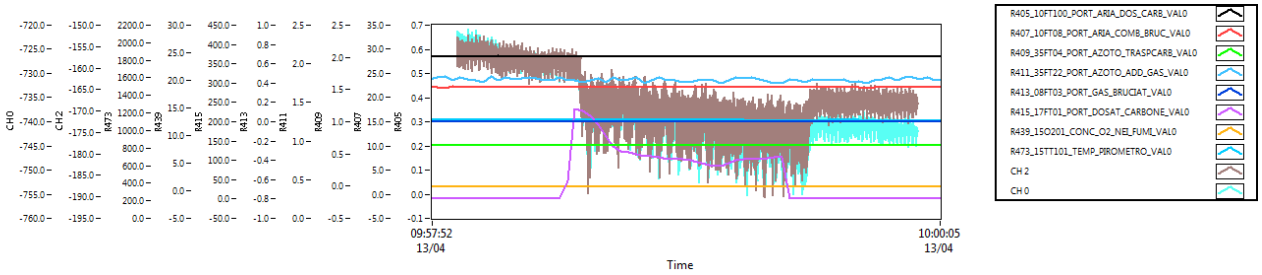
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE nulla-continua-nulla 110 g/h
Trasporto aria+azoto
O2 0.7 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	13/4/11 9:58:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1110
Pirometro portina 5 15TT101	1118
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1142
TMOD6[°C] (15TT95)	1092
Tquench [°C] (15TT97)	203
Tvalle_quench [°C] (15TT19)	150
Portata carbone(set point) [g/h]	off-110-off
N2quench_sonda [Nm3/h] 35ft101	22
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.1
CO (ppm)	2.3
O2 IN [%vol]	0.7
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.34
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	202.91
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1140.88
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.03
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1091.50
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1109.44
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	149.41
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	184.36
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	82.98
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.27
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	27.61
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.15
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	28.72
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	27.99
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.45
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.34
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.06
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	27.70
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.11
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.79
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	58.21
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	183.38
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2841.02
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.74
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.04
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.31
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1094.63
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1097.74
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.60
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1098.46
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.64
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1052.55
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1099.16
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1097.84
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.19
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1117.15
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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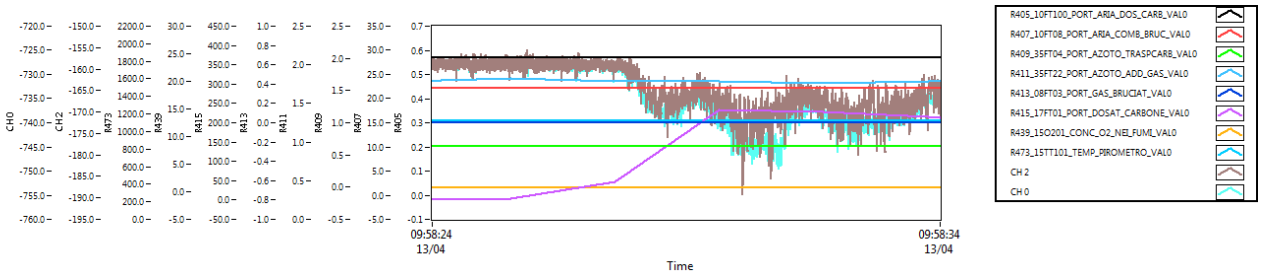
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
09:57:52
13/04
10:00:05
13/04
Time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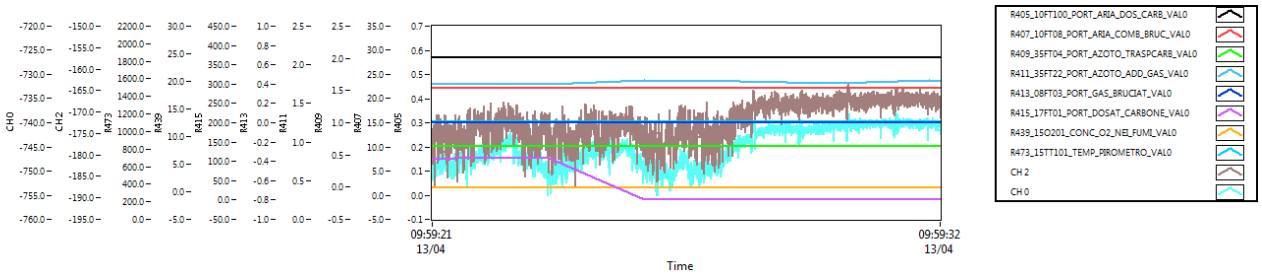
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
09:58:24
13/04
09:58:34
13/04
Time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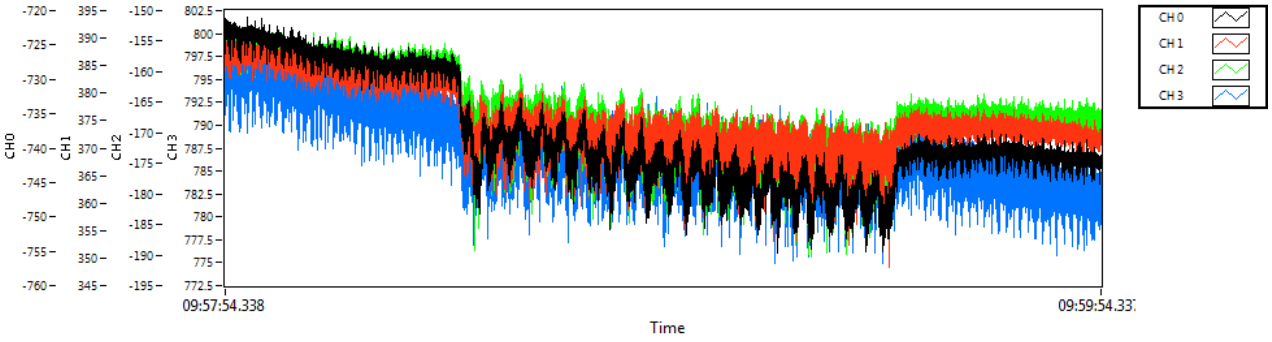
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
09:59:21
13/04
09:59:32
13/04
Time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CH 2
CH 3
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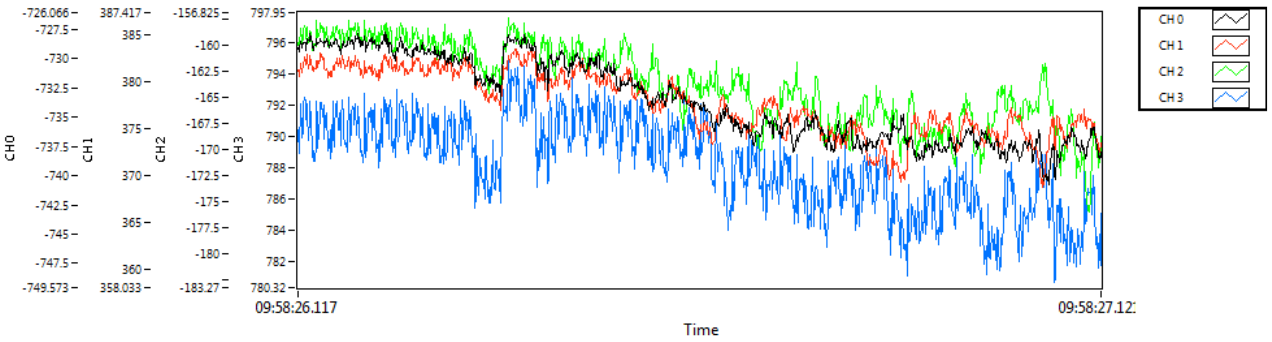
09:59:54.33
Time


CH 0
CH 1
CH 2
CH 3
09:58:26.117
09:58:27.12
Time

Misura 4: 13-04-2011-10-05-01.174.tdms

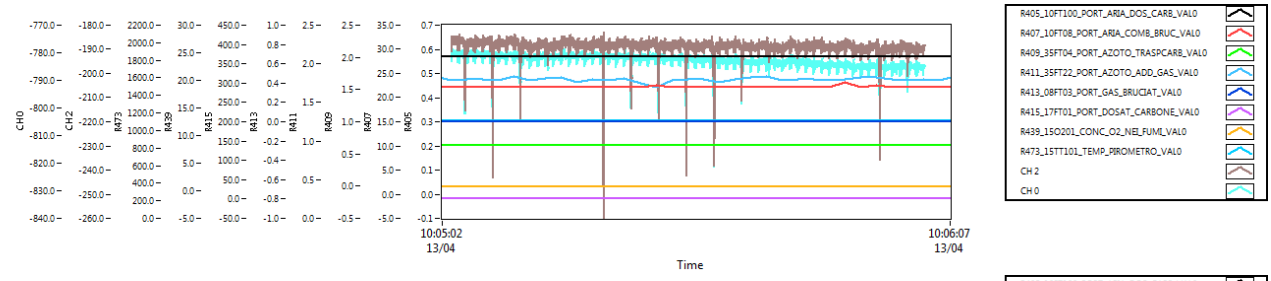
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE pulsata 250 mmc
Trasporto aria+azoto
O2 0.7 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	13/4/11 10:05:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1107
Pirometro portina 5 15TT101	1114
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1140
TMOD6[°C] (15TT95)	1091
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	153
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	22.2
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11
CO (ppm)	2.25
O2 IN [%vol]	0.7
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.5
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.40
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.71
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1139.79
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.12
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	1090.84
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1106.51
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	153.79
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	191.02
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	80.48
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.32
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	27.75
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.23
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	28.78
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.11
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.55
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.41
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	29.11
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	27.79
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.19
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.80
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.09
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	199.74
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2841.14
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.73
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.05
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.31
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1094.63
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.00
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.59
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.73
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.77
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1051.76
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1098.79
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1097.78
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.17
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1113.32
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		7.17
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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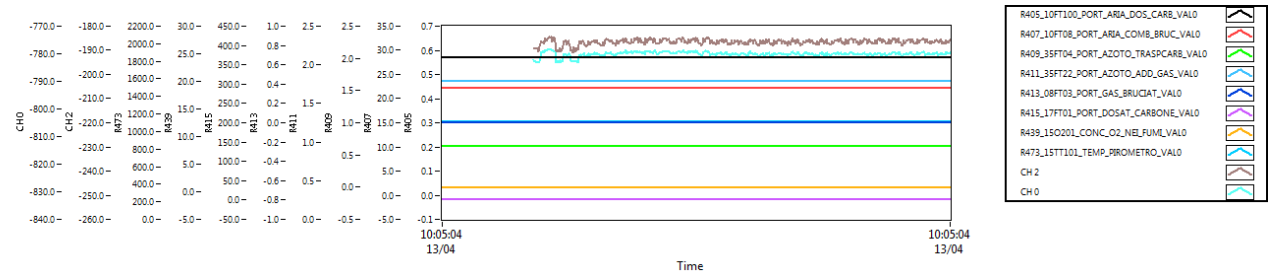
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:05:02
13/04
10:06:07
13/04
Time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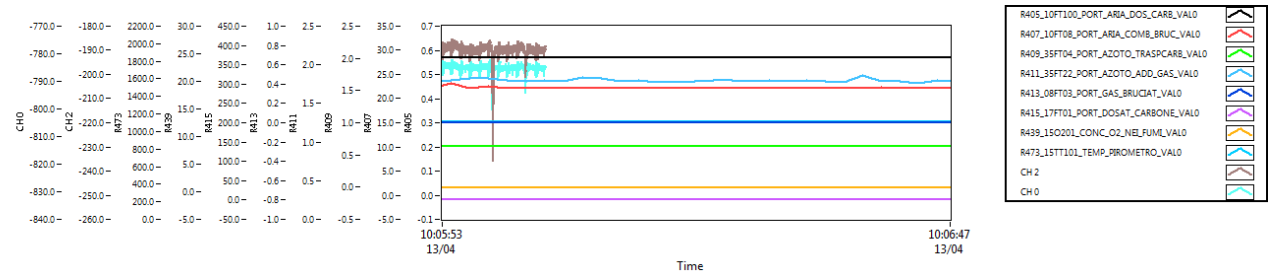
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:05:04
13/04
10:05:04
13/04
Time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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
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R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
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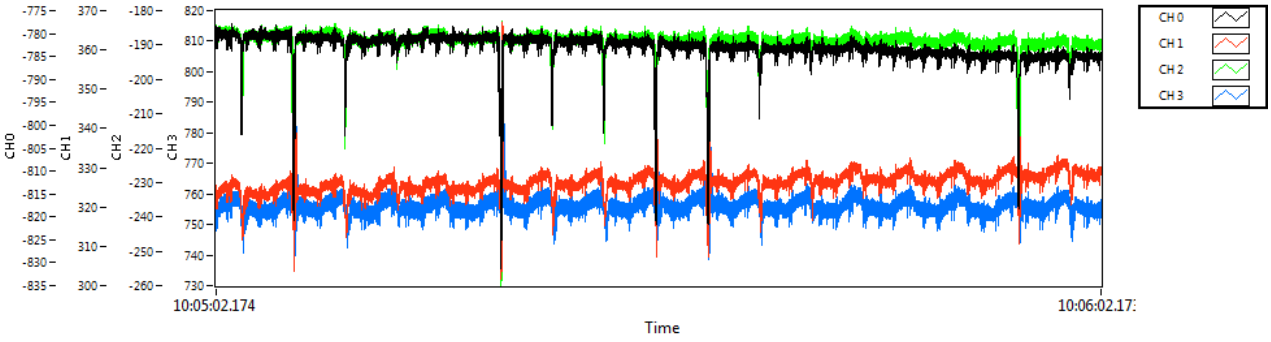
10:05:53
13/04
10:06:47
13/04
Time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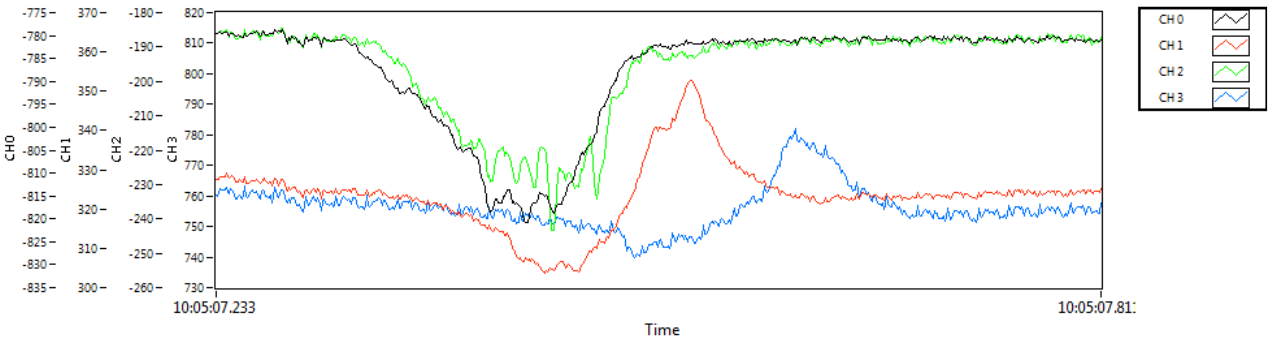
CH 2
CH 3
10:05:02.174
10:06:02.17
Time


CH 0
CH 1
CH 2
CH 3
10:05:07.233
10:05:07.81
Time

Misura 5: 13-04-2011-10-09-23.560.tdms

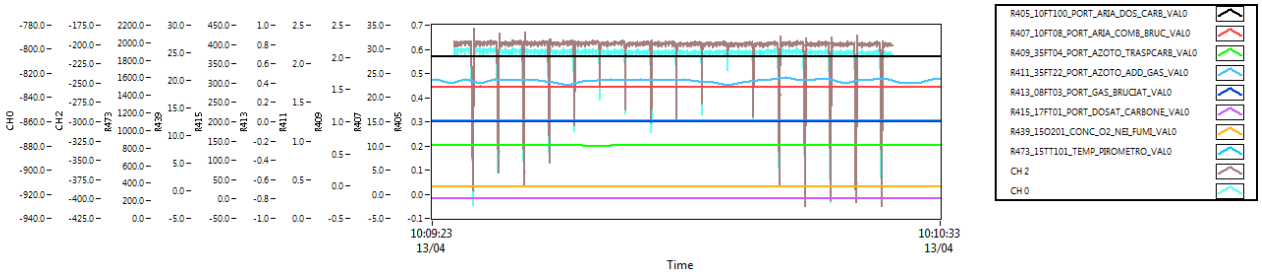
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE pulsata 250 mmc
Trasporto aria+azoto
O2 0.7 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	13/4/11 10:09:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1103
Pirometro portina 5 15TT101	1111
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1140
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	152
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	22.2
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11
CO (ppm)	2.25
O2 IN [%vol]	0.7
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.52
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.65
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1139.82
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.14
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	1090.57
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1104.02
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	152.55
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	192.57
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	78.74
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.28
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	27.77
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.28
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	28.82
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.12
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.58
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.49
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	29.14
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	27.84
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.13
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.78
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.09
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	183.29
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.59
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.73
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.07
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.37
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1095.04
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.10
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.67
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.81
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.80
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1051.31
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1098.49
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.00
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.16
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1111.77
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		7.17
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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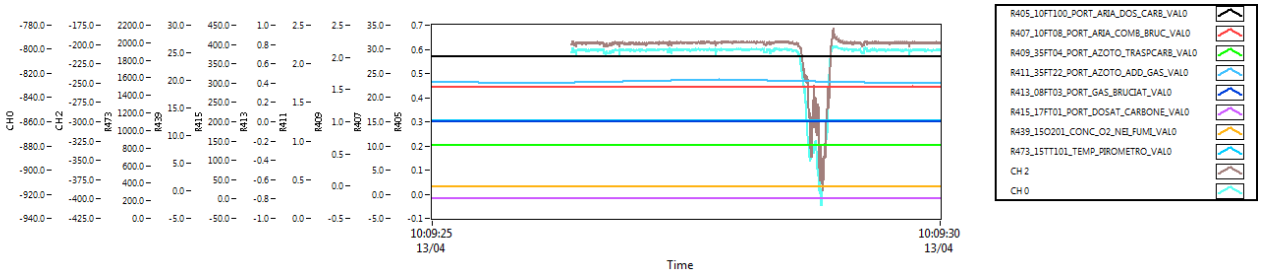
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:09:23
13/04
10:10:33
13/04
Time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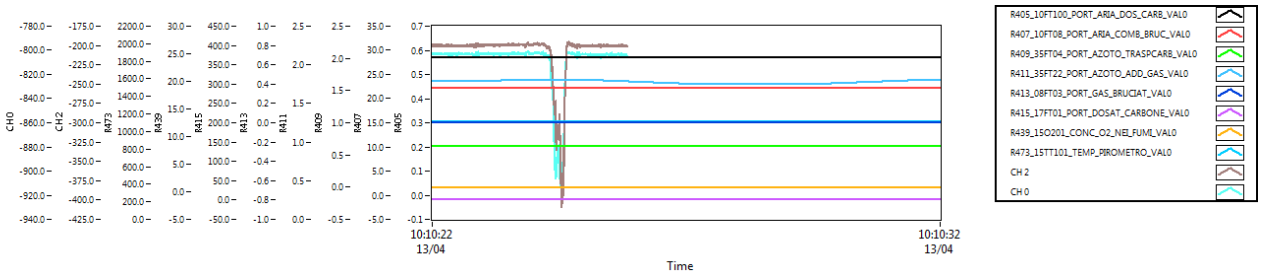
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:09:25
13/04
10:09:30
13/04
Time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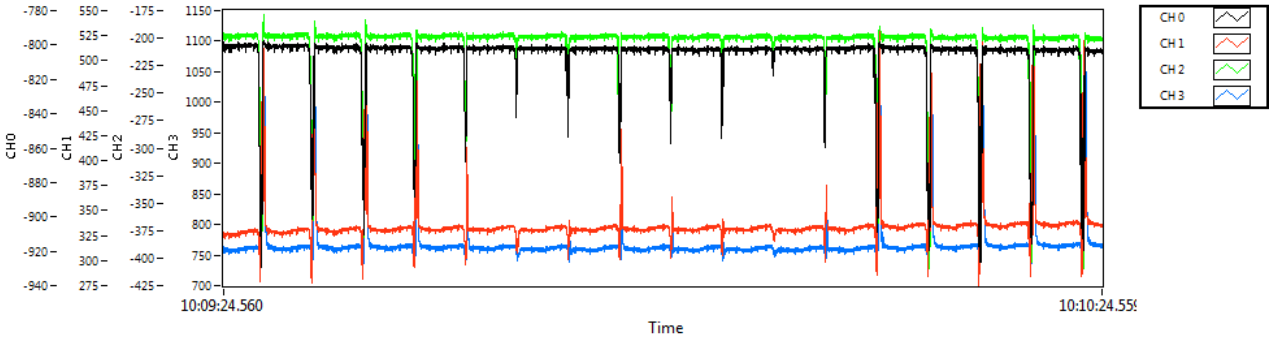
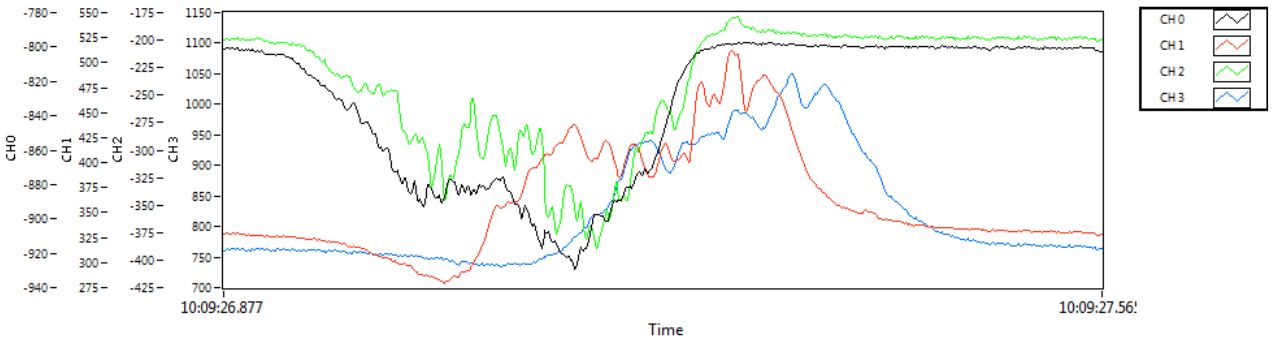
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:10:22
13/04
10:10:32
13/04
Time


CH 0
CH 1
CH 2
CH 3
10:09:24.560
10:10:24.55
Time


CH 0
CH 1
CH 2
CH 3
10:09:26.877
10:09:27.56
Time

Misura 6: 13-04-2011-10-11-05.095.tdms

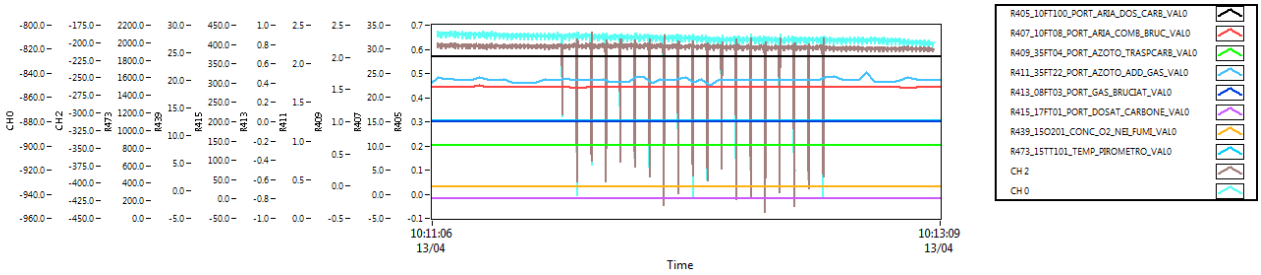
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE nulla-pulsata-nulla 250 mmc
Trasporto aria+azoto
O2 0.7 % nei fumi
TEMP 1100°

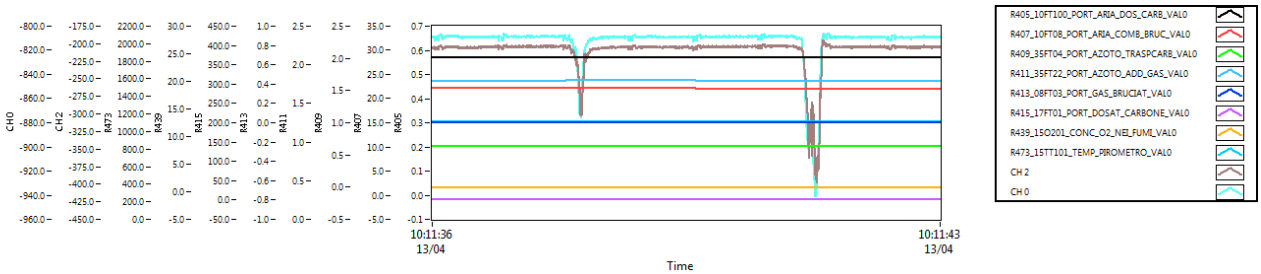
Condizioni di misura

data e ora inizio prova	13/4/11 10:11:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	22.1
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1.8
Tbruc [°C] (15TT09)	1103
Pirometro portina 5 15TT101	1111
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1140
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	152
Portata carbone(set point) [q/h]	off-pulse-off
N2quench_sonda [Nm3/h] 35ft101	22.2
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11
CO (ppm)	2.25
O2 IN [%vol]	0.7
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1427
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.57
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.98
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1140.19
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.19
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.37
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1103.27
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	153.48
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	193.20
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	78.12
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.26
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	27.83
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.31
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	28.87
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.12
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.63
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.55
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.15
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	27.88
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.12
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.79
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.09
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	198.29
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2841.33
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.73
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.07
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	2.30
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1095.46
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.25
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.71
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.41
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.86
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1051.01
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1098.41
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.20
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.15
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1110.71
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.17
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:11:06
13/04
10:13:09
13/04
Time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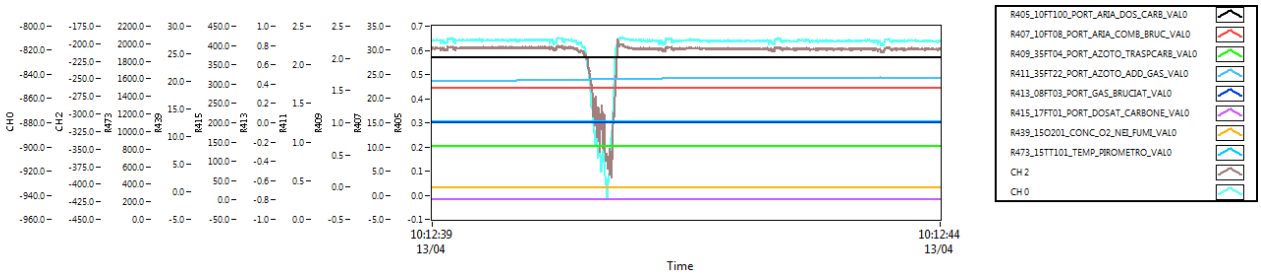
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:11:36
13/04
10:11:43
13/04
Time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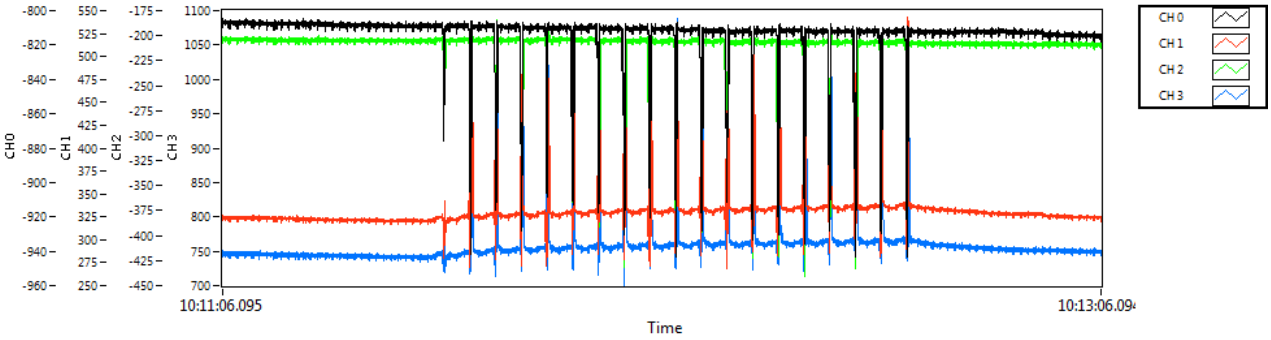
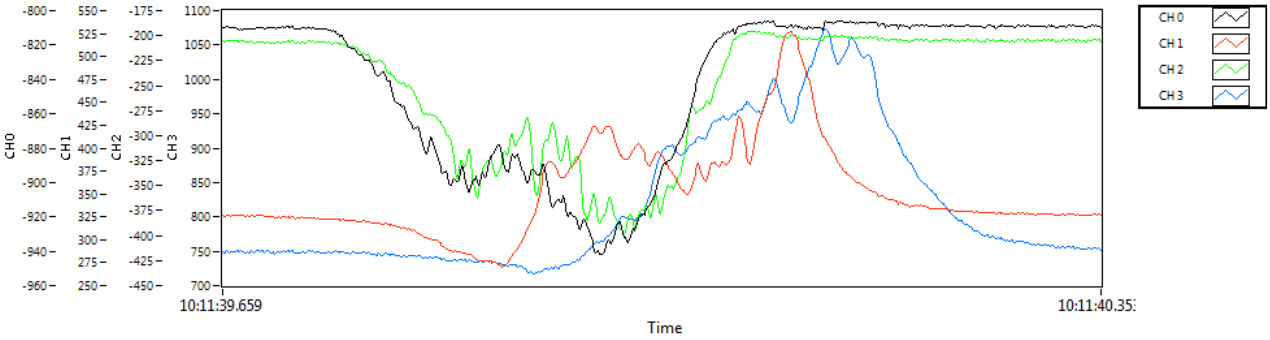
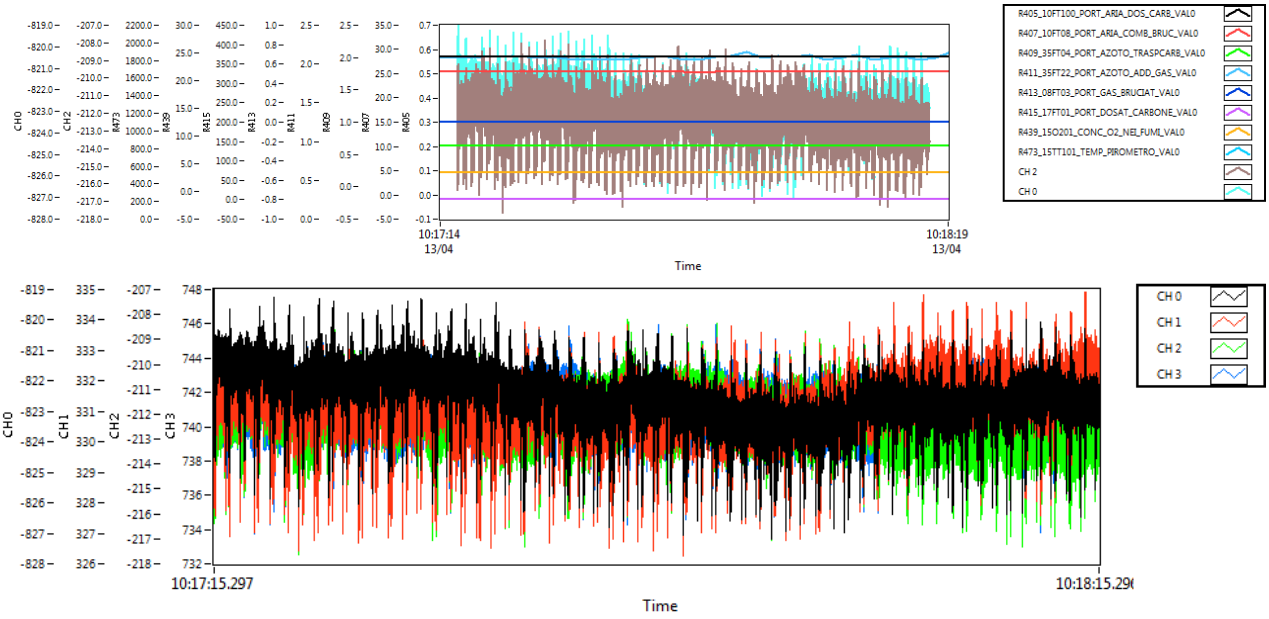
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:12:39
13/04
10:12:44
13/04
Time


CH 0
CH 1
CH 2
CH 3
10:11:06.095
10:13:06.094
Time


CH 0
CH 1
CH 2
CH 3
10:11:39.659
10:11:40.35
Time

Misura 7: 13-04-2011-10-17-14.297.tdms

Misura di fondo
ALIMENTAZIONE nulla
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°



Misura 8: 13-04-2011-10-19-17.328.tdms

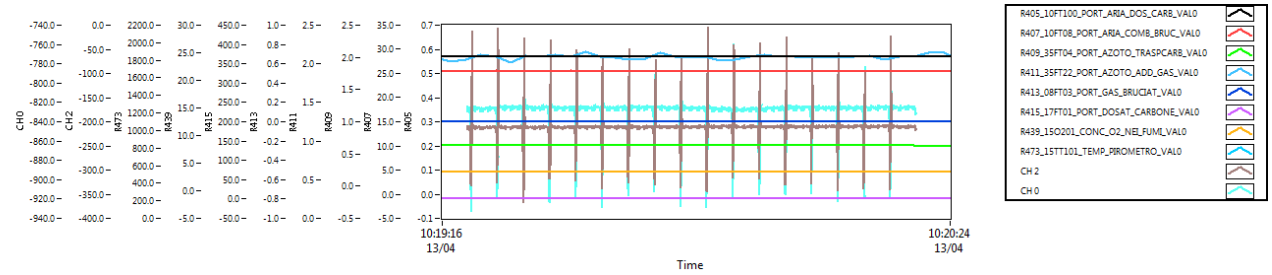
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE pulsata 250 mmc
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°

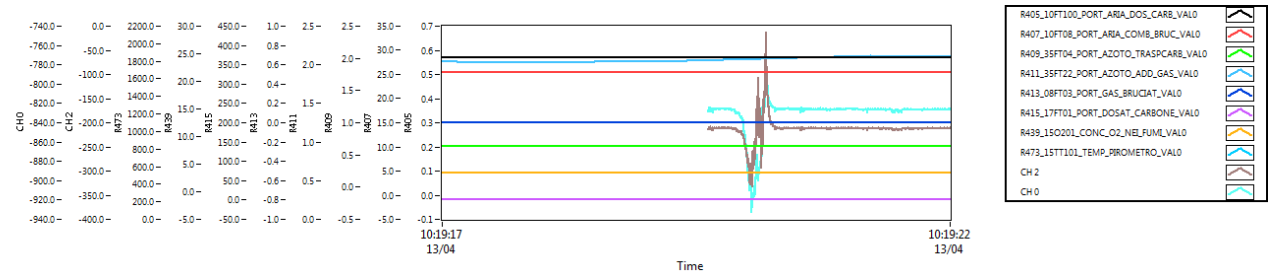
Condizioni di misura

data e ora inizio prova	13/4/11 10:19:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	25.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	2.1
Tbruc [°C] (15TT09)	1088
Pirometro portina 5 15TT101	1104
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1130
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	198
Tvalle_quench [°C] (15TT19)	190
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	21.78
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.6
CO (ppm)	1.47
O2 IN [%vol]	3.3
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1280
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.69
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	198.39
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1127.20
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.29
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.46
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1086.20
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	190.36
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	189.38
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	81.87
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.27
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.32
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.40
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.04
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.25
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.83
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.57
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.18
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	27.96
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.69
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	25.40
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.08
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.09
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	273.35
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.41
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.34
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.56
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.46
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1096.72
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.42
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.92
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.18
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.89
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1050.08
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1098.01
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.90
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.70
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1103.30
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.67
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:19:16
13/04
10:20:24
13/04
Time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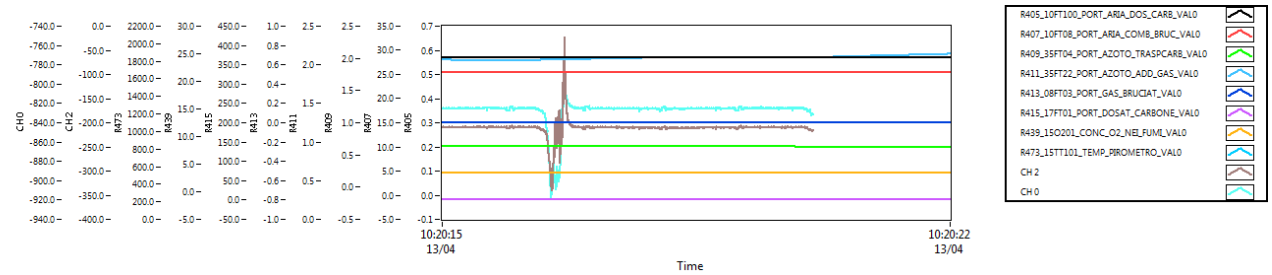
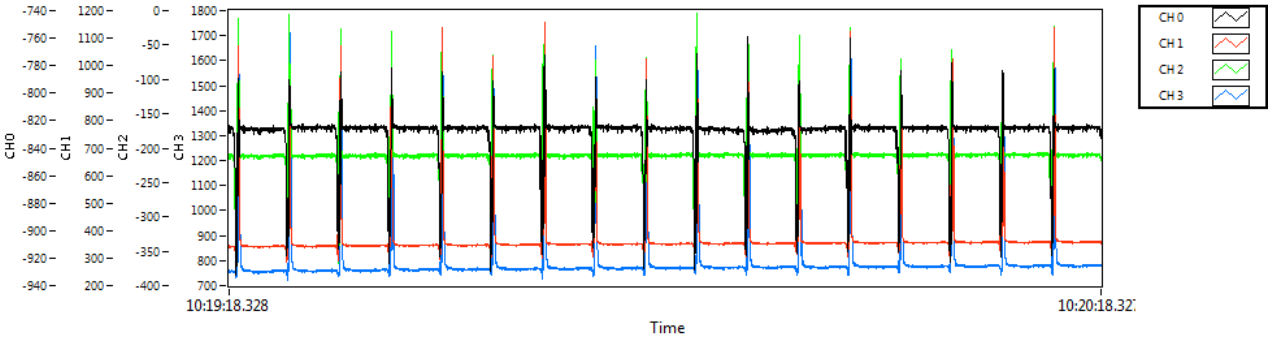
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:19:17
13/04
10:19:22
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:20:15
13/04
10:20:22
13/04
Time


CH 0
CH 1
CH 2
CH 3
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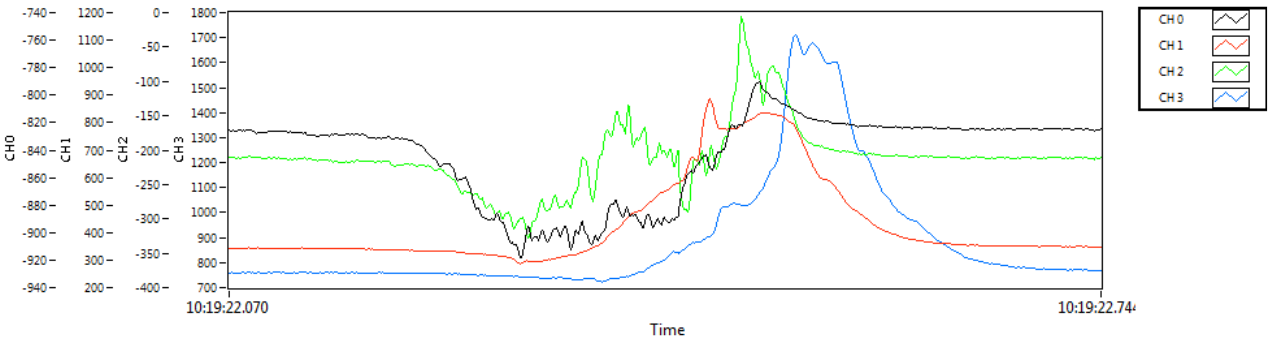
10:20:18.32
Time


CH 0
CH 1
CH 2
CH 3
10:19:22.070
10:19:22.74
Time

Misura 9: 13-04-2011-10-20-50.751.tdms

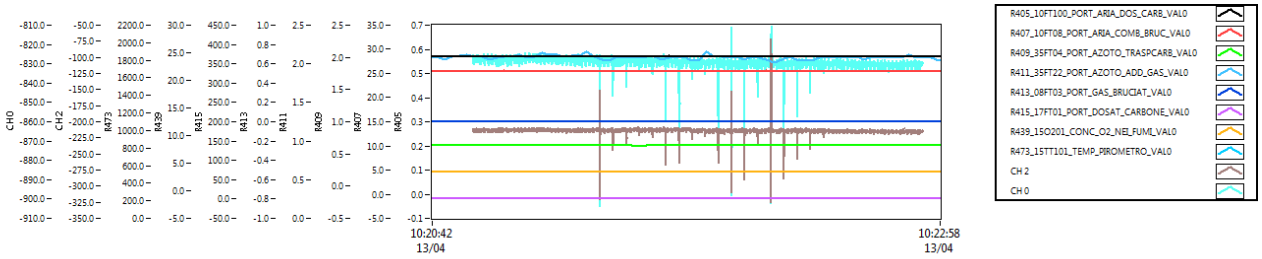
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE nulla- pulsata-nulla 250 mmc
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°

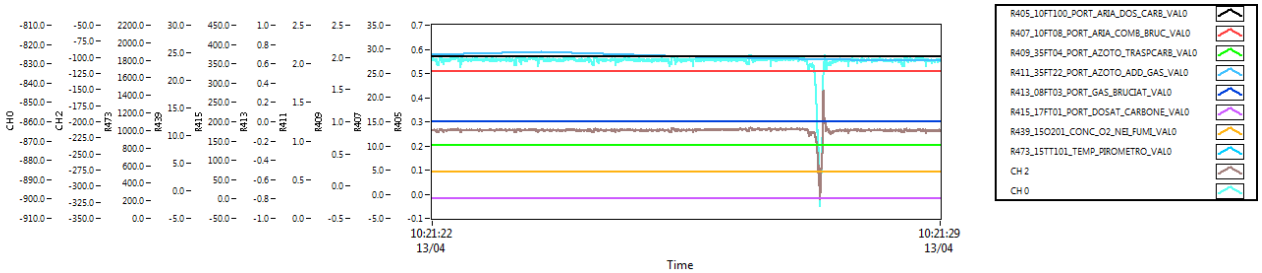
Condizioni di misura

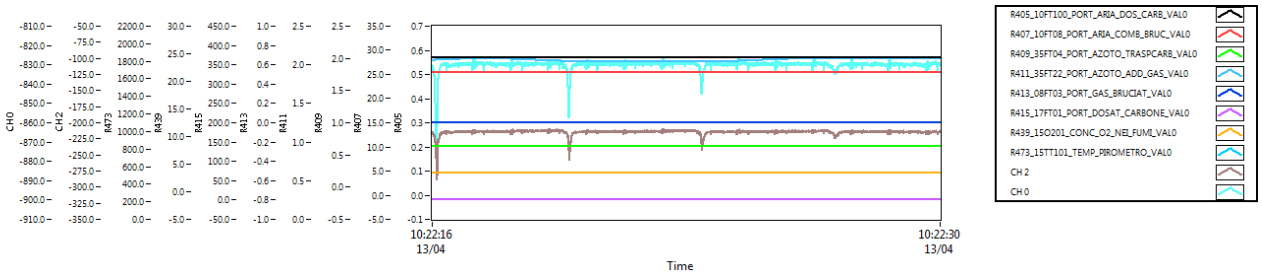
data e ora inizio prova	13/4/11 10:21:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	25.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	2.1
Tbruc [°C] (15TT09)	1085
Pirometro portina 5 15TT101	1102
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1126
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	199
Tvalle_quench [°C] (15TT19)	188
Portata carbone(set point) [q/h]	off-pulse-off
N2quench_sonda [Nm3/h] 35ft101	21.68
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.6
CO (ppm)	1.53
O2 IN [%vol]	3.3
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1280
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.3
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

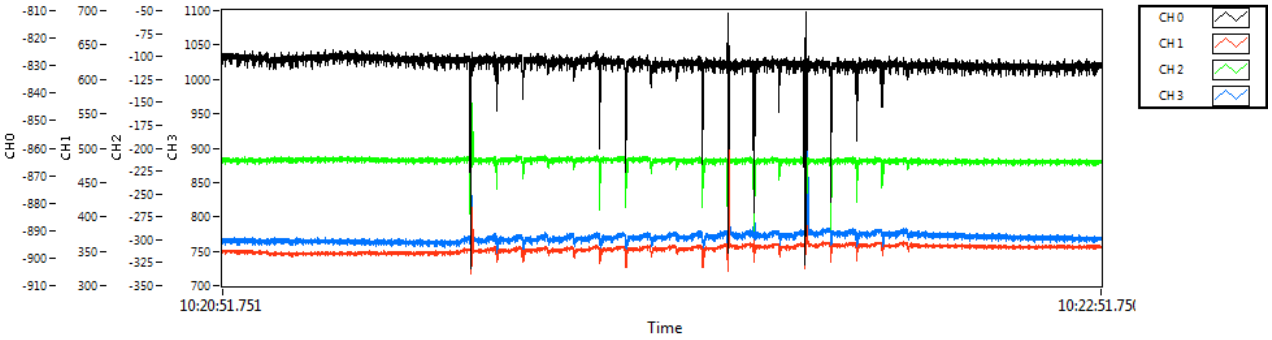
Valori medi variabili di processo

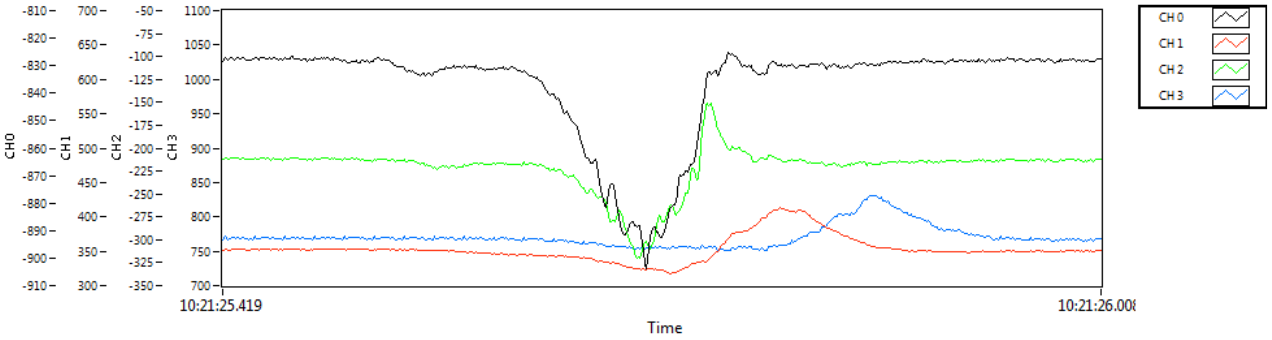
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.80
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.54
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.61
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.34
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	1089.46
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1084.67
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	188.02
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	188.74
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	82.22
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.37
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.34
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.43
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.09
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.28
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.87
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.62
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	29.23
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.00
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	25.39
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.08
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.09
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	266.77
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.25
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.33
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.58
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.51
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.03
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.50
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.05
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.21
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.83
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1049.77
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1097.87
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.10
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.65
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1102.26
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:20:42
13/04
10:22:58
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:21:22
13/04
10:21:29
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:22:16
13/04
10:22:30
13/04
Time


CH 0
CH 1
CH 2
CH 3
10:20:51.751
10:22:51.75(
Time


CH 0
CH 1
CH 2
CH 3
10:21:25.419
10:21:26.00(
Time

Misura 10: 13-04-2011-10-25-59.004.tdms

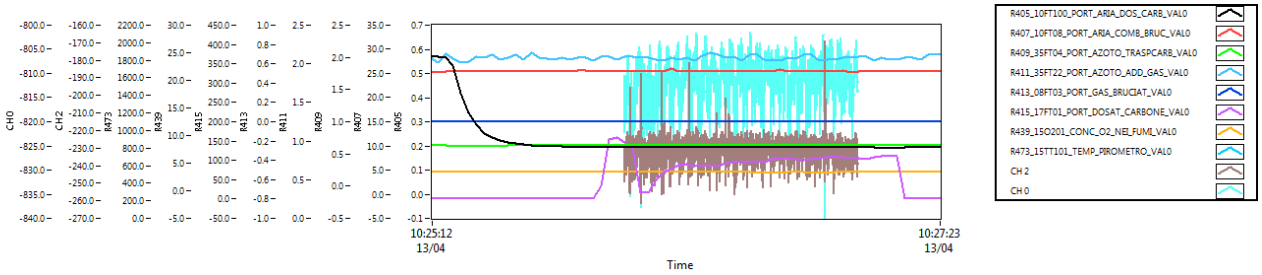
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°

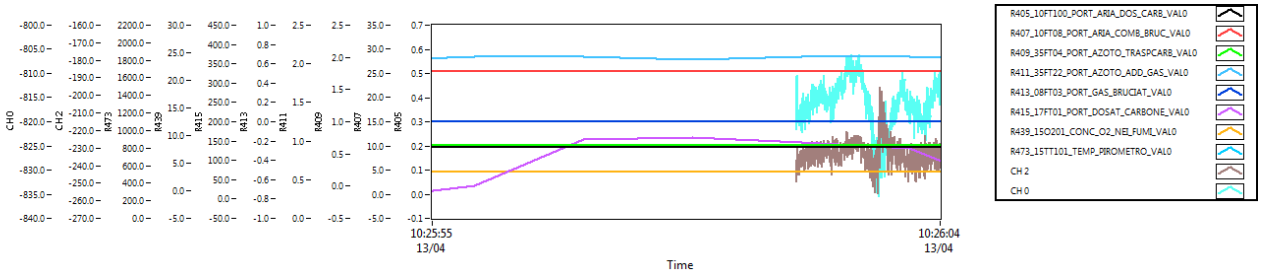
Condizioni di misura

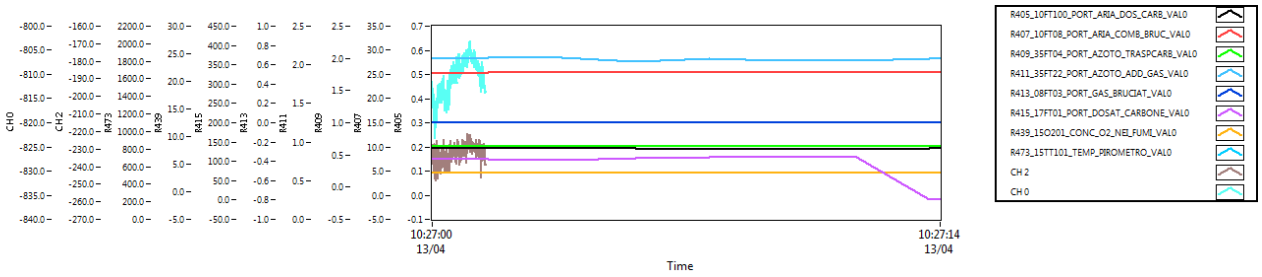
data e ora inizio prova	13/4/11 10:26:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	25.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	2.1
Tbruc [°C] (15TT09)	1082
Pirometro portina 5 15TT101	1100
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1126
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	203
Tvalle_quench [°C] (15TT19)	185
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	21.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.6
CO (ppm)	1.48
O2 IN [%vol]	3.3
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1280
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.58
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

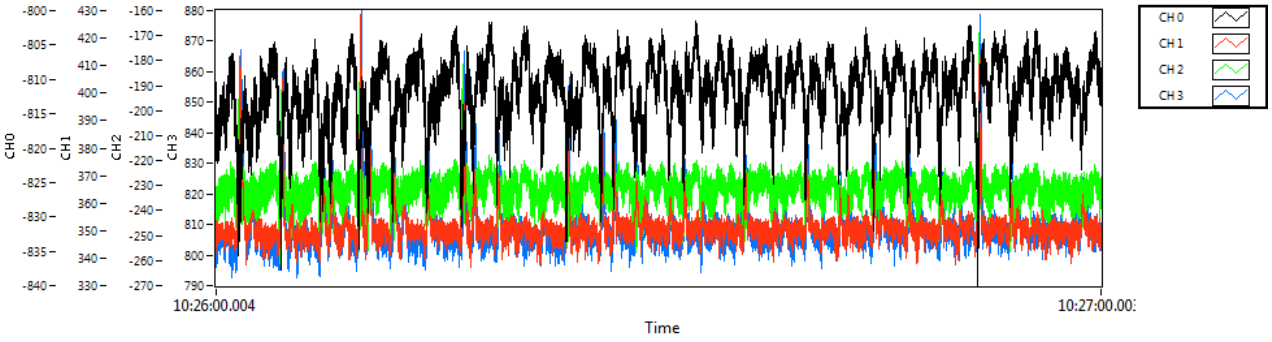
Valori medi variabili di processo

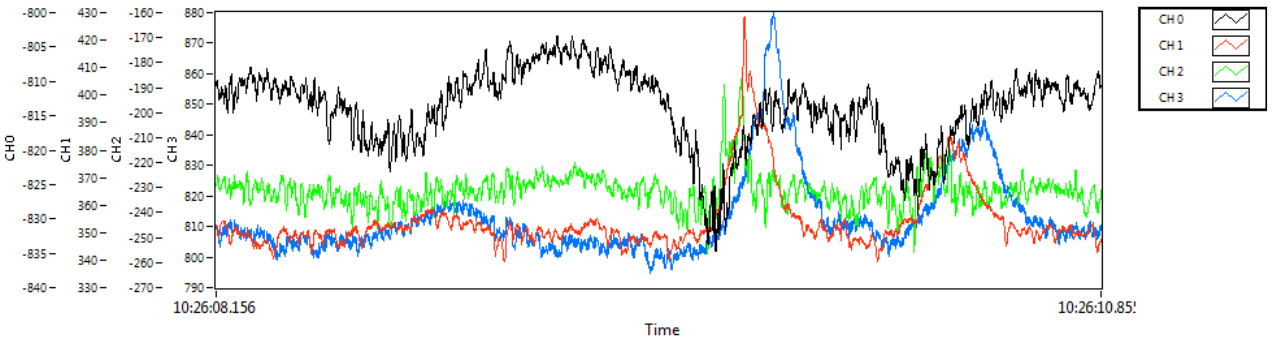
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.85
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	202.93
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.61
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.39
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.71
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1082.28
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	184.93
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	190.42
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	81.86
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.59
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.35
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.48
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.17
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.32
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.91
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.69
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.26
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.06
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.72
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.19
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	25.42
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.08
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	93.35
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	252.16
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.15
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.32
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.59
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.48
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.49
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.53
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.23
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.61
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.78
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1049.32
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1097.61
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.43
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.88
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1100.04
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:25:12
13/04
10:27:23
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:25:55
13/04
10:26:04
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:27:00
13/04
10:27:14
13/04
Time


CH 0
CH 1
CH 2
CH 3
10:26:00.004
10:27:00.00
Time


CH 0
CH 1
CH 2
CH 3
10:26:08.156
10:26:10.85
Time

Misura 11: 13-04-2011-10-27-26.440.tdms

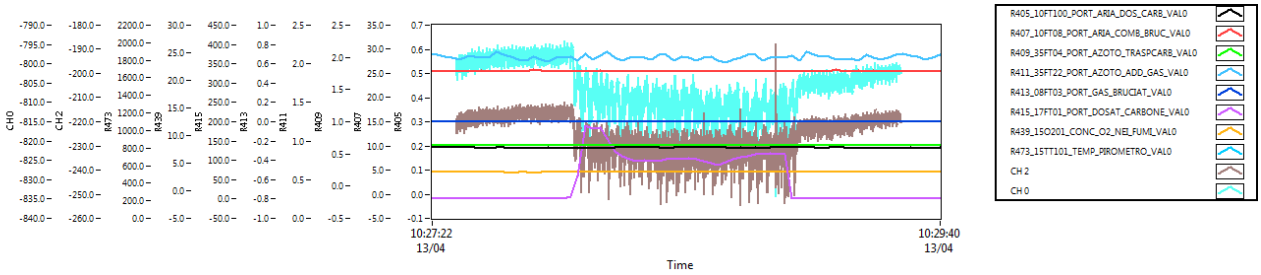
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE nulla-continua-nulla 110 g/h
Trasporto aria+azoto
O2 3.3 % nei fumi
TEMP 1100°

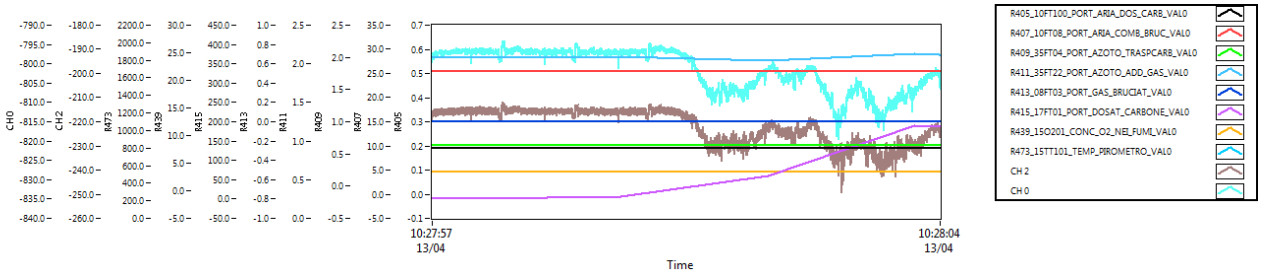
Condizioni di misura

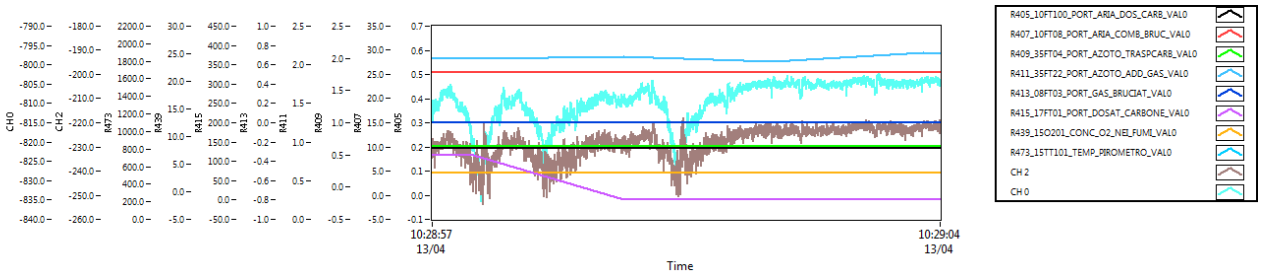
data e ora inizio prova	13/4/11 10:27:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	25.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	2.1
Tbruc [°C] (15TT09)	1082
Pirometro portina 5 15TT101	1100
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1126
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	203
Tvalle_quench [°C] (15TT19)	185
Portata carbone(set point) [g/h]	off-110-off
N2quench_sonda [Nm3/h] 35ft101	21.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.6
CO (ppm)	1.48
O2 IN [%vol]	3.3
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1280
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

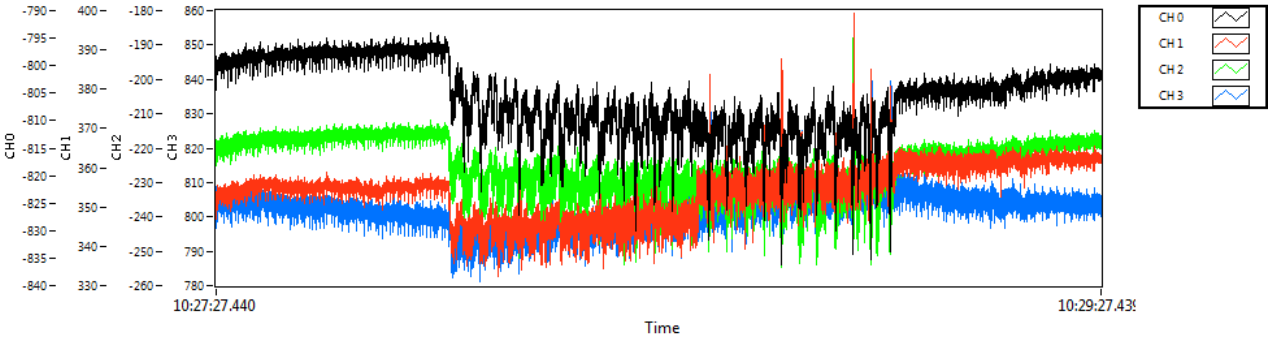
Valori medi variabili di processo

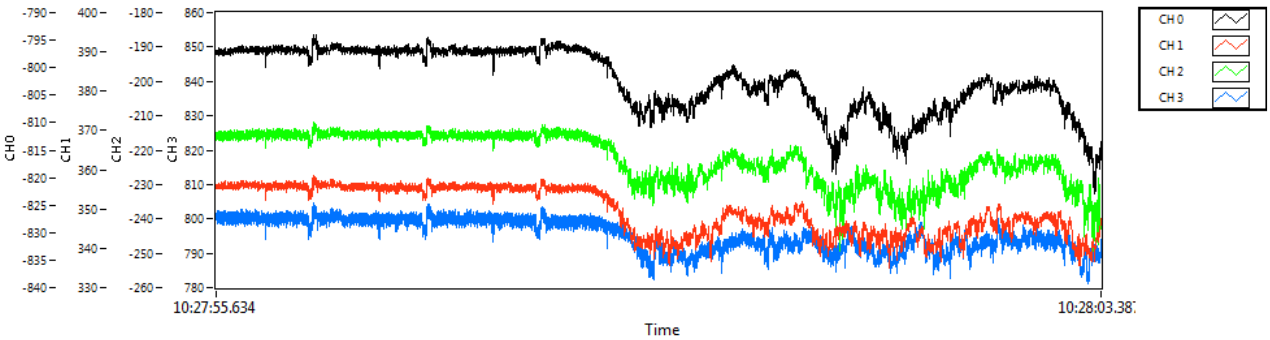
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.86
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	203.05
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1125.59
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.39
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.78
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1082.10
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	185.59
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	191.63
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	81.72
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.54
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.38
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.49
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.18
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.32
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	27.92
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.67
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.27
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.07
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.72
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.19
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	25.40
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.08
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	25.11
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	262.25
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2840.51
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.32
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.59
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.51
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.65
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.88
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.28
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.60
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.81
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1049.21
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1097.43
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.48
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.97
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1099.58
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:27:22
13/04
10:29:40
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:27:57
13/04
10:28:04
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:28:57
13/04
10:29:04
13/04
Time


CH 0
CH 1
CH 2
CH 3
10:27:27.440
Time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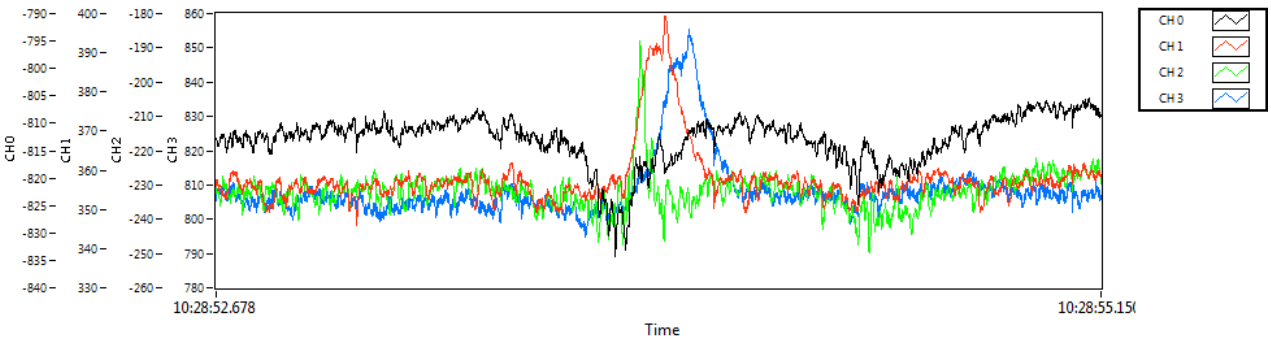
CH 1
CH 2
CH 3
10:27:55.634
Time


CH 0
CH 1
CH 2
CH 3
10:28:52.678
Time

Misura 12: 13-04-2011-10-34-08.933.tdms

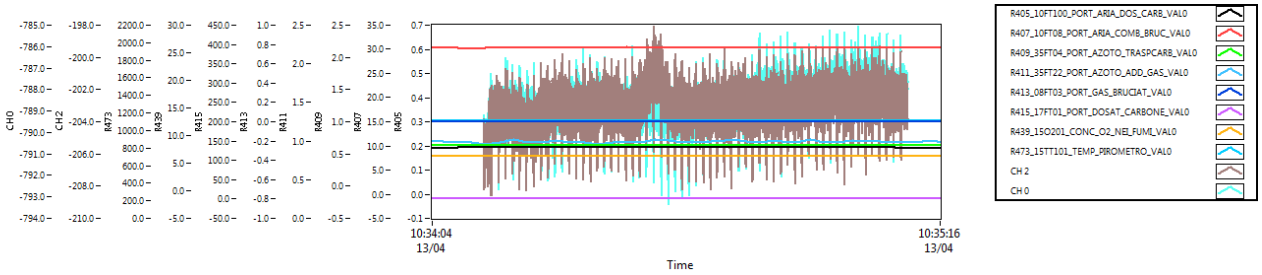
FONDO
ALIMENTAZIONE nulla
Trasporto aria+azoto
O2 6.2 % nei fumi
TEMP 1100°

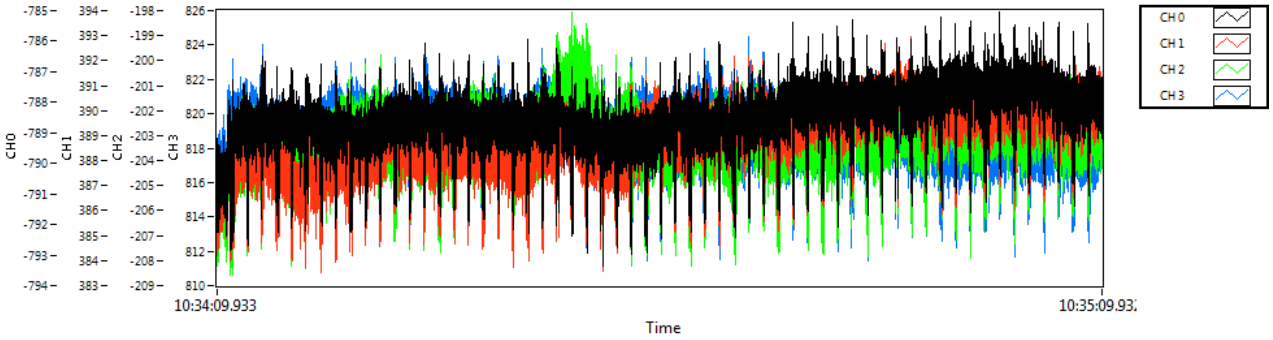
Condizioni di misura

data e ora inizio prova	13/4/11 10:36:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1055
Pirometro portina 5 15TT101	1104
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1123
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	211
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	21.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	1.08
O2 IN [%vol]	6.2
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.97
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.13
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1123.98
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.53
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1088.93
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1055.30
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	211.06
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	194.32
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	87.40
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.95
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.80
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.61
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.32
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.46
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.15
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.80
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.39
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.18
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.77
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.19
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.34
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.99
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	57.66
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	400.46
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.47
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.24
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.01
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.12
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.29
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1102.62
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.82
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.69
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.98
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1048.38
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1096.99
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.87
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.89
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1104.50
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:34:04
13/04
10:35:16
13/04
Time


CH 0
CH 1
CH 2
CH 3
10:34:09.933
10:35:09.93
Time

Misura 13: 13-04-2011-10-36-45.390.tdms

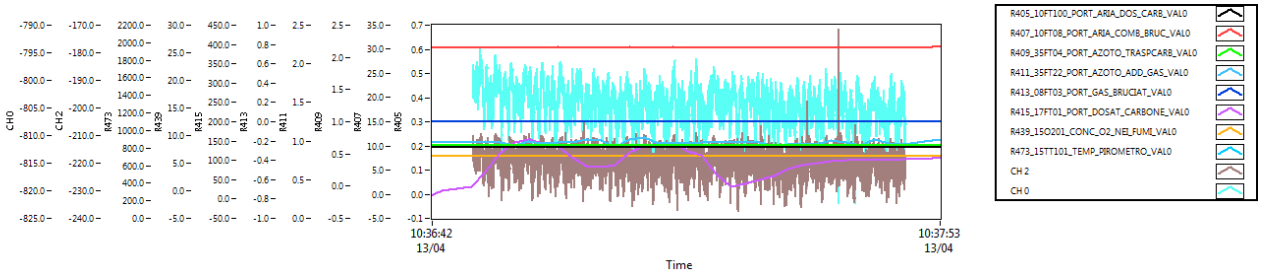
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 6.2 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	13/4/11 10:36:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38- 90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1055
Pirometro portina 5 15TT101	1104
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1123
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	211
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	21.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	1.08
O2 IN [%vol]	6.2
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6- CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	23.97
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.13
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1123.98
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.53
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1088.93
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1055.30
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	211.06
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	194.32
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	87.40
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.95
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.80
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.61
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.32
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.46
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.15
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.80
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	29.39
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.18
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.77
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.19
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.34
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.99
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	57.66
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	400.46
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.47
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.24
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.01
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.12
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.29
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1102.62
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.82
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.69
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.98
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1048.38
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1096.99
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.87
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.89
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1104.50
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
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CH 2
CH 0
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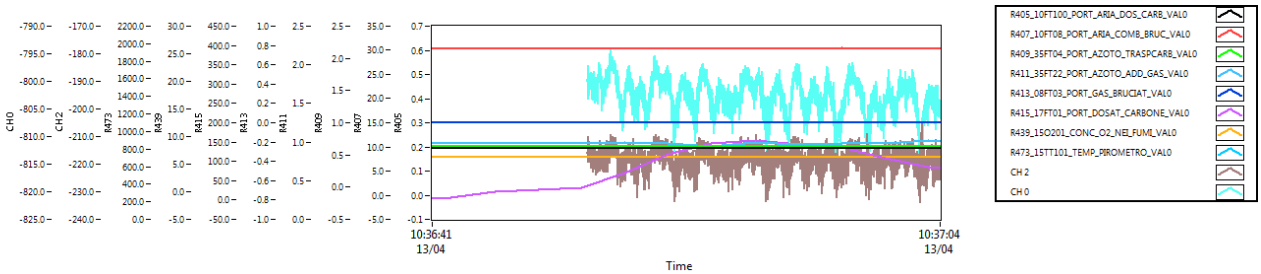
13/04
10:37:53
13/04
Time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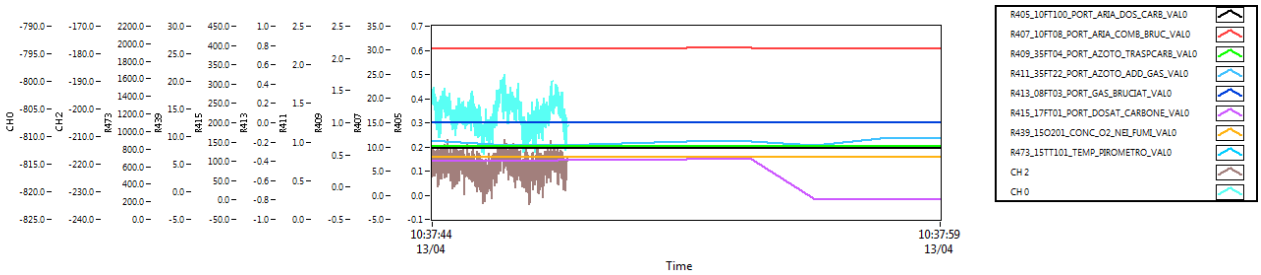
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:36:41
13/04
10:37:04
13/04
Time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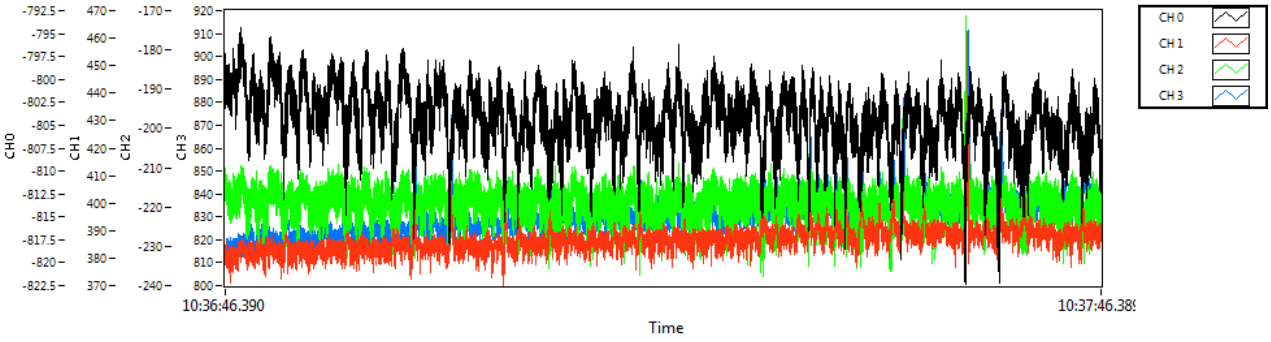
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:37:44
13/04
10:37:59
13/04
Time


CH 0
CH 1
CH 2
CH 3
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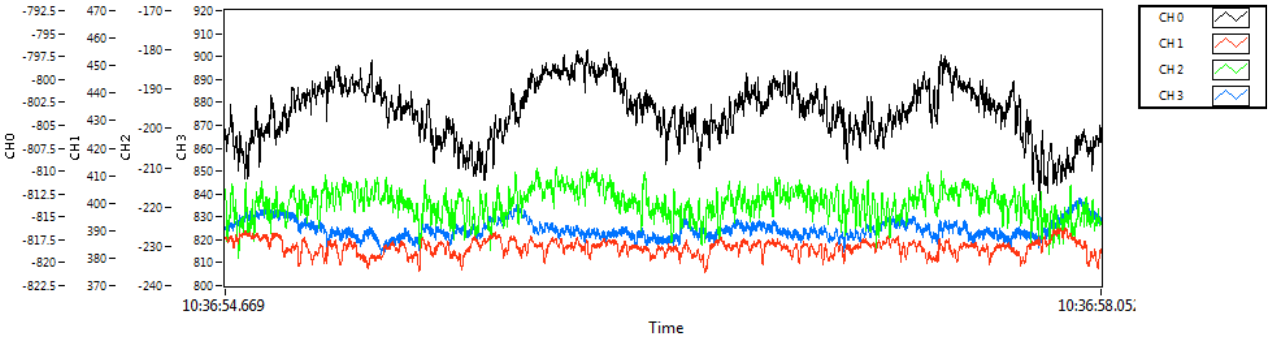
10:37:46.38
Time


CH 0
CH 1
CH 2
CH 3
10:36:54.669
10:36:58.05
Time

Misura 14: 13-04-2011-10-38-21.874.tdms

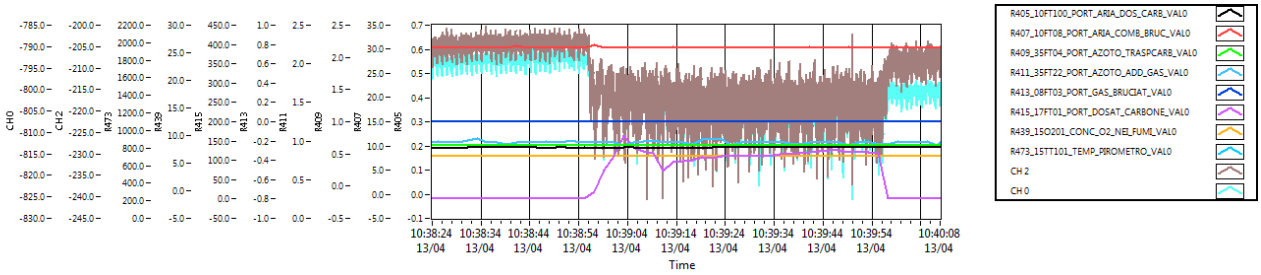
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE nulla-continua-nulla 110 g/h
Trasporto aria+azoto
O2 6.2 % nei fumi
TEMP 1100°

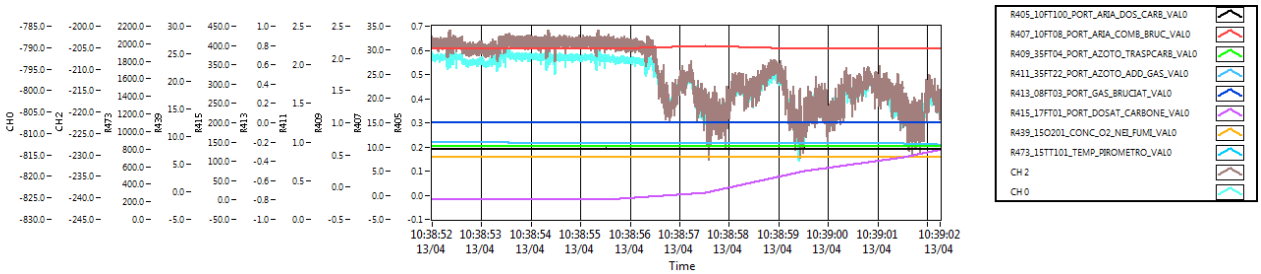
Condizioni di misura

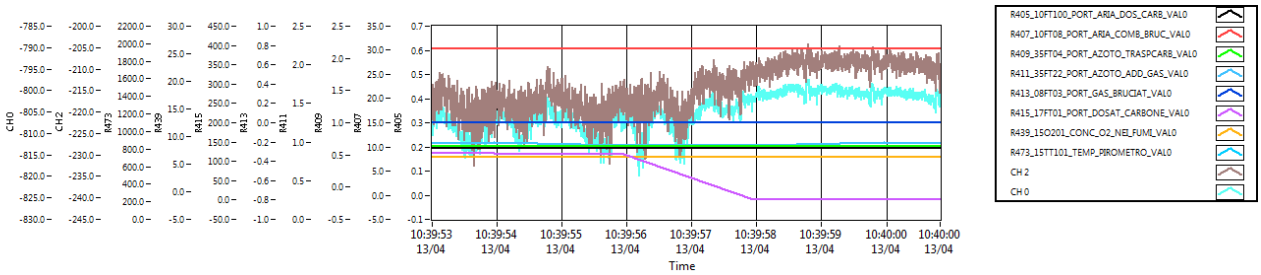
data e ora inizio prova	13/4/11 10:38:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38-90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1053
Pirometro portina 5 15TT101	1102
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1123
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	209
Portata carbone(set point) [q/h]	off-110-off
N2quench_sonda [Nm3/h] 35ft101	21.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	1.13
O2 IN [%vol]	6.2
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	24.06
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.86
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1123.27
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.57
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.27
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1052.12
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.70
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	195.55
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	88.30
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.96
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.84
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.65
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.36
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.47
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.19
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.85
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.44
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.22
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.19
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.35
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.98
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	55.22
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	420.21
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.34
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.23
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.00
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.11
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.44
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1101.89
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.87
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.92
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.97
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1048.12
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1096.94
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.07
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.95
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1102.63
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:38:24 13/04
10:38:34 13/04
10:38:44 13/04
10:38:54 13/04
10:39:04 13/04
10:39:14 13/04
10:39:24 13/04
10:39:34 13/04
10:39:44 13/04
10:39:54 13/04
10:40:08 13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:38:52 13/04
10:38:53 13/04
10:38:54 13/04
10:38:55 13/04
10:38:56 13/04
10:38:57 13/04
10:38:58 13/04
10:38:59 13/04
10:39:00 13/04
10:39:01 13/04
10:39:02 13/04
Time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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:39:53 13/04
10:39:54 13/04
10:39:55 13/04
10:39:56 13/04
10:39:57 13/04
10:39:58 13/04
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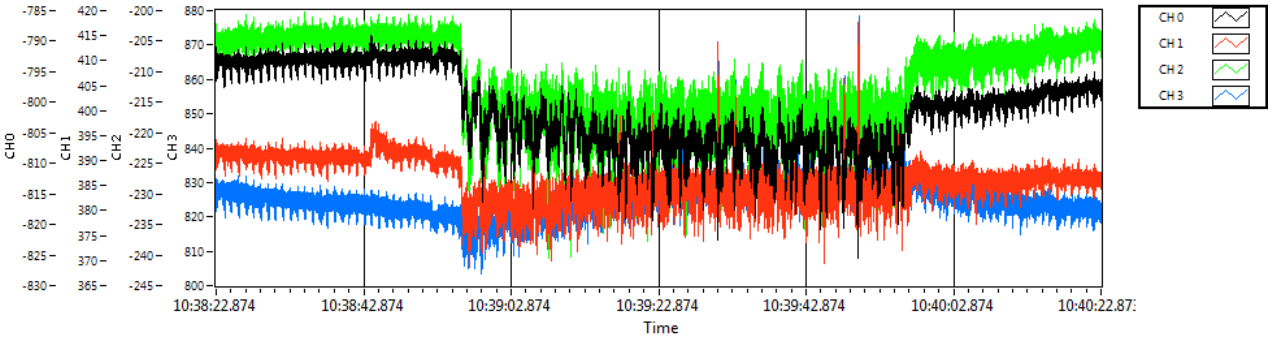
10:40:00 13/04
10:40:00 13/04
Time


CH 0
CH 1
CH 2
CH 3
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10:38:42.874
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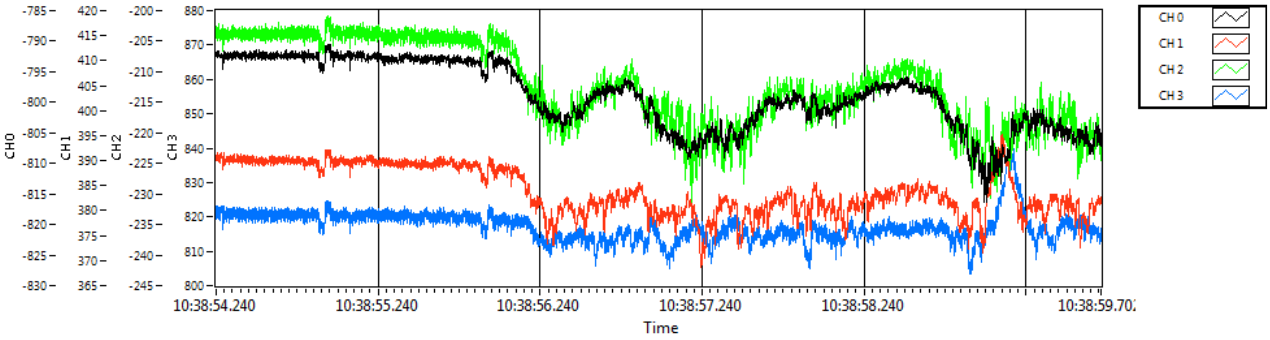
10:39:42.874
10:40:02.874
Time


CH 0
CH 1
CH 2
CH 3
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10:38:55.240
10:38:56.240
10:38:57.240
10:38:58.240
Time

Misura 15: 13-04-2011-10-45-10.067.tdms

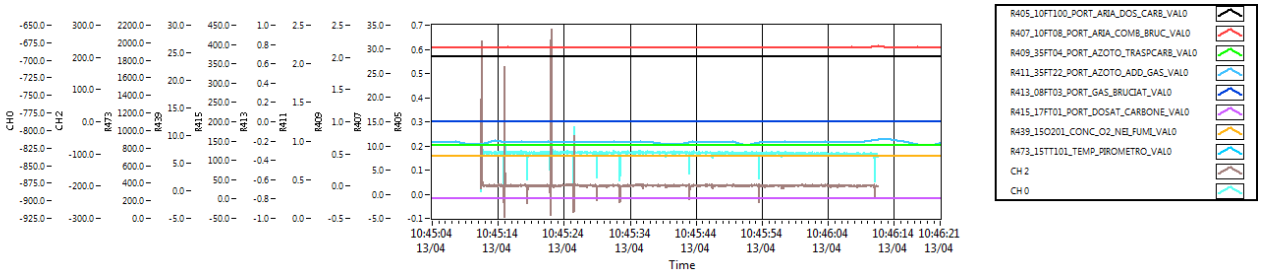
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE pulsata 250 mmc
Trasporto aria+azoto
O2 6.0 % nei fumi
TEMP 1100°

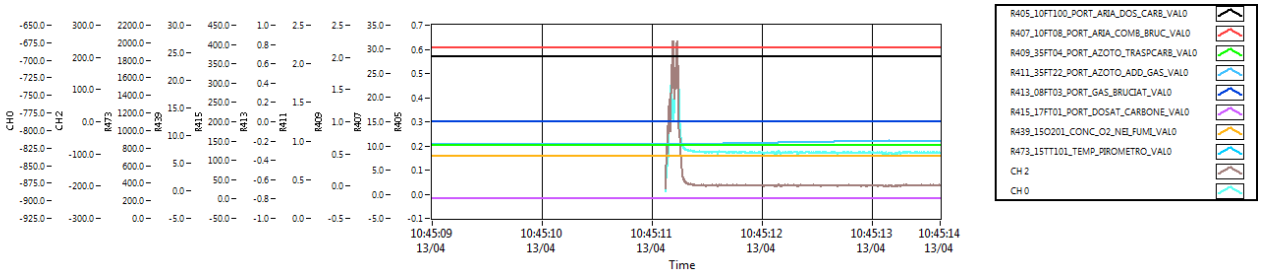
Condizioni di misura

data e ora inizio prova	13/4/11 10:45:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38-90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1047
Pirometro portina 5 15TT101	1099
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1139
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	21.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	1.09
O2 IN [%vol]	6.2
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	1
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	24.19
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.61
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1131.12
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.65
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1088.91
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1046.88
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	211.31
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	194.08
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	90.21
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.18
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.91
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.73
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.45
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.57
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.26
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.92
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.53
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.30
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.31
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.98
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.10
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	390.20
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.24
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.24
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.00
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.07
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.82
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.67
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1100.00
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.43
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.06
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1047.56
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1096.57
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.25
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.77
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1099.64
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.83
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:45:04 13/04
10:45:14 13/04
10:45:24 13/04
10:45:34 13/04
10:45:44 13/04
10:45:54 13/04
10:46:04 13/04
10:46:14 13/04
10:46:21 13/04
Time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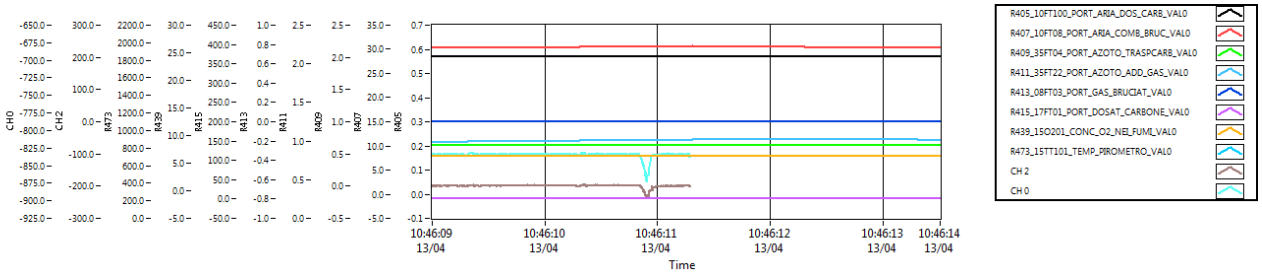
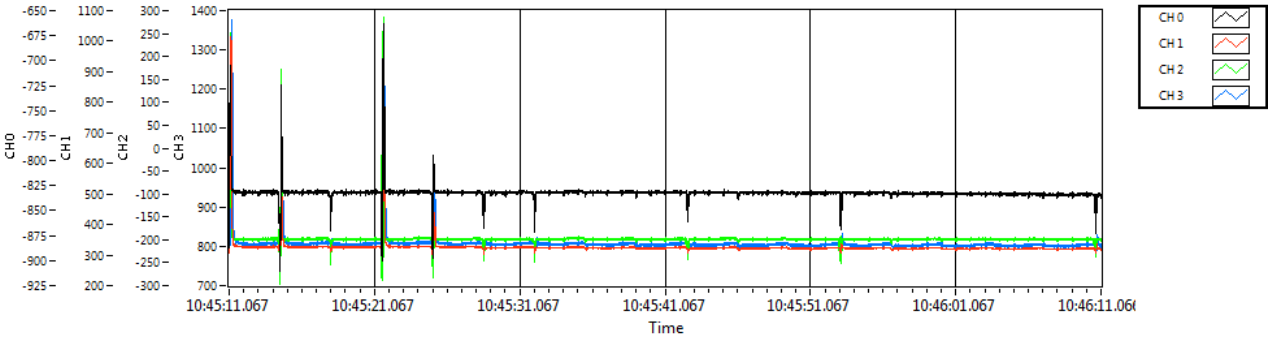
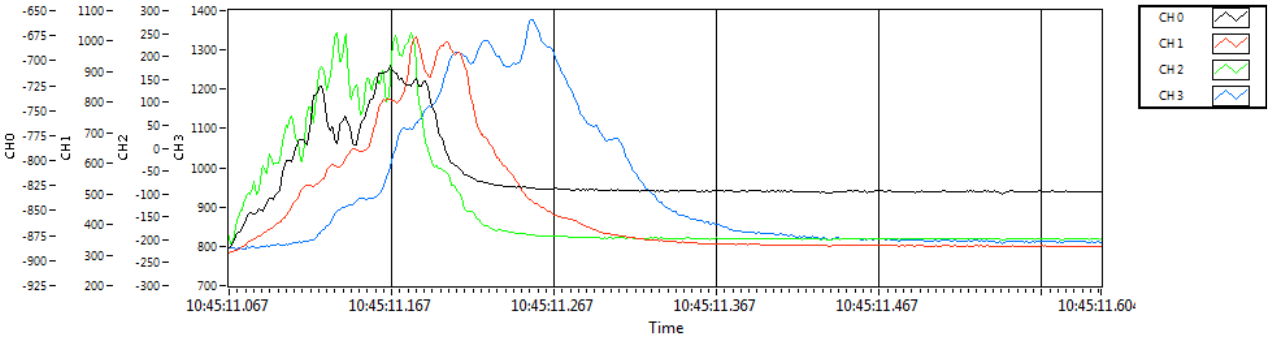
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:45:09 13/04
10:45:10 13/04
10:45:11 13/04
10:45:12 13/04
10:45:13 13/04
10:45:14 13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:46:09 13/04
10:46:10 13/04
10:46:11 13/04
10:46:12 13/04
10:46:13 13/04
10:46:14 13/04
Time


CH 0
CH 1
CH 2
CH 3
10:45:11.067
10:45:21.067
10:45:31.067
10:45:41.067
10:45:51.067
10:46:01.067
10:46:11.06
Time


CH 0
CH 1
CH 2
CH 3
10:45:11.067
10:45:11.167
10:45:11.267
10:45:11.367
10:45:11.467
10:45:11.60
Time

Misura 16: 13-04-2011-10-47-12.694.tdms

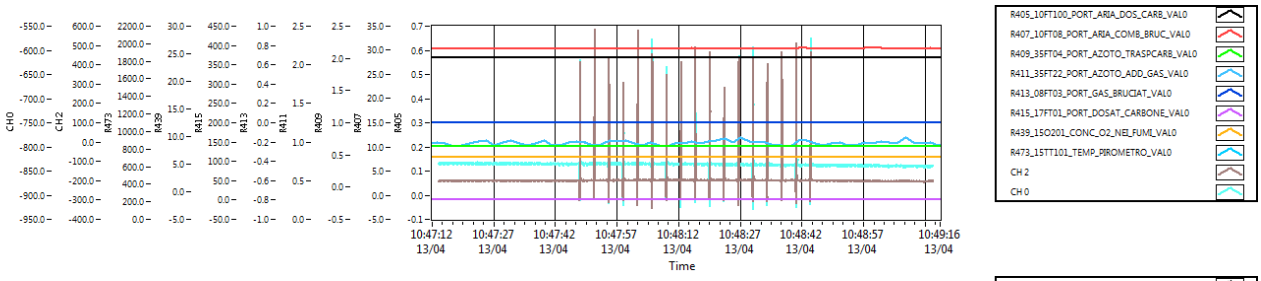
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE nulla-pulsata-nulla 250 mmc
Trasporto aria+azoto
O2 6.0 % nei fumi
TEMP 1100°

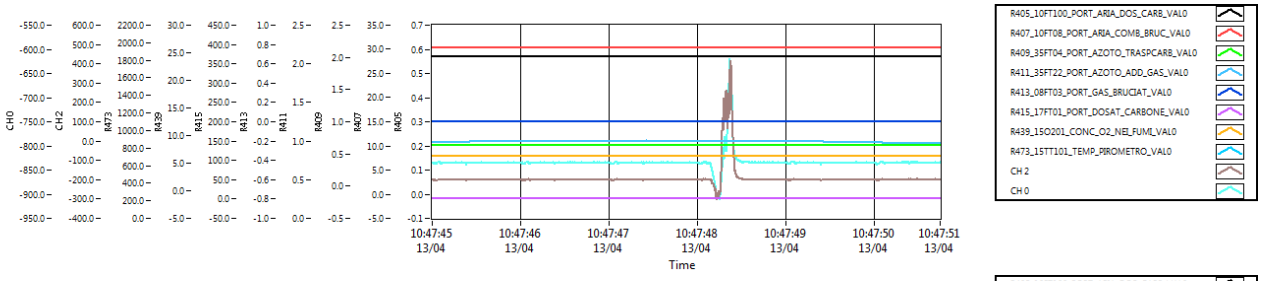
Condizioni di misura

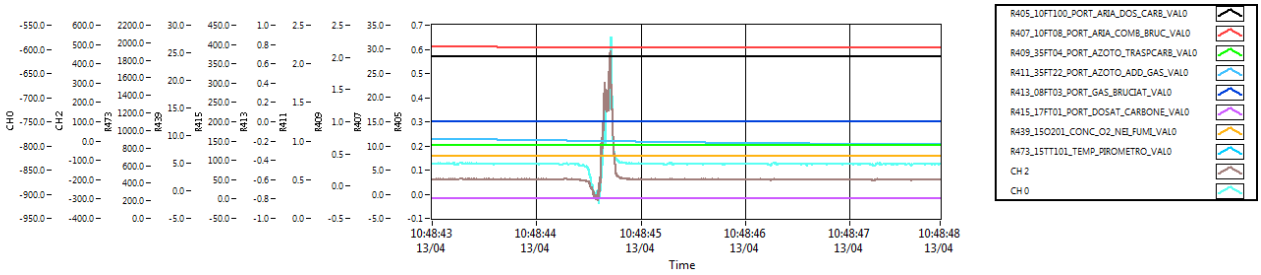
data e ora inizio prova	13/4/11 10:47:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38-90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1045
Pirometro portina 5 15TT101	1098
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1139
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	211
Portata carbone(set point) [q/h]	off-pulse-off
N2quench_sonda [Nm3/h] 35ft101	21.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	1.1
O2 IN [%vol]	6.25
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

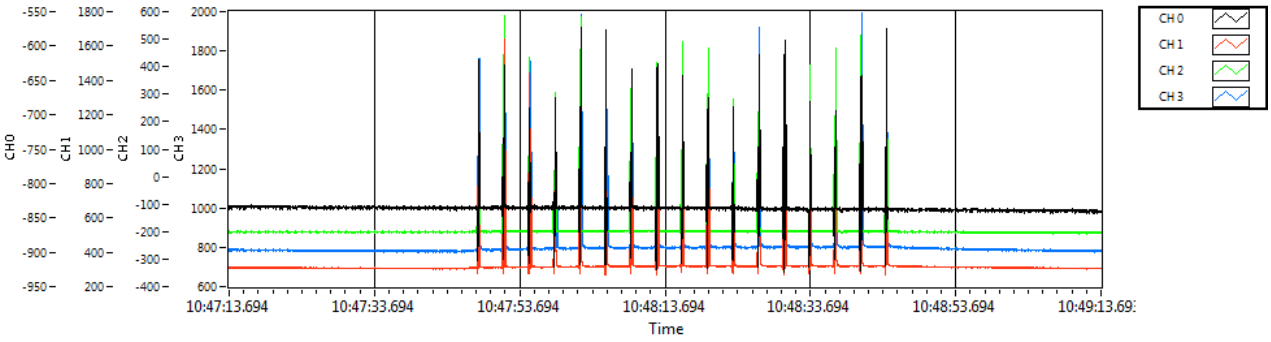
Valori medi variabili di processo

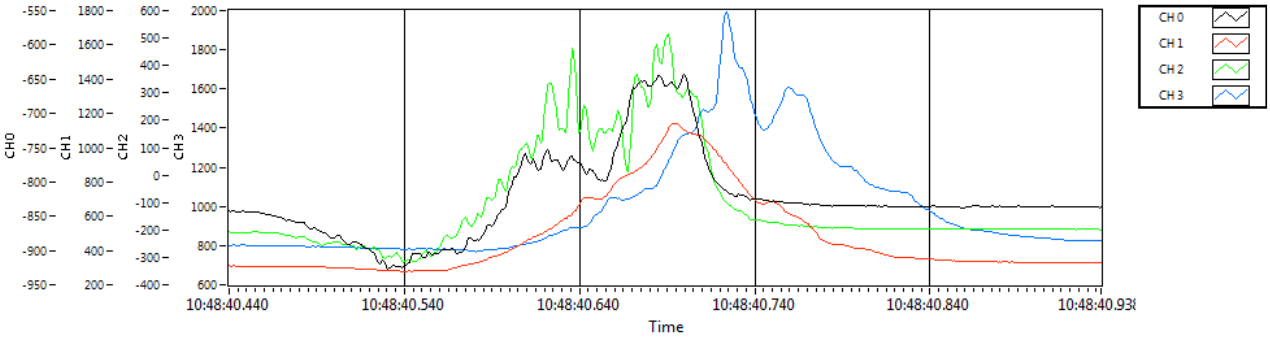
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	24.25
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.59
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1138.81
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.67
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1088.87
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1045.05
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.23
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	194.42
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	91.03
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.09
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.94
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.77
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.46
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.58
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.29
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	27.97
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	29.55
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.34
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.75
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.33
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.99
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.10
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	401.33
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.02
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.25
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.01
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.10
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.80
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.38
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1100.02
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.79
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.96
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1047.36
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1096.37
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.19
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.81
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1098.49
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.08
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:47:12 13/04
10:47:27 13/04
10:47:42 13/04
10:47:57 13/04
10:48:12 13/04
10:48:27 13/04
10:48:42 13/04
10:48:57 13/04
10:49:16 13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:47:45 13/04
10:47:46 13/04
10:47:47 13/04
10:47:48 13/04
10:47:49 13/04
10:47:50 13/04
10:47:51 13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:48:43 13/04
10:48:44 13/04
10:48:45 13/04
10:48:46 13/04
10:48:47 13/04
10:48:48 13/04
Time


CH 0
CH 1
CH 2
CH 3
10:47:13.694
10:47:33.694
10:47:53.694
10:48:13.694
10:48:33.694
10:48:53.694
Time


CH 0
CH 1
CH 2
CH 3
10:48:40.440
10:48:40.540
10:48:40.640
10:48:40.740
10:48:40.840
Time

Misura 17: 13-04-2011-10-55-05.865.tdms

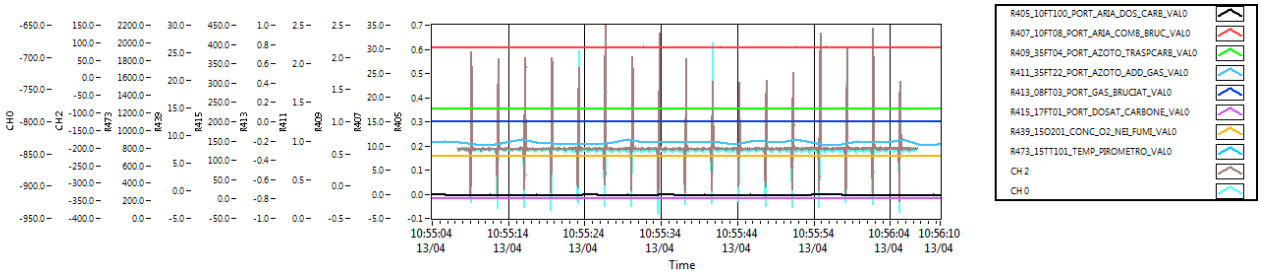
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE pulsata 250 mmc
Trasporto azoto
O2 6.25 % nei fumi
TEMP 1100°

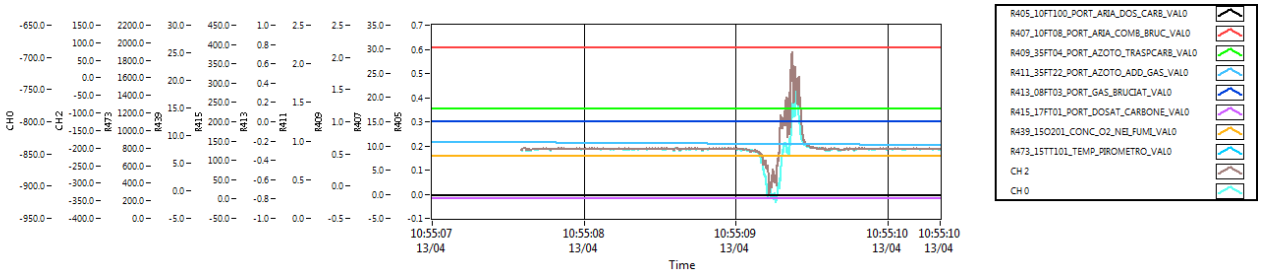
Condizioni di misura

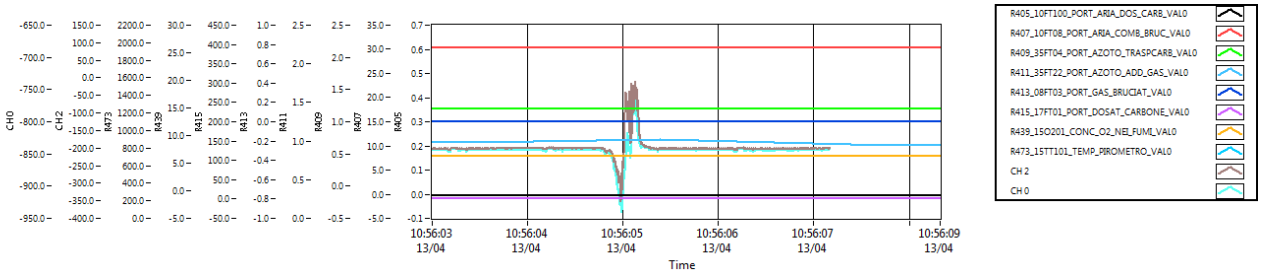
data e ora inizio prova	13/4/11 10:55:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38-90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1041
Pirometro portina 5 15TT101	1095
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1139
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	209
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	21.8
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	8
CO (ppm)	1.2
O2 IN [%vol]	6.25
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.04
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

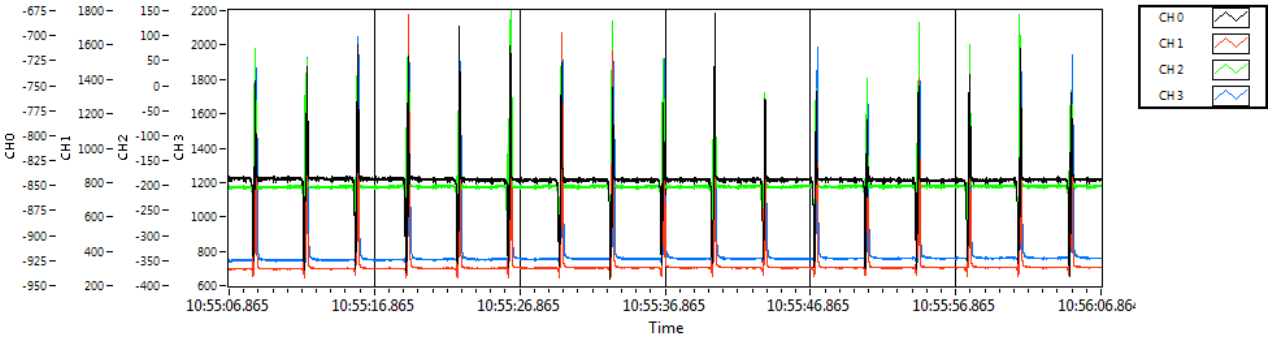
Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	24.36
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.58
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1133.66
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.78
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	1088.60
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1040.96
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.47
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	194.38
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	91.76
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.17
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.04
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.87
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.56
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.68
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.40
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.07
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	29.65
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.44
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.33
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	1.20
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.98
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.10
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	406.35
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.03
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.24
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.01
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.17
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.74
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.18
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1100.00
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.58
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.87
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1046.73
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1096.11
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.16
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.81
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1095.65
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		7.17
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:55:04 13/04
10:55:14 13/04
10:55:24 13/04
10:55:34 13/04
10:55:44 13/04
10:55:54 13/04
10:56:04 13/04
10:56:10 13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:55:07 13/04
10:55:08 13/04
10:55:09 13/04
10:55:10 13/04
10:55:10 13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:56:03 13/04
10:56:04 13/04
10:56:05 13/04
10:56:06 13/04
10:56:07 13/04
10:56:09 13/04
Time


CH 0
CH 1
CH 2
CH 3
10:55:06.865
10:55:16.865
10:55:26.865
10:55:36.865
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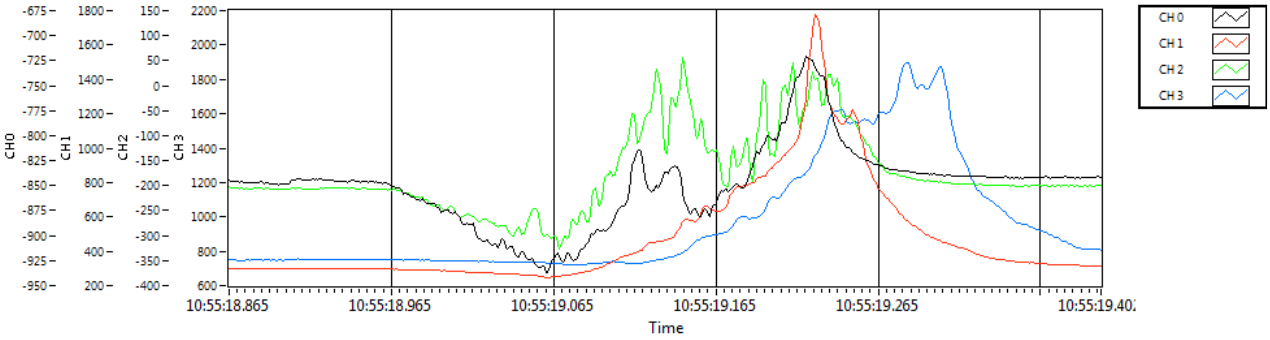
10:55:56.865
10:56:06.86
Time


CH 0
CH 1
CH 2
CH 3
10:55:18.865
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10:55:19.065
10:55:19.165
10:55:19.265
10:55:19.40
Time

Misura 18: 13-04-2011-11-00-54.321.tdms

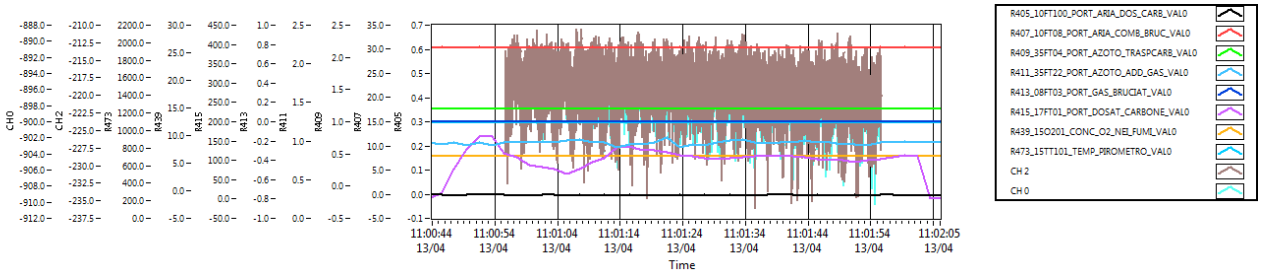
CARBONE S.A. TQ 38-90 micron
ALIMENTAZIONE continua 250 mmc
Trasporto azoto
O2 6.25 % nei fumi
TEMP 1100°

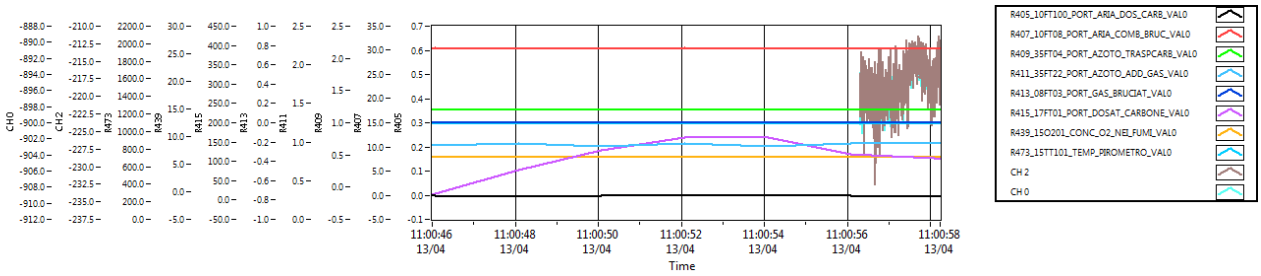
Condizioni di misura

data e ora inizio prova	13/4/11 11:01:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ 38-90 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1039
Pirometro portina 5 15TT101	1094
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1135
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	209
Portata carbone(set point) [g/h]	110
N2quench_sonda [Nm3/h] 35ft101	21.6
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	8
CO (ppm)	1.1
O2 IN [%vol]	6.25
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.02
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	24.51
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.01
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1137.17
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.84
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1088.81
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1038.44
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	208.68
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	192.07
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	91.99
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.17
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.08
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.93
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.61
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.72
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.45
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.12
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.69
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.50
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.34
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	1.20
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.98
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	105.06
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	399.46
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2839.97
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.24
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.01
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.13
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.32
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.88
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.83
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.97
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.89
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1046.16
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1095.78
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.92
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.71
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1093.94
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:00:44 13/04
11:00:54 13/04
11:01:04 13/04
11:01:14 13/04
11:01:24 13/04
11:01:34 13/04
11:01:44 13/04
11:01:54 13/04
11:02:05 13/04
Time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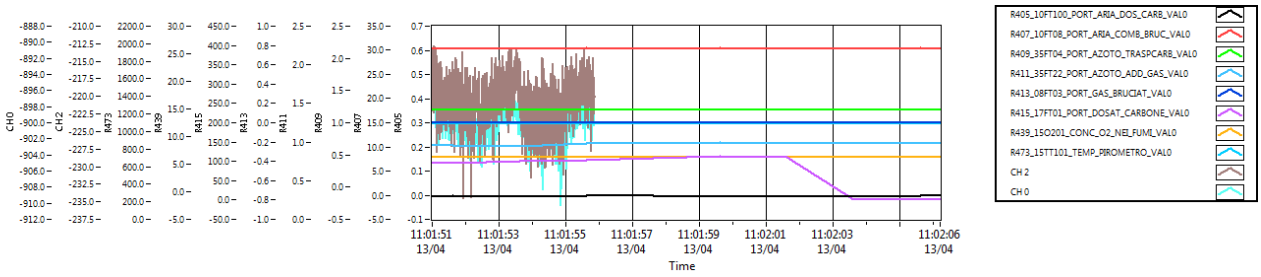
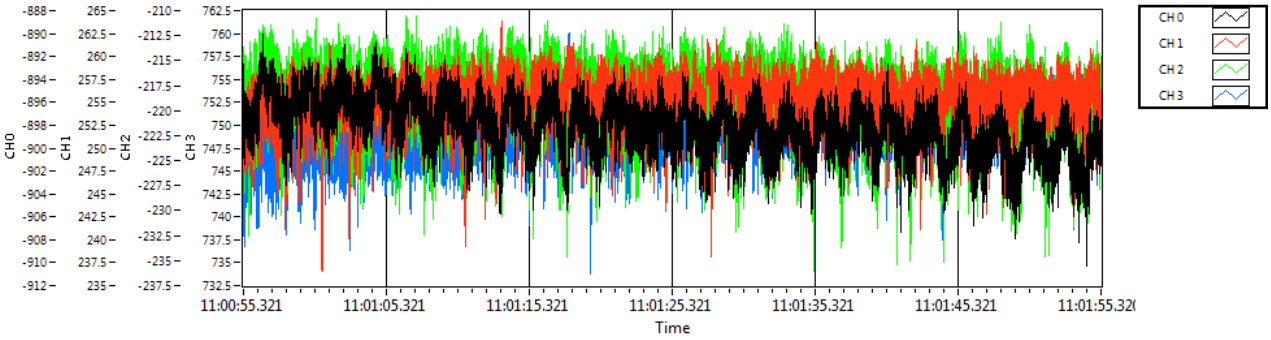
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:00:46 13/04
11:00:48 13/04
11:00:50 13/04
11:00:52 13/04
11:00:54 13/04
11:00:56 13/04
11:00:58 13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:01:51 13/04
11:01:53 13/04
11:01:55 13/04
11:01:57 13/04
11:01:59 13/04
11:02:01 13/04
11:02:03 13/04
11:02:06 13/04
Time


CH 0
CH 1
CH 2
CH 3
11:00:55.321
11:01:05.321
11:01:15.321
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11:01:35.321
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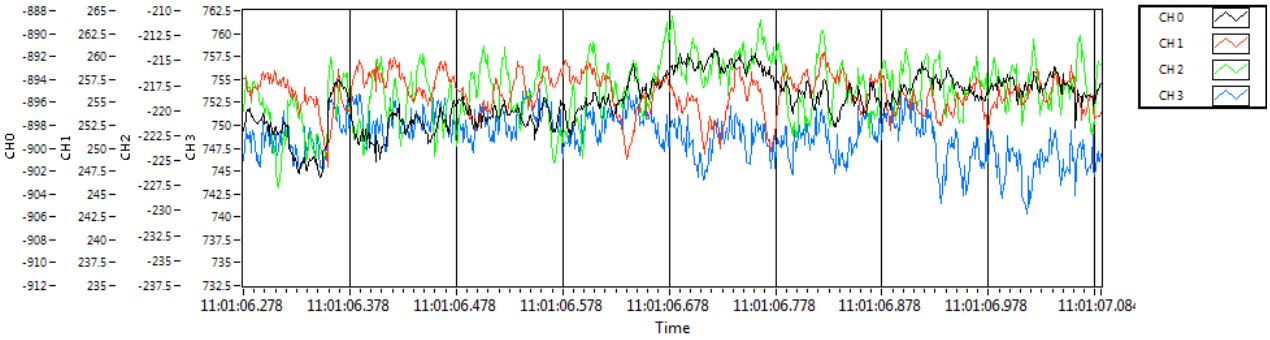
Time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CH 1
CH 2
CH 3
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11:01:06.478
11:01:06.578
11:01:06.678
11:01:06.778
11:01:06.878
11:01:06.978
11:01:07.08(
Time

Misura 19: 13-04-2011-11-50-12.456.tdms

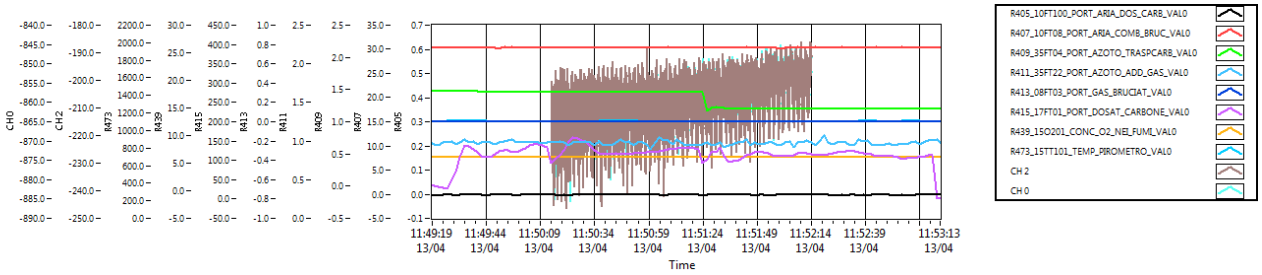
CARBONE S.A. CHAR 90-125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.25 % nei fumi
TEMP 1100°

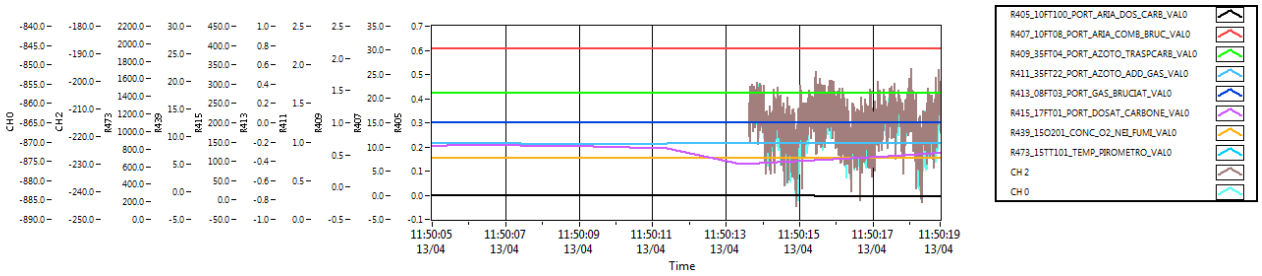
Condizioni di misura

data e ora inizio prova	13/4/11 11:50:00
Tipo di prova	Sonda ENEA
Carbone	S.A. CHAR 90-125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1068
Pirometro portina 5 15TT101	1105
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1141
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	203
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	22
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	8
CO (ppm)	1.28
O2 IN [%vol]	6.1
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.8
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	25.59
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	202.58
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1140.93
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.42
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.70
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1067.74
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.29
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	196.80
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	95.31
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	23.45
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.72
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.52
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	30.23
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.30
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	29.06
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.72
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	30.28
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.10
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.74
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.31
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	1.39
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.97
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	122.95
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	421.95
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.08
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.10
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	7.96
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.30
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.95
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.80
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.87
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.70
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.03
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1043.12
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1092.91
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.01
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.02
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1105.39
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:49:19 13/04
11:49:44 13/04
11:50:09 13/04
11:50:34 13/04
11:50:59 13/04
11:51:24 13/04
11:51:49 13/04
11:52:14 13/04
11:52:39 13/04
11:53:13 13/04
Time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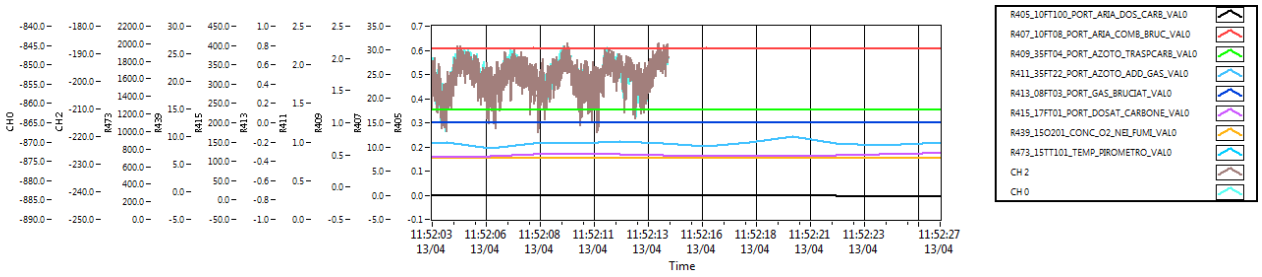
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:50:05 13/04
11:50:07 13/04
11:50:09 13/04
11:50:11 13/04
11:50:13 13/04
11:50:15 13/04
11:50:17 13/04
11:50:19 13/04
Time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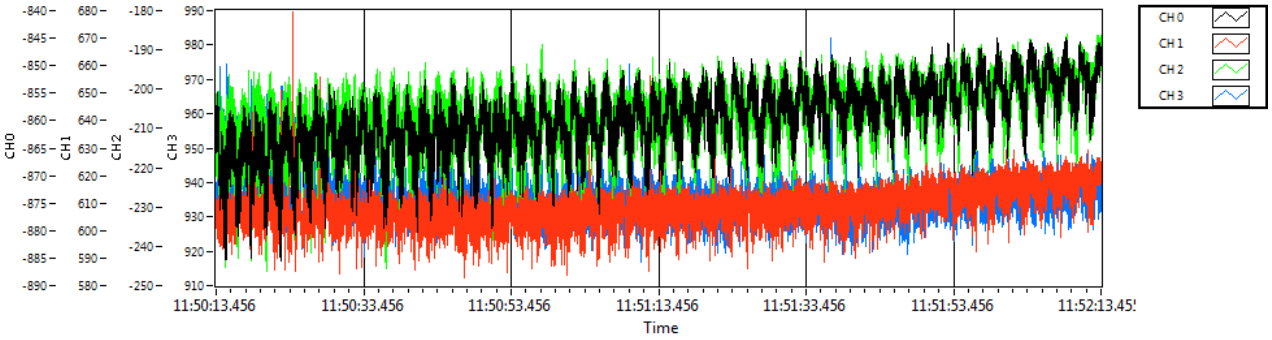
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:52:03 13/04
11:52:06 13/04
11:52:08 13/04
11:52:11 13/04
11:52:13 13/04
11:52:16 13/04
11:52:18 13/04
11:52:21 13/04
11:52:23 13/04
11:52:27 13/04
Time


CH 0
CH 1
CH 2
CH 3
11:50:13.456
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11:50:53.456
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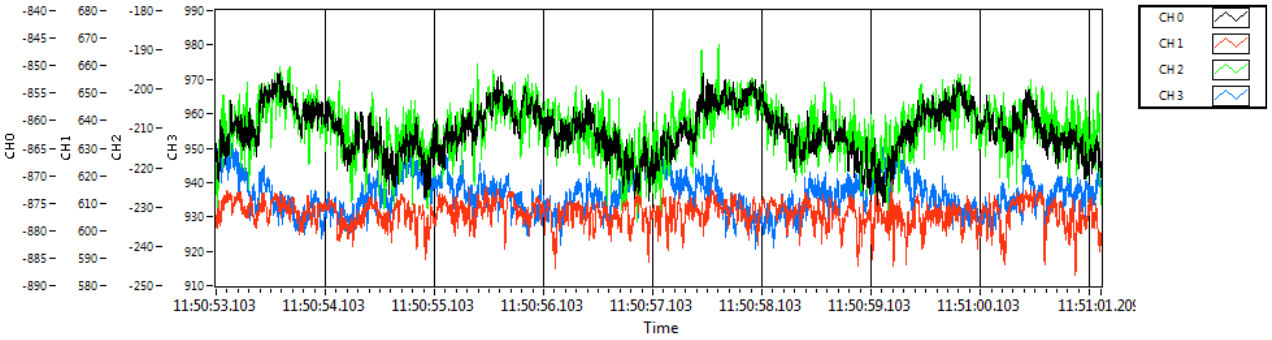
11:51:33.456
11:51:53.456
11:52:13.45
Time


CH 0
CH 1
CH 2
CH 3
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11:50:55.103
11:50:56.103
11:50:57.103
11:50:58.103
11:50:59.103
11:51:00.103
11:51:01.20
Time

Misura 20: 13-04-2011-12-00-06.413.tdms

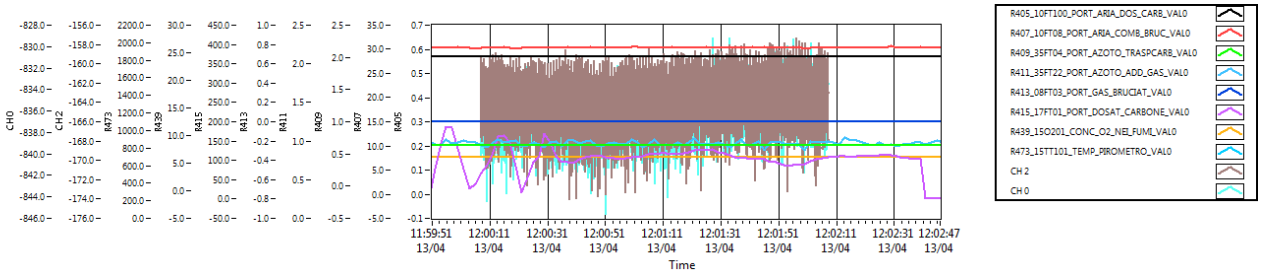
CARBONE S.A. CHAR 90-125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto
O2 6.25 % nei fumi
TEMP 1100°

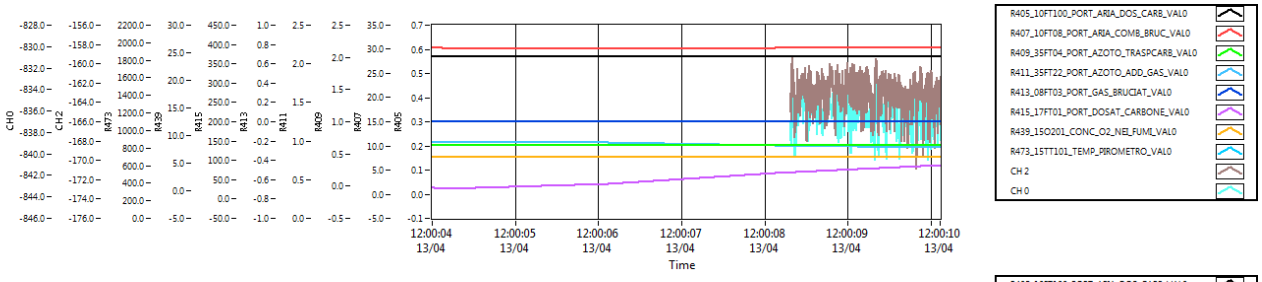
Condizioni di misura

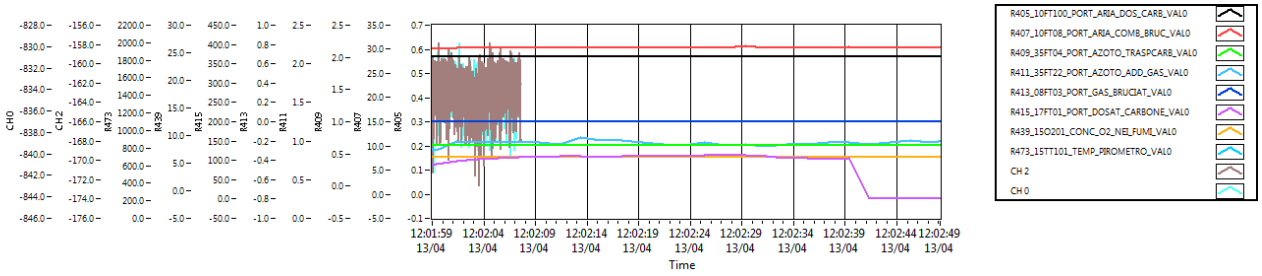
data e ora inizio prova	13/4/11 12:00:00
Tipo di prova	Sonda ENEA
Carbone	S.A. CHAR 90-125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1067
Pirometro portina 5 15TT101	1105
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1147
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	21.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	7.9
CO (ppm)	1.33
O2 IN [%vol]	6.1
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	25.86
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.33
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1153.84
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.54
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.63
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1067.25
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.14
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	195.24
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	94.70
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	24.01
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.79
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.65
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	30.33
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.43
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	29.13
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.85
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	30.46
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.22
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.74
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.33
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.97
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	106.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	388.34
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.77
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.08
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	7.97
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.35
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.23
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1103.00
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1100.81
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.78
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.54
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1043.31
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1093.10
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.09
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.86
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1104.73
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:59:51 13/04
12:00:11 13/04
12:00:31 13/04
12:00:51 13/04
12:01:11 13/04
12:01:31 13/04
12:01:51 13/04
12:02:11 13/04
12:02:31 13/04
12:02:47 13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
12:00:04 13/04
12:00:05 13/04
12:00:06 13/04
12:00:07 13/04
12:00:08 13/04
12:00:09 13/04
12:00:10 13/04
Time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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
12:01:59 13/04
12:02:04 13/04
12:02:09 13/04
12:02:14 13/04
12:02:19 13/04
12:02:24 13/04
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12:02:34 13/04
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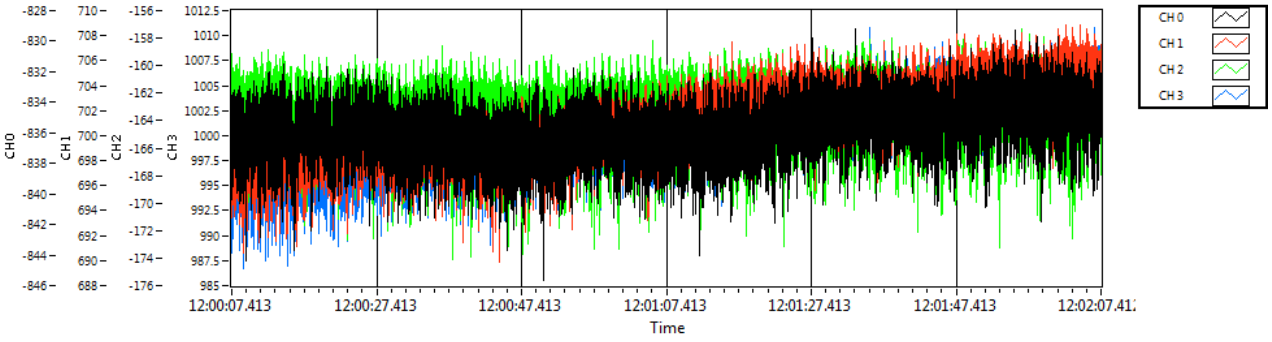
12:02:44 13/04
12:02:49 13/04
Time


CH 0
CH 1
CH 2
CH 3
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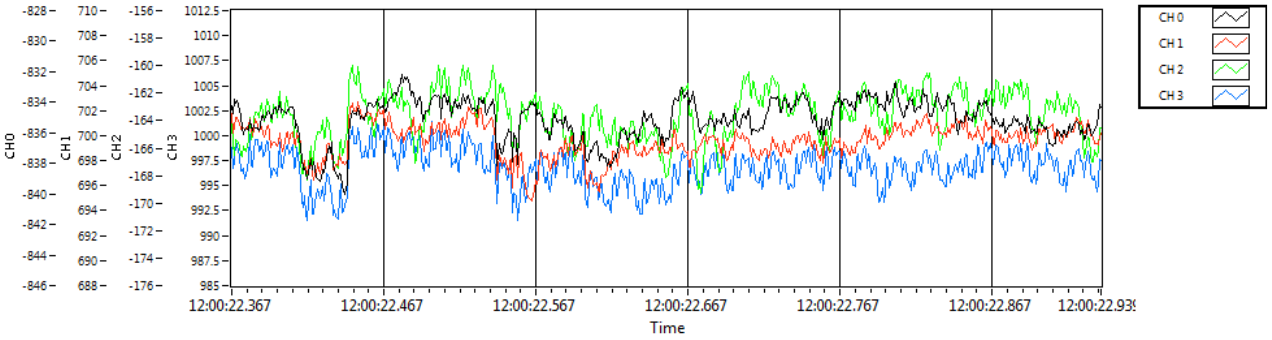
12:02:07.41
Time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CH 2
CH 3
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12:00:22.767
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12:00:22.93
Time

Misura 21: 13-04-2011-12-07-18.176.tdms

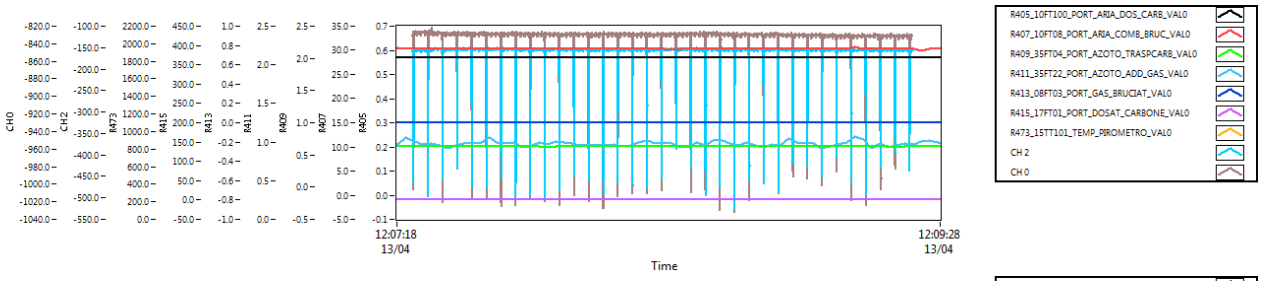
Carbone S.A. CHAR 90-125 micron
ALIMENTAZIONE PULSATA
Trasporto aria+azoto
O2 6.0 %
TEMP 1100°

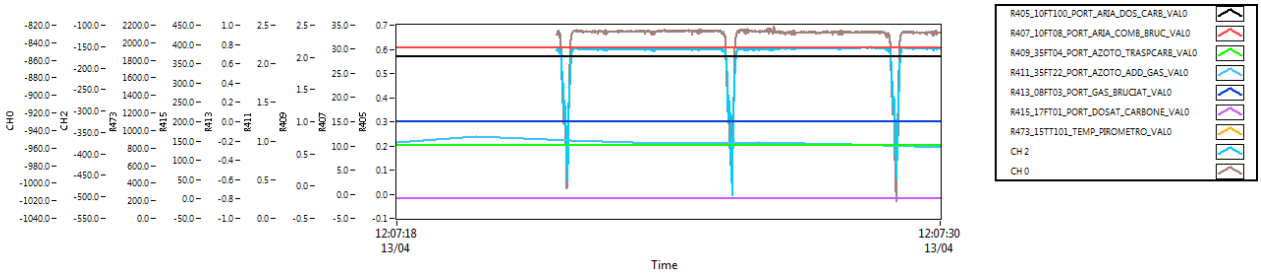
Condizioni di misura

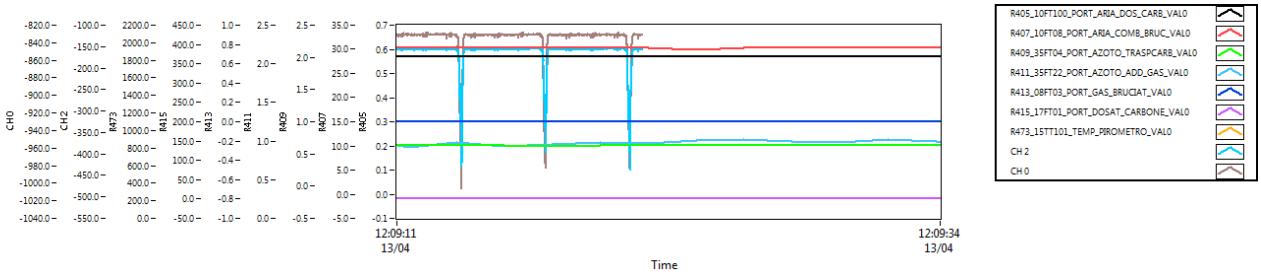
data e ora inizio prova	13/4/11 12:07:00
Tipo di prova	Sonda ENEA
Carbone	S.A. CHAR 90-125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1067
Pirometro portina 5 15TT101	1104
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1170
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	212
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	21.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	1.4
O2 IN [%vol]	6.06
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.2
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	25.99
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.45
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1171.55
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.62
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.11
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1066.43
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.55
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	194.92
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	94.78
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	23.77
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.90
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.74
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	30.42
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.53
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	29.24
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.97
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	30.56
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.32
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.76
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.31
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.98
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.10
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	393.45
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.10
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	7.98
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.38
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.35
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1101.76
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1100.86
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.40
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.29
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1043.27
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1093.16
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.21
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.95
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1104.56
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		7.17
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
12:07:18
13/04
12:09:28
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
12:07:18
13/04
12:07:30
13/04
Time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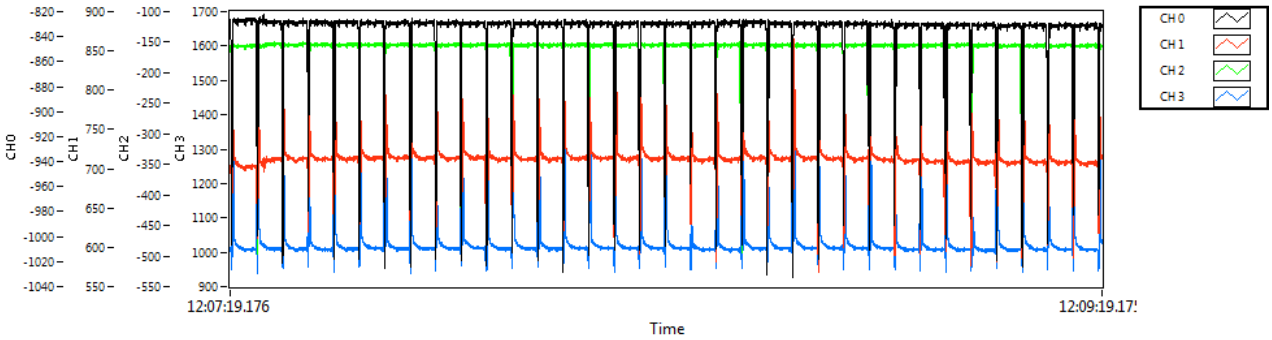
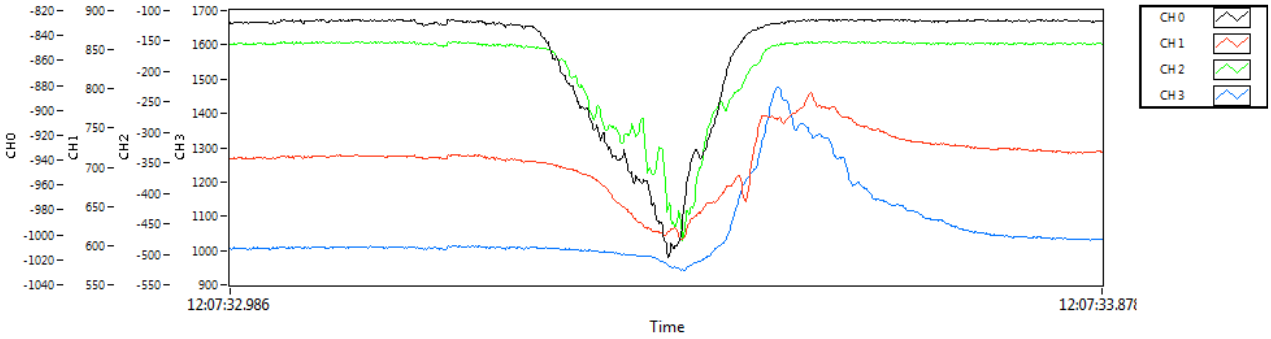
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
12:09:11
13/04
12:09:34
13/04
Time


CH 0
CH 1
CH 2
CH 3
12:07:19.176
12:09:19.17
Time


CH 0
CH 1
CH 2
CH 3
12:07:32.986
12:07:33.87
Time

Misura 22: 13-04-2011-12-11-12.985.tdms

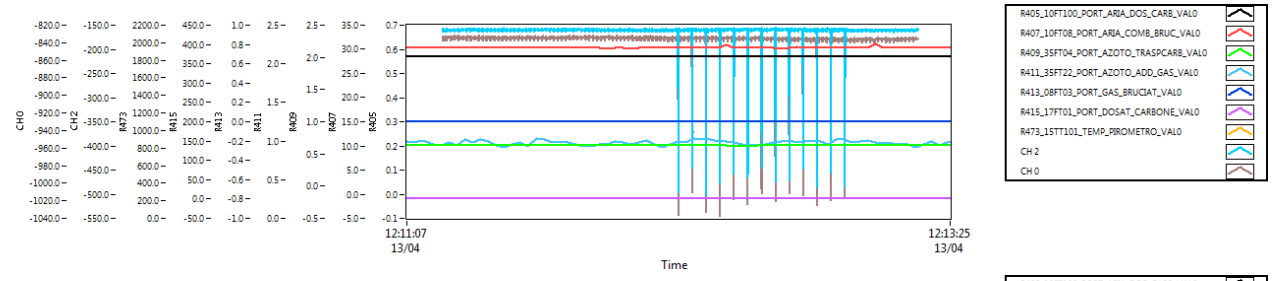
Carbone S.A. CHAR 90-125 micron
ALIMENTAZIONE nulla-pulsata-nulla
Trasporto aria+azoto
O2 6.2 %
TEMP 1100°

Condizioni di misura

data e ora inizio prova	13/4/11 12:11:00
Tipo di prova	Sonda ENEA
Carbone	S.A. CHAR 90-125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1066
Pirometro portina 5 15TT101	1104
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1178
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	211
Portata carbone(set point) [q/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	22.14
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	1.4
O2 IN [%vol]	6.08
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	25.99
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.45
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1171.55
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.62
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	1090.11
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1066.43
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.55
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	194.92
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	94.78
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	23.77
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.90
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.74
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	30.42
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.53
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	29.24
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.97
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	30.56
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.32
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.76
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.95
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.31
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.98
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.10
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	393.45
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.10
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	7.98
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.38
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1098.35
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1101.76
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1100.86
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.40
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.29
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1043.27
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1093.16
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1100.21
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	21.95
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1104.56
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		7.17
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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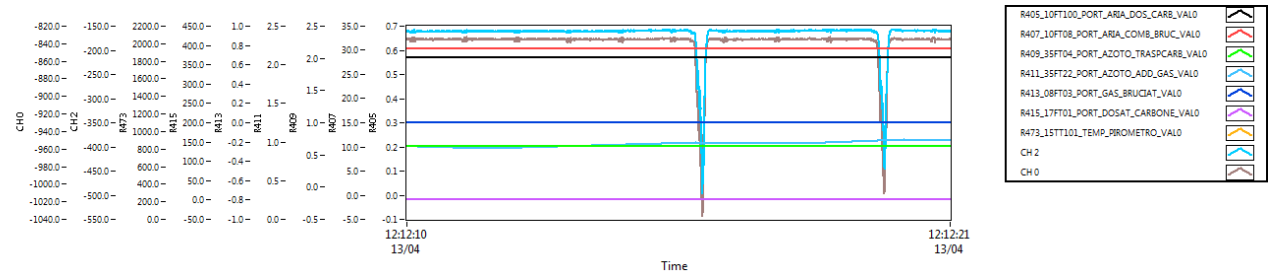
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
12:11:07
13/04
12:13:25
13/04
Time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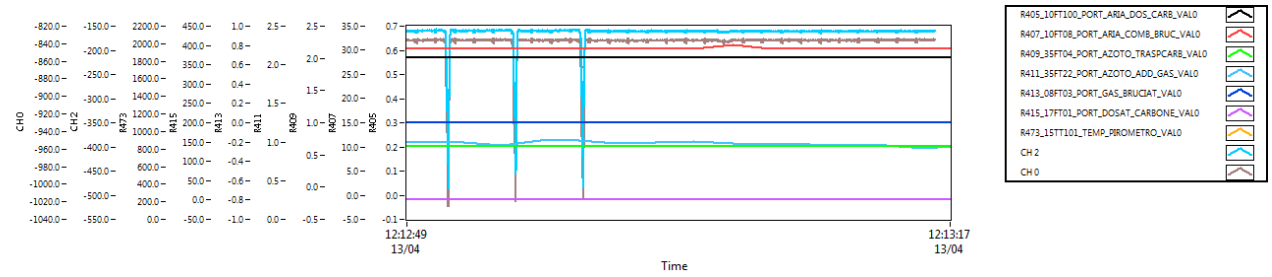
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
12:12:10
13/04
12:12:21
13/04
Time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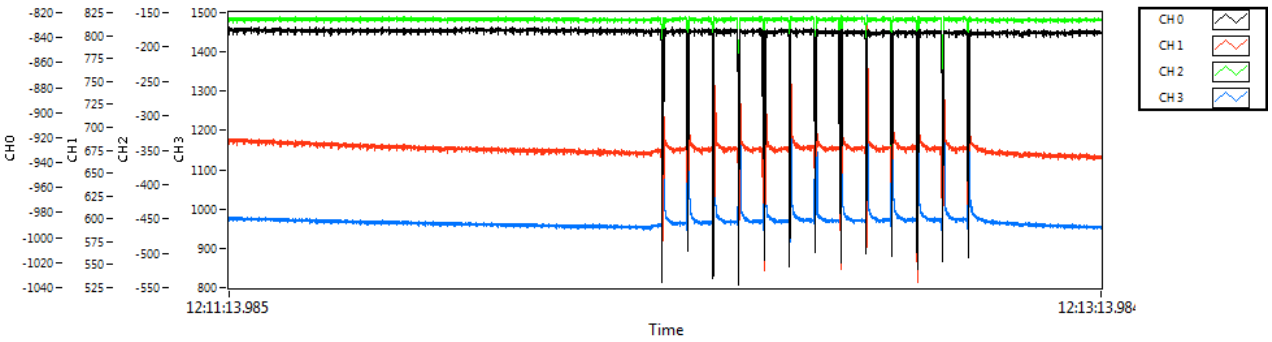
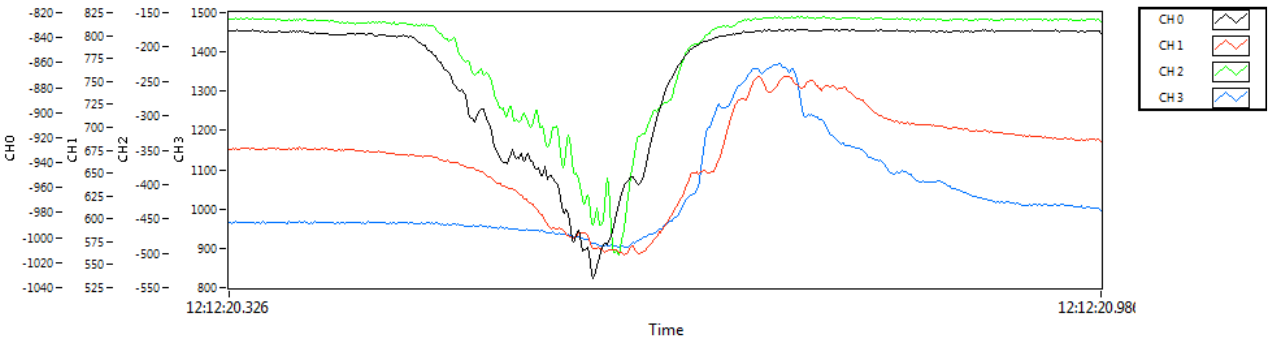
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
12:12:49
13/04
12:13:17
13/04
Time


CH 0
CH 1
CH 2
CH 3
12:11:13.985
12:13:13.98
Time


CH 0
CH 1
CH 2
CH 3
12:12:20.326
12:12:20.98
Time

Misura 23: 13-04-2011-14-29-09.604.tdms

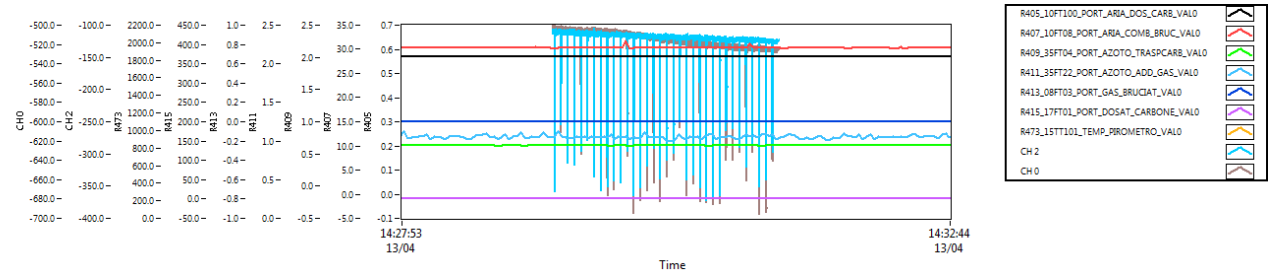
Carbone S.A. CHAR 45-90 micron
ALIMENTAZIONE pulsata
Trasporto aria+azoto
O2 6.2 %
TEMP 1100°

Condizioni di misura

data e ora inizio prova	13/4/11 14:29:00
Tipo di prova	Sonda ENEA
Carbone	S.A. 45<CHAR>90 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1060
Pirometro portina 5 15TT101	1100
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1160
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	203
Tvalle_quench [°C] (15TT19)	209
Portata carbone(set point) [g/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	22.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.1
CO (ppm)	1.49
O2 IN [%vol]	6.04
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
gr somma dei campioni dai due cicloni	0.4
gr Ciclone piccolo 15cy27	
gr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.72
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	203.10
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1162.22
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.47
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.47
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1060.51
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	208.95
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	170.68
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	104.13
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.91
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	31.68
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.60
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.31
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.41
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.13
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	30.81
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	32.46
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.22
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.32
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.05
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.10
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	413.75
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2840.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.05
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.06
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.52
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.41
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.05
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.35
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1098.89
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.34
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1045.79
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1094.07
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1095.16
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.97
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1100.78
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		7.17
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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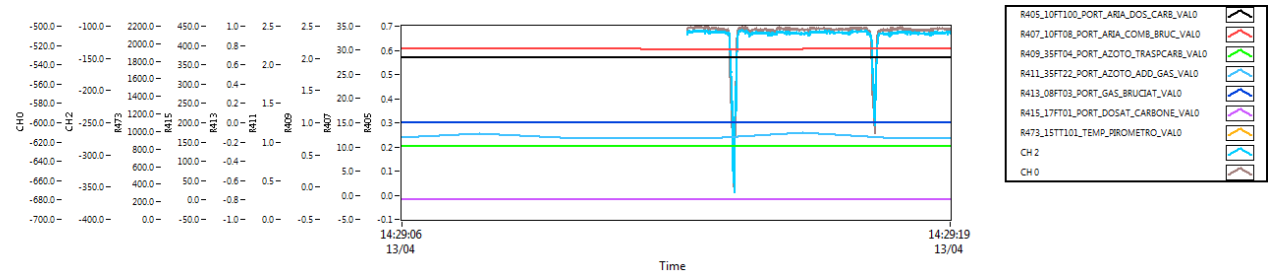
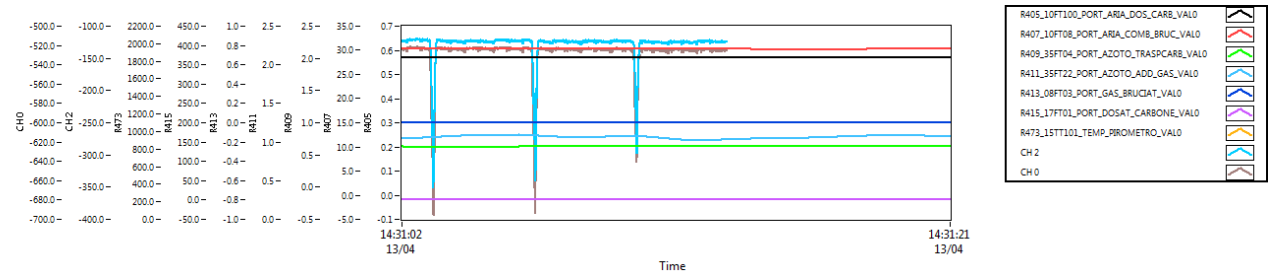
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:27:53
13/04
14:32:44
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:29:06
13/04
14:29:19
13/04
Time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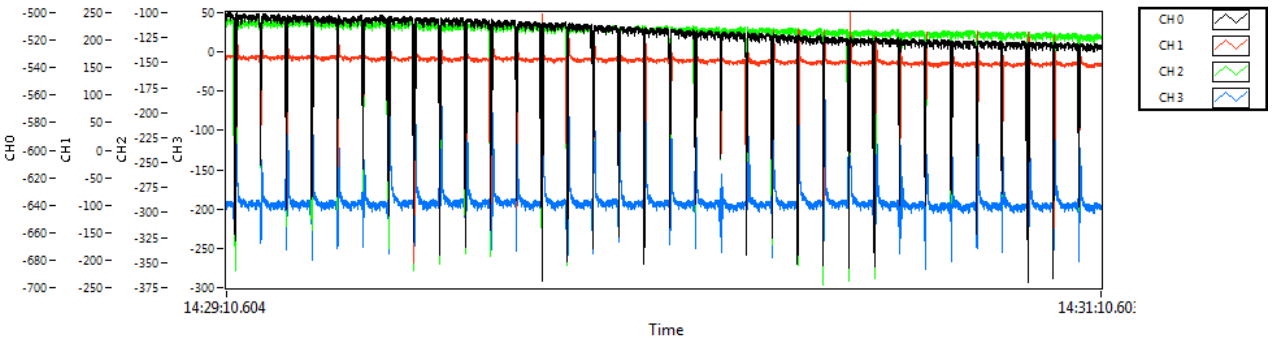
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:31:02
13/04
14:31:21
13/04
Time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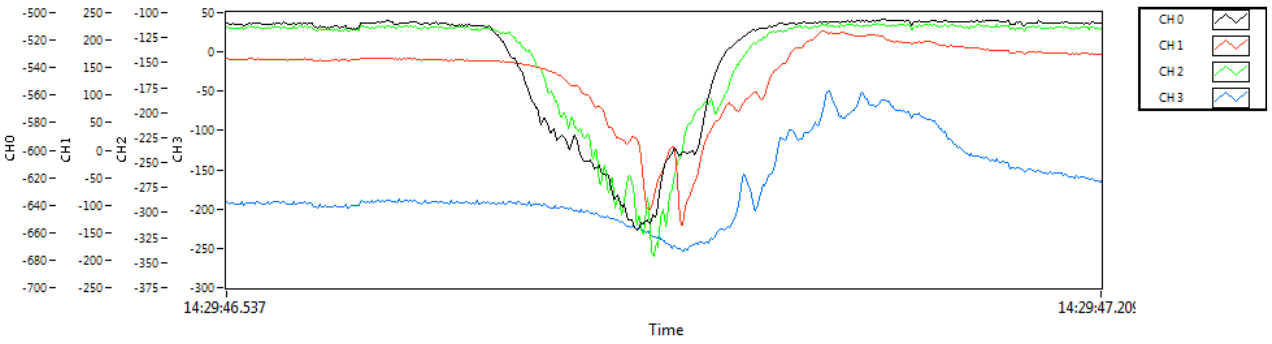
CH 1
CH 2
CH 3
14:29:10.604
14:31:10.60
Time


CH 0
CH 1
CH 2
CH 3
14:29:46.537
14:29:47.20
Time

Misura 24: 13-04-2011-14-34-04.175.tdms

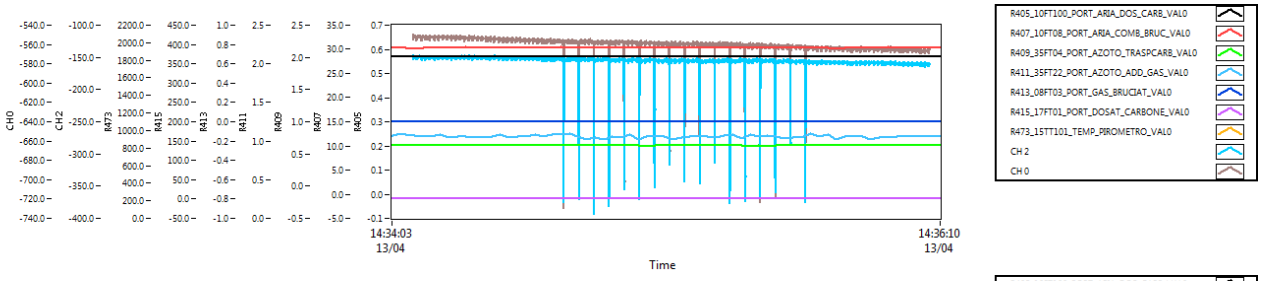
Carbone S.A. CHAR 45-90 micron
ALIMENTAZIONE nullo-pulsato-nullo
Trasporto aria+azoto
O2 6.2 % nei fumi
TEMP 1100°

Condizioni di misura

data e ora inizio prova	13/4/11 14:34:00
Tipo di prova	Sonda ENEA
Carbone	S.A. 45<CHAR>90 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1060
Pirometro portina 5 15TT101	1100
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1147
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	199
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [g/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	23
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.1
CO (ppm)	1.53
O2 IN [%vol]	6.04
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.74
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.46
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1146.93
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.52
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1088.85
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1060.29
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.81
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	187.58
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	101.33
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	27.39
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	31.77
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.66
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.34
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.43
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.19
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	30.87
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	32.48
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.28
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.74
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.30
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.10
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	434.94
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2840.74
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.05
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.07
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.52
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1097.24
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.83
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1098.49
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.58
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.45
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1045.45
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1093.88
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1095.17
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	23.02
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1100.01
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.15
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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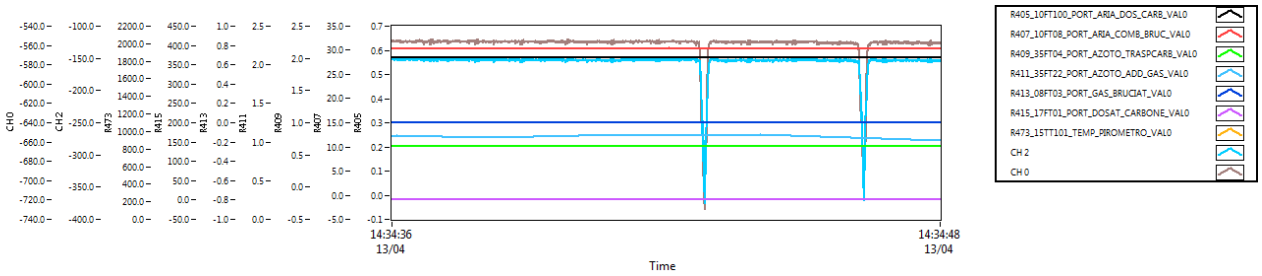
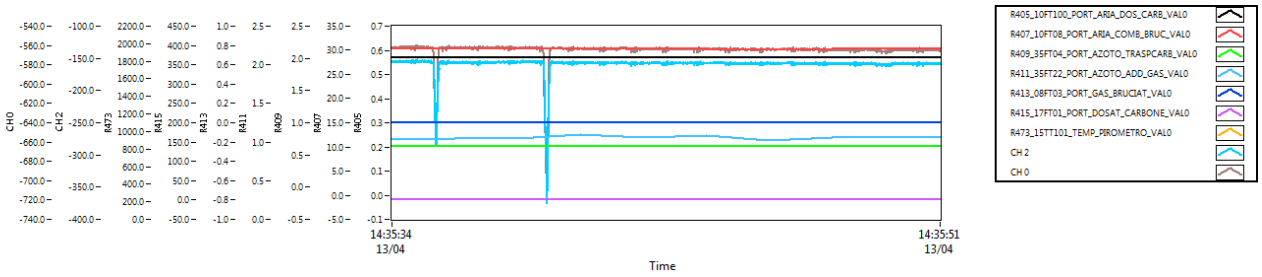
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:34:03
13/04
14:36:10
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:34:36
13/04
14:34:48
13/04
Time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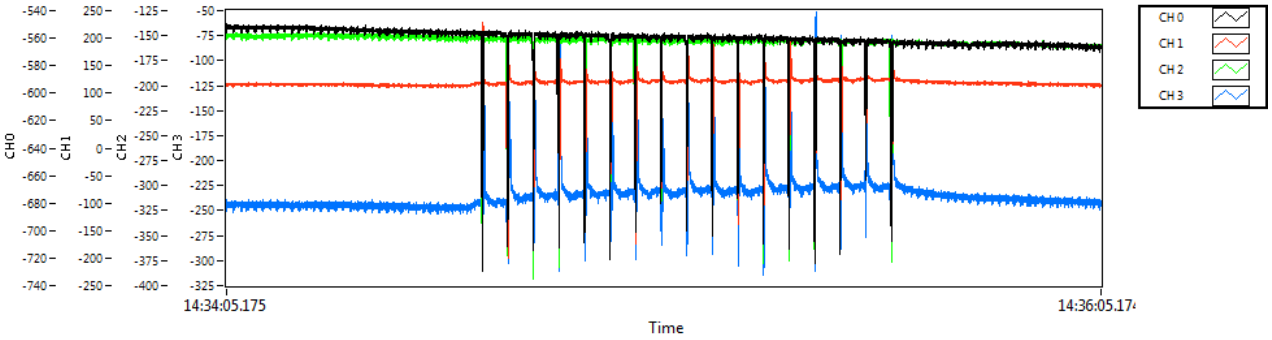
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:35:34
13/04
14:35:51
13/04
Time


CH 0
CH 1
CH 2
CH 3
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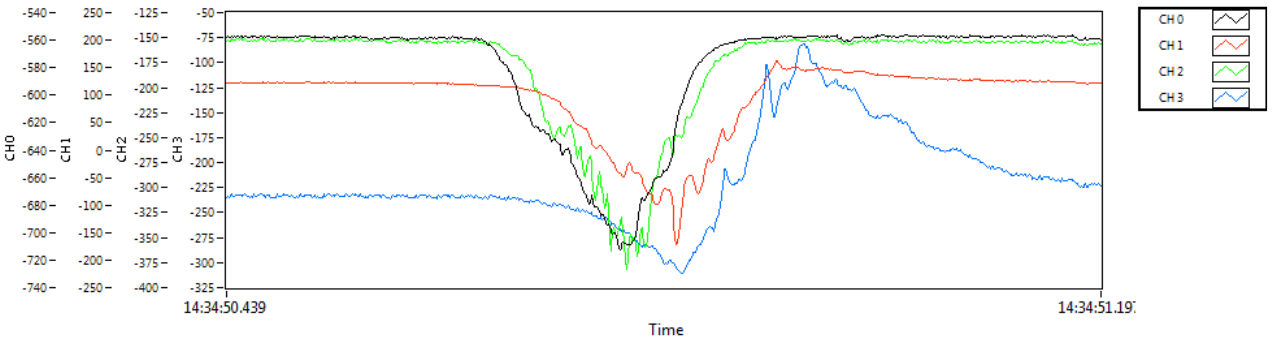
14:36:05.17
Time


CH 0
CH 1
CH 2
CH 3
14:34:50.439
14:34:51.19
Time

Misura 25: 13-04-2011-14-45-27.804.tdms

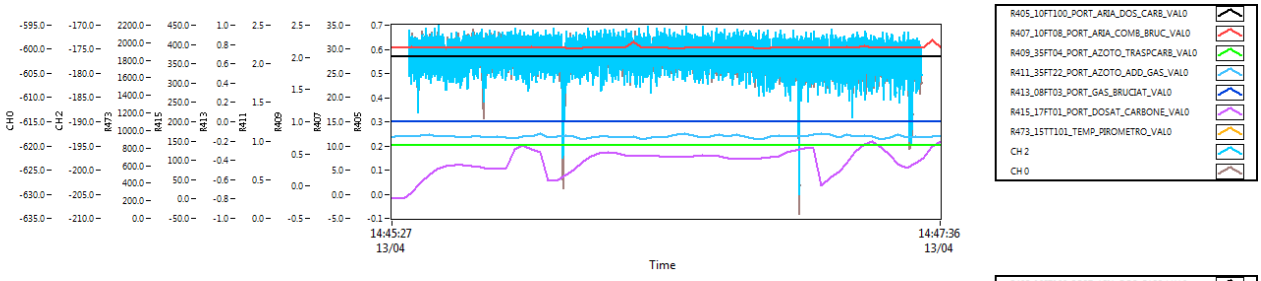
CARBONE S.A. CHAR 45-90 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto (10% O2)
O2 6.2 % (nei fumi)
TEMP 1100°

Condizioni di misura

data e ora inizio prova	13/4/11 14:45:00
Tipo di prova	Sonda ENEA
Carbone	S.A. 45<CHAR>90 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1060
Pirometro portina 5 15TT101	1099
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1147
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	211
Portata carbone(set point) [g/h]	110
N2quench_sonda [Nm3/h] 35ft101	22.7
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.1
CO (ppm)	1.49
O2 IN [%vol]	6.06
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
gr somma dei campioni dai due cicloni	0.43
gr Ciclone piccolo 15cy27	
gr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.68
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.59
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1137.12
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.65
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.26
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1060.41
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.61
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	198.50
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	98.20
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.53
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	31.86
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.79
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.48
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.57
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.29
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	30.95
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	32.58
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.40
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.74
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.31
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	88.66
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	389.53
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.19
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.05
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.06
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.46
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1096.96
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.92
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.07
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.08
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.03
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1044.71
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1093.34
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1097.46
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.70
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1098.58
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
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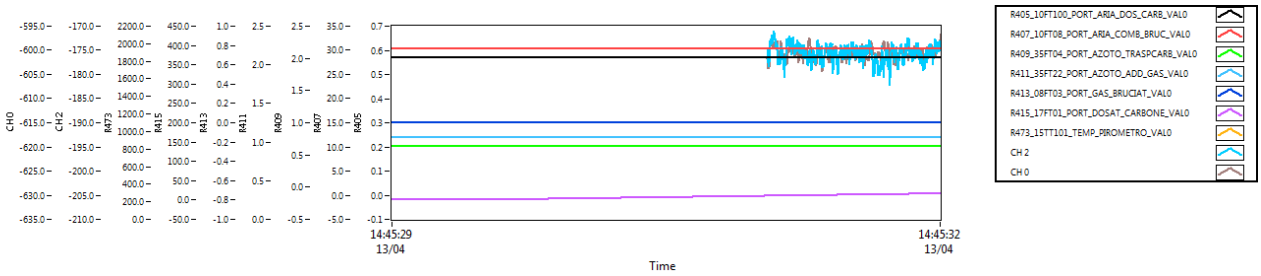
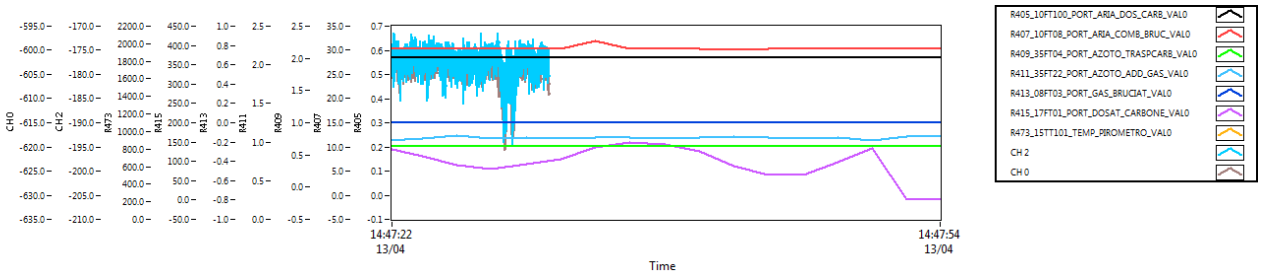
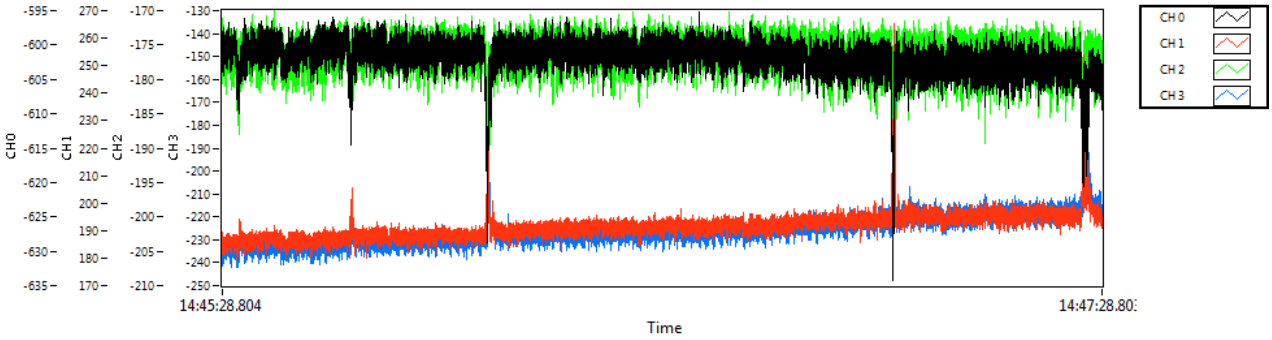
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:45:27
13/04
14:47:36
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:45:29
13/04
14:45:32
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:47:22
13/04
14:47:54
13/04
Time


CH0
CH1
CH2
CH3
CH 0
CH 1
CH 2
CH 3
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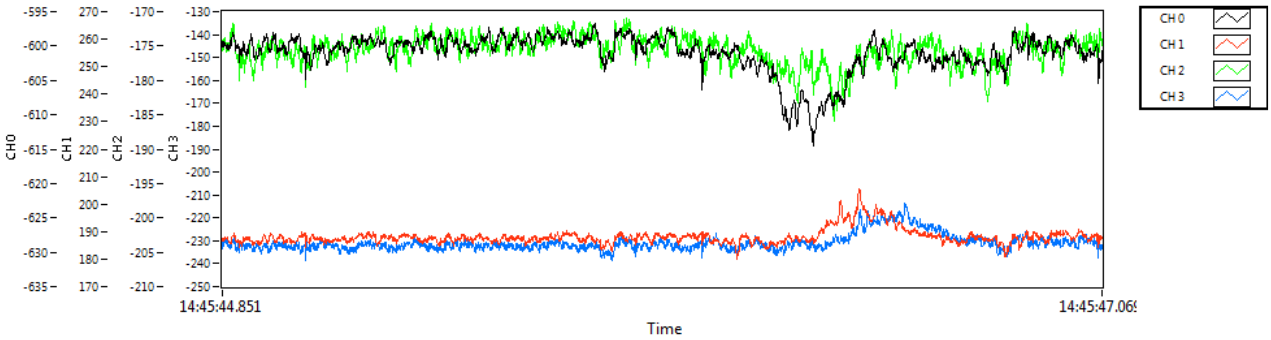
14:47:28.80
Time


CH0
CH1
CH2
CH3
CH 0
CH 1
CH 2
CH 3
14:45:44.851
14:45:47.06
Time

Misura 26: 13-04-2011-14-49-01.460.tdms

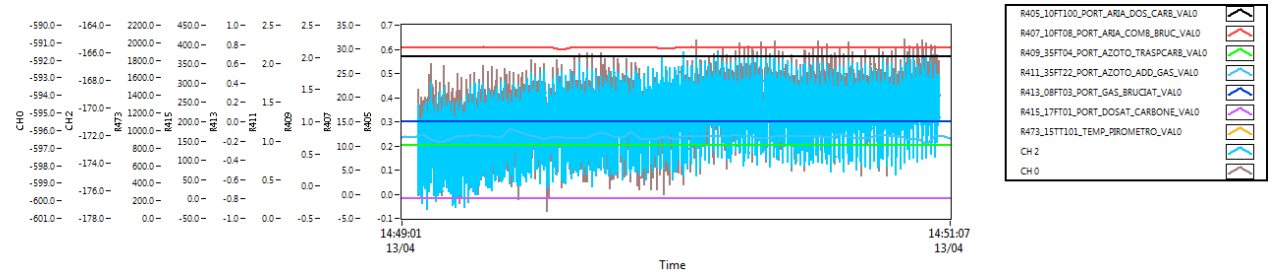
Carbone S.A. CHAR 45-90 micron
ALIMENTAZIONE continua 110 g/h
Trasporto aria+azoto (10% O2)
O2 6.2 % (nei fumi)
TEMP 1100°

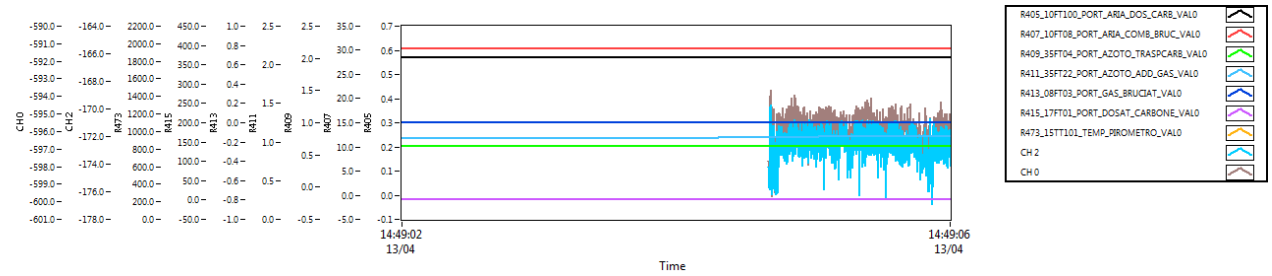
Condizioni di misura

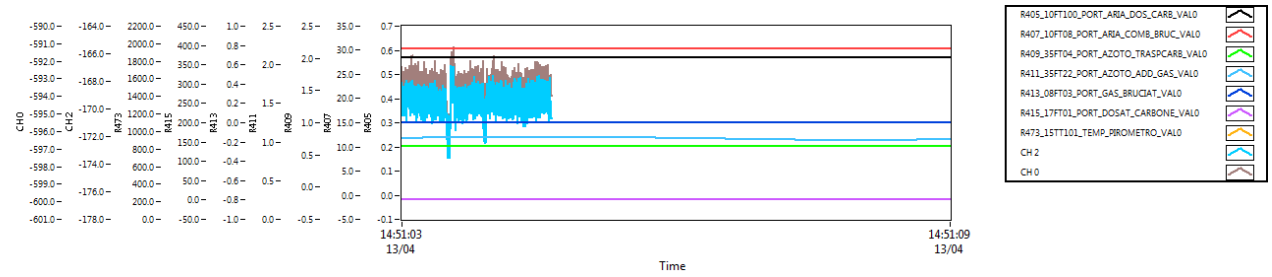
data e ora inizio prova	13/4/11 14:49:00
Tipo di prova	Sonda ENEA
Carbone	S.A. 45<CHAR>90 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1060
Pirometro portina 5 15TT101	1098
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1138
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [g/h]	0
N2quench_sonda [Nm3/h] 35ft101	22.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.1
CO (ppm)	1.47
O2 IN [%vol]	6.03
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

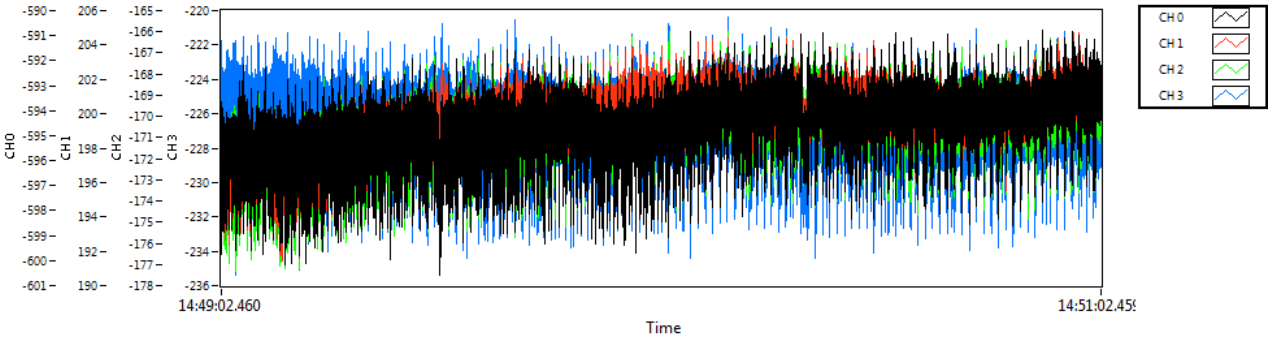
Valori medi variabili di processo

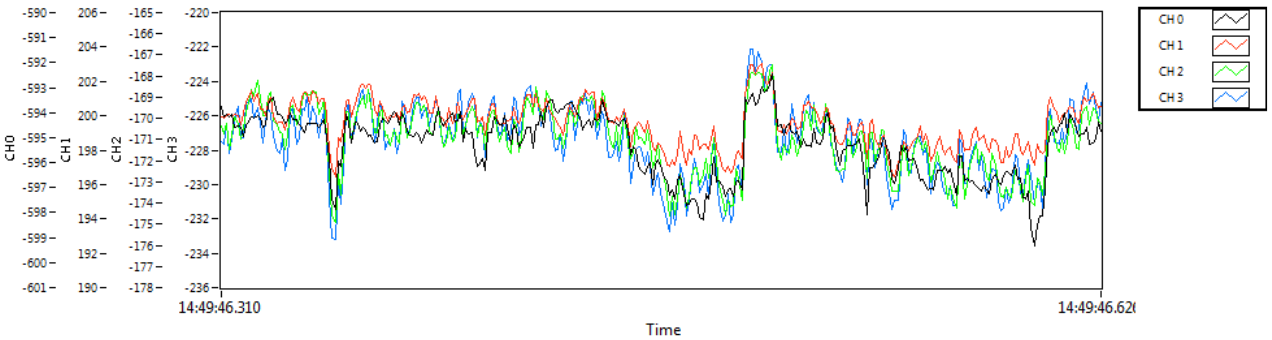
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.70
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.34
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1136.58
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.69
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.38
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1060.55
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.79
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	201.33
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	97.51
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.33
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	31.92
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.83
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.53
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.59
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.32
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.02
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	32.67
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.44
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.74
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.28
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.11
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	389.61
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2840.08
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.04
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.06
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.48
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1096.90
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.73
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.48
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.62
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.24
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1044.63
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1093.25
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.56
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.80
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1098.33
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:49:01
13/04
14:51:07
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:49:02
13/04
14:49:06
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:51:03
13/04
14:51:09
13/04
Time


CH 0
CH 1
CH 2
CH 3
14:49:02.460
14:51:02.45
Time


CH 0
CH 1
CH 2
CH 3
14:49:46.310
14:49:46.62
Time

Misura 27: 13-04-2011-14-51-32.442.tdms

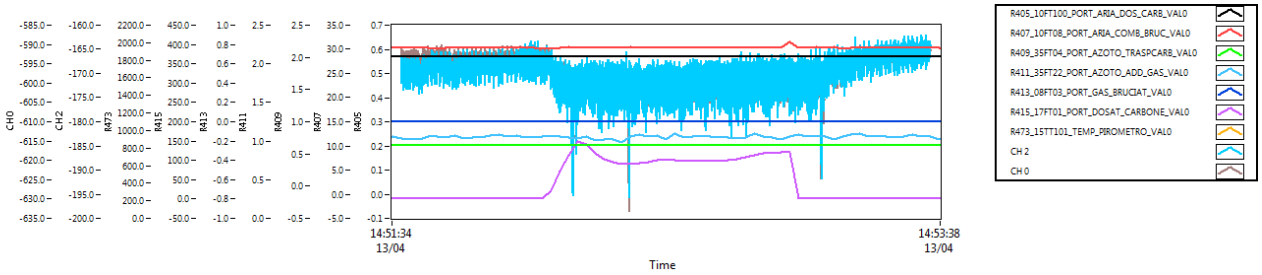
Carbone S.A. CHAR 45-90 micron
ALIMENTAZIONE nulla-continua-nulla 110 g/h
Trasporto aria+azoto (10% O2)
O2 6.2 % (nei fumi)
TEMP 1100°

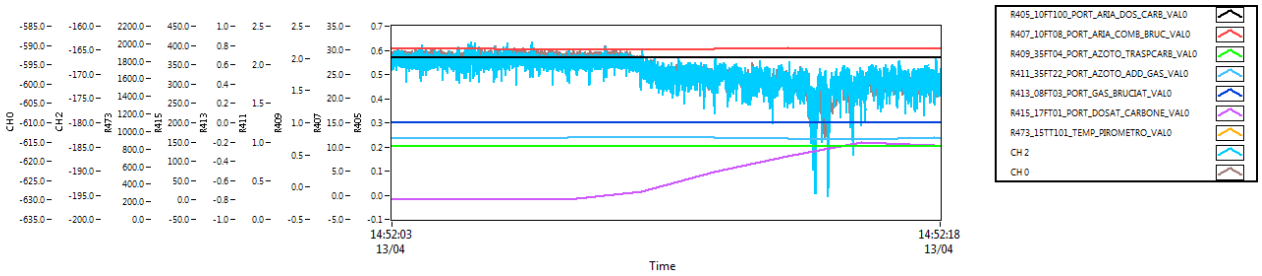
Condizioni di misura

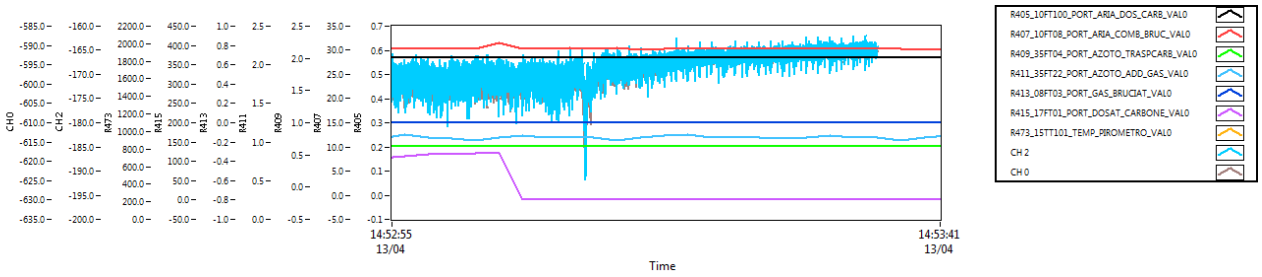
data e ora inizio prova	13/4/11 14:52:00
Tipo di prova	Sonda ENEA
Carbone	S.A. 45<CHAR>90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1060
Pirometro portina 5 15TT101	1098
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1123
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	211
Portata carbone(set point) [q/h]	off110off
N2quench_sonda [Nm3/h] 35ft101	22.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.1
CO (ppm)	1.45
O2 IN [%vol]	6.05
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

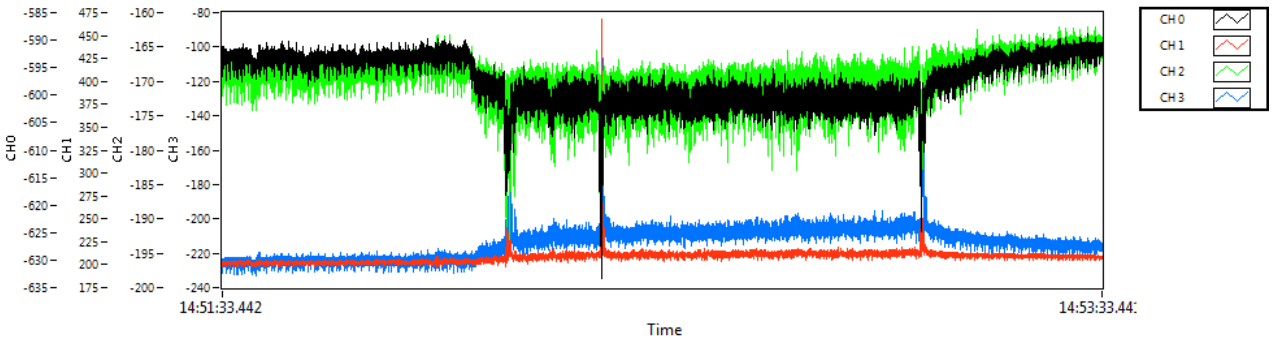
Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.66
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.02
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1122.73
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.71
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.66
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1060.29
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.40
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	202.44
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	97.36
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.16
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	31.96
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.85
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.55
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.62
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.35
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.03
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	32.70
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.47
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.75
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.32
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	47.10
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	389.68
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2839.46
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.05
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.06
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.48
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1096.68
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1099.76
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.85
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.74
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.41
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1044.55
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1093.23
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.17
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.80
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1098.25
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:51:34
13/04
14:53:38
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:52:03
13/04
14:52:18
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:52:55
13/04
14:53:41
13/04
Time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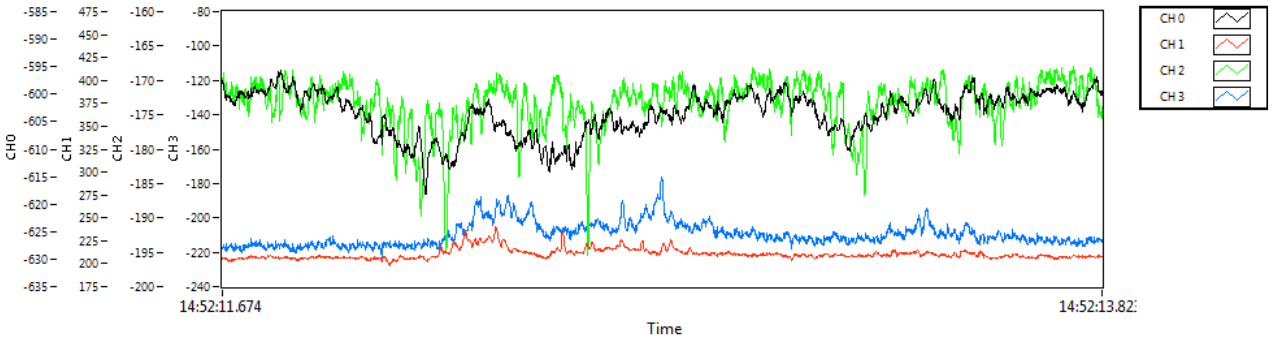
CH 1
CH 2
CH 3
14:51:33.442
Time


CH 0
CH 1
CH 2
CH 3
14:52:11.674
Time

Misura 28: 13-04-2011-14-56-14.067.tdms

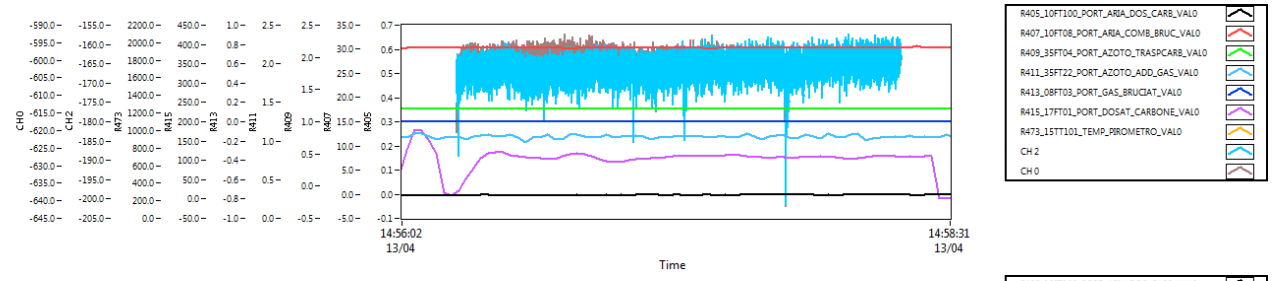
Combustione diffusiva
Carbone S.A. CHAR 45-90 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°

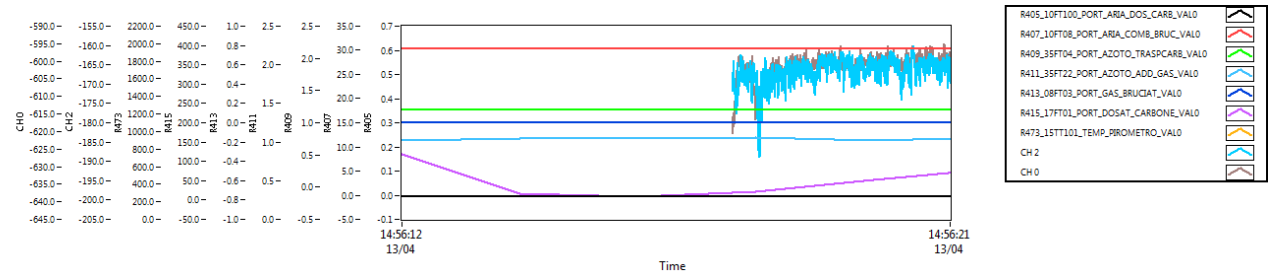
Condizioni di misura

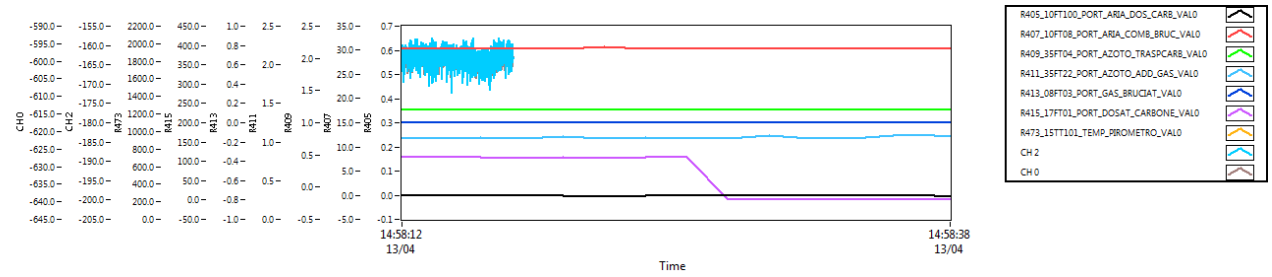
data e ora inizio prova	13/4/11 14:56:00
Tipo di prova	Sonda ENEA
Carbone	S.A. 45<CHAR>90 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	30.3
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	1
Tbruc [°C] (15TT09)	1061
Pirometro portina 5 15TT101	1098
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1122
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	209
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	22.6
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	8.1
CO (ppm)	1.46
O2 IN [%vol]	6.06
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1099
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.3
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

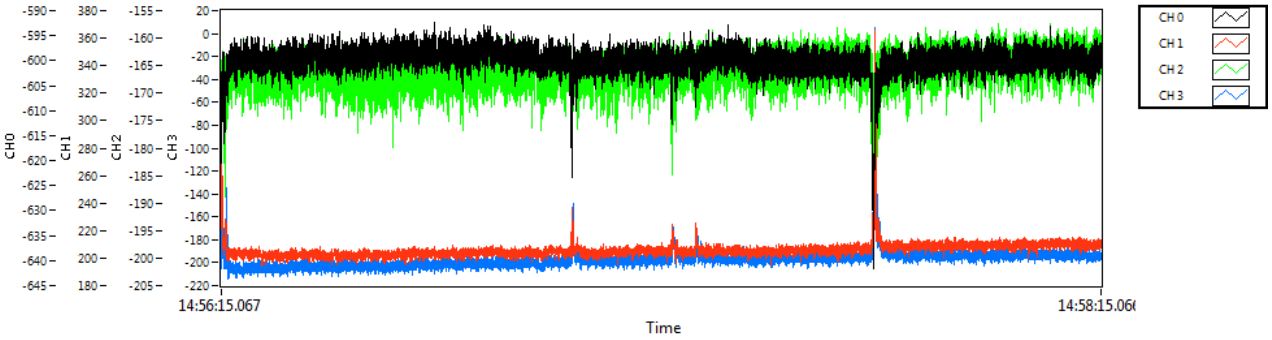
Valori medi variabili di processo

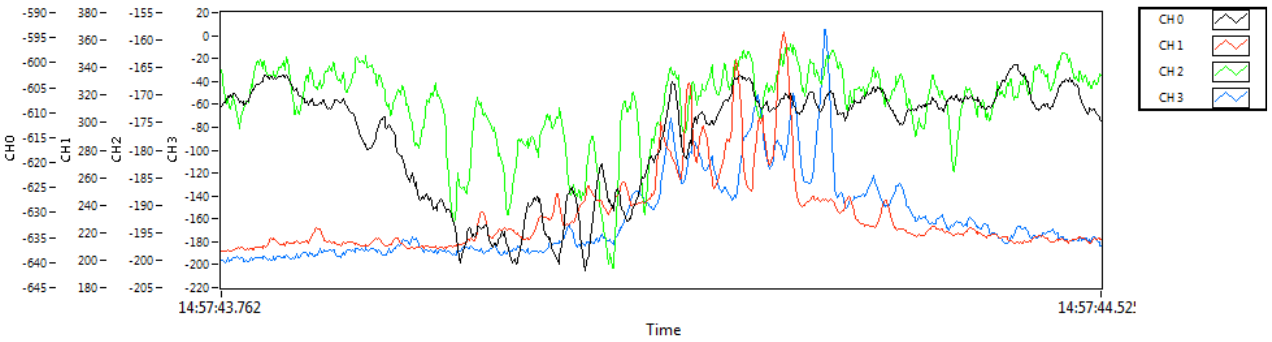
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.65
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.33
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1121.71
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.74
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1089.84
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1060.22
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.37
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	200.44
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	97.15
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.46
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	31.98
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.88
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.54
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.64
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.38
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.07
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	32.67
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.49
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	30.29
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	1.20
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	1.06
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	104.04
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	405.28
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2839.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.08
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.07
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.46
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1096.35
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.06
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1100.09
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1100.54
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1100.35
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1044.43
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1093.20
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1099.89
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	22.61
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1097.89
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:56:02
13/04
14:58:31
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:56:12
13/04
14:56:21
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:58:12
13/04
14:58:38
13/04
Time

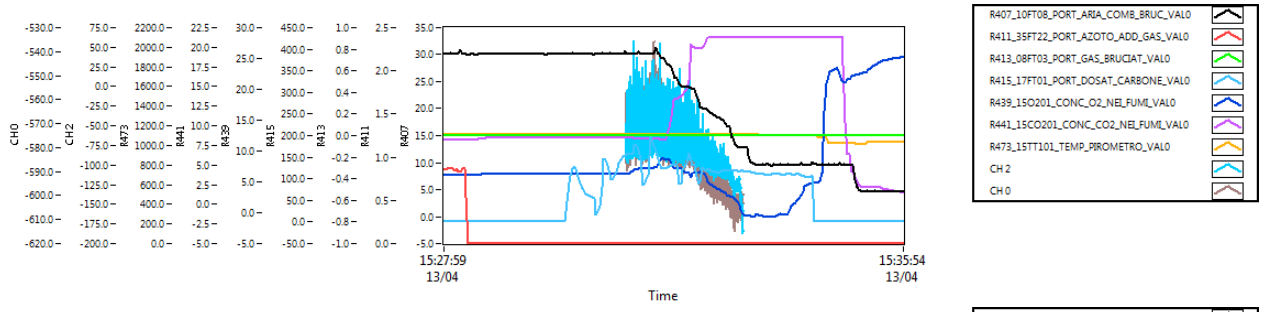

CH0
CH1
CH2
CH3
CH 0
CH 1
CH 2
CH 3
14:56:15.067
14:58:15.06
Time

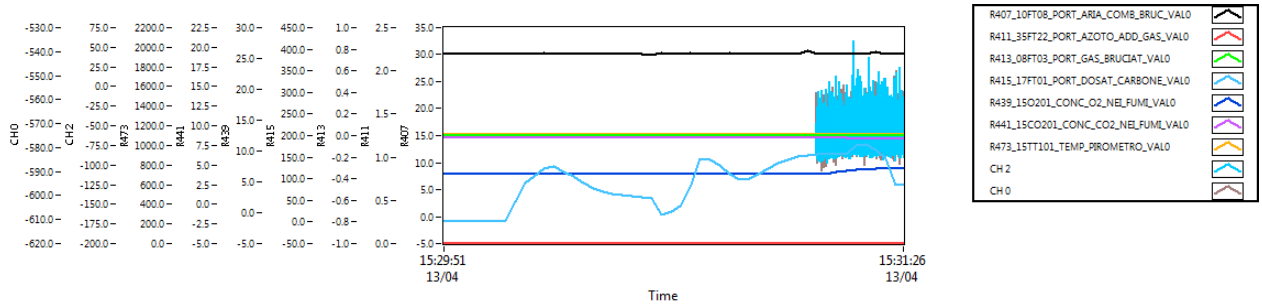

CH0
CH1
CH2
CH3
CH 0
CH 1
CH 2
CH 3
14:57:43.762
14:57:44.52
Time

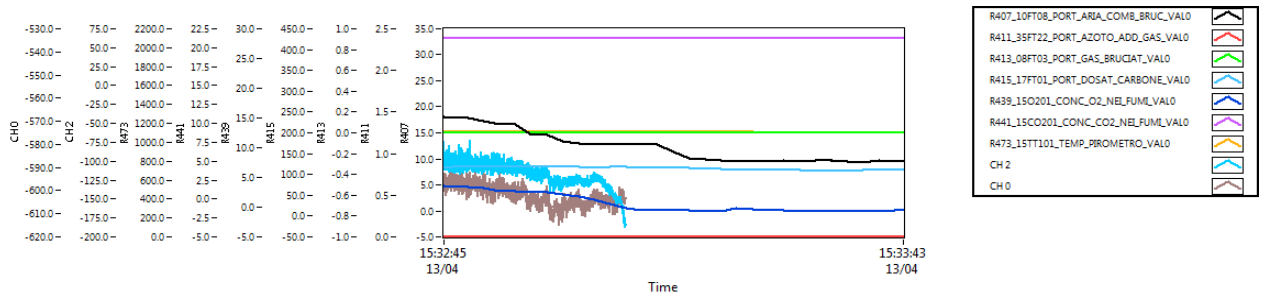
Misura 29: 13-04-2011-15-31-04.474.tdms

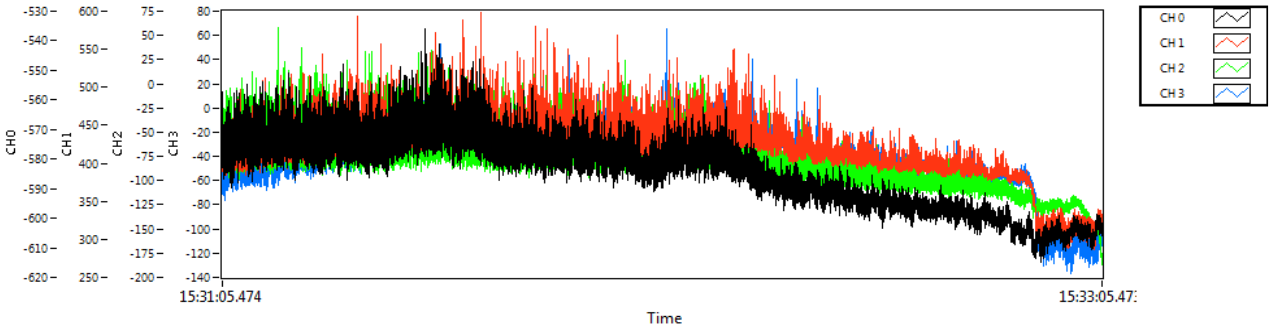
Passaggio in Oxy-combustione
Carbone S.A. TQ >125micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°
Sonde sul reattore

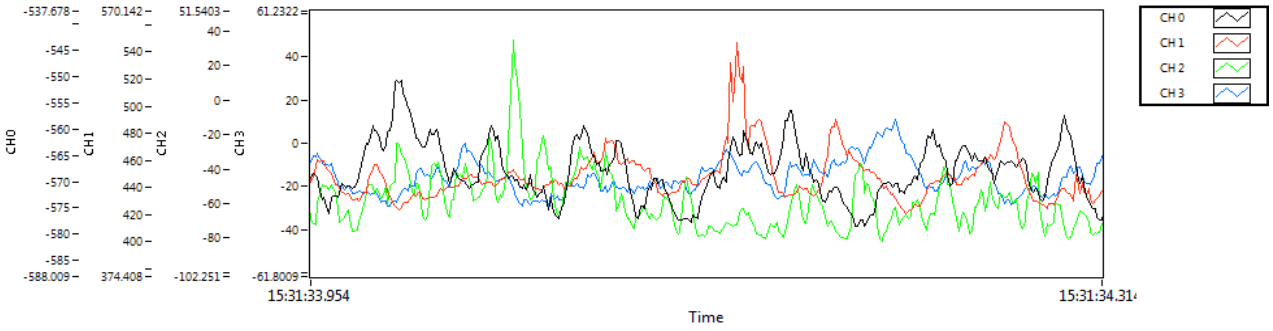
TABELLE DATI IMPIANTO NON DISPONIBILI

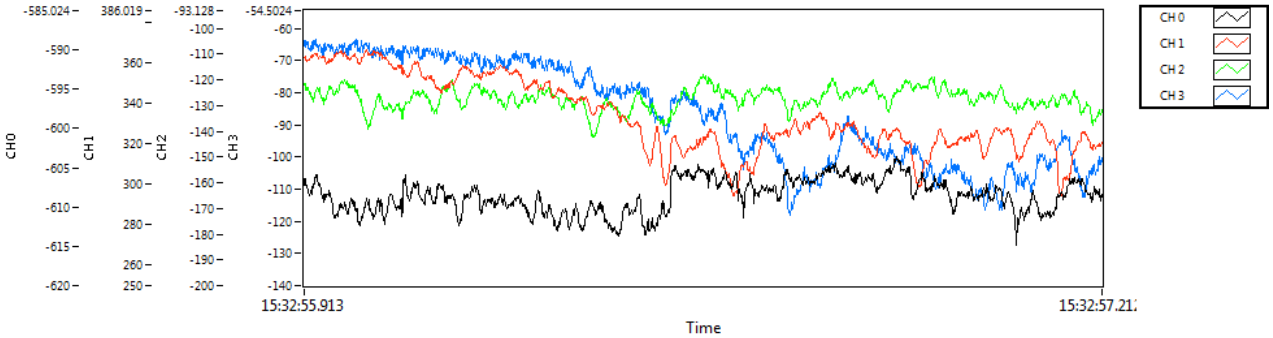

R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:27:59
13/04
15:35:54
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:29:51
13/04
15:31:26
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:32:45
13/04
15:33:43
13/04
Time


CH 0
CH 1
CH 2
CH 3
15:31:05.474
15:33:05.47
Time

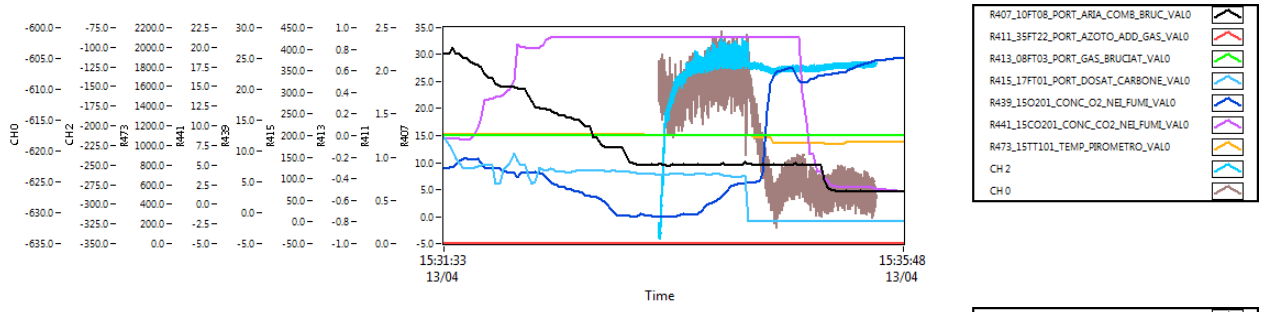

CH 0
CH 1
CH 2
CH 3
15:31:33.954
15:31:34.31
Time


CH 0
CH 1
CH 2
CH 3
15:32:55.913
15:32:57.21
Time

Misura 30: 13-04-2011-15-33-29.090.tdms

Oxycombustione
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°
Note: si spegne la fiamma

TABELLE DATI MEDI IMPIANTO NON DISPONIBILI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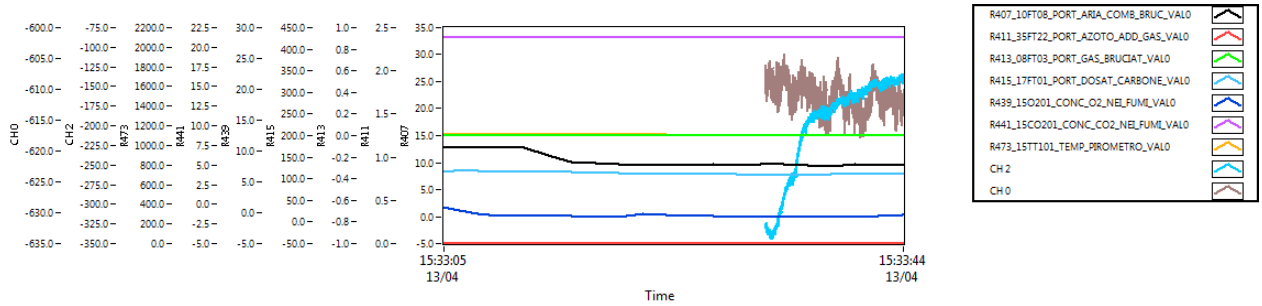
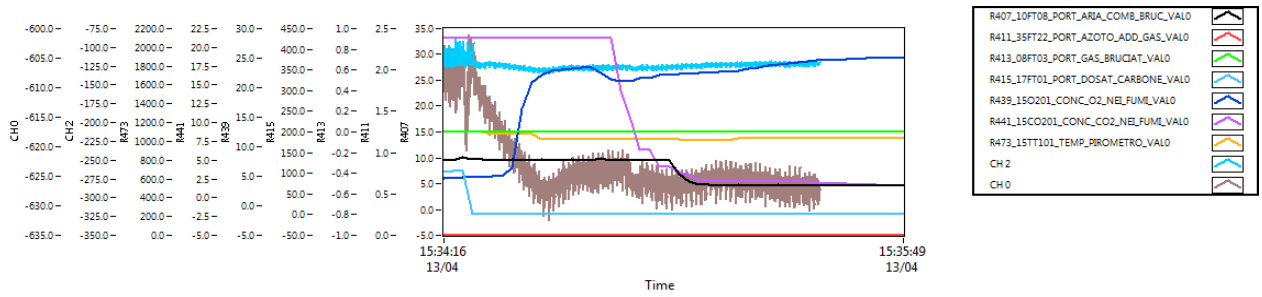
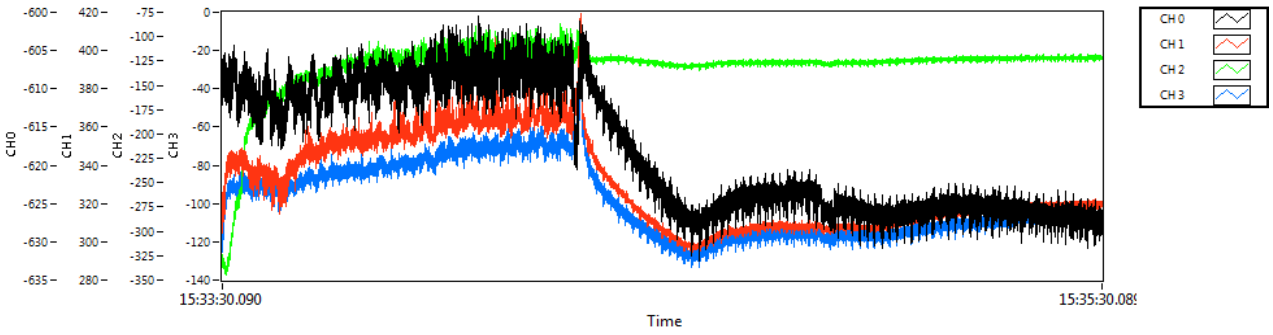
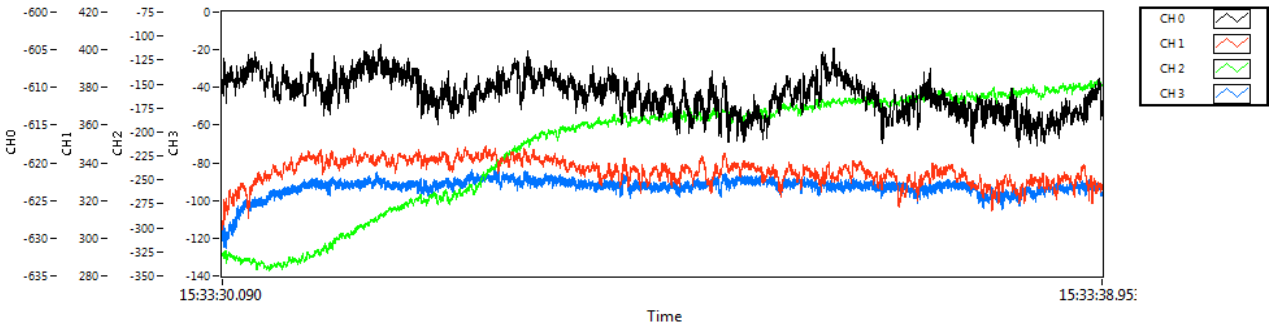
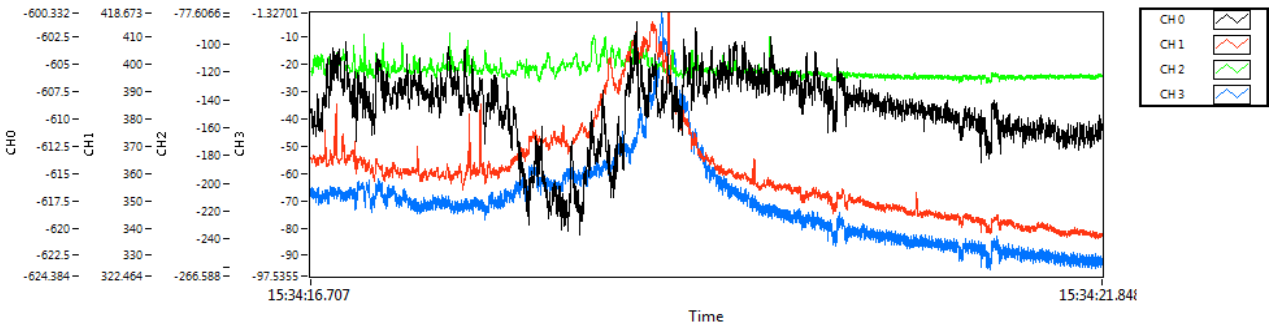
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:31:33
13/04
15:35:48
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:33:05
13/04
15:33:44
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:34:16
13/04
15:35:49
13/04
Time


CH 0
CH 1
CH 2
CH 3
15:33:30.090
Time


CH 0
CH 1
CH 2
CH 3
15:33:30.090
Time


CH 0
CH 1
CH 2
CH 3
15:34:16.707
Time

Misura 31: 13-04-2011-15-46-34.270.tdms

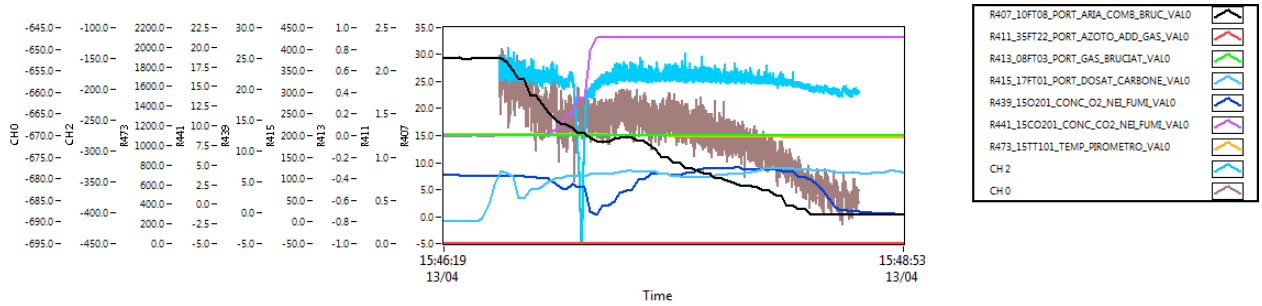
Passaggio in Oxycombustione
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°
Sonde solo su reattore

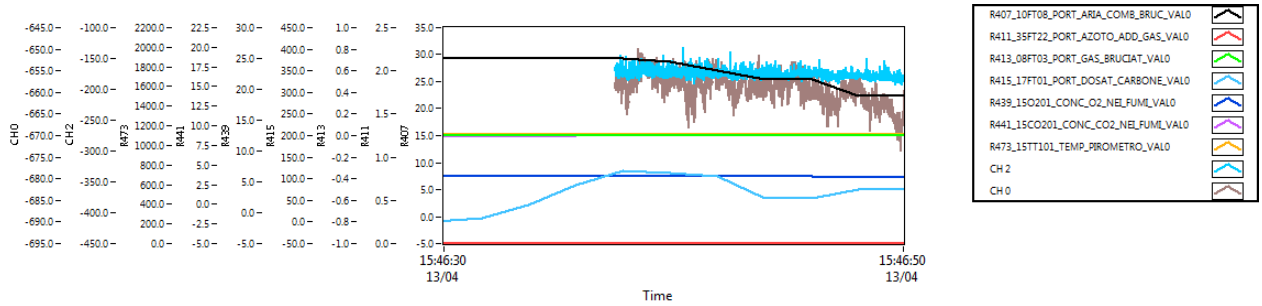
Condizioni di misura

data e ora inizio prova	13/4/11 15:48:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqgio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	TRANSITORIO OXY
GN bruciatore [Nm3/h] 08ft05	
Aria bruciatore [Nm3/h] 10ft08	
Ossigeno	ENTRATA
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	1082
Pirometro portina 5 15TT101	1115
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1177
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	207
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	22.4
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	
CO (ppm)	
O2 IN [%vol]	
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	??
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.75
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	197.32
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1163.53
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.81
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.50
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1041.05
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	71.64
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	201.60
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	64.35
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.91
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	30.72
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.97
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.19
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.77
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	30.90
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.20
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	32.65
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.63
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.01
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.60
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	0.24
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	1.20
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.00
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	110.37
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	18.46
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2842.87
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.96
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	21.25
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	13.22
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1090.99
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.73
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.21
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.83
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.63
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1042.64
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1089.95
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.25
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	23.12
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1076.28
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	1.69
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:46:19
13/04
15:48:53
13/04
Time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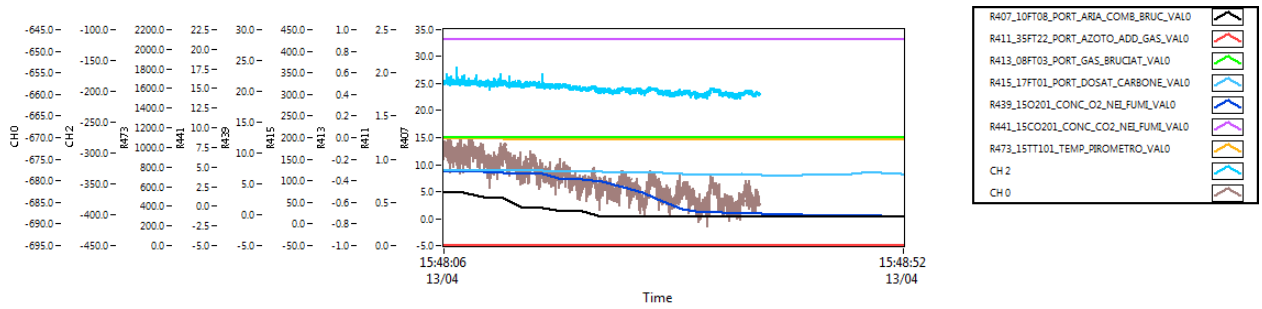
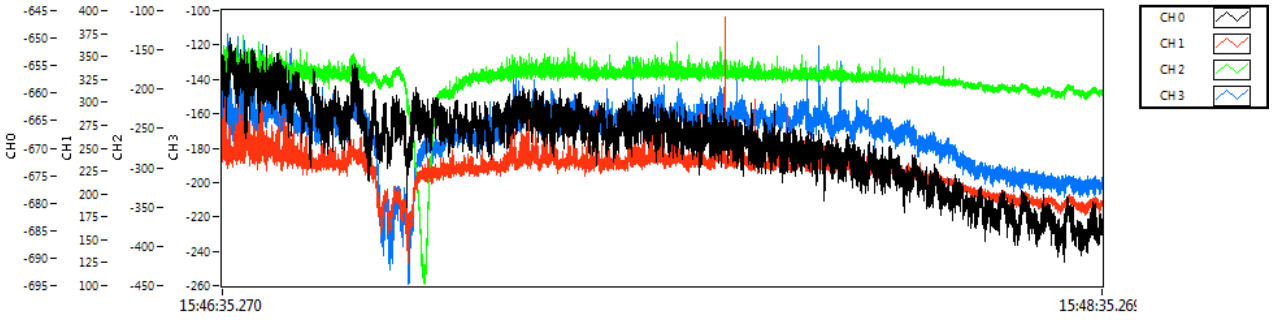
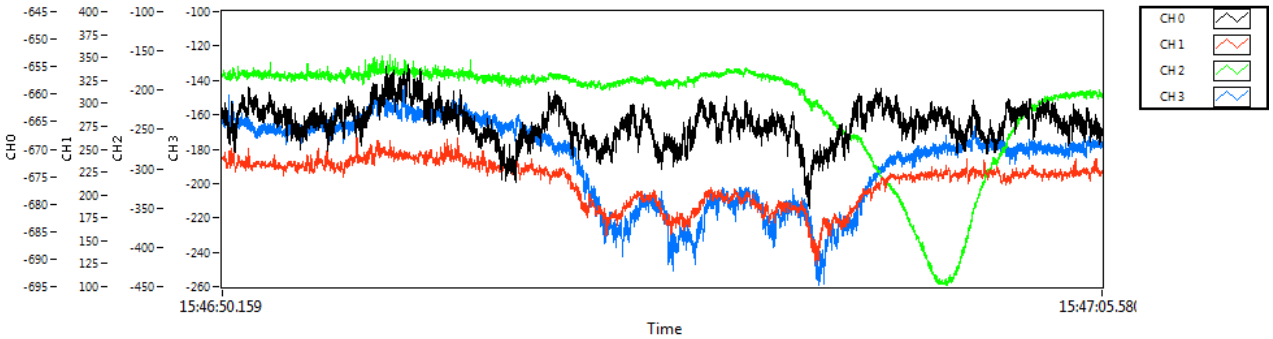
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:46:30
13/04
15:46:50
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:48:06
13/04
15:48:52
13/04
Time


CH 0
CH 1
CH 2
CH 3
15:46:35.270
15:48:35.26
Time


CH 0
CH 1
CH 2
CH 3
15:46:50.159
15:47:05.58
Time

Misura 32: 13-04-2011-15-49-19.184.tdms

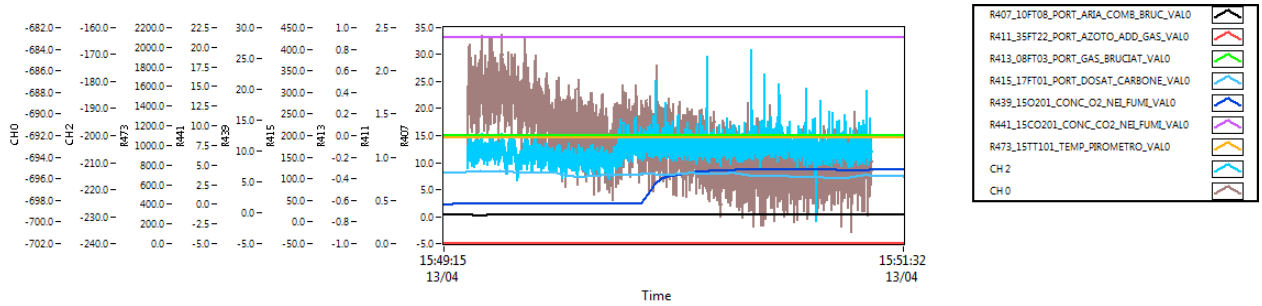
Stazionario Oxycombustione
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°
Sonde solo sul reattore

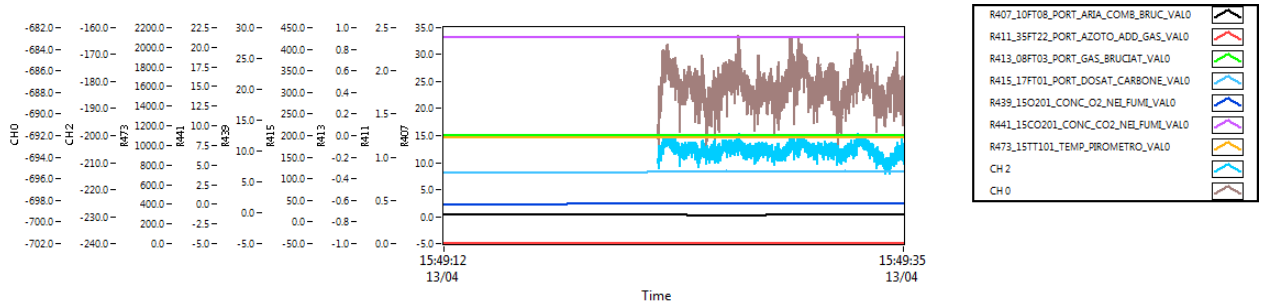
Condizioni di misura

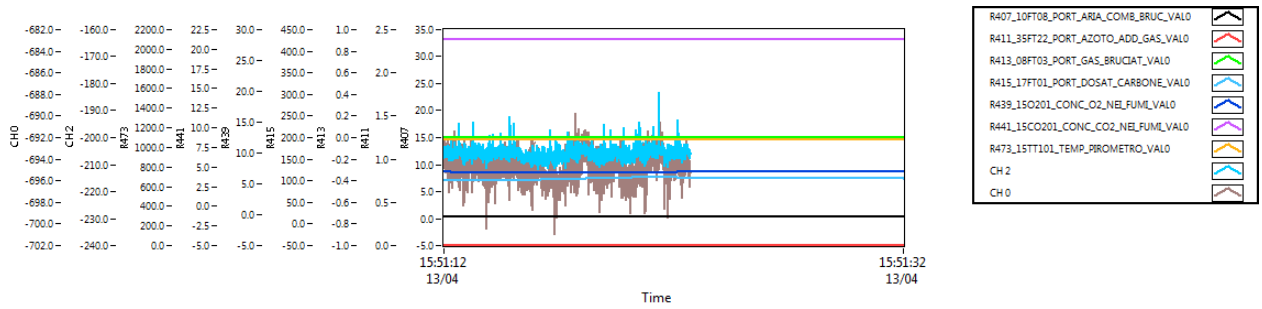
data e ora inizio prova	13/4/11 15:48:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	TRANSITORIO OXY
GN bruciatore [Nm3/h] 08ft05	
Aria bruciatore [Nm3/h] 10ft08	
Ossigeno	ENTRATA
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	1082
Pirometro portina 5 15TT101	1115
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1177
TMOD6[°C] (15TT95)	1089
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	207
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	22.4
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	
CO (ppm)	
O2 IN [%vol]	
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	??
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

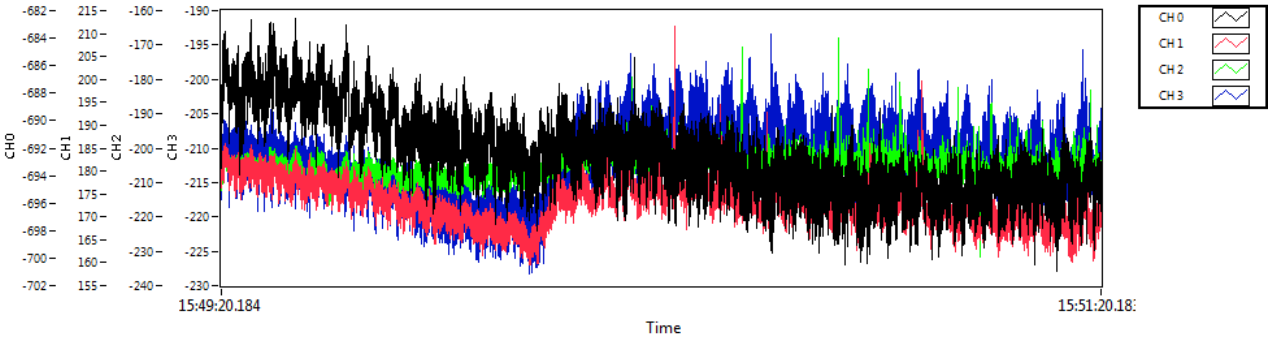
Valori medi variabili di processo

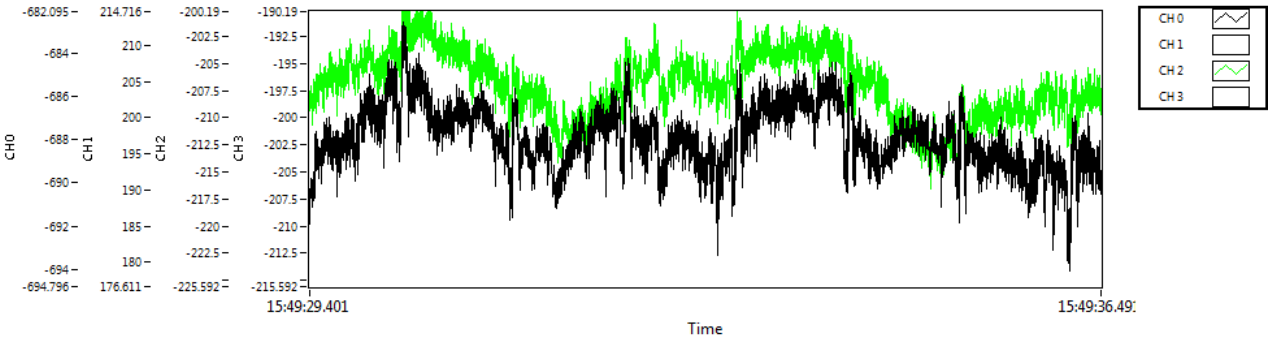
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.75
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	197.32
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1163.53
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.81
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.50
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1041.05
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	71.64
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	201.60
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	64.35
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.91
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	30.72
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.97
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.19
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.77
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	30.90
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.20
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	32.65
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.63
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.01
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.60
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	0.24
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	1.20
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.00
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	110.37
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	18.46
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2842.87
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.96
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	21.25
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	13.22
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1090.99
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.73
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.21
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.83
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.63
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1042.64
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1089.95
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.25
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	23.12
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1076.28
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	1.69
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:49:15
13/04
15:51:32
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:49:12
13/04
15:49:35
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:51:12
13/04
15:51:32
13/04
Time


CH 0
CH 1
CH 2
CH 3
15:49:20.184
15:51:20.18
Time


CH 0
CH 1
CH 2
CH 3
15:49:29.401
15:49:36.49
Time

Misura 33: 13-04-2011-15-52-53.905.tdms

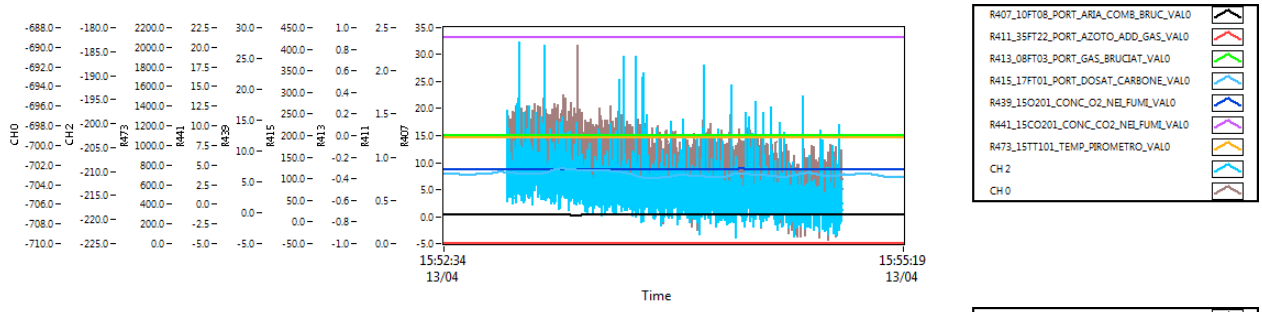
Stazionario Oxycombustione
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°
Sonde solo su reattore

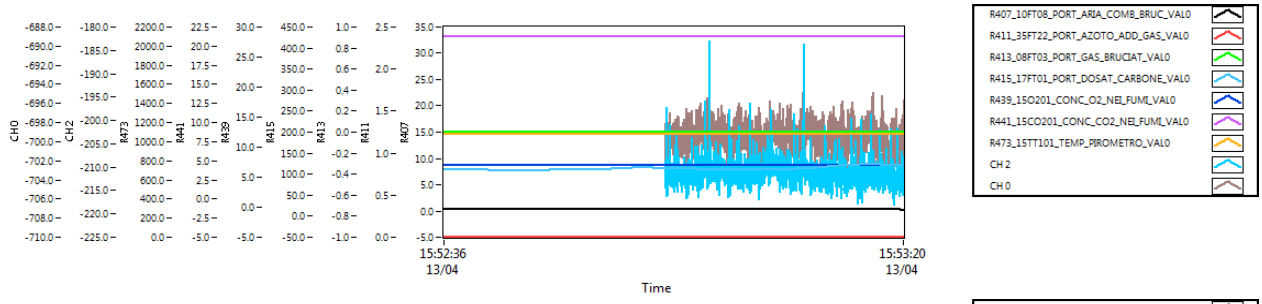
Condizioni di misura

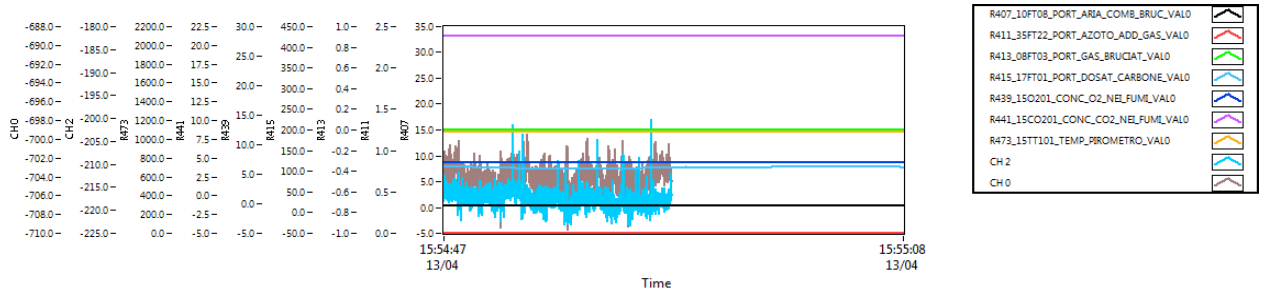
data e ora inizio prova	13/4/11 15:53:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6.9
GN bruciatore [Nm3/h] 08ft05	1.69
Aria bruciatore [Nm3/h] 10ft08	
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	1039
Pirometro portina 5 15TT101	1076
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1164
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	195
Tvalle_quench [°C] (15TT19)	76
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	23.19
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	21.2
CO (ppm)	13.26
O2 IN [%vol]	6.9
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	2600
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.5
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	ccass ccrad P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

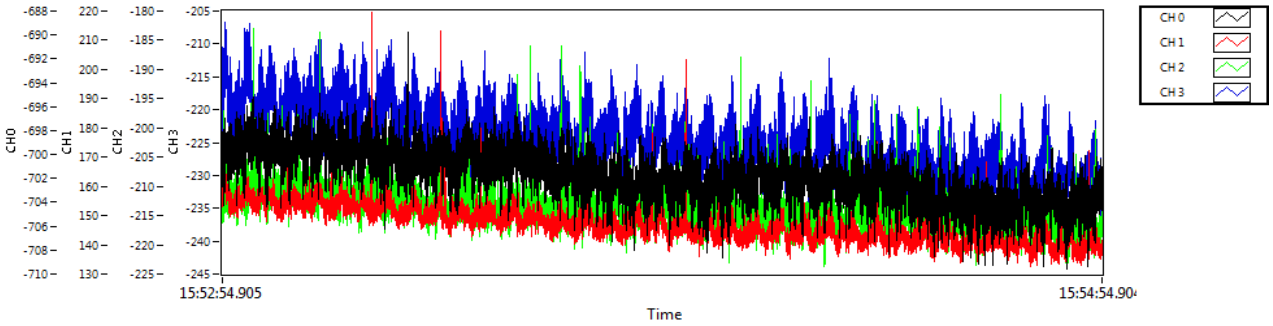
Valori medi variabili di processo

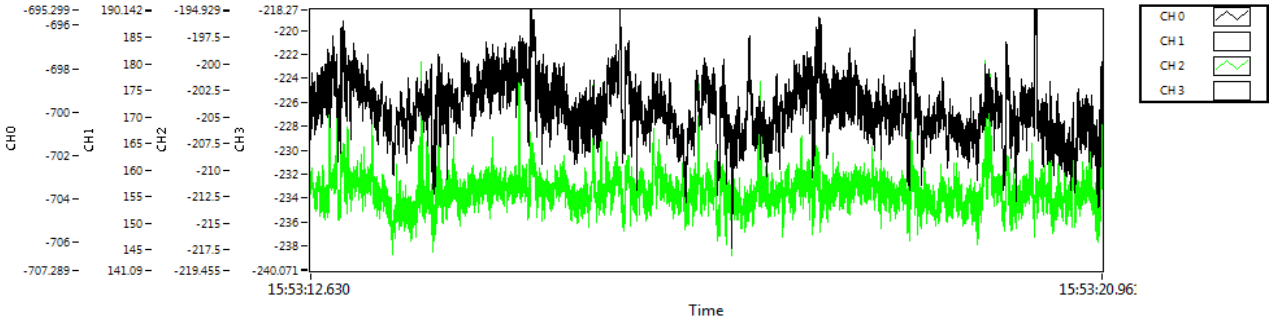
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.75
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	197.32
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1163.53
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.81
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.50
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1041.05
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	71.64
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	201.60
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	64.35
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.91
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	30.72
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.97
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.19
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.77
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	30.90
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.20
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	32.65
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.63
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.01
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.60
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	0.24
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	1.20
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.00
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	110.37
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	18.46
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2842.87
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.96
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	21.25
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	13.22
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1090.99
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.73
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.21
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.83
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.63
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1042.64
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1089.95
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.25
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	23.12
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1076.28
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	1.69
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

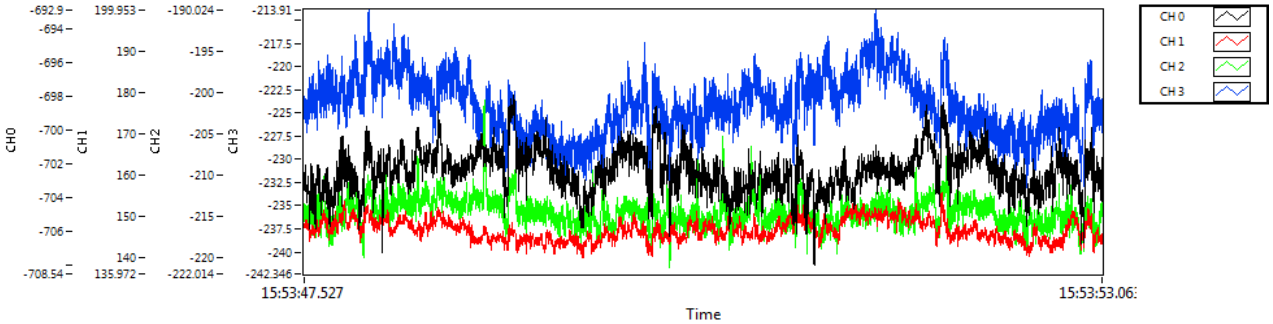

R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:52:34
13/04
15:55:19
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:52:36
13/04
15:53:20
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:54:47
13/04
15:55:08
13/04
Time


CH 0
CH 1
CH 2
CH 3
15:52:54.905
15:54:54.90
Time


CH 0
CH 1
CH 2
CH 3
15:53:12.630
15:53:20.96
Time


CH 0
CH 1
CH 2
CH 3
15:53:47.527
15:53:53.06
Time

Misura 34: 13-04-2011-15-55-58.495.tdms

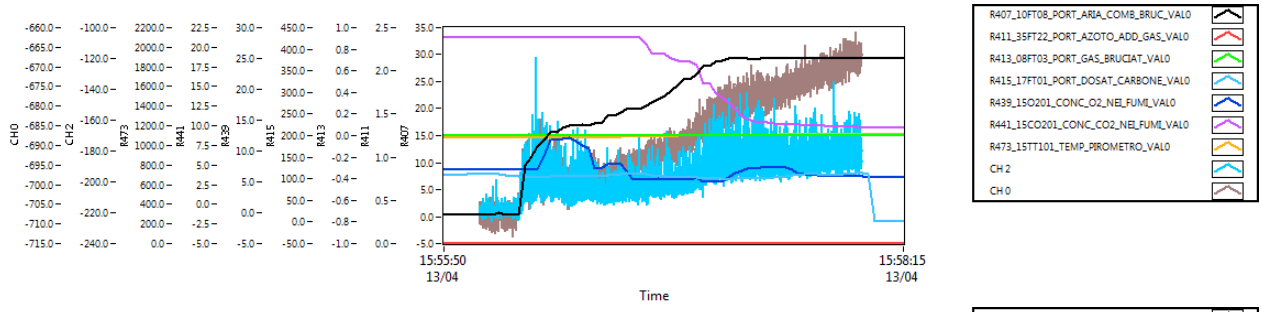
Passaggio Oxycombustione- Diffusivo
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°
Sonde solo su reattore

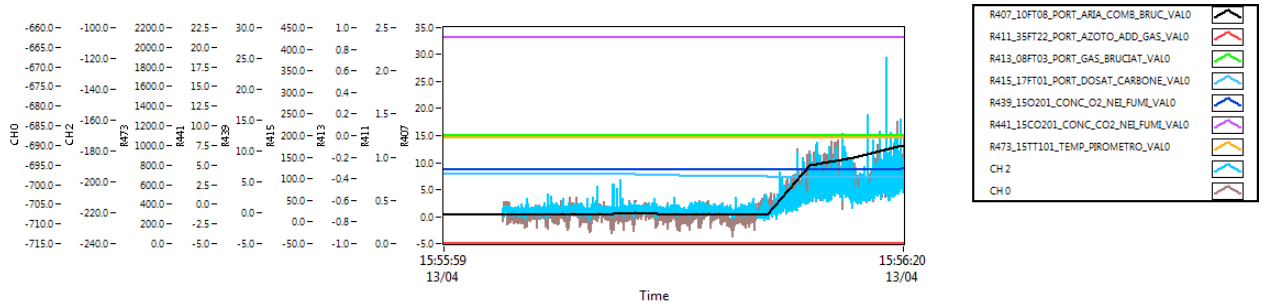
Condizioni di misura

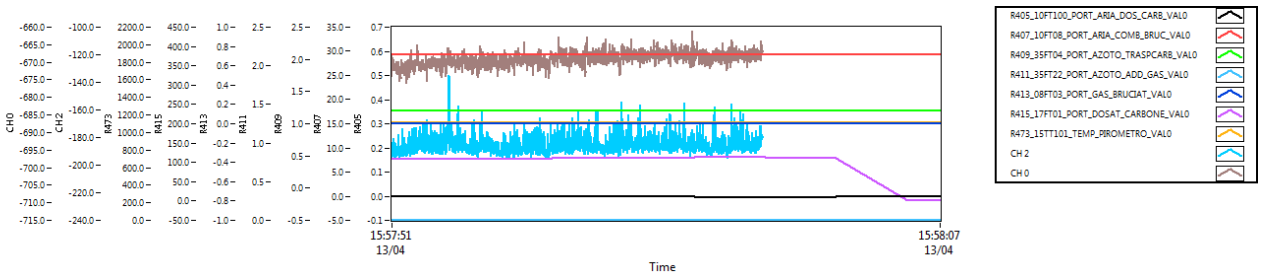
data e ora inizio prova	13/4/11 15:53:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6.9
GN bruciatore [Nm3/h] 08ft05	1.69
Aria bruciatore [Nm3/h] 10ft08	
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	1039
Pirometro portina 5 15TT101	1076
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1164
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	195
Tvalle_quench [°C] (15TT19)	76
Portata carbone(set point) [g/h]	110
N2quench_sonda [Nm3/h] 35ft101	23.19
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	21.2
CO (ppm)	13.26
O2 IN [%vol]	6.9
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	2600
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.5
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	ccass ccrad P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

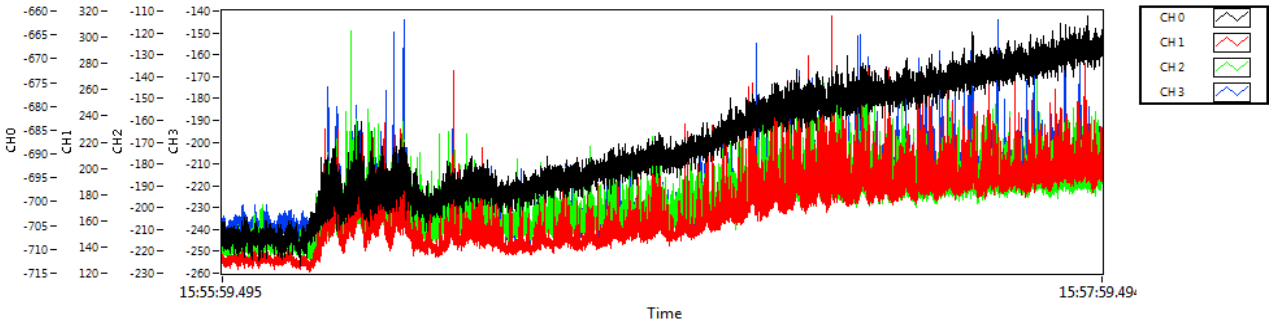
Valori medi variabili di processo

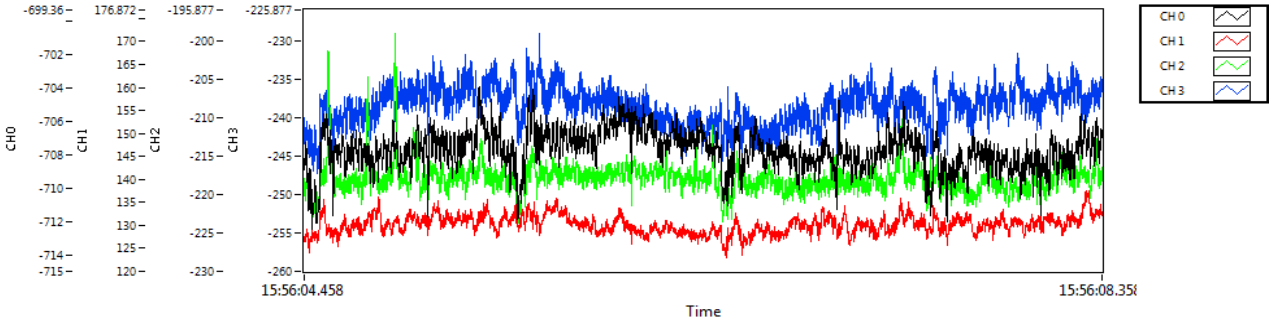
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.75
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	197.32
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1163.53
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.81
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.50
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1041.05
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	71.64
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	201.60
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	64.35
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.91
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	30.72
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.97
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	32.19
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.77
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	30.90
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.20
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	32.65
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.63
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.01
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.60
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	0.24
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	1.20
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.00
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	110.37
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	18.46
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2842.87
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.96
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	21.25
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	13.22
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1090.99
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1098.73
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1099.21
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.83
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1099.63
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1042.64
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1089.95
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1098.25
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	23.12
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1076.28
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	1.69
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

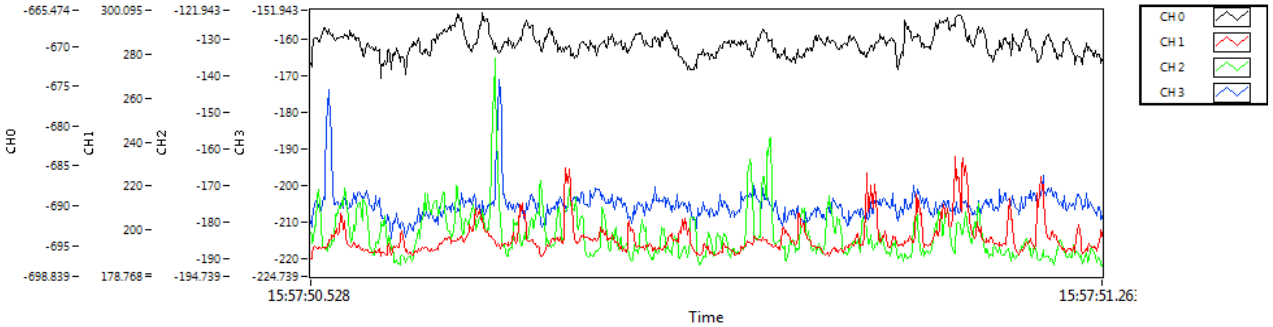

R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:55:50
13/04
15:58:15
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:55:59
13/04
15:56:20
13/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:57:51
13/04
15:58:07
13/04
Time


CH 0
CH 1
CH 2
CH 3
15:55:59.495
15:57:59.49
Time


CH 0
CH 1
CH 2
CH 3
15:56:04.458
15:56:08.35
Time


CH 0
CH 1
CH 2
CH 3
15:57:50.528
15:57:51.26
Time

Misura 35: 13-04-2011-16-19-20.056.tdms

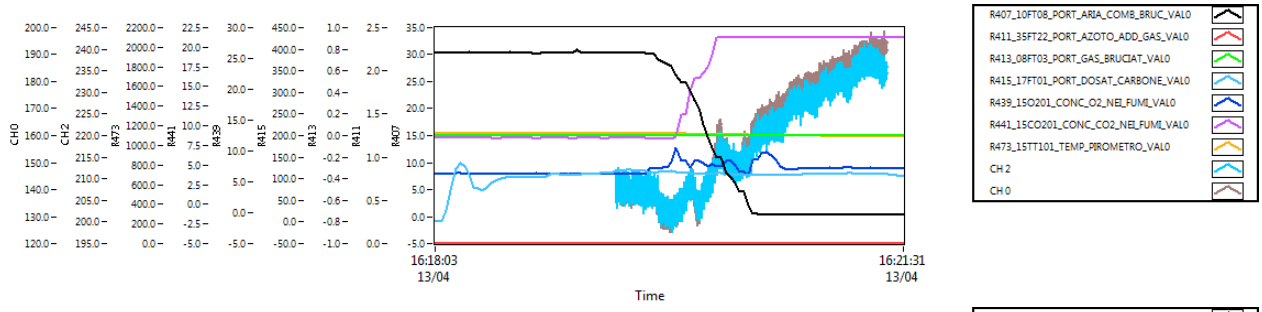
Entrata in Oxycombustione
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°
CH0, assiale, e CH2, radiale, combustore

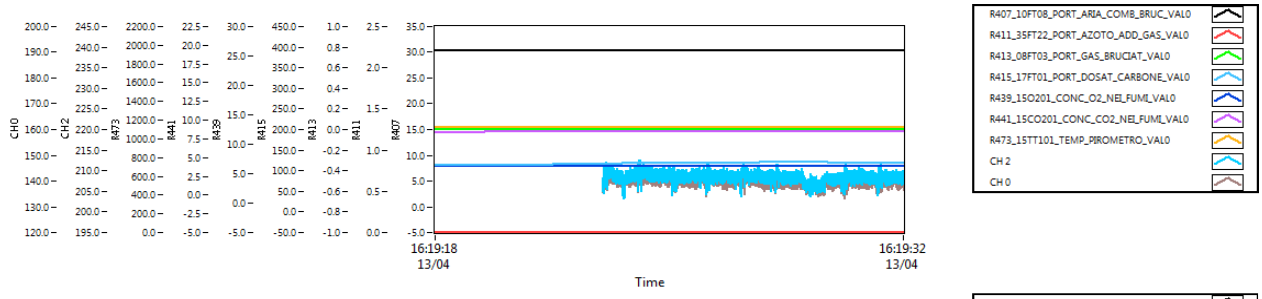
Condizioni di misura

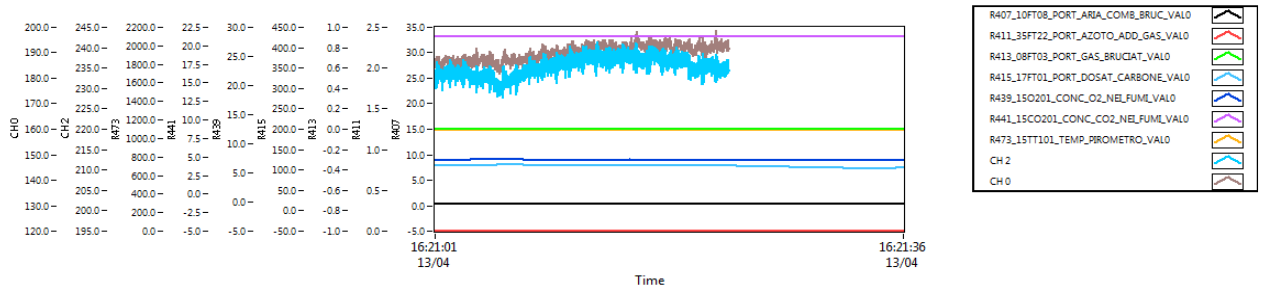
data e ora inizio prova	13/4/11 16:19:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	TRANSITORIO OXY
GN bruciatore [Nm3/h] 08ft05	
Aria bruciatore [Nm3/h] 10ft08	
Ossigeno	ENTRATA
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	
Pirometro portina 5 15TT101	
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	
TMOD6[°C] (15TT95)	
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	
Portata carbone(set point) [g/h]	
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	
Air_Carrier (10FT100)	
CO2 [%vol]	
CO (ppm)	
O2 IN [%vol]	
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	ccass ccrad P8 P9
POSIZIONE SONDE	CH0 ccass-CH2 ccrad-CH1 P8-CH3 P9

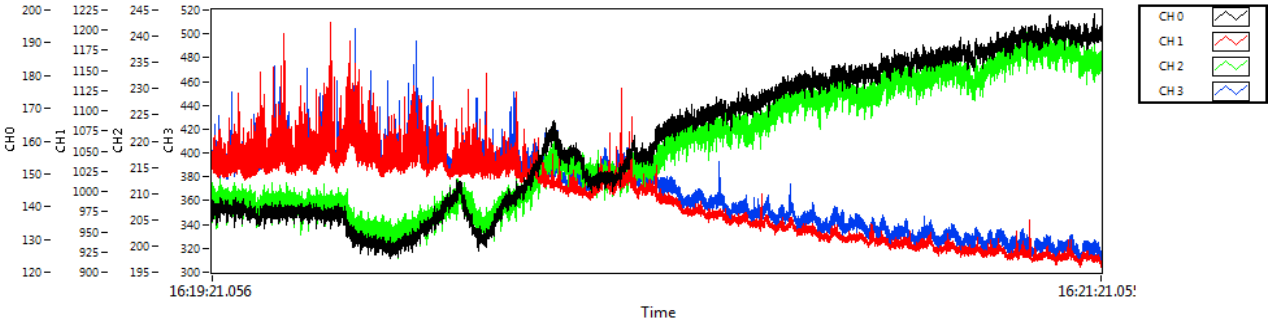
Valori medi variabili di processo

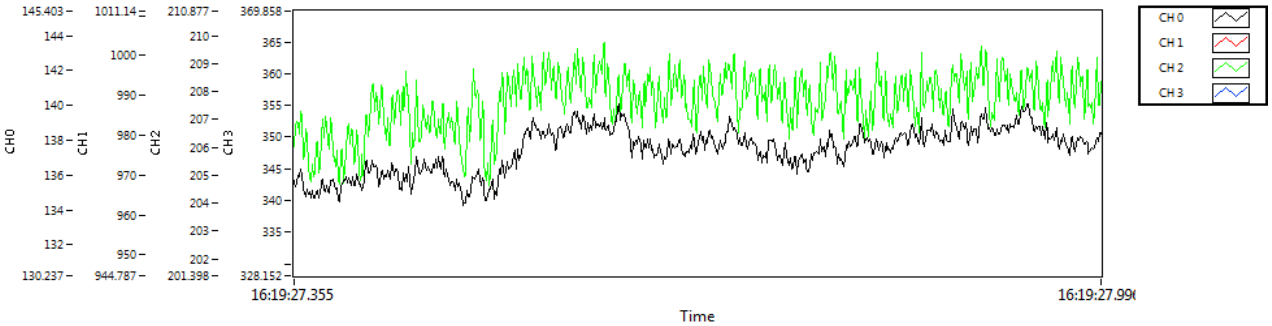
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	transitorio air-oxy
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	
R457_15TT01_TEMP_MODULO_1_VAL0	°C	
R461_15TT03_TEMP_MODULO_3_VAL0	°C	
R463_15TT04_TEMP_MODULO_4_VAL0	°C	
R465_15TT05_TEMP_MODULO_5_VAL0	°C	
R467_15TT06_TEMP_MODULO_6_VAL0	°C	
R469_15TT07_TEMP_MODULO_7_VAL0	°C	
R471_15TT08_TEMP_MODULO_8_VAL0	°C	
R459_15TT02_TEMP_MODULO_2_VAL0	°C	
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

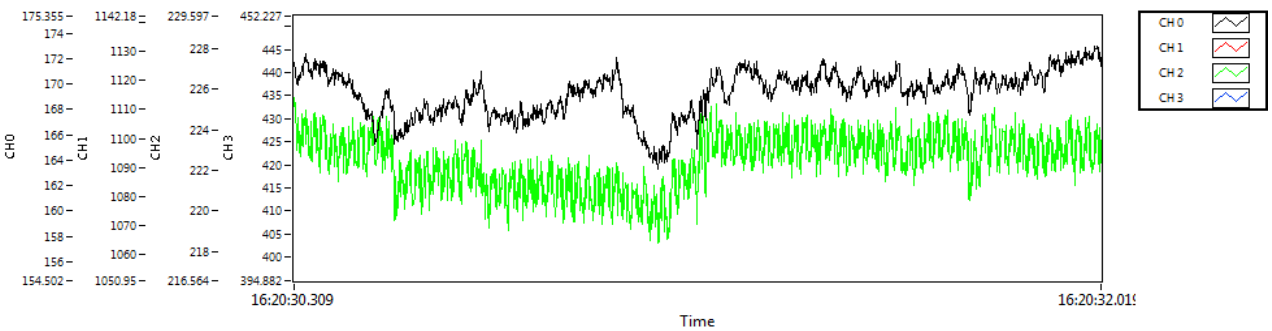

R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:18:03
13/04
16:21:31
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:19:18
13/04
16:19:32
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:21:01
13/04
16:21:36
13/04
Time


CH 0
CH 1
CH 2
CH 3
16:19:21.056
16:21:21.05
Time


CH 0
CH 1
CH 2
CH 3
16:19:27.355
16:19:27.99
Time


CH 0
CH 1
CH 2
CH 3
16:20:30.309
16:20:32.01
Time

Misura 36: 13-04-2011-16-22-09.673.tdms

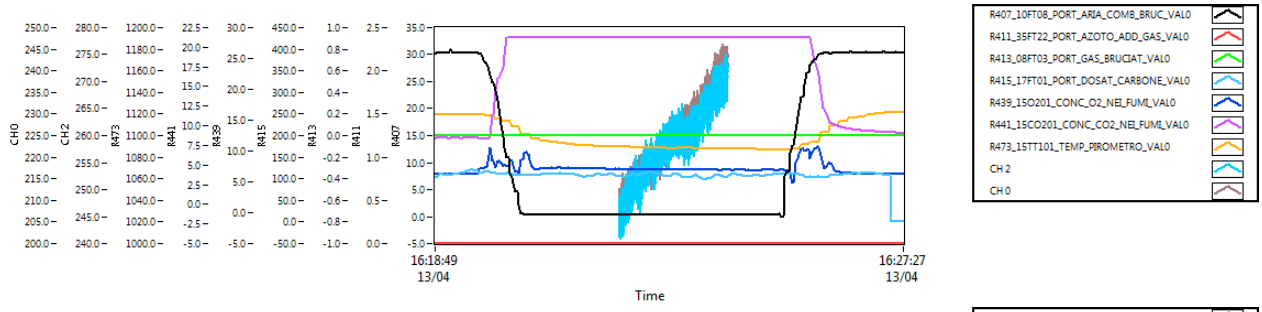
Stazionario Oxycombustione
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°

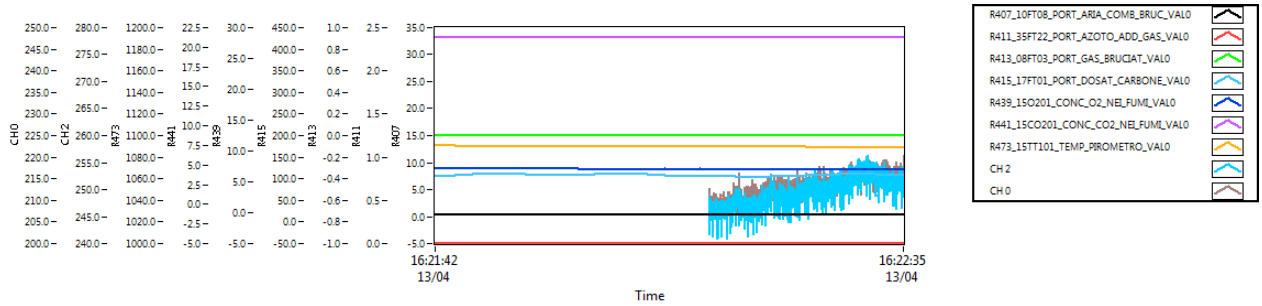
Condizioni di misura

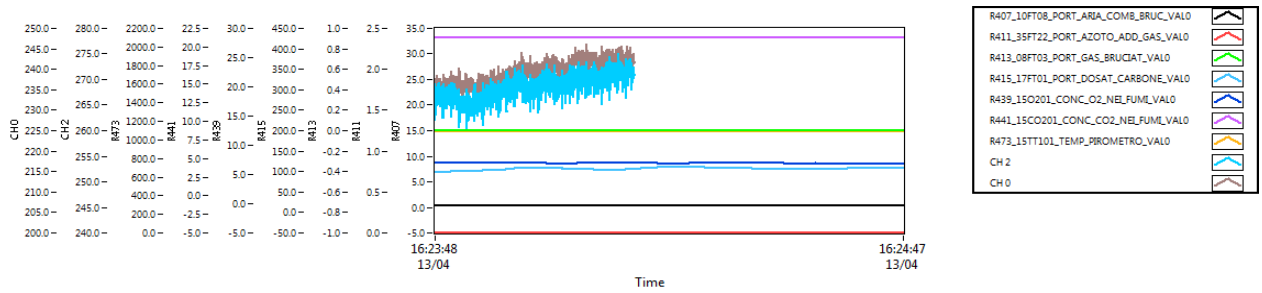
data e ora inizio prova	13/4/11 16:22:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaqqio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	1.69
GN bruciatore [Nm3/h] 08ft05	
Aria bruciatore [Nm3/h] 10ft08	
Ossiqeno	4.55
CO2	9
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	
Pirometro portina 5 15TT101	1088
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	1136
TMOD6[°C] (15TT95)	1090
Tquench [°C] (15TT97)	96
Tvalle_quench [°C] (15TT19)	204
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	1.2
Air_Carrier (10FT100)	0
CO2 [%vol]	21.2
CO (ppm)	12.3
O2 IN [%vol]	6.92
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	2600
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	ccass ccrad P8 P9
POSIZIONE SONDE	CH0 ccass-CH2 ccrad-CH1 P8-CH3 P9

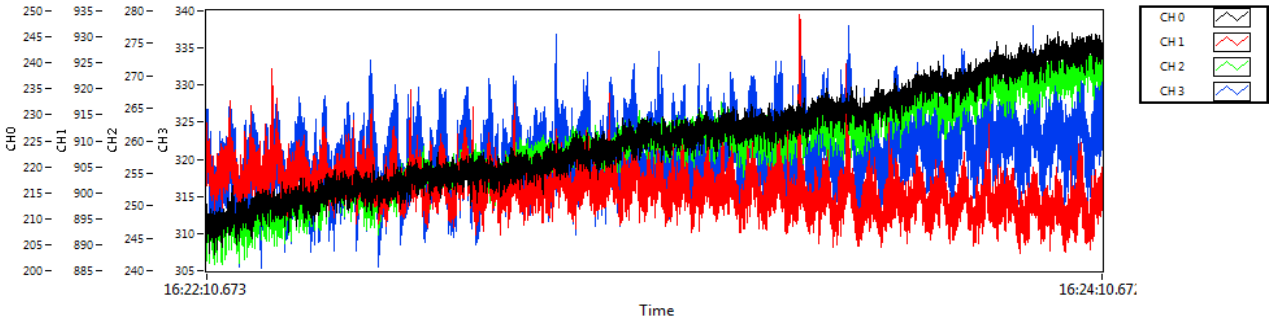
Valori medi variabili di processo

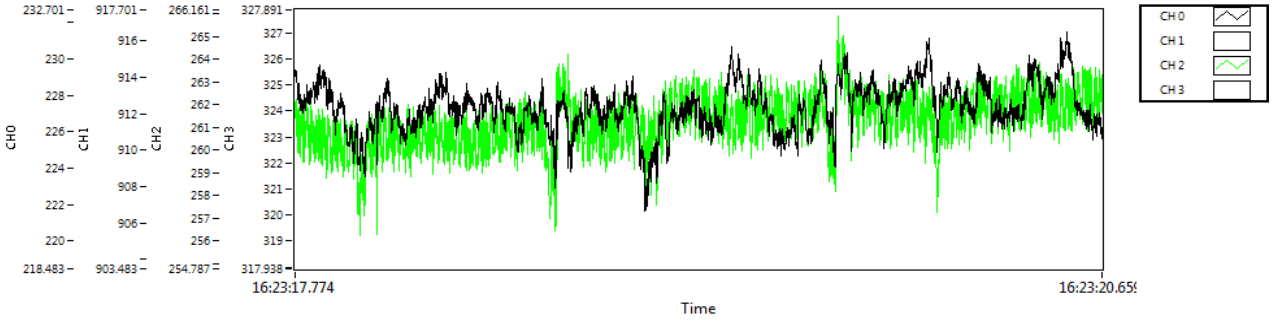
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	28.15
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	94.75
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	1135.80
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	28.84
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	1090.14
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	36.69
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	203.06
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	52.01
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	96.61
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	26.95
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	32.31
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	30.94
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	31.34
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	31.74
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	31.67
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	31.15
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	32.60
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	31.60
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.01
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.11
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.72
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.87
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.00
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	0.23
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	1.20
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	0.00
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	107.82
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	521.51
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.95
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	21.25
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	12.21
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	1093.42
R461_15TT03_TEMP_MODULO_3_VAL0	°C	1100.64
R463_15TT04_TEMP_MODULO_4_VAL0	°C	1097.72
R465_15TT05_TEMP_MODULO_5_VAL0	°C	1099.36
R467_15TT06_TEMP_MODULO_6_VAL0	°C	1098.68
R469_15TT07_TEMP_MODULO_7_VAL0	°C	1042.39
R471_15TT08_TEMP_MODULO_8_VAL0	°C	1089.77
R459_15TT02_TEMP_MODULO_2_VAL0	°C	1101.92
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.39
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	1088.66
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	1.69
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

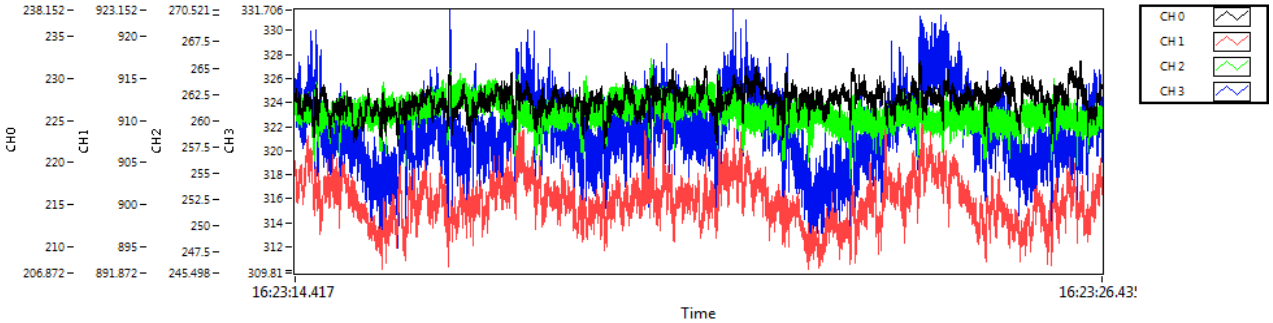

R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:18:49
13/04
16:27:27
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:21:42
13/04
16:22:35
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:23:48
13/04
16:24:47
13/04
Time


CH 0
CH 1
CH 2
CH 3
16:22:10.673
16:24:10.67
Time


CH 0
CH 1
CH 2
CH 3
16:23:17.774
16:23:20.65
Time


CH 0
CH 1
CH 2
CH 3
16:23:14.417
16:23:26.43
Time

Misura 37: 13-04-2011-16-24-54.984.tdms

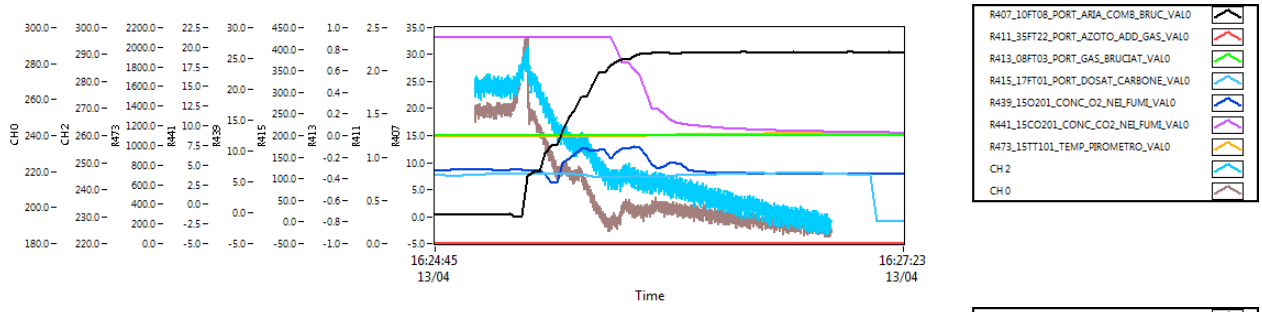
Passaggio Oxycombustione-diffusivo
Carbone S.A. TQ >125 micron
ALIMENTAZIONE continua 110 g/h
Trasporto azoto
O2 6.2 % (nei fumi)
TEMP 1100°

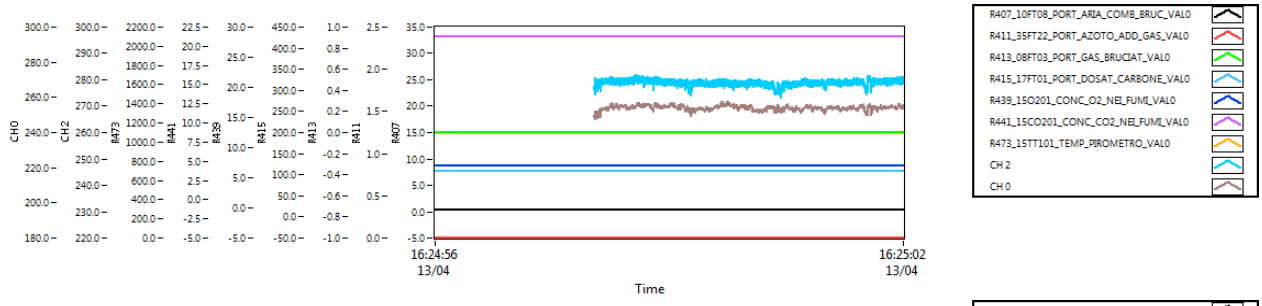
Condizioni di misura

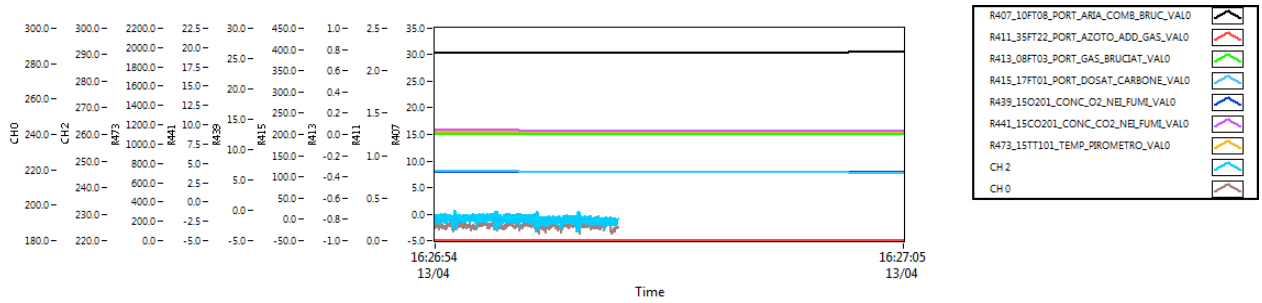
data e ora inizio prova	13/4/11 16:25:00
Tipo di prova	Sonda ENEA
Carbone	S.A. TQ > 125 micron
Tipo flussaggio resistenze	azoto
Treattore (set point)	1100
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	TRANSITORIO OXY
GN bruciatore [Nm3/h] 08ft05	
Aria bruciatore [Nm3/h] 10ft08	
Ossigeno	USCITA
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	
Pirometro portina 5 15TT101	
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	
TMOD6[°C] (15TT95)	
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	
Portata carbone(set point) [g/h]	
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	
Air_Carrier (10FT100)	
CO2 [%vol]	
CO (ppm)	
O2 IN [%vol]	
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	ccass ccrad P8 P9
POSIZIONE SONDE	CH0 ccass-CH2 ccrad-CH1 P8-CH3 P9

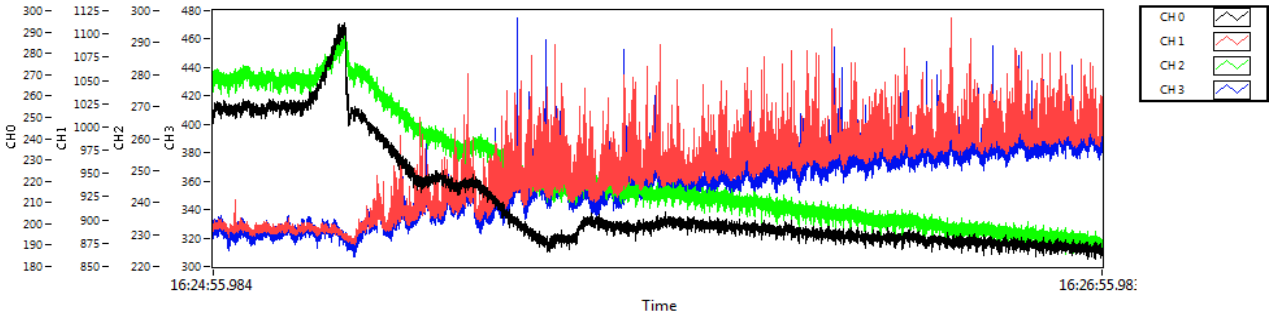
Valori medi variabili di processo

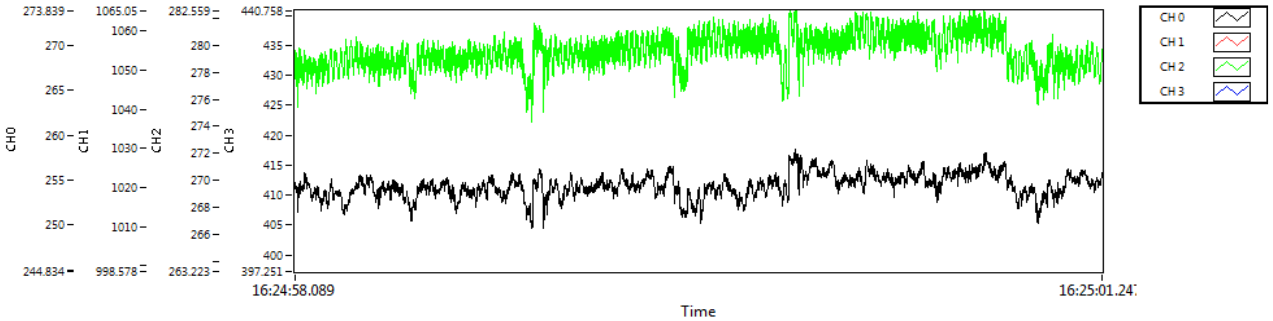
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	transitorio oxy-air
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL(	Nm3/h	
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	
R457_15TT01_TEMP_MODULO_1_VAL0	°C	
R461_15TT03_TEMP_MODULO_3_VAL0	°C	
R463_15TT04_TEMP_MODULO_4_VAL0	°C	
R465_15TT05_TEMP_MODULO_5_VAL0	°C	
R467_15TT06_TEMP_MODULO_6_VAL0	°C	
R469_15TT07_TEMP_MODULO_7_VAL0	°C	
R471_15TT08_TEMP_MODULO_8_VAL0	°C	
R459_15TT02_TEMP_MODULO_2_VAL0	°C	
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

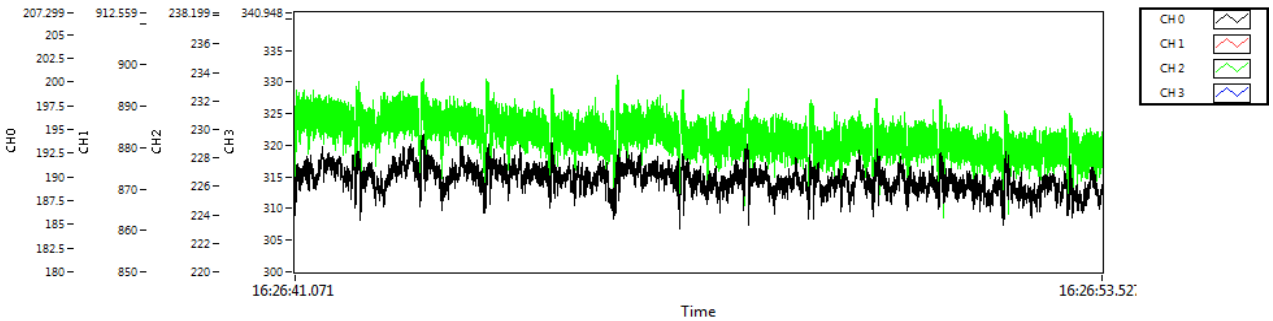

R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:24:45
13/04
16:27:23
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:24:56
13/04
16:25:02
13/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEL_FUMI_VAL0
R441_15CO201_CONC_CO2_NEL_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:26:54
13/04
16:27:05
13/04
Time


CH 0
CH 1
CH 2
CH 3
16:24:55.984
16:26:55.98
Time


CH 0
CH 1
CH 2
CH 3
16:24:58.089
16:25:01.24
Time


CH 0
CH 1
CH 2
CH 3
16:26:41.071
16:26:53.52
Time

8. Panoramica sul contenuto informativo delle misure effettuate: 14 Aprile 2011

Misura 1: 14-04-2011-10-33-00.331.tdms

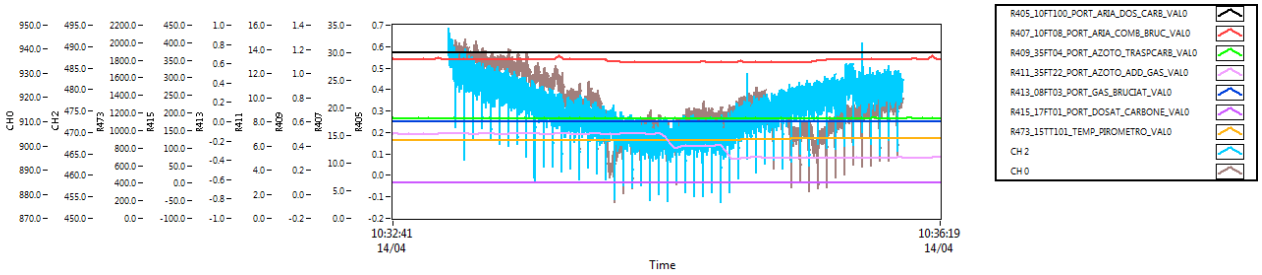
Biomassa semi di girasole secchi e macinati
ALIMENTAZIONE pulsata mmc 250
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°
TEST

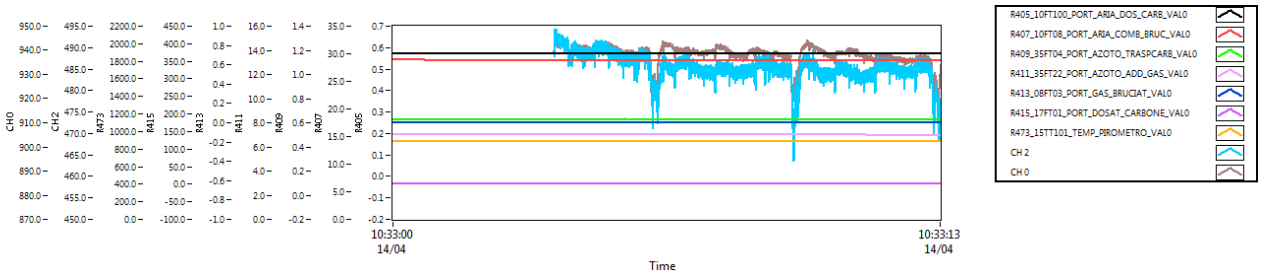
Condizioni di misura

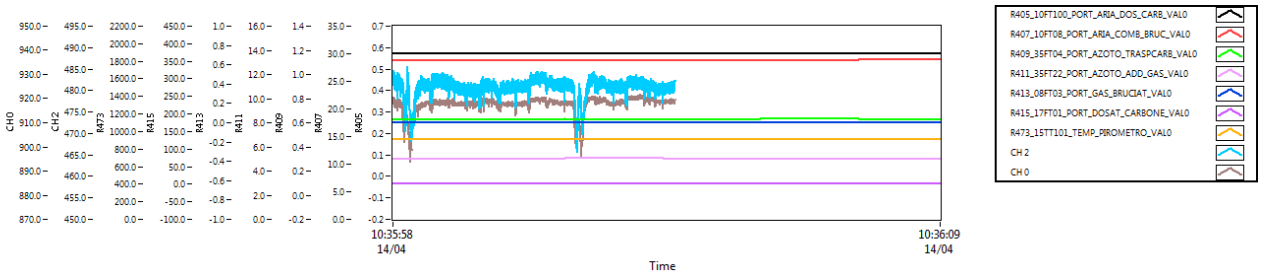
data e ora inizio prova	14/4/11 10:39:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqgio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	28.7
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1021
Pirometro portina 5 15TT101	911
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	953
TMOD6[°C] (15TT95)	894
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	196
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	18.7
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.5
CO (ppm)	0.99
O2 IN [%vol]	5.9
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1200
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

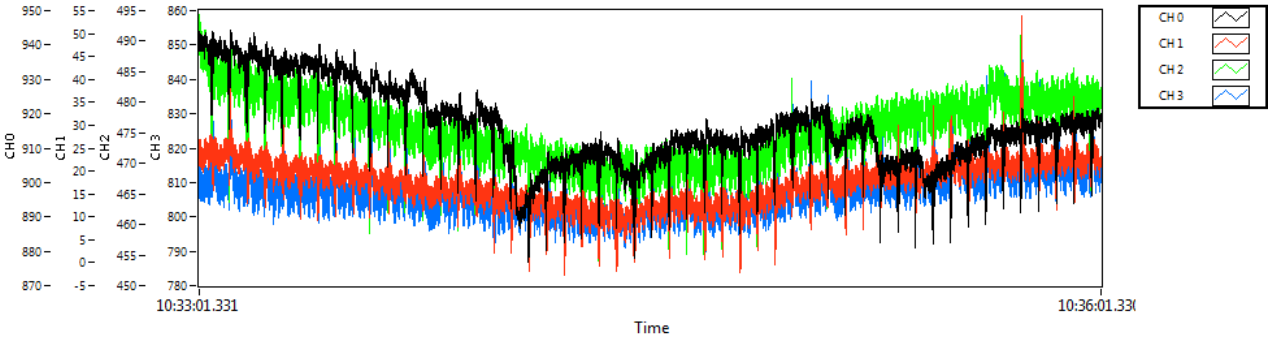
Valori medi variabili di processo

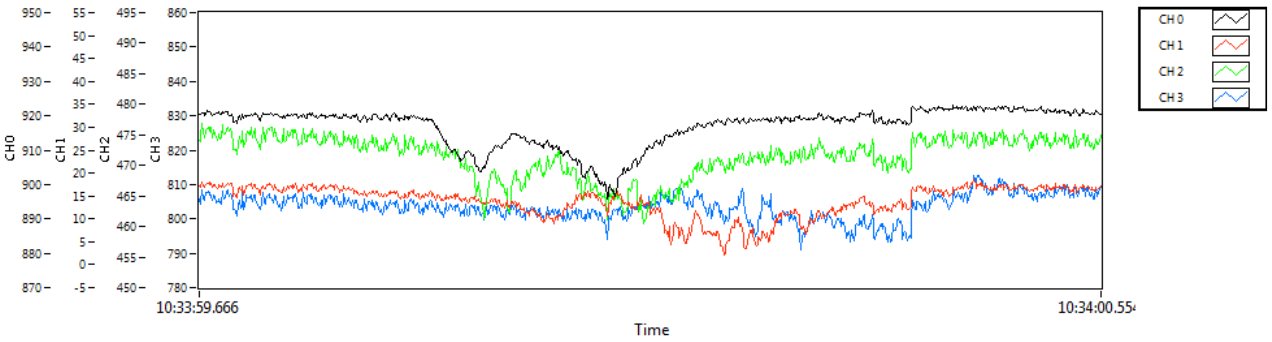
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.54
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.00
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	952.53
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.54
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	894.35
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1021.83
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	197.91
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	179.62
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	86.77
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.79
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.64
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.65
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	30.04
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.46
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.86
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.82
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	29.52
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.21
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.74
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.91
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	28.80
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.08
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	345.58
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.38
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.92
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.47
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.96
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	901.06
R461_15TT03_TEMP_MODULO_3_VAL0	°C	898.04
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.17
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.92
R467_15TT06_TEMP_MODULO_6_VAL0	°C	900.06
R469_15TT07_TEMP_MODULO_7_VAL0	°C	883.76
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.86
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.36
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.64
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	911.40
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		7.28
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:32:41
14/04
10:36:19
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:33:00
14/04
10:33:13
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:35:58
14/04
10:36:09
14/04
Time


CH 0
CH 1
CH 2
CH 3
10:33:01.331
10:36:01.33
Time


CH 0
CH 1
CH 2
CH 3
10:33:59.666
10:34:00.55
Time

Misura 2: 14-04-2011-10-39-15.420.tdms

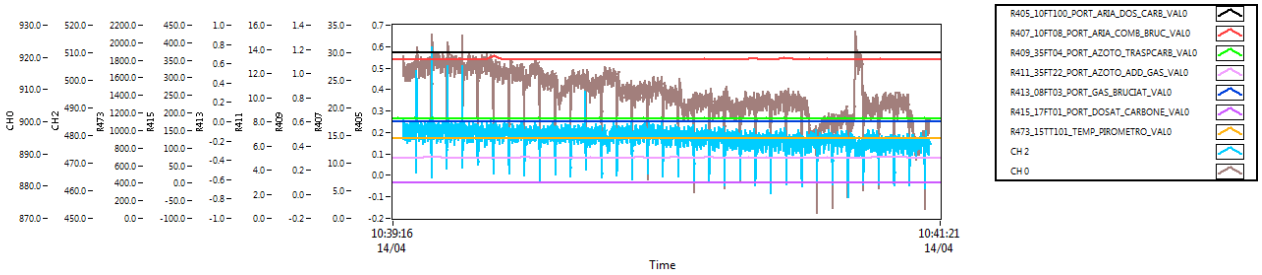
Biomassa : semi di girasole
ALIMENTAZIONE pulsata 250mmc
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 10:43:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	28.7
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1022
Pirometro portina 5 15TT101	911
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	953
TMOD6[°C] (15TT95)	894
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	198
Portata carbone(set point) [q/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	18.6
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.5
CO (ppm)	0.98
O2 IN [%vol]	5.9
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1200
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.25
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.56
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.26
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	952.67
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.52
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	894.08
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1021.67
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	196.76
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	181.34
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	87.03
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.86
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.62
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.63
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	30.00
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.43
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.83
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.82
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.49
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.20
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	28.80
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	340.38
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2839.71
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.90
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.48
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.99
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	899.25
R461_15TT03_TEMP_MODULO_3_VAL0	°C	897.68
R463_15TT04_TEMP_MODULO_4_VAL0	°C	899.92
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.91
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.97
R469_15TT07_TEMP_MODULO_7_VAL0	°C	883.42
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.78
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.07
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.64
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	911.31
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.67
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
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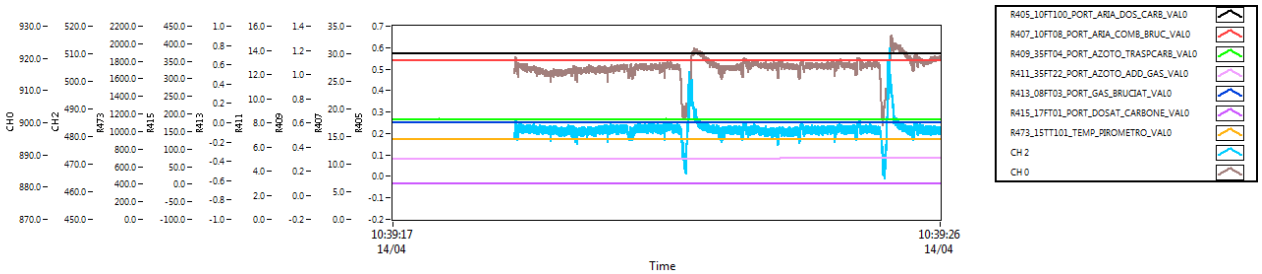
10:39:16
14/04
10:41:21
14/04
Time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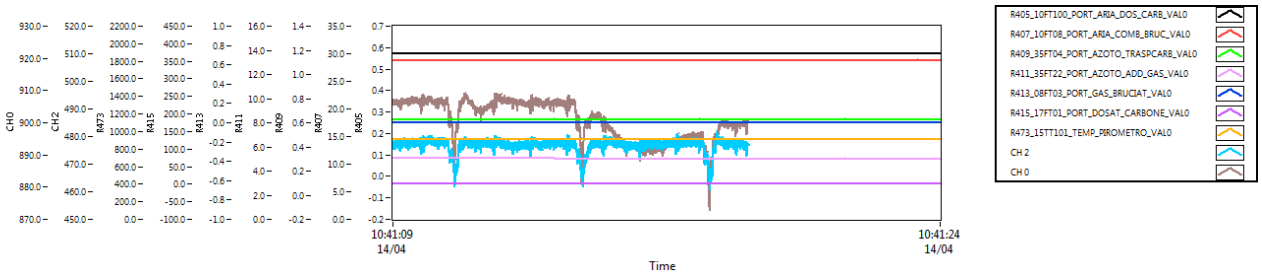
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:39:17
14/04
10:39:26
14/04
Time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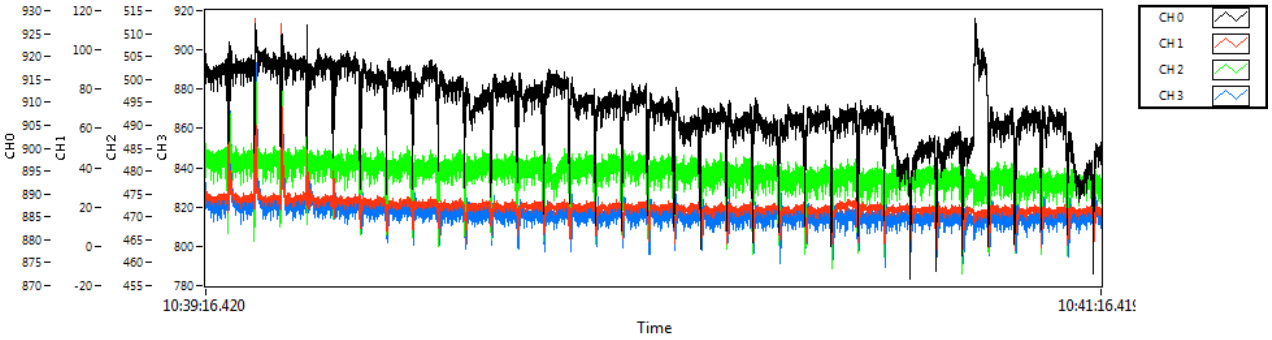
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:41:09
14/04
10:41:24
14/04
Time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CH 2
CH 3
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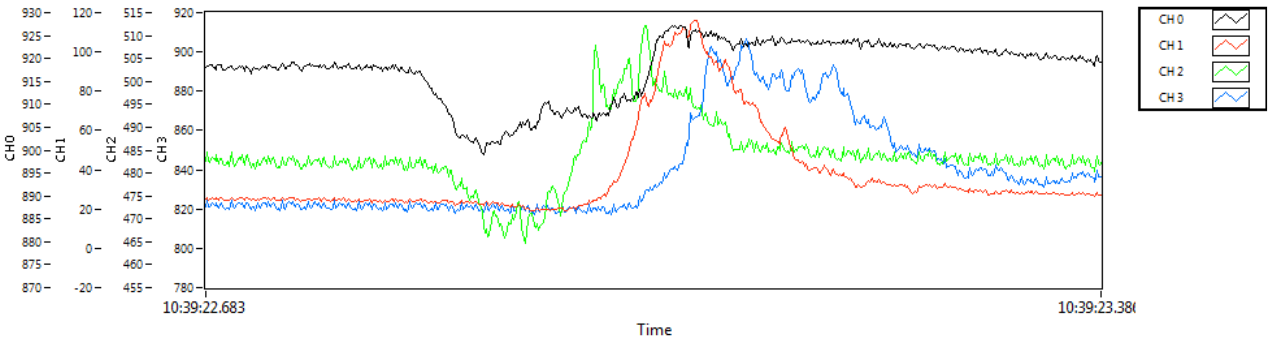
Time


CH 0
CH 1
CH 2
CH 3
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10:39:23.38
Time

Misura 3: 14-04-2011-10-42-49.154.tdms

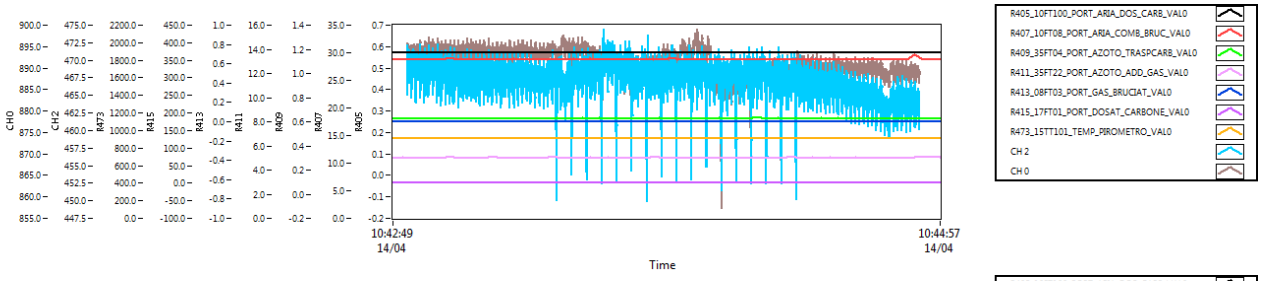
Biomassa : semi di girasole
ALIMENTAZIONE nullo- puls- nullo 250mmc
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 10:43:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaggio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	28.7
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1022
Pirometro portina 5 15TT101	911
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	953
TMOD6[°C] (15TT95)	894
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	198
Portata carbone(set point) [g/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	18.6
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.5
CO (ppm)	0.98
O2 IN [%vol]	5.9
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1200
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.25
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.56
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.26
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	952.67
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.52
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	894.08
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1021.67
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	196.76
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	181.34
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	87.03
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.86
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.62
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.63
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	30.00
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.43
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.83
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.82
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.49
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.20
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	28.80
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	340.38
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2839.71
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.90
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.48
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.99
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	899.25
R461_15TT03_TEMP_MODULO_3_VAL0	°C	897.68
R463_15TT04_TEMP_MODULO_4_VAL0	°C	899.92
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.91
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.97
R469_15TT07_TEMP_MODULO_7_VAL0	°C	883.42
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.78
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.07
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.64
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	911.31
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.67
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
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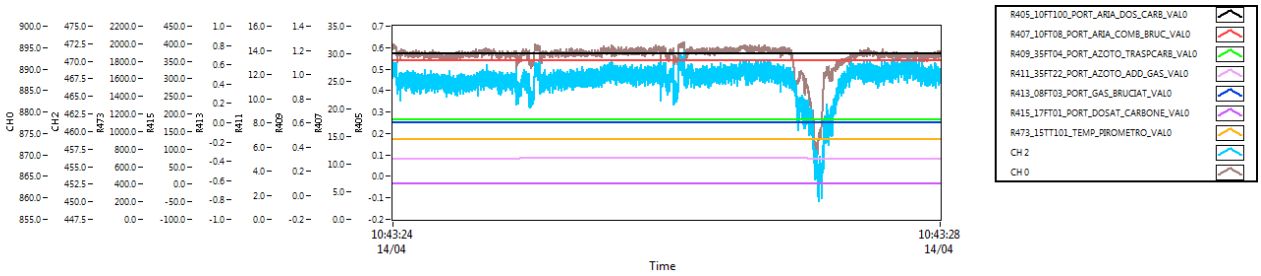
CH 2
CH 0
10:42:49
14/04
10:44:57
14/04
Time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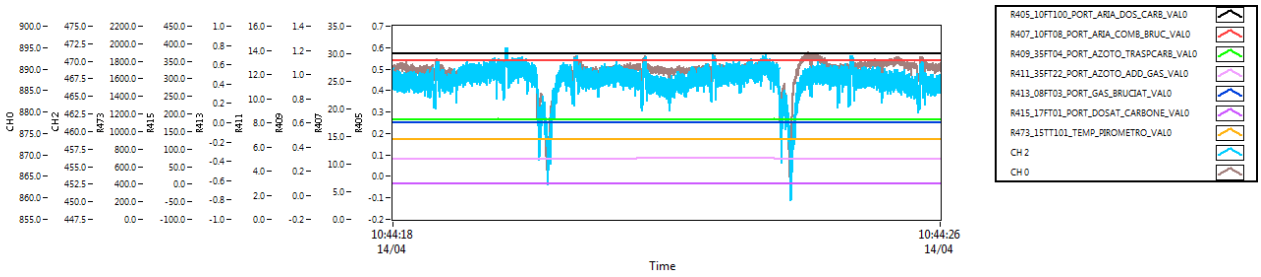
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:43:24
14/04
10:43:28
14/04
Time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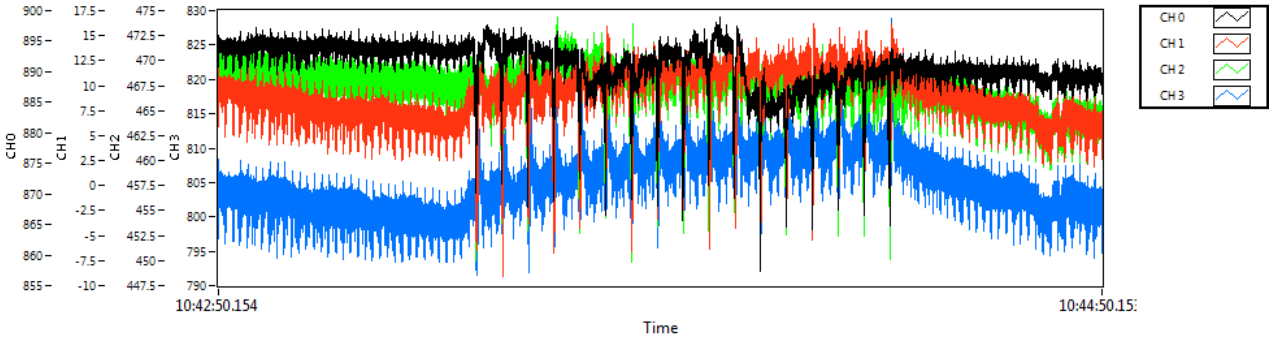
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:44:18
14/04
10:44:26
14/04
Time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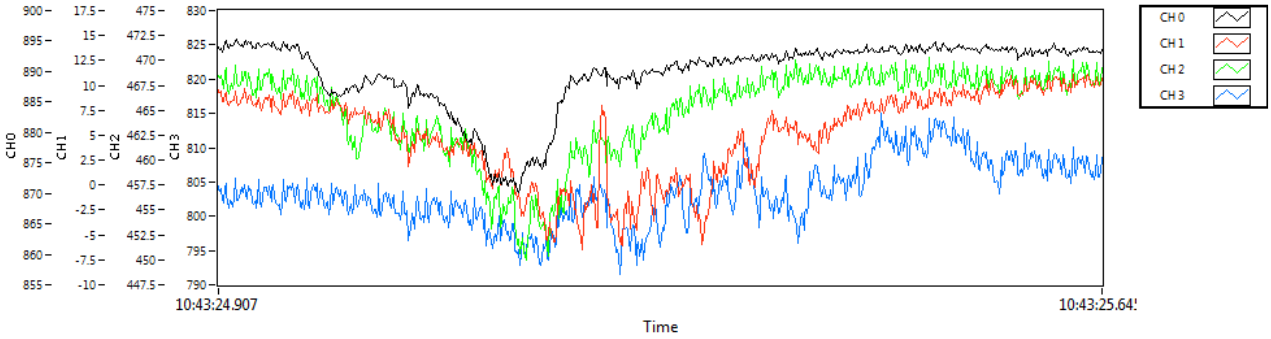
10:44:50.15
Time


CH 0
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CH 2
CH 3
10:43:24.907
10:43:25.64
Time

Misura 4: 14-04-2011-10-50-00.878.tdms

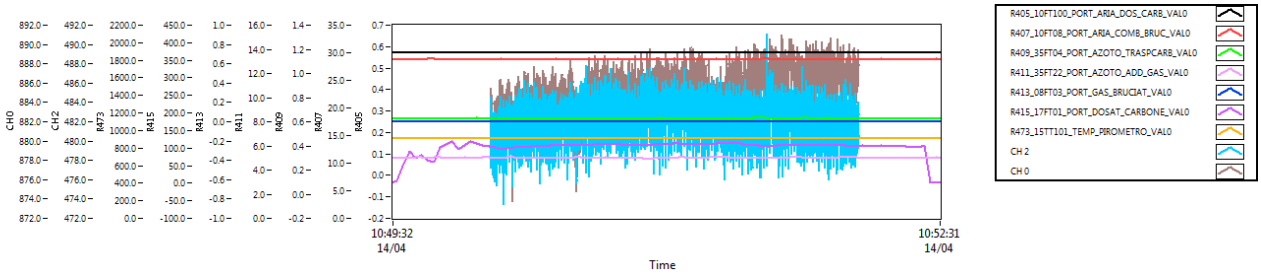
Biomassa : semi di girasole
ALIMENTAZIONE continua 250mmc
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

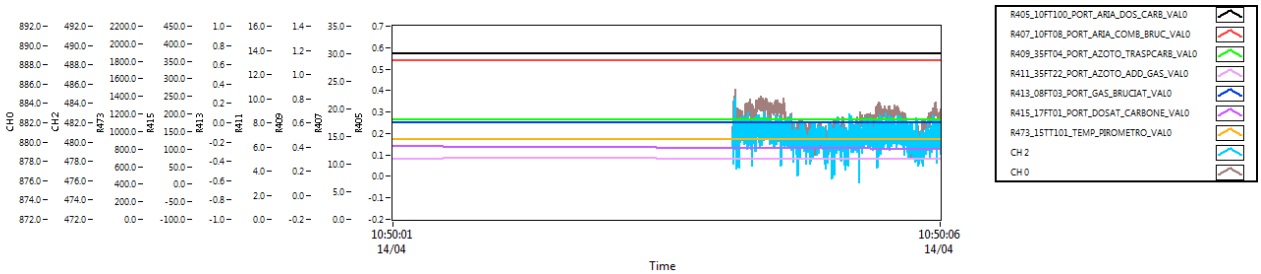
Condizioni di misura

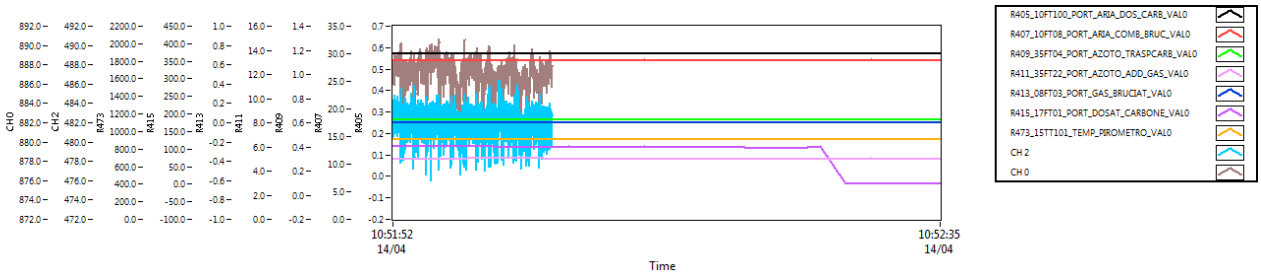
data e ora inizio prova	14/4/11 10:50:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	28.7
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1021
Pirometro portina 5 15TT101	910
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	952
TMOD6[°C] (15TT95)	894
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	196
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	18.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.5
CO (ppm)	0.97
O2 IN [%vol]	5.9
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1200
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.2
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

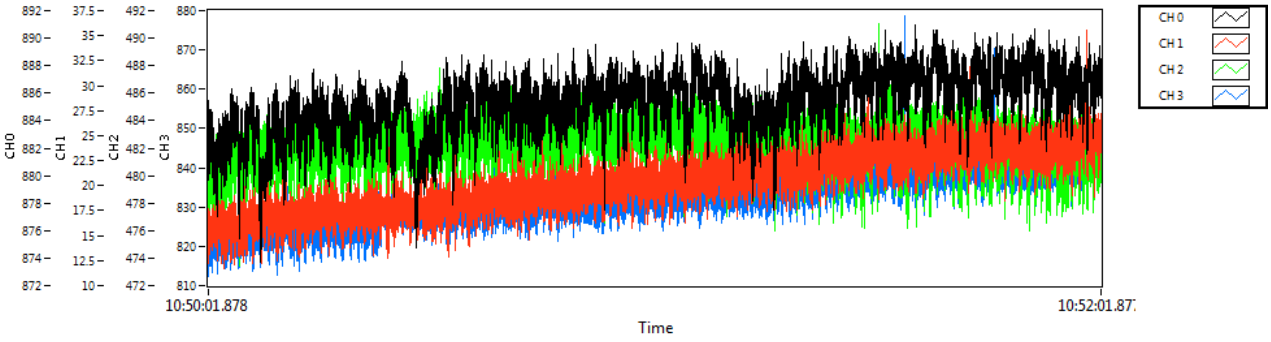
Valori medi variabili di processo

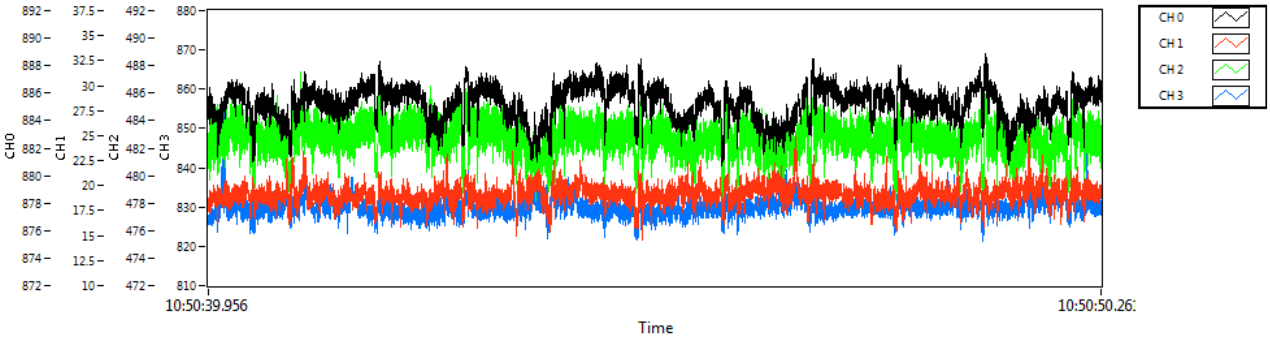
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.62
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.35
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	951.82
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.51
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	894.02
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1021.41
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	195.45
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	184.68
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	86.71
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.88
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.59
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.61
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	30.01
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.42
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.82
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.79
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.44
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.17
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	28.79
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	87.21
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	326.25
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.06
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.88
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.47
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.95
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	897.69
R461_15TT03_TEMP_MODULO_3_VAL0	°C	898.98
R463_15TT04_TEMP_MODULO_4_VAL0	°C	899.60
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.86
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.69
R469_15TT07_TEMP_MODULO_7_VAL0	°C	882.86
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.92
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.14
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.88
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	909.99
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:49:32
14/04
10:52:31
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:50:01
14/04
10:50:06
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:51:52
14/04
10:52:35
14/04
Time


CH 0
CH 1
CH 2
CH 3
10:50:01.878
10:52:01.87
Time


CH 0
CH 1
CH 2
CH 3
10:50:39.956
10:50:50.26
Time

Misura 5: 14-04-2011-10-53-10.624.tdms

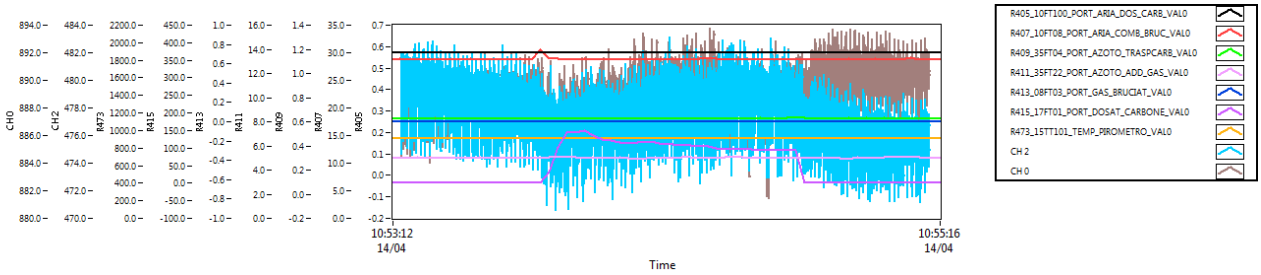
Biomassa : semi di girasole
ALIM. Biomassa nulla-pulsata-nulla 250mmc
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

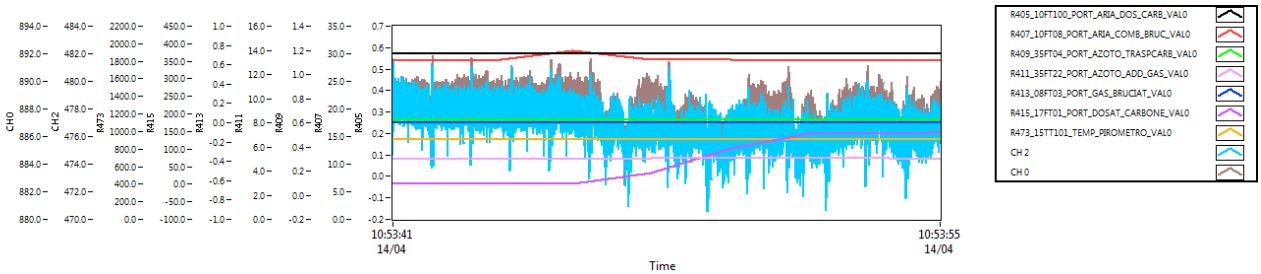
Condizioni di misura

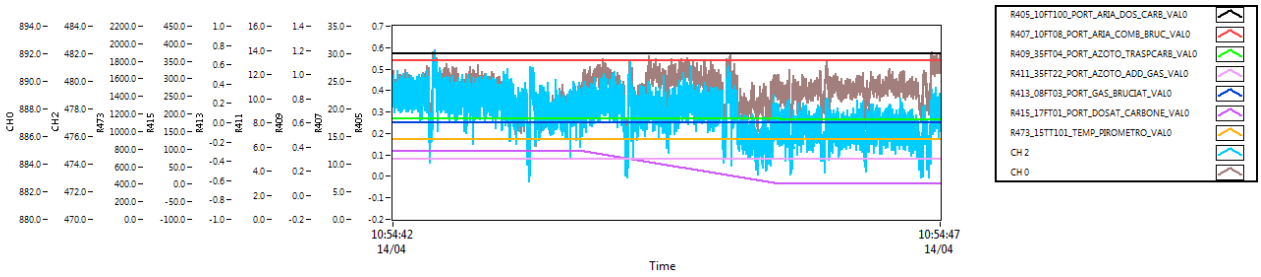
data e ora inizio prova	14/4/11 10:53:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaggio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	28.7
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1022
Pirometro portina 5 15TT101	911
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	952
TMOD6[°C] (15TT95)	894
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	195
Portata carbone(set point) [g/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	18.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.5
CO (ppm)	0.94
O2 IN [%vol]	5.88
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1200
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

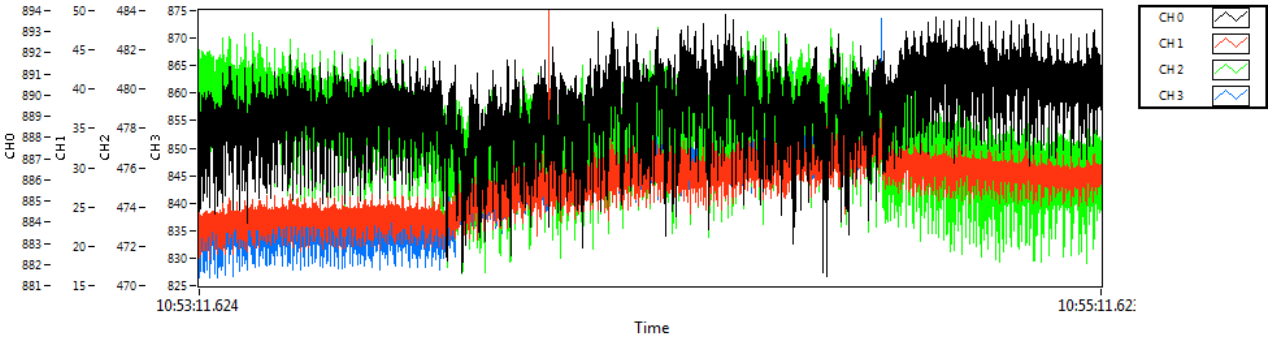
Valori medi variabili di processo

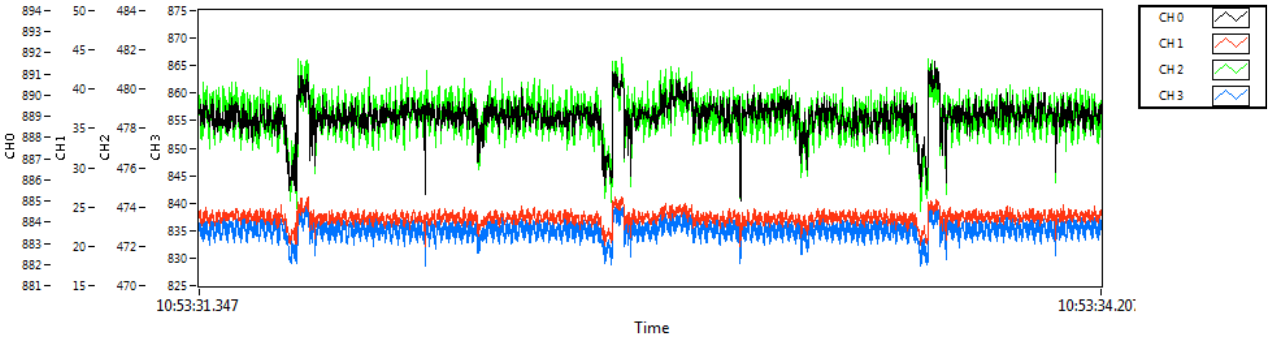
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.59
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.31
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	950.77
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.50
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	893.89
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1021.96
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	195.28
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	186.00
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	86.43
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.73
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.59
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.60
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.99
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.41
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.80
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.77
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.43
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.17
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.73
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	28.83
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.12
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	34.75
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	328.32
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2840.15
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.89
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.46
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.92
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	897.55
R461_15TT03_TEMP_MODULO_3_VAL0	°C	899.85
R463_15TT04_TEMP_MODULO_4_VAL0	°C	899.66
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.95
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.78
R469_15TT07_TEMP_MODULO_7_VAL0	°C	882.63
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.96
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.34
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.92
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	910.25
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

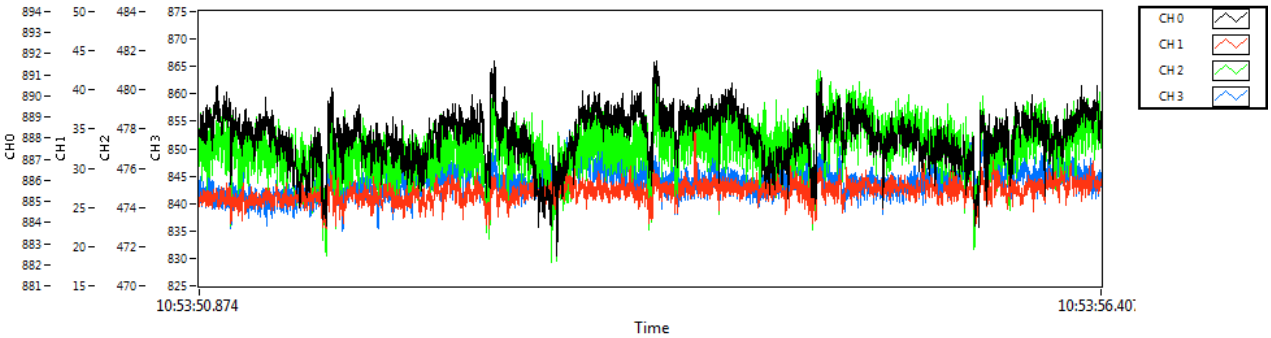

R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:53:12
14/04
10:55:16
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:53:41
14/04
10:53:55
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
10:54:42
14/04
10:54:47
14/04
Time


CH 0
CH 1
CH 2
CH 3
10:53:11.624
10:55:11.62
Time


CH 0
CH 1
CH 2
CH 3
10:53:31.347
10:53:34.20
Time


CH 0
CH 1
CH 2
CH 3
10:53:50.874
10:53:56.40
Time

Misura 6: 14-04-2011-11-02-28.309.tdms

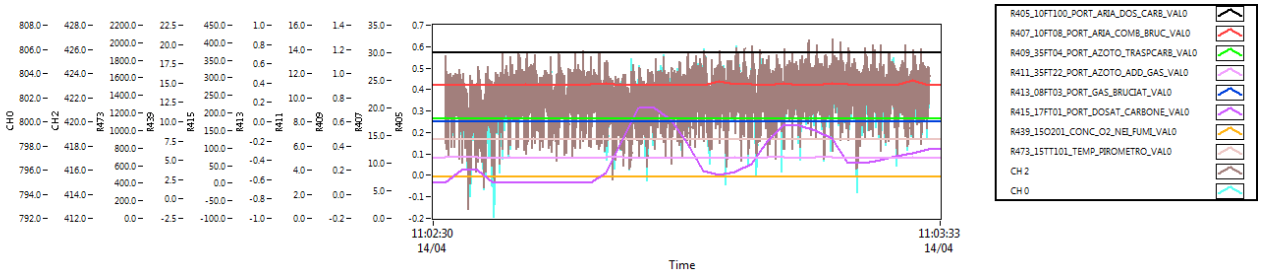
Biomassa : semi di girasole
ALIM. Biomassa continua 250mmc
Trasporto azoto
O2 3.0 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 11:02:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	24.5
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1040
Pirometro portina 5 15TT101	895
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	944
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	162
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	18.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	10.2
CO (ppm)	1.19
O2 IN [%vol]	2.81
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1300
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.03
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.65
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.30
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	944.18
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.46
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.89
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1040.07
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	163.23
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	184.48
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	82.23
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.60
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.23
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.59
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.85
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.39
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.70
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.76
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.40
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.16
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.93
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	24.21
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.01
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	54.77
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	256.51
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.52
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	2.86
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	10.20
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.19
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	896.80
R461_15TT03_TEMP_MODULO_3_VAL0	°C	900.91
R463_15TT04_TEMP_MODULO_4_VAL0	°C	899.69
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.75
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.80
R469_15TT07_TEMP_MODULO_7_VAL0	°C	881.90
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.88
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.30
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.82
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	894.60
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
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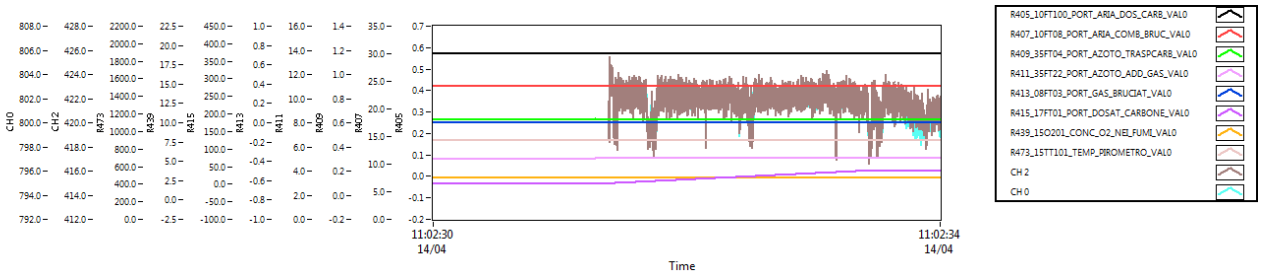
14/04
11:03:33
14/04
Time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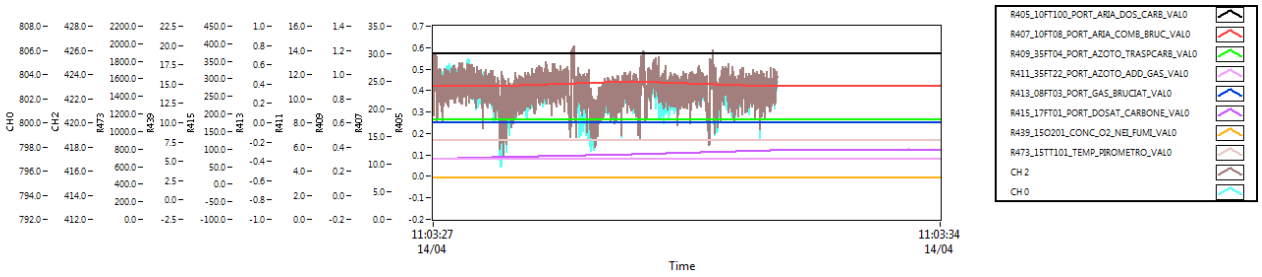
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:02:30
14/04
11:02:34
14/04
Time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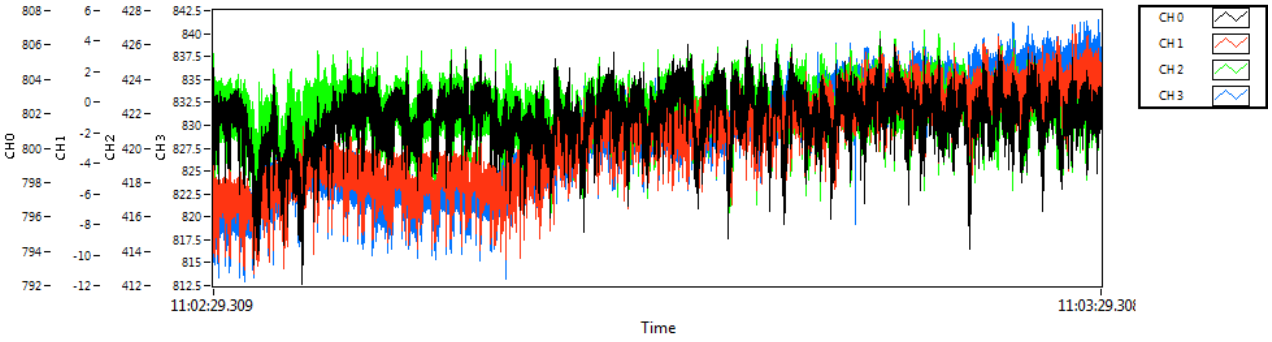
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:03:27
14/04
11:03:34
14/04
Time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CH 2
CH 3
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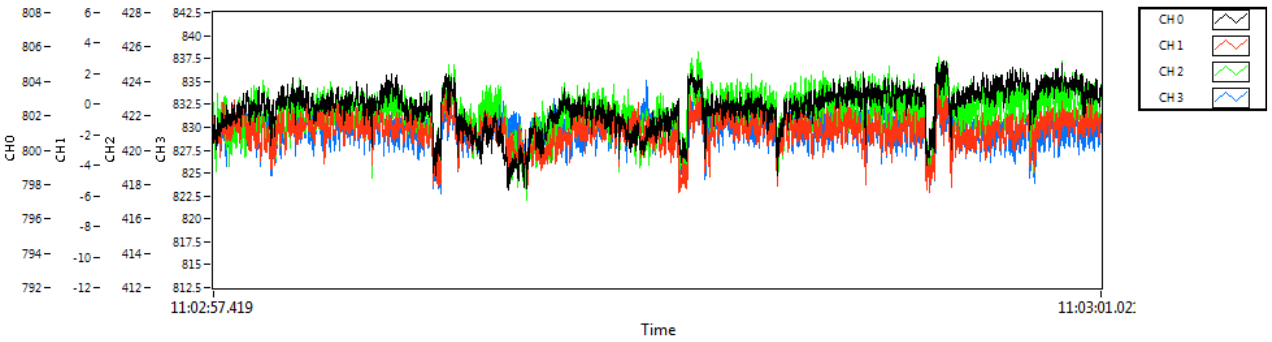
11:03:29.30
Time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CH 3
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11:03:01.02
Time

Misura 7: 14-04-2011-11-20-22.205.tdms

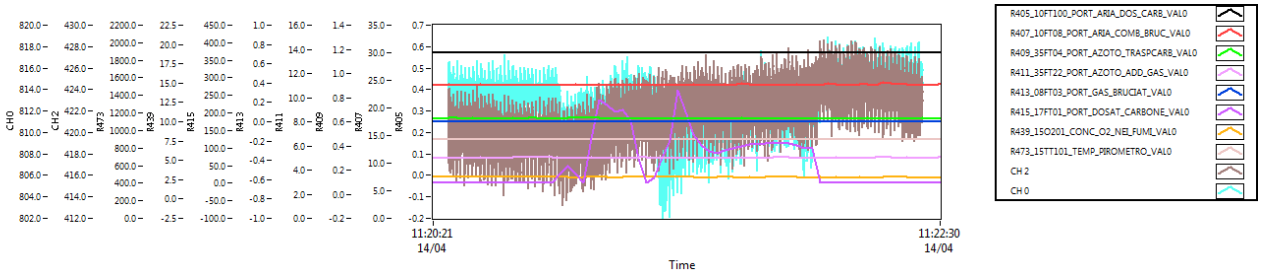
Biomassa : semi di girasole
ALIM. Biomassa nulla-continua-nulla 250mmc
Trasporto azoto
O2 3.0 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 11:20:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	24.5
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1046
Pirometro portina 5 15TT101	896
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	938
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	160
Portata carbone(set point) [q/h]	off110off
N2quench_sonda [Nm3/h] 35ft101	18.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	10.2
CO (ppm)	1.05
O2 IN [%vol]	2.8
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1300
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.78
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.83
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	938.16
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.42
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.85
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1046.17
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	159.81
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	185.60
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	78.36
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.88
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.16
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.55
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.82
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.37
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.67
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.73
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.36
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.12
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	24.16
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.01
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	72.69
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	246.95
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.28
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	2.83
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	10.19
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.06
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	899.62
R461_15TT03_TEMP_MODULO_3_VAL0	°C	899.77
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.03
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.90
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.91
R469_15TT07_TEMP_MODULO_7_VAL0	°C	880.23
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.95
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.75
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.87
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	896.92
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
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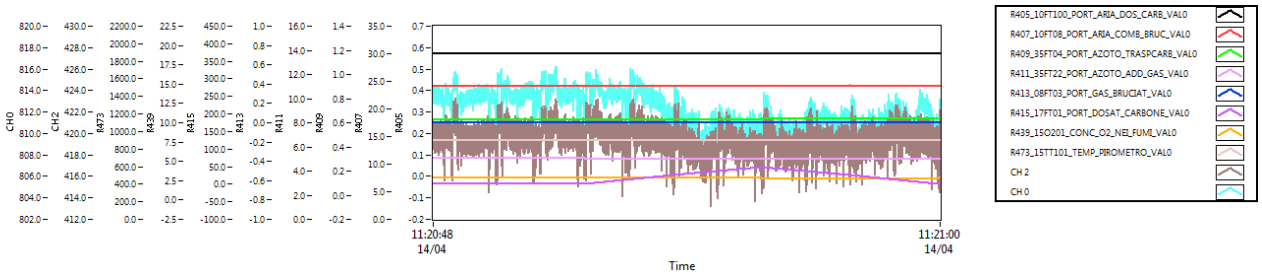
14/04
11:22:30
14/04
Time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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
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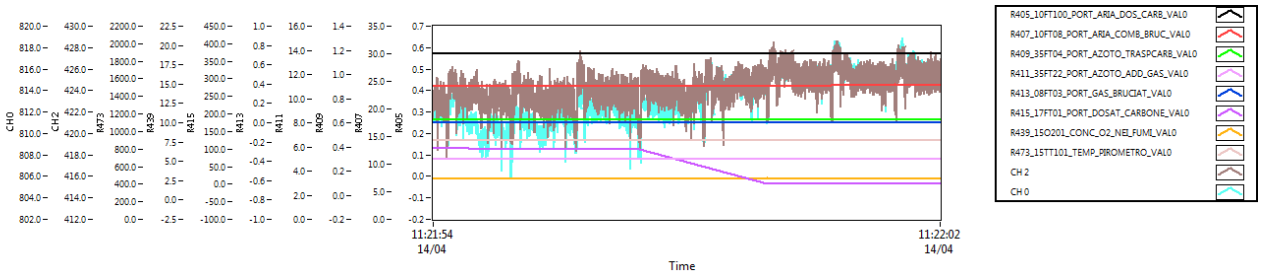
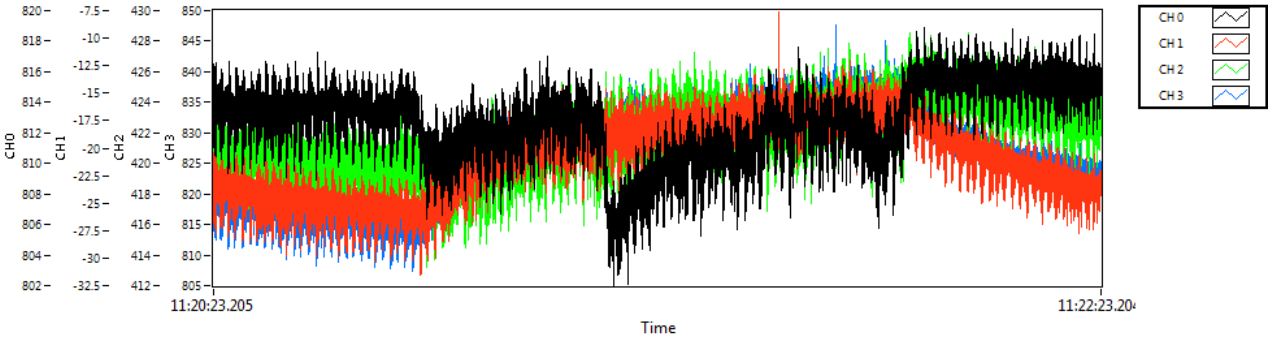
11:20:48
14/04
11:21:00
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:21:54
14/04
11:22:02
14/04
Time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CH 3
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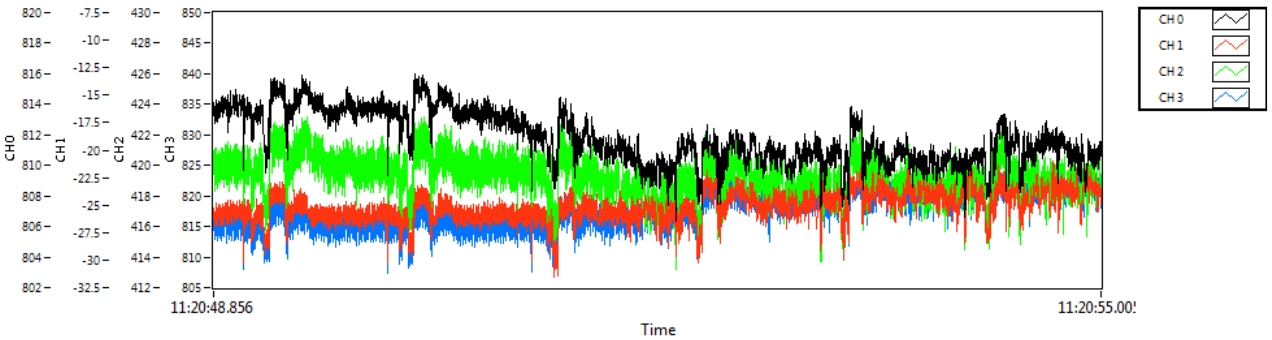
11:22:23.20
Time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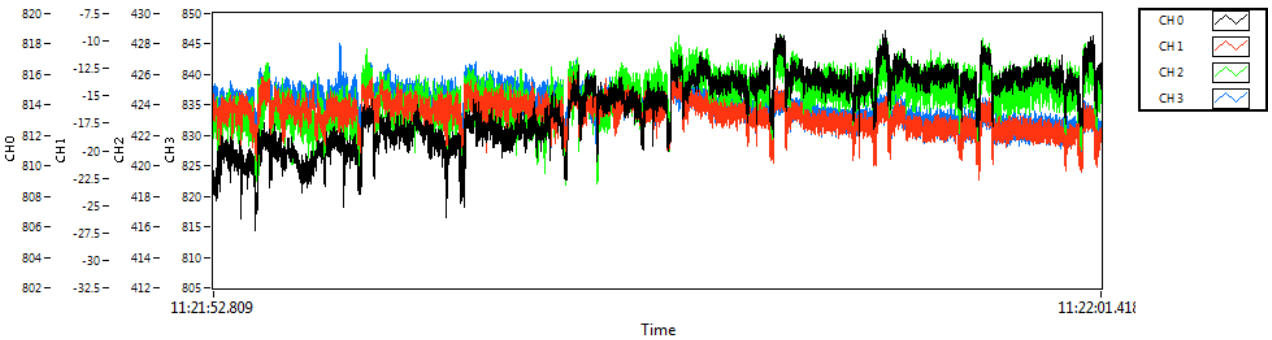
11:20:55.00
Time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CH 2
CH 3
11:21:52.809
11:22:01.41
Time

Misura 8: 14-04-2011-11-26-15.098.tdms

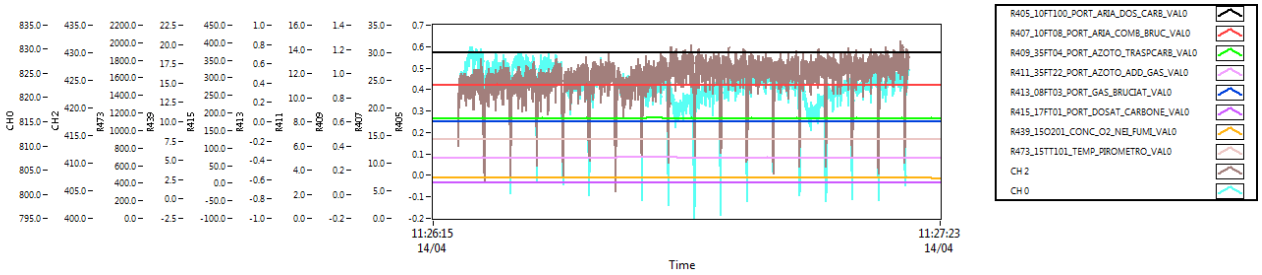
Biomassa : semi di girasole
ALIM. Biomassa pulsata 250mmc
Trasporto azoto
O2 3.0 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 11:26:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqgio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	24.5
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1046
Pirometro portina 5 15TT101	896
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	936
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	159
Portata carbone(set point) [g/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	18.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	10.2
CO (ppm)	1.11
O2 IN [%vol]	2.75
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1300
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.06
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.81
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.47
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	937.04
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.42
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.85
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1046.91
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	158.44
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	183.73
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	76.84
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.94
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.15
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.55
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.82
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.37
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.67
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.72
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.39
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.12
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.72
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	24.18
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.01
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	249.30
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2839.90
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	2.70
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	10.24
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.03
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	900.53
R461_15TT03_TEMP_MODULO_3_VAL0	°C	899.40
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.28
R465_15TT05_TEMP_MODULO_5_VAL0	°C	900.05
R467_15TT06_TEMP_MODULO_6_VAL0	°C	900.12
R469_15TT07_TEMP_MODULO_7_VAL0	°C	879.79
R471_15TT08_TEMP_MODULO_8_VAL0	°C	900.06
R459_15TT02_TEMP_MODULO_2_VAL0	°C	900.04
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.87
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	896.30
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.33
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
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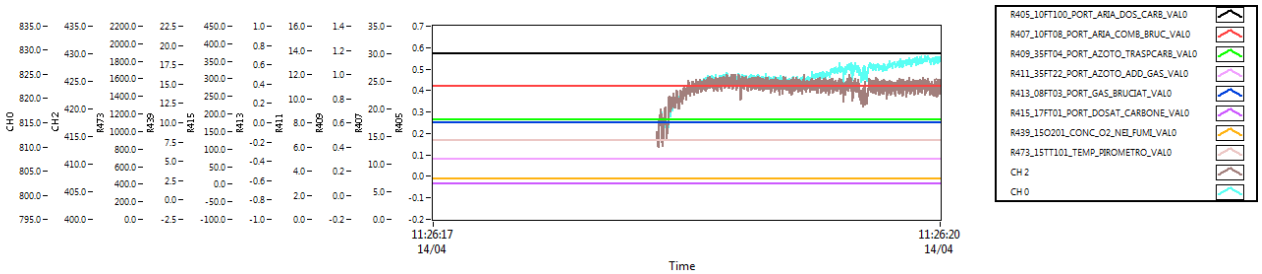
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:26:15
14/04
11:27:23
14/04
Time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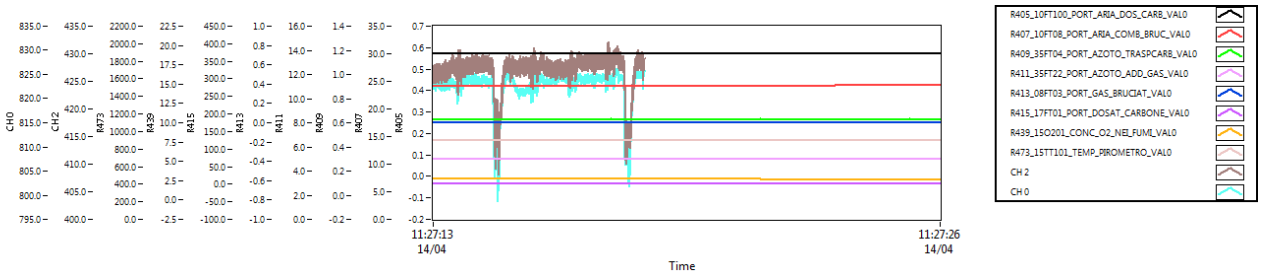
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:26:17
14/04
11:26:20
14/04
Time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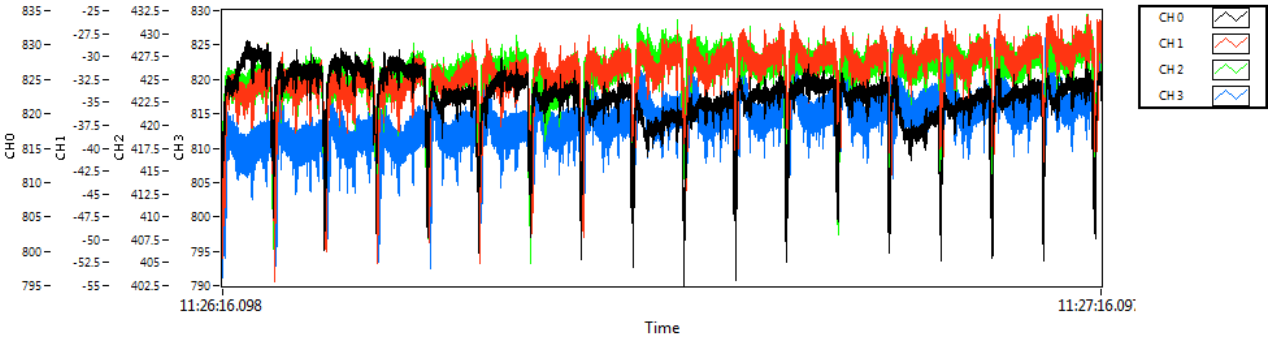
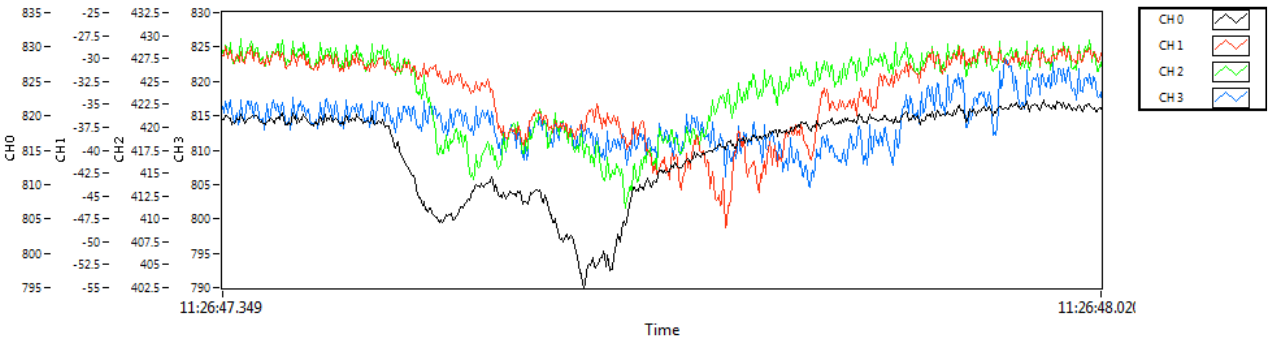
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:27:13
14/04
11:27:26
14/04
Time


CH 0
CH 1
CH 2
CH 3
11:26:16.098
11:27:16.09
Time


CH 0
CH 1
CH 2
CH 3
11:26:47.349
11:26:48.02
Time

Misura 9: 14-04-2011-11-27-52.092.tdms

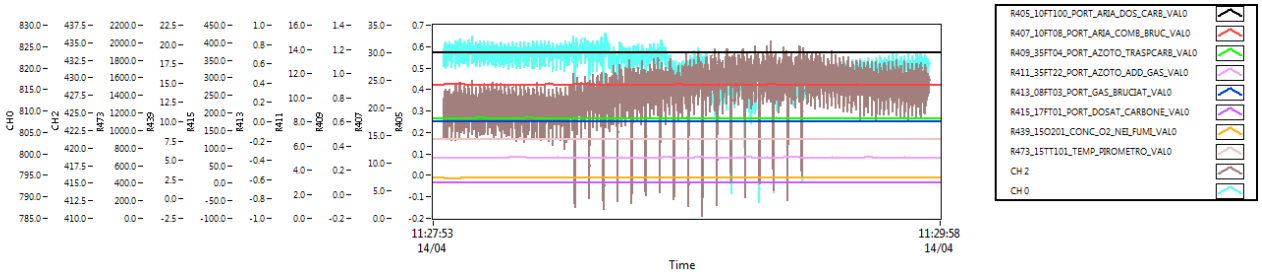
Biomassa : semi di girasole
ALIM. Biomassa nulla-pulsata_nulla 250mmc
Trasporto azoto
O2 3.0 % NEI FUMI
TEMP 900°

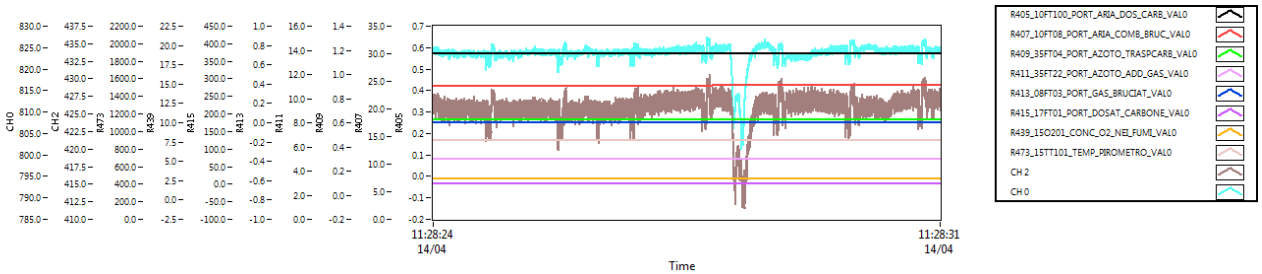
Condizioni di misura

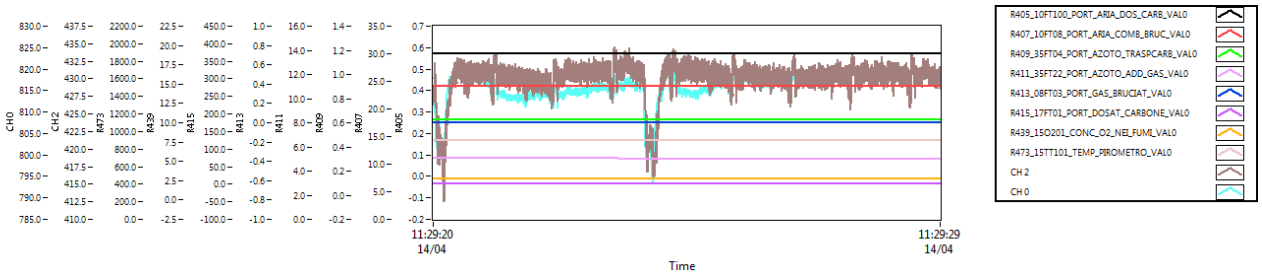
data e ora inizio prova	14/4/11 11:28:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	24.5
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1047
Pirometro portina 5 15TT101	895
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	937
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	159
Portata carbone(set point) [q/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	18.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	10.3
CO (ppm)	1.02
O2 IN [%vol]	2.68
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1300
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

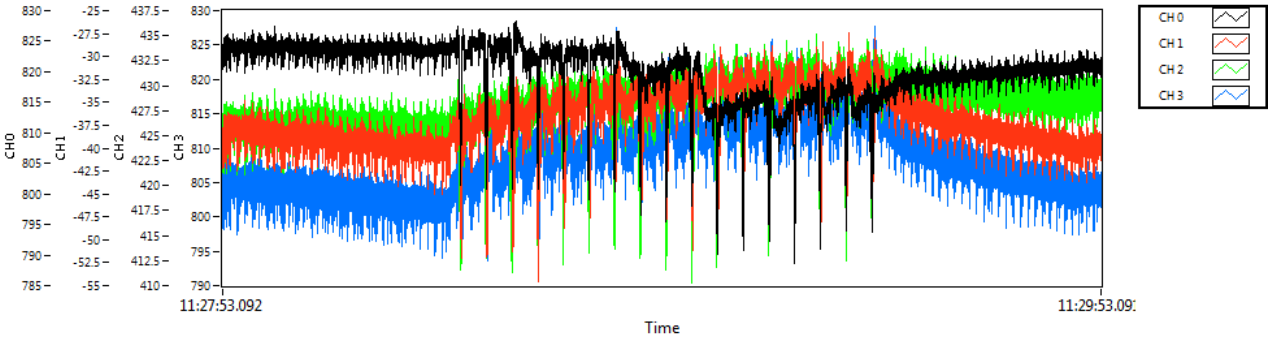
Valori medi variabili di processo

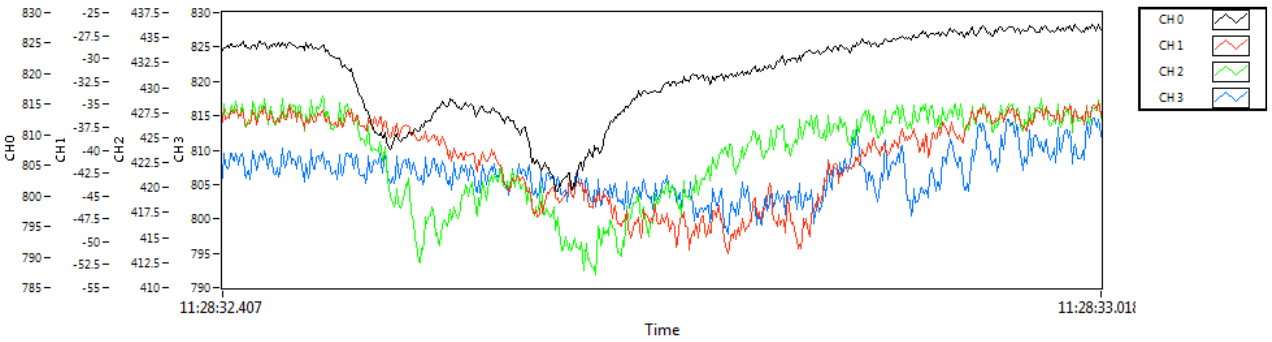
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.87
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.29
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	936.58
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.43
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.95
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1047.40
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	159.46
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	184.30
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	76.57
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.92
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.17
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.56
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.83
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.36
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.67
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.74
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.39
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.13
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.72
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	24.19
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	256.01
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2839.78
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	2.73
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	10.23
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.02
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	900.79
R461_15TT03_TEMP_MODULO_3_VAL0	°C	899.97
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.44
R465_15TT05_TEMP_MODULO_5_VAL0	°C	900.00
R467_15TT06_TEMP_MODULO_6_VAL0	°C	900.13
R469_15TT07_TEMP_MODULO_7_VAL0	°C	879.69
R471_15TT08_TEMP_MODULO_8_VAL0	°C	900.07
R459_15TT02_TEMP_MODULO_2_VAL0	°C	900.12
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.89
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	896.50
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.08
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:27:53
14/04
11:29:58
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:28:24
14/04
11:28:31
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:29:20
14/04
11:29:29
14/04
Time


CH 0
CH 1
CH 2
CH 3
11:27:53.092
11:29:53.09
Time


CH 0
CH 1
CH 2
CH 3
11:28:32.407
11:28:33.01
Time

Misura 10: 14-04-2011-11-38-00.765.tdms

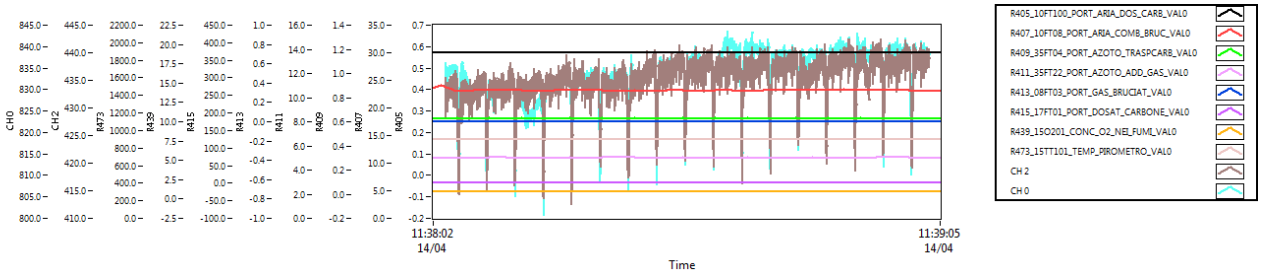
Biomassa : semi di girasole
ALIM. Biomassa pulsata 250mmc
Trasporto azoto
O2 0.5 % NEI FUMI
TEMP 900°

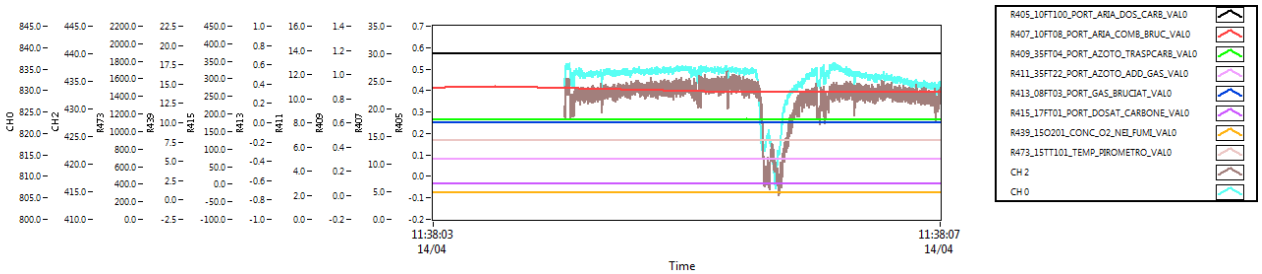
Condizioni di misura

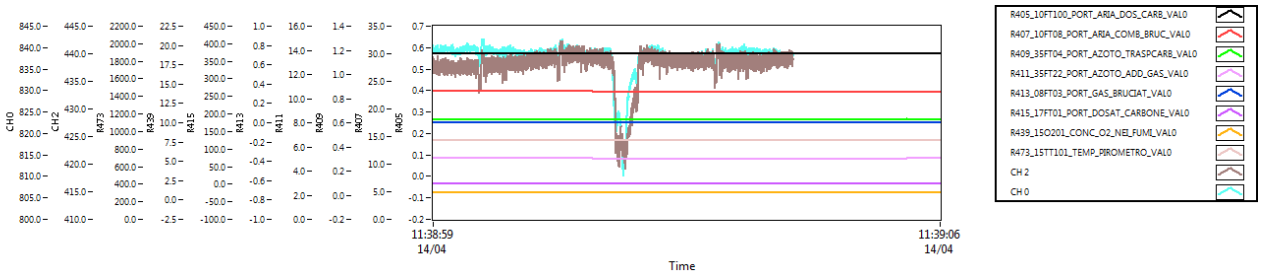
data e ora inizio prova	14/4/11 11:38:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.3
Aria bruciatore [Nm3/h] 10ft08	23.2
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1073
Pirometro portina 5 15TT101	902
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	933
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	153
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	18.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	1.39
O2 IN [%vol]	0.9
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1400
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.02
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

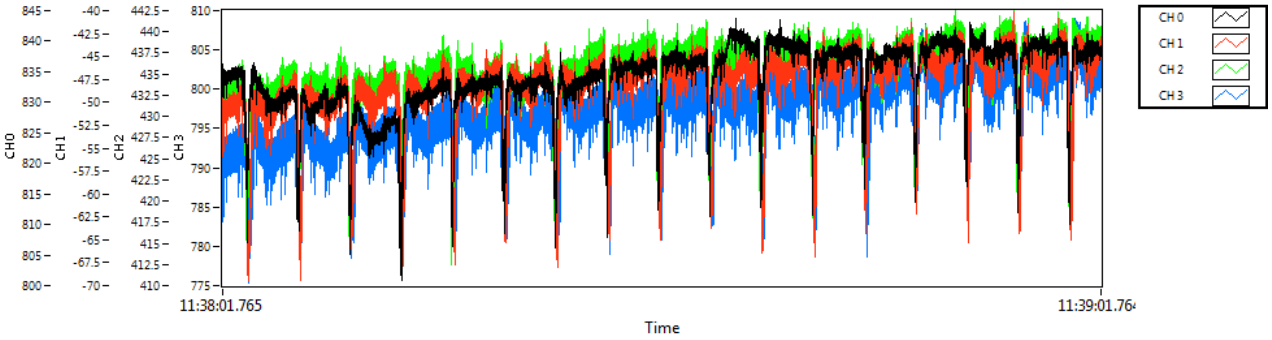
Valori medi variabili di processo

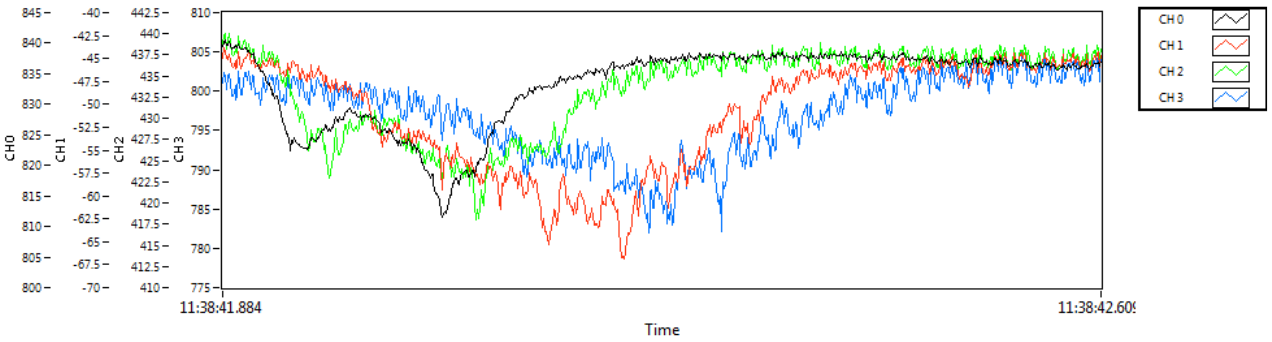
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.10
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.20
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	932.87
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.42
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.61
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1073.34
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	153.37
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	184.78
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	75.89
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.08
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.11
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.56
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.81
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.36
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.65
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.70
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.39
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.12
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.69
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	23.19
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.08
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	243.10
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.84
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.94
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.25
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.31
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	900.96
R461_15TT03_TEMP_MODULO_3_VAL0	°C	898.93
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.36
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.94
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.92
R469_15TT07_TEMP_MODULO_7_VAL0	°C	879.07
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.93
R459_15TT02_TEMP_MODULO_2_VAL0	°C	900.16
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.85
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	901.74
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.29
		7.33
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:38:02
14/04
11:39:05
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:38:03
14/04
11:38:07
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:38:59
14/04
11:39:06
14/04
Time


CH 0
CH 1
CH 2
CH 3
11:38:01.765
11:39:01.76
Time


CH 0
CH 1
CH 2
CH 3
11:38:41.884
11:38:42.60
Time

Misura 11: 14-04-2011-11-39-57.157.tdms

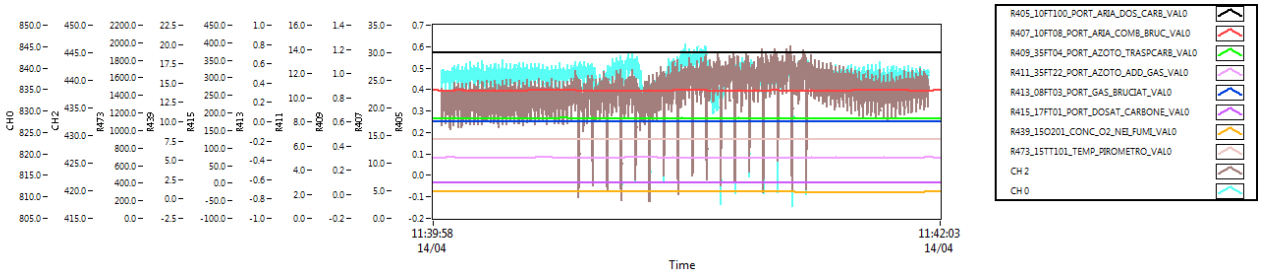
Biomassa : semi di girasole
ALIM. Biomassa nulla-pulsata-nulla 250mmc
Trasporto azoto
O2 0.5 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 11:40:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.3
Aria bruciatore [Nm3/h] 10ft08	23.2
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1075
Pirometro portina 5 15TT101	902
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	933
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	153
Portata carbone(set point) [q/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	18.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.3
CO (ppm)	1.34
O2 IN [%vol]	0.9
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1400
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.14
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.58
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	933.26
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.42
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	892.73
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1075.35
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	152.95
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	185.32
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	75.85
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	20.93
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.11
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.55
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.81
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.35
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.65
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.73
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	29.38
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.12
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	23.15
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.01
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	246.42
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.17
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.89
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.26
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.36
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	900.91
R461_15TT03_TEMP_MODULO_3_VAL0	°C	898.87
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.33
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.94
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.91
R469_15TT07_TEMP_MODULO_7_VAL0	°C	878.88
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.91
R459_15TT02_TEMP_MODULO_2_VAL0	°C	900.21
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.90
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	902.38
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.29
		6.08
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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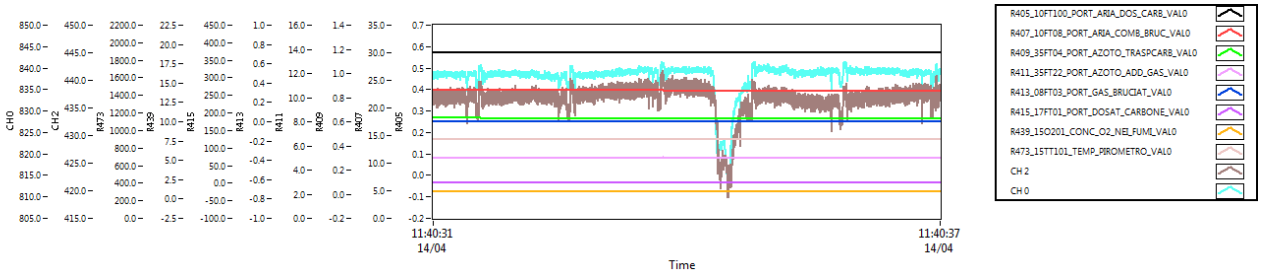
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:39:58
14/04
11:42:03
14/04
Time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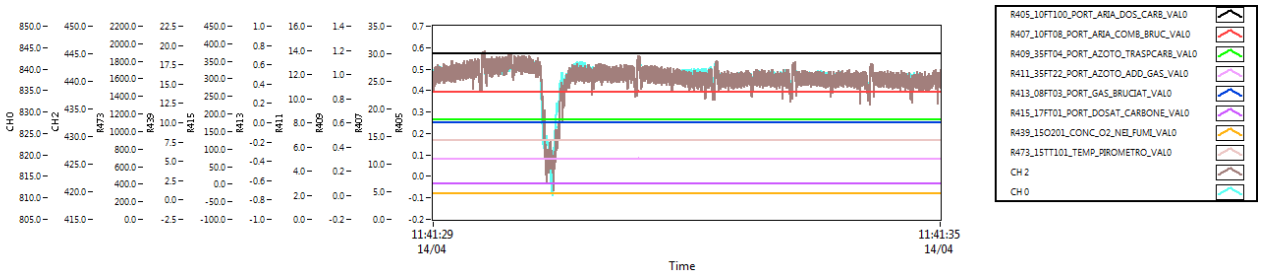
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:40:31
14/04
11:40:37
14/04
Time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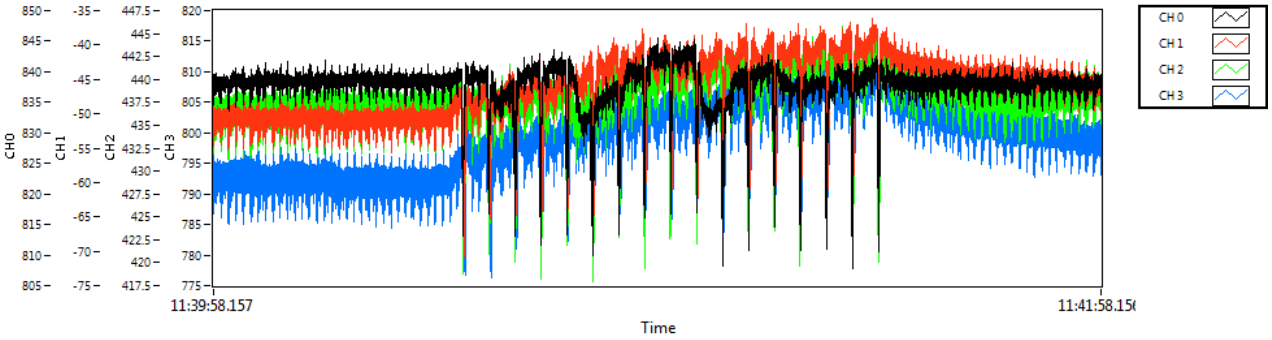
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:41:29
14/04
11:41:35
14/04
Time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CH 1
CH 2
CH 3
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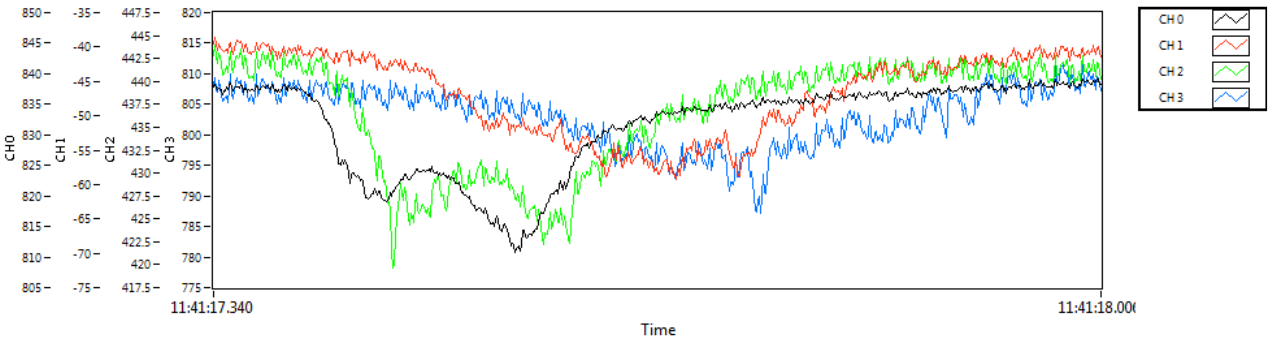
11:41:58.15(
Time


CH 0
CH 1
CH 2
CH 3
11:41:17.340
11:41:18.00(
Time

Misura 12: 14-04-2011-11-46-53.837.tdms

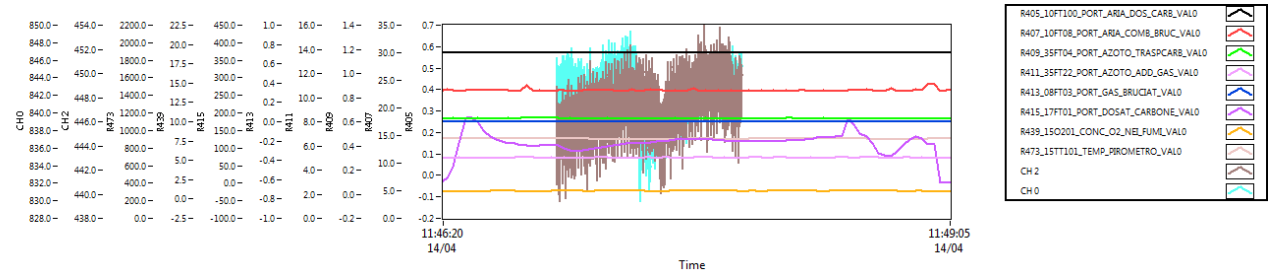
Biomassa : semi di girasole
ALIM. Biomassa continua 250mmc
Trasporto azoto
O2 0.5 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 11:46:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaggio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.3
Aria bruciatore [Nm3/h] 10ft08	23.2
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1077
Pirometro portina 5 15TT101	904
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	932
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	202
Tvalle_quench [°C] (15TT19)	151
Portata carbone(set point) [g/h]	110
N2quench_sonda [Nm3/h] 35ft101	18.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.21
CO (ppm)	1.3
O2 IN [%vol]	1.03
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1400
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.25
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.16
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.88
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	932.67
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.40
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.97
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1077.83
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	150.83
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	183.23
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	74.37
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.24
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.07
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.54
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.78
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.34
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.63
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.73
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.36
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.11
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	23.18
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	95.81
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	246.76
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2839.61
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	1.01
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.19
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.31
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	900.75
R461_15TT03_TEMP_MODULO_3_VAL0	°C	900.81
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.27
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.96
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.95
R469_15TT07_TEMP_MODULO_7_VAL0	°C	878.61
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.95
R459_15TT02_TEMP_MODULO_2_VAL0	°C	900.24
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.85
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	903.65
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.29
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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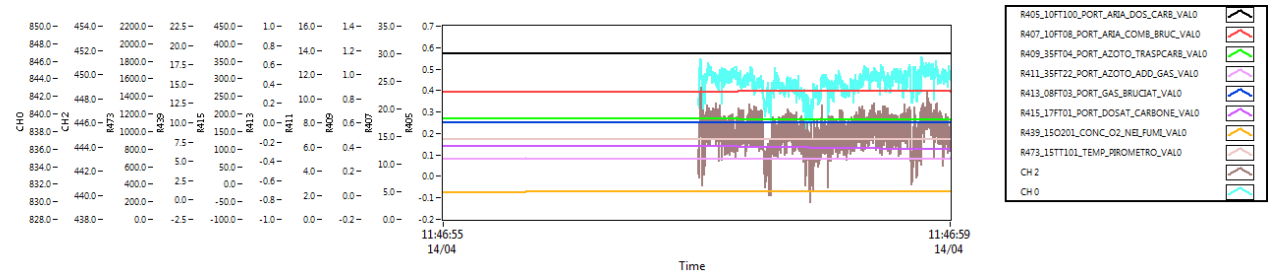
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:46:20
14/04
11:49:05
14/04
Time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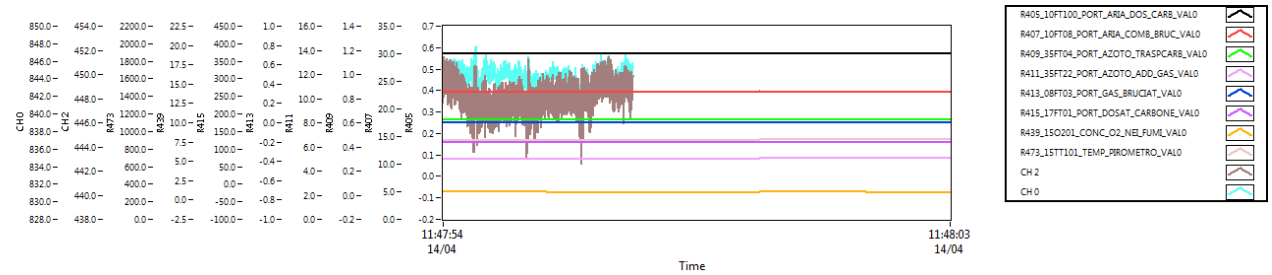
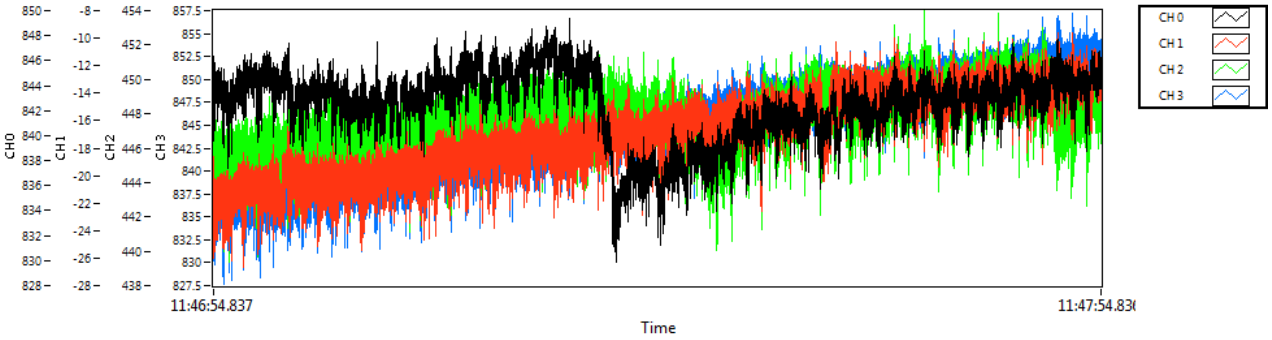
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:46:55
14/04
11:46:59
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:47:54
14/04
11:48:03
14/04
Time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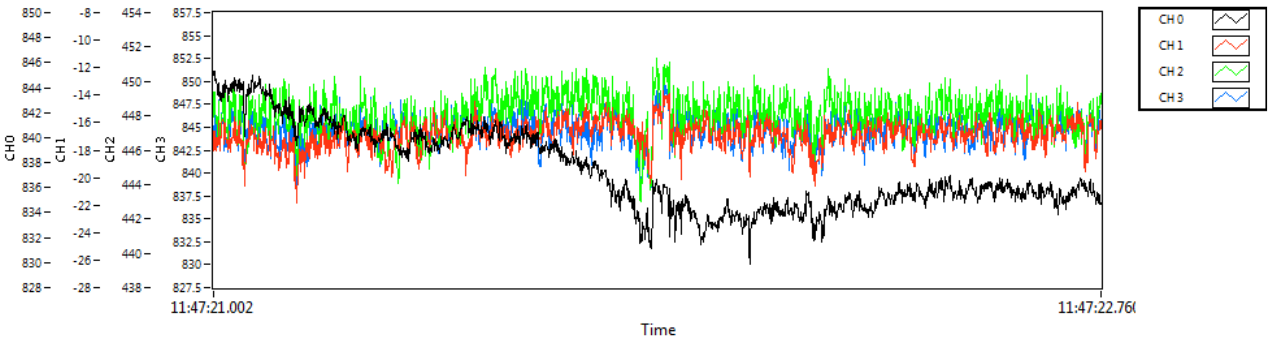
CH 1
CH 2
CH 3
11:46:54.837
11:47:54.83(
Time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CH 1
CH 2
CH 3
11:47:21.002
11:47:22.76(
Time

Misura 13: 14-04-2011-11-49-02.229.tdms

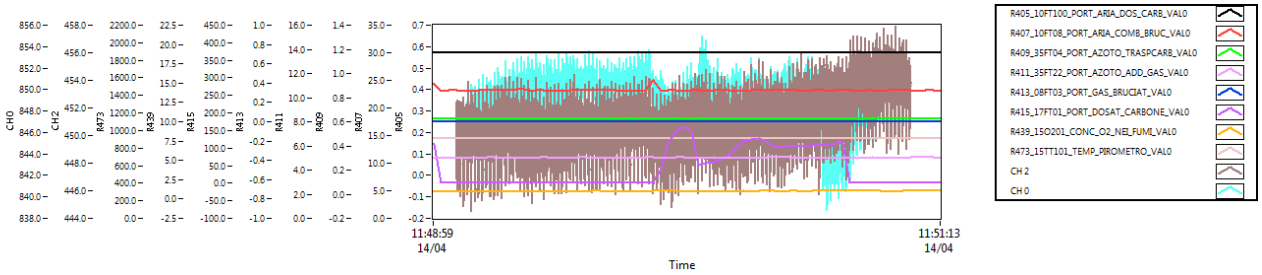
Biomassa : semi di girasole
ALIM. Biomassa nulla-continua-nulla 250mmc
Trasporto azoto
O2 0.5 % NEI FUMI
TEMP 900°

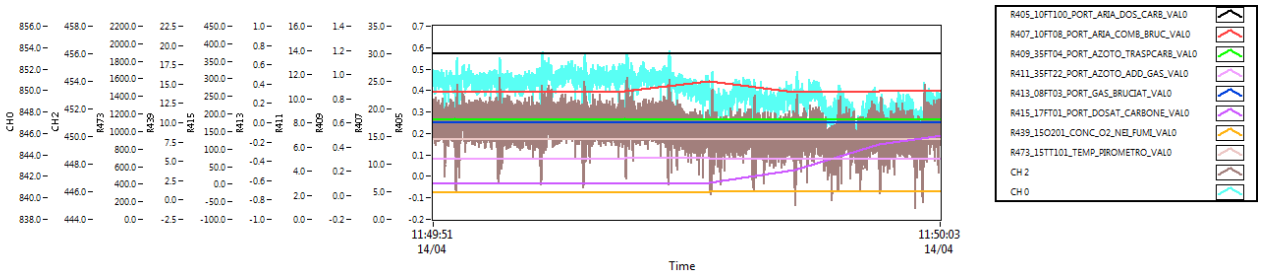
Condizioni di misura

data e ora inizio prova	14/4/11 11:49:00
Tipo di prova	Sonda ENEA
Biomassa	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.3
Aria bruciatore [Nm3/h] 10ft08	23.2
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1079
Pirometro portina 5 15TT101	903
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	931
TMOD6[°C] (15TT95)	894
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	152
Portata carbone(set point) [q/h]	off110off
N2quench_sonda [Nm3/h] 35ft101	18.9
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11.2
CO (ppm)	1.3
O2 IN [%vol]	1
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1400
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.12
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.65
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	931.58
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.41
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	893.42
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1078.73
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	151.55
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	184.66
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	74.23
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	21.28
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.09
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.54
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.79
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.37
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.63
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.71
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	29.38
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	29.10
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.90
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	23.20
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.01
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	43.43
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	246.69
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.06
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	1.01
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.18
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	1.28
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	900.68
R461_15TT03_TEMP_MODULO_3_VAL0	°C	901.02
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.35
R465_15TT05_TEMP_MODULO_5_VAL0	°C	900.11
R467_15TT06_TEMP_MODULO_6_VAL0	°C	900.06
R469_15TT07_TEMP_MODULO_7_VAL0	°C	878.52
R471_15TT08_TEMP_MODULO_8_VAL0	°C	900.03
R459_15TT02_TEMP_MODULO_2_VAL0	°C	900.26
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.94
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	903.93
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.29
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:48:59
14/04
11:51:13
14/04
Time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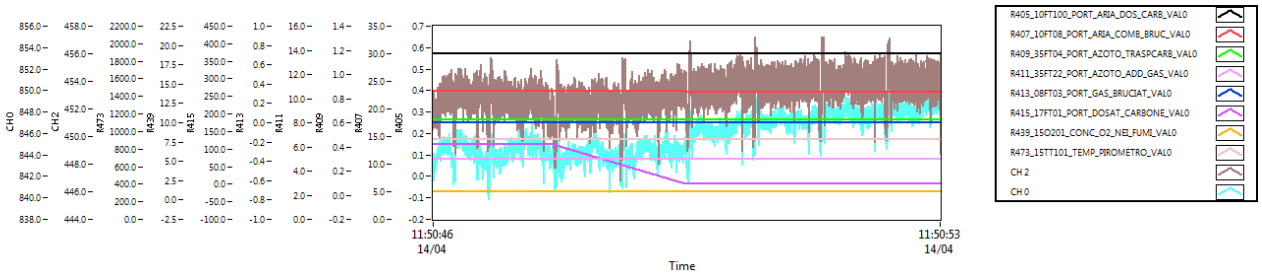
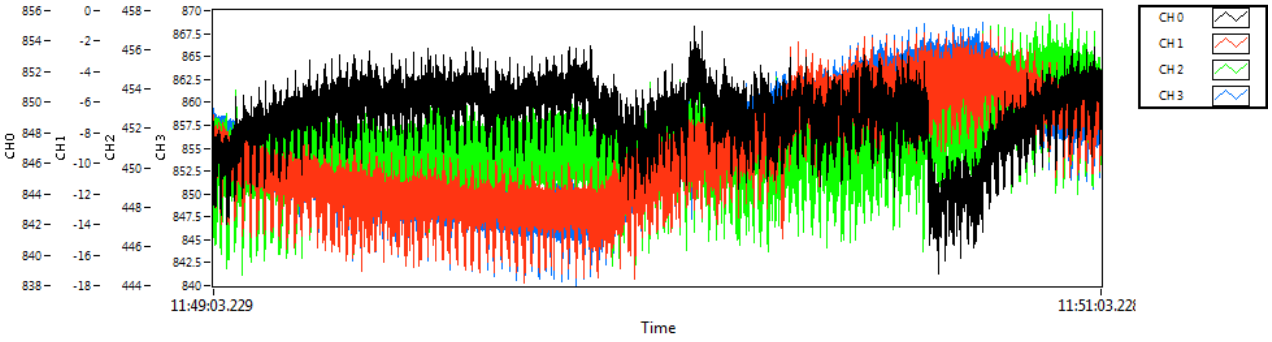
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:49:51
14/04
11:50:03
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
11:50:46
14/04
11:50:53
14/04
Time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CH 2
CH 3
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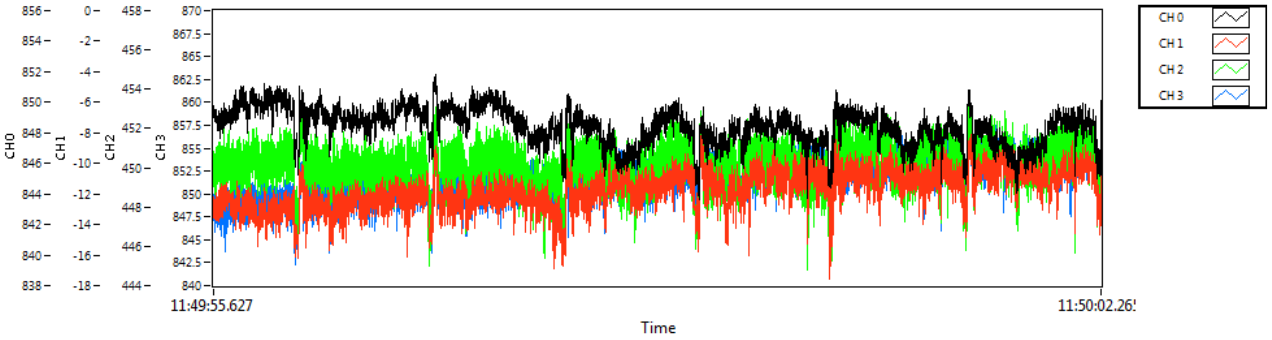
11:51:03.22
Time


CH 0
CH 1
CH 2
CH 3
11:49:55.627
11:50:02.26
Time

Misura 14: 14-04-2011-14-22-23.746.tdms

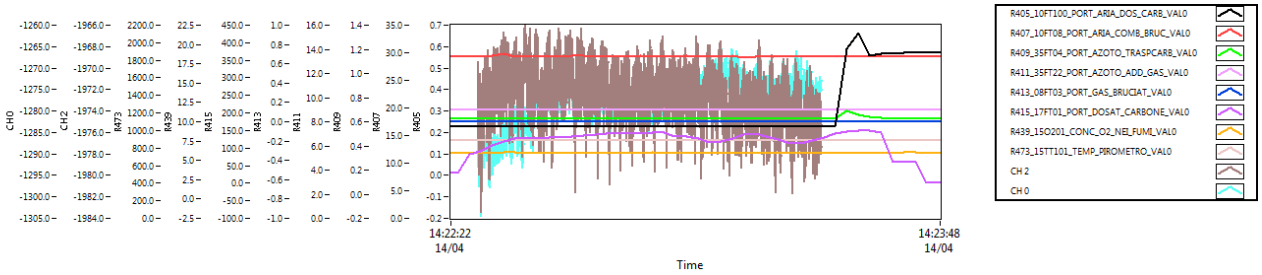
Carbone S.A. TQ > 125 micron
ALIM. continua 110 g/h
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 14:22:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	29
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	9
Tbruc [°C] (15TT09)	1046
Pirometro portina 5 15TT101	889
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	917
TMOD6[°C] (15TT95)	892
Tquench [°C] (15TT97)	199
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	110
N2quench_sonda [Nm3/h] 35ft101	19.2
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	0.01
O2 IN [%vol]	5.94
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1000
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.41
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.95
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	917.13
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.08
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.32
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1045.16
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.29
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	179.78
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	91.43
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.77
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.37
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.18
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.56
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.95
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.44
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.36
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.06
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.73
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.69
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.23
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	29.35
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	9.00
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	91.90
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	460.04
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.25
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.96
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.01
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.17
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	880.87
R461_15TT03_TEMP_MODULO_3_VAL0	°C	893.33
R463_15TT04_TEMP_MODULO_4_VAL0	°C	895.57
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.17
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.31
R469_15TT07_TEMP_MODULO_7_VAL0	°C	886.09
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.61
R459_15TT02_TEMP_MODULO_2_VAL0	°C	893.90
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	19.15
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	888.43
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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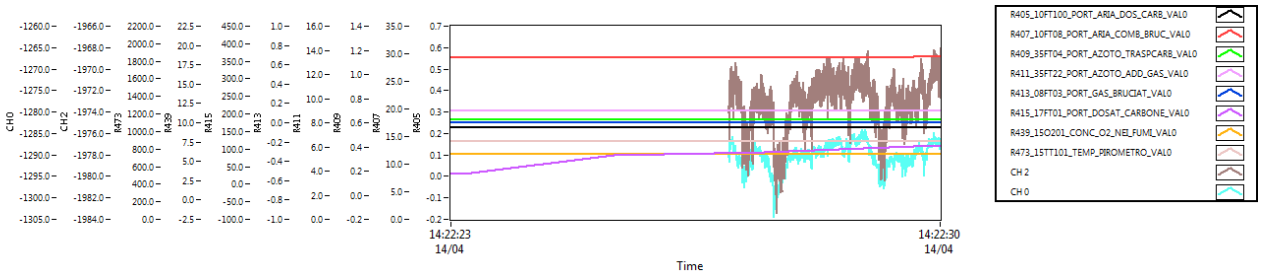
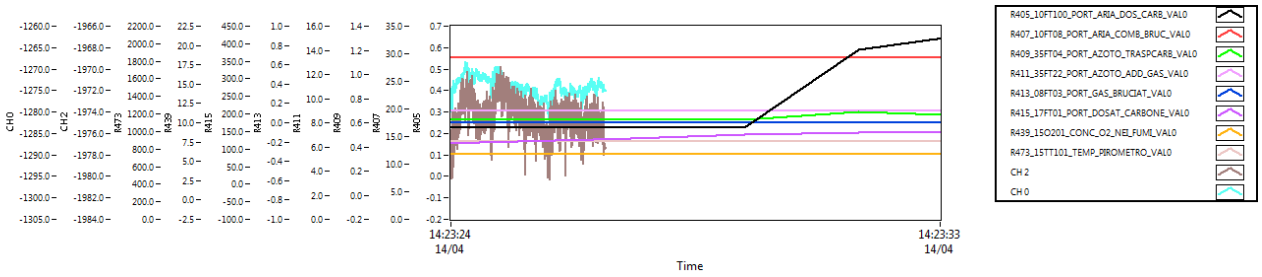
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:22:22
14/04
14:23:48
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:22:23
14/04
14:22:30
14/04
Time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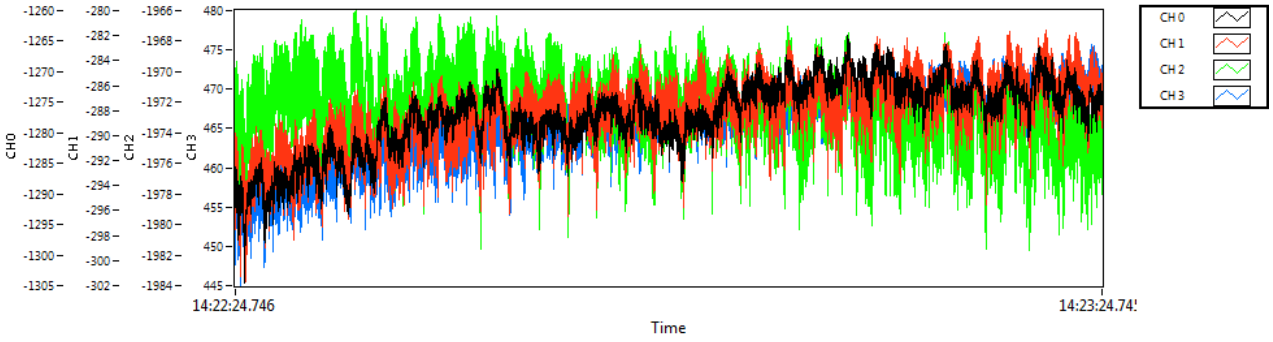
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:23:24
14/04
14:23:33
14/04
Time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CH 2
CH 3
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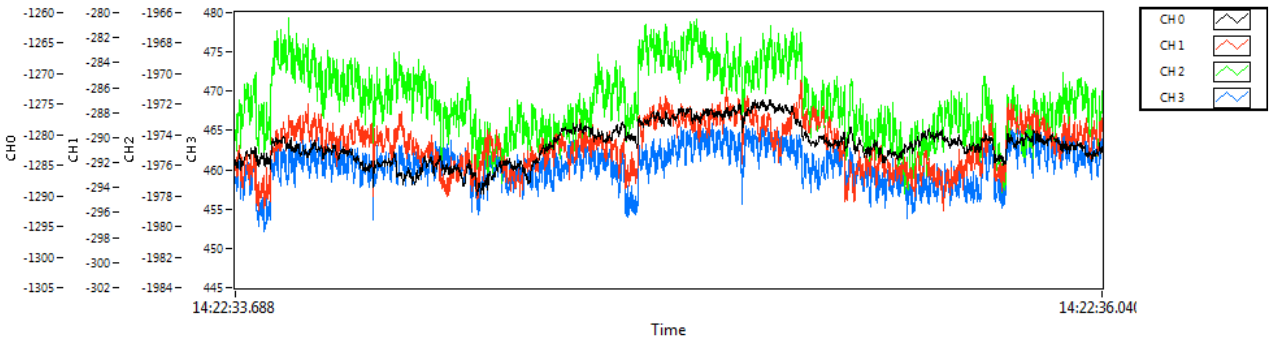
14:23:24.74
Time


CH 0
CH 1
CH 2
CH 3
14:22:33.688
14:22:36.04
Time

Misura 15: 14-04-2011-14-24-10.145.tdms

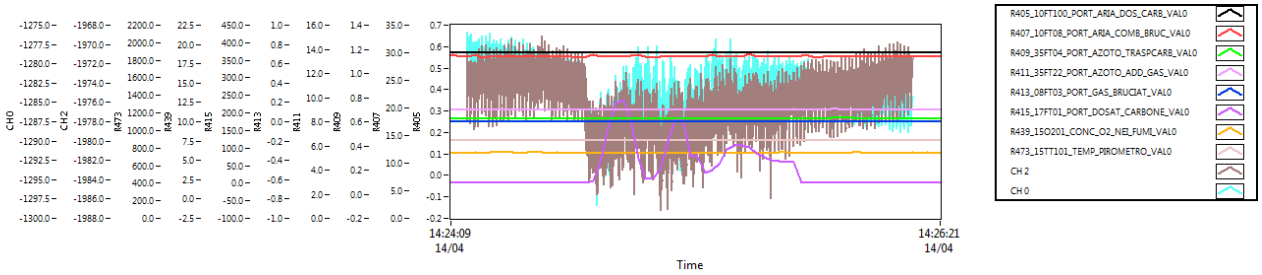
Carbone S.A. TQ > 125 micron
ALIM. nulla-continua-nulla 110 g/h
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

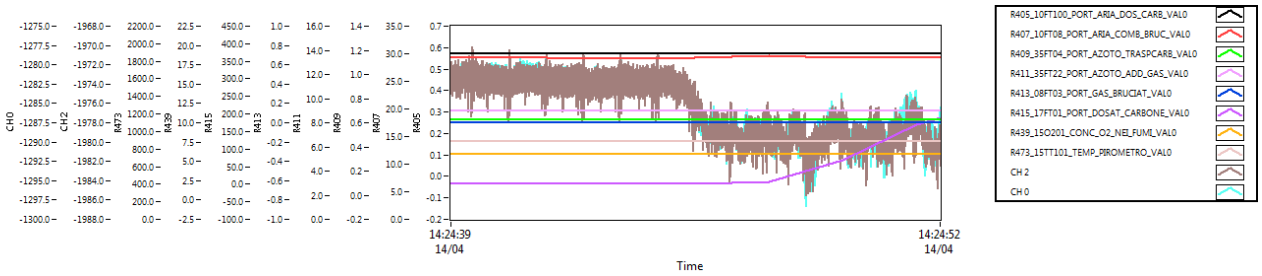
Condizioni di misura

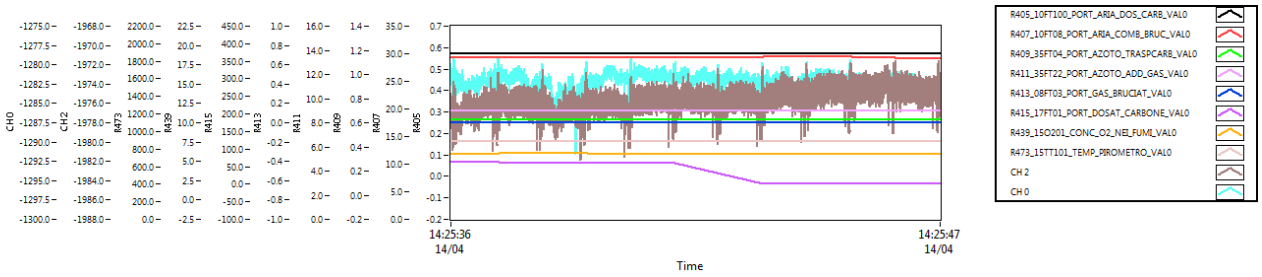
data e ora inizio prova	14/4/11 14:24:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	29
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	9
Tbruc [°C] (15TT09)	1044
Pirometro portina 5 15TT101	886
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	919
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	200
Tvalle_quench [°C] (15TT19)	208
Portata carbone(set point) [q/h]	off110off
N2quench_sonda [Nm3/h] 35ft101	19.2
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	0.13
O2 IN [%vol]	5.96
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1000
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.41
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	200.46
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	919.31
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.08
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.65
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1043.64
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	208.92
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	180.82
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	91.31
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.63
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.40
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.20
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.60
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.98
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.46
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.36
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.09
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.75
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.69
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	29.33
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	8.99
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	43.13
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	447.51
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.29
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.96
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.01
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.08
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	879.37
R461_15TT03_TEMP_MODULO_3_VAL0	°C	894.51
R463_15TT04_TEMP_MODULO_4_VAL0	°C	896.38
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.20
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.54
R469_15TT07_TEMP_MODULO_7_VAL0	°C	885.53
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.65
R459_15TT02_TEMP_MODULO_2_VAL0	°C	895.97
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	19.20
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	885.82
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.00
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:24:09
14/04
14:26:21
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:24:39
14/04
14:24:52
14/04
Time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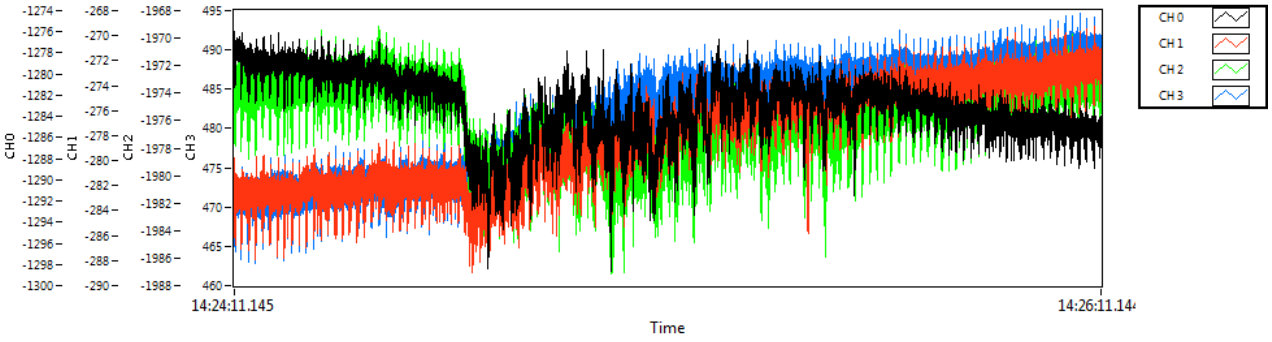
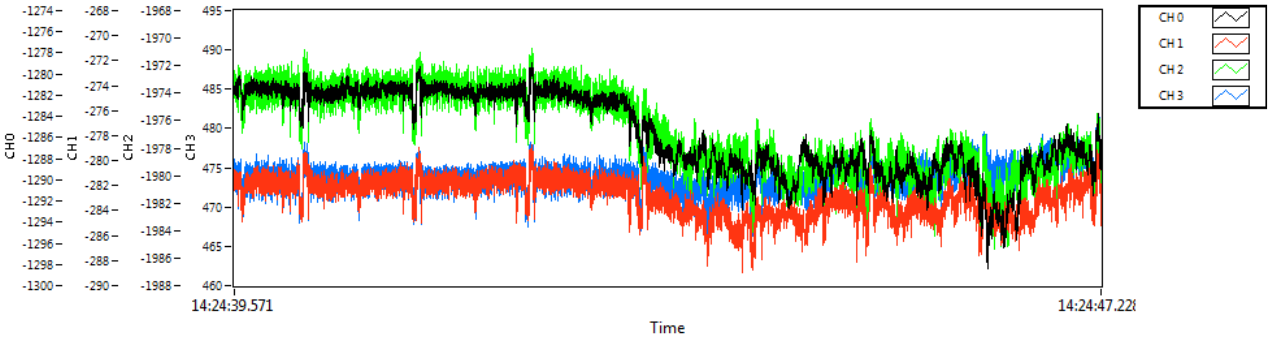
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:25:36
14/04
14:25:47
14/04
Time


CH 0
CH 1
CH 2
CH 3
14:24:11.145
14:26:11.14
Time


CH 0
CH 1
CH 2
CH 3
14:24:39.571
14:24:47.22
Time

Misura 16: 14-04-2011-14-29-10.411.tdms

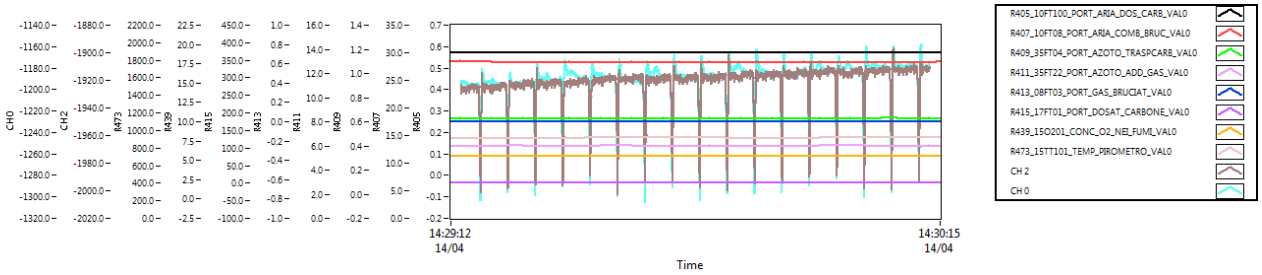
Carbone S.A. TQ > 125 micron
ALIM. pulsata 110 g/h
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 14:28:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaggio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	28.4
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	6
Tbruc [°C] (15TT09)	1044
Pirometro portina 5 15TT101	914
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	919
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	198
Portata carbone(set point) [g/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	19
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.4
CO (ppm)	0.17
O2 IN [%vol]	5.51
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1100
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.4
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.41
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	197.92
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	919.85
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.11
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.45
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1043.80
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	202.56
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	173.47
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	90.07
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.57
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.35
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.21
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.56
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.00
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.45
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.39
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.07
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.77
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.60
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.93
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	28.30
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.62
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	6.16
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	383.65
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2839.20
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.51
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.42
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.14
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	879.75
R461_15TT03_TEMP_MODULO_3_VAL0	°C	896.74
R463_15TT04_TEMP_MODULO_4_VAL0	°C	897.58
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.34
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.88
R469_15TT07_TEMP_MODULO_7_VAL0	°C	884.81
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.81
R459_15TT02_TEMP_MODULO_2_VAL0	°C	898.15
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	19.03
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	905.70
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.67
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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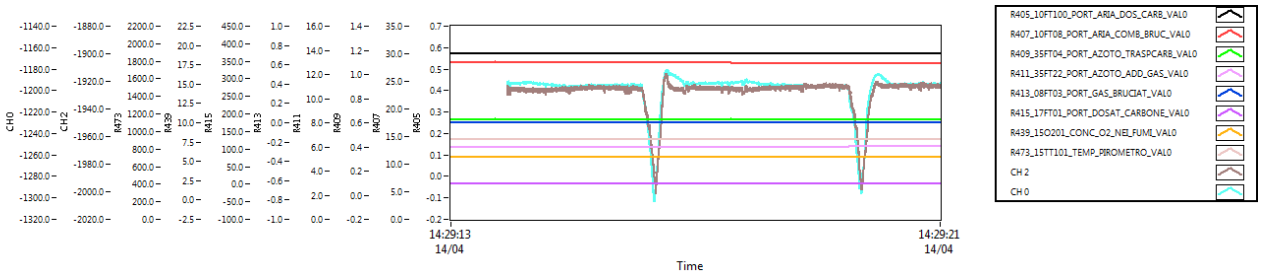
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:29:12
14/04
14:30:15
14/04
Time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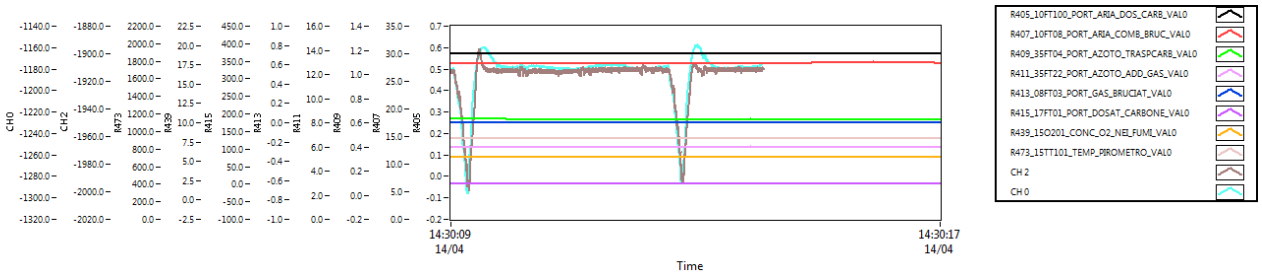
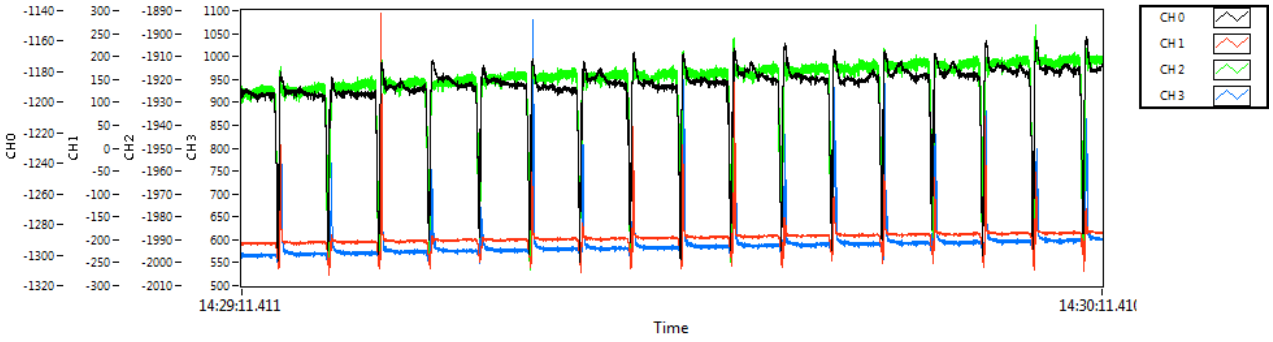
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:29:13
14/04
14:29:21
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:30:09
14/04
14:30:17
14/04
Time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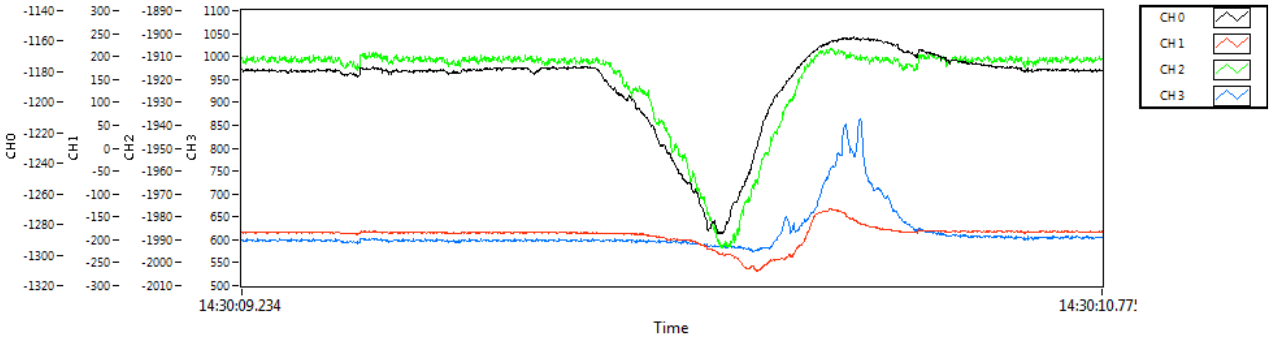
CH 2
CH 3
14:29:11.411
14:30:11.41(
Time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CH 1
CH 2
CH 3
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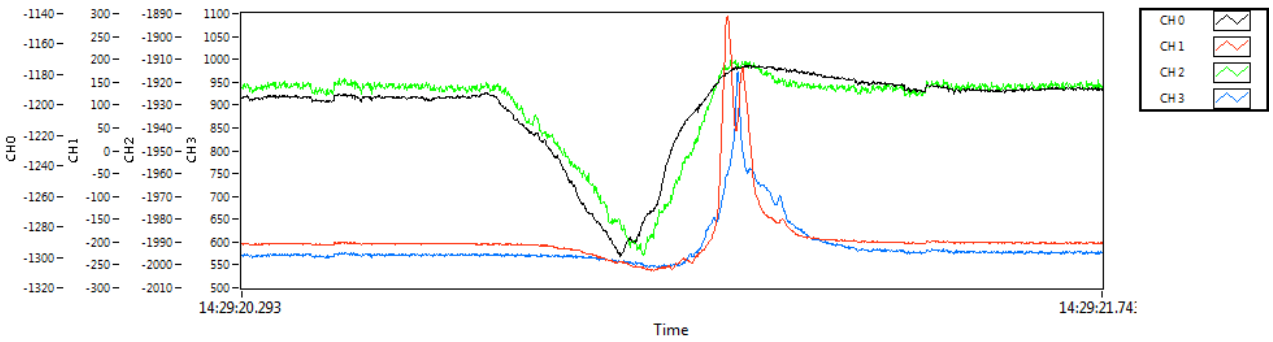
14:30:10.77!
Time


CH 0
CH 1
CH 2
CH 3
14:29:20.293
14:29:21.74!
Time

Misura 17: 14-04-2011-14-34-45.382.tdms

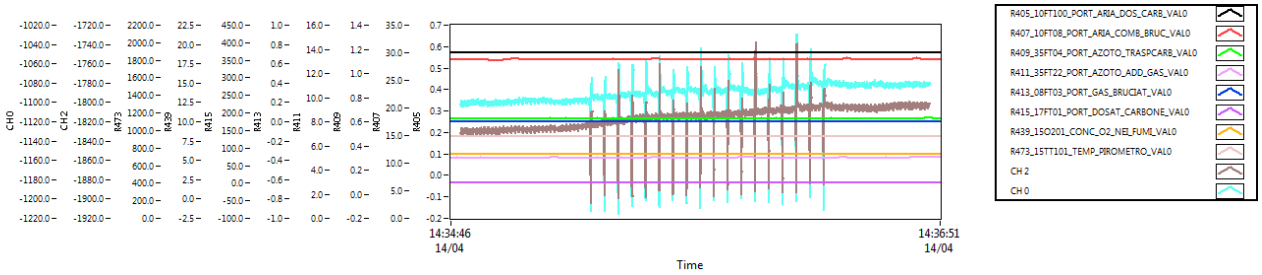
Carbone S.A. TQ > 125 micron
ALIM. nulla- pulsata - nulla 110 g/h
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

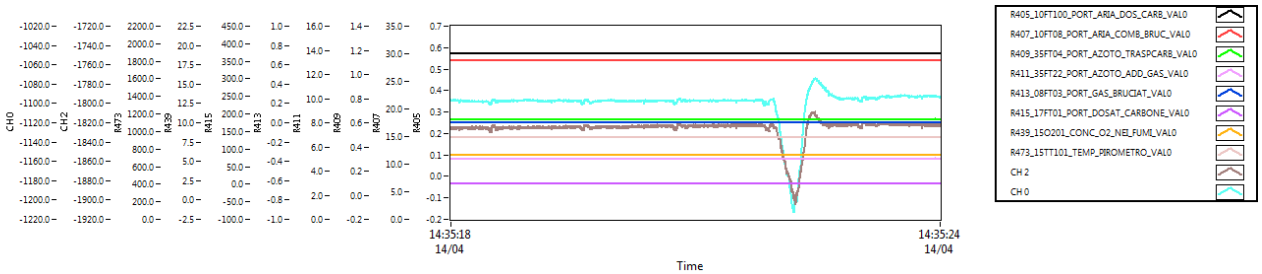
Condizioni di misura

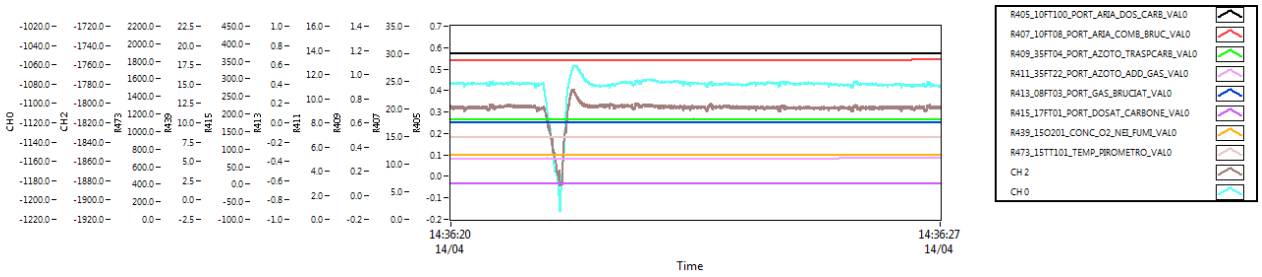
data e ora inizio prova	14/4/11 14:34:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	28.8
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1041
Pirometro portina 5 15TT101	932
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	920
TMOD6[°C] (15TT95)	894
Tquench [°C] (15TT97)	201
Tvalle_quench [°C] (15TT19)	192
Portata carbone(set point) [g/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	19.4
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.3
CO (ppm)	0.1
O2 IN [%vol]	5.79
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1100
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

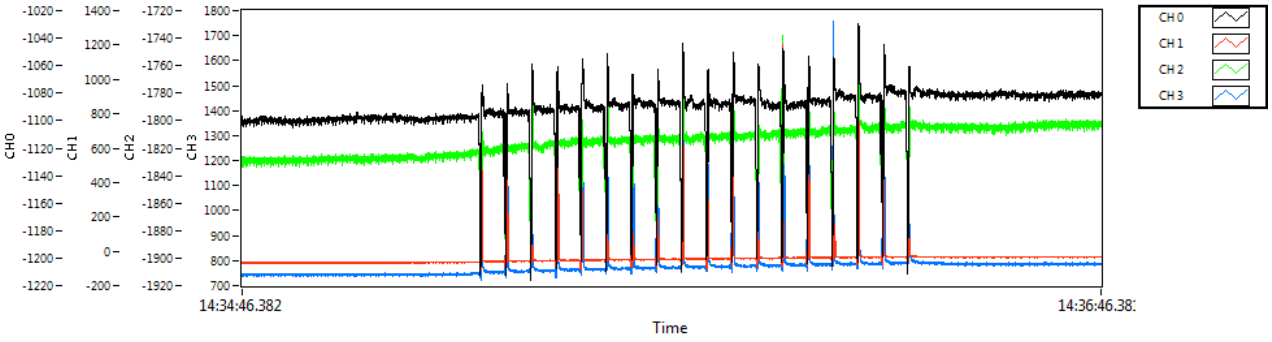
Valori medi variabili di processo

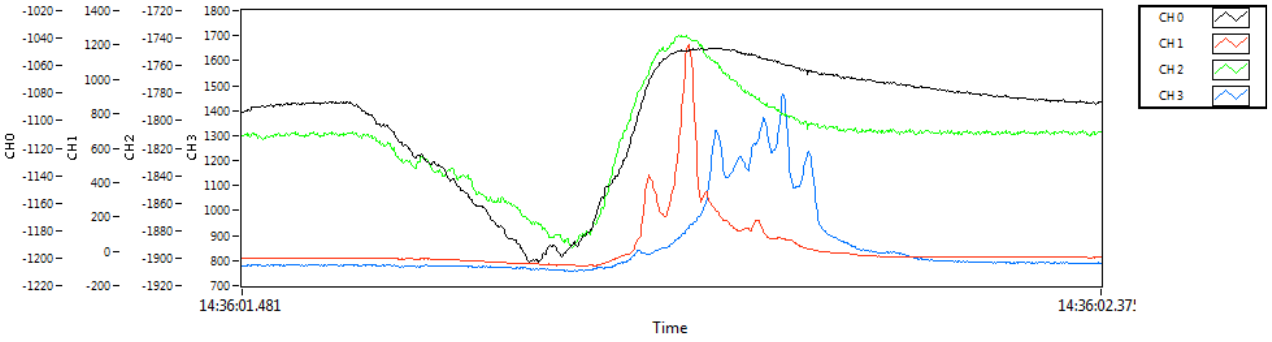
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.36
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	201.46
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	919.86
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.13
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	894.29
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1041.14
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	191.82
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	182.26
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	86.71
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.84
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.18
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.23
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.65
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.03
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.43
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.40
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL(	°C	29.07
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.79
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.72
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	28.81
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	340.65
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2839.69
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.79
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.28
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.12
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	887.20
R461_15TT03_TEMP_MODULO_3_VAL0	°C	901.13
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.05
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.81
R467_15TT06_TEMP_MODULO_6_VAL0	°C	900.53
R469_15TT07_TEMP_MODULO_7_VAL0	°C	883.68
R471_15TT08_TEMP_MODULO_8_VAL0	°C	900.10
R459_15TT02_TEMP_MODULO_2_VAL0	°C	901.86
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	19.40
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	932.38
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		6.50
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:34:46
14/04
14:36:51
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:35:18
14/04
14:35:24
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:36:20
14/04
14:36:27
14/04
Time


CH 0
CH 1
CH 2
CH 3
14:34:46.382
14:36:46.38
Time


CH 0
CH 1
CH 2
CH 3
14:36:01.481
14:36:02.37
Time

Misura 18: 14-04-2011-14-42-30.034.tdms

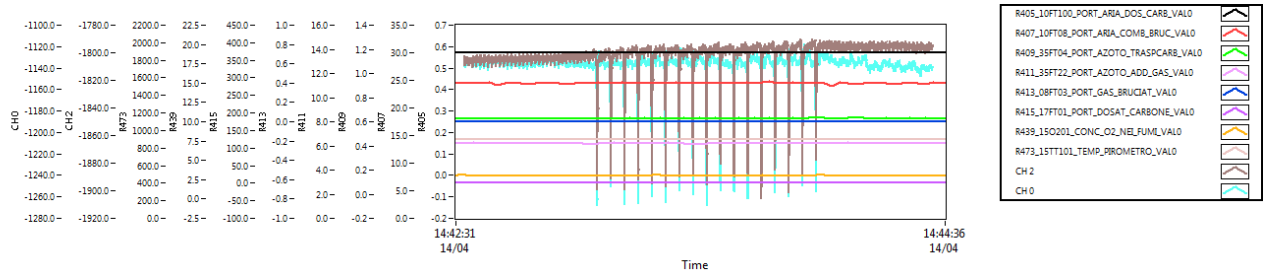
Carbone S.A. TQ > 125 micron
ALIM. nulla- pulsata - nulla 110 g/h
Trasporto azoto
O2 3.0 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 14:42:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di inqresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	3
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	24.5
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	6.2
Tbruc [°C] (15TT09)	1055
Pirometro portina 5 15TT101	897
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	916
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	199
Tvalle_quench [°C] (15TT19)	172
Portata carbone(set point) [q/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	19.2
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	9.8
CO (ppm)	0.33
O2 IN [%vol]	3.05
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1300
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.31
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.43
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	199.39
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	915.94
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.13
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	893.41
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1055.08
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	171.80
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	180.92
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	82.00
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.89
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.98
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.25
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.56
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.03
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.39
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.43
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	29.07
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.81
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.89
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	24.46
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	6.20
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.07
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	286.37
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	2840.10
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	3.04
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	9.76
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.30
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	898.04
R461_15TT03_TEMP_MODULO_3_VAL0	°C	904.93
R463_15TT04_TEMP_MODULO_4_VAL0	°C	902.50
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.92
R467_15TT06_TEMP_MODULO_6_VAL0	°C	900.68
R469_15TT07_TEMP_MODULO_7_VAL0	°C	882.85
R471_15TT08_TEMP_MODULO_8_VAL0	°C	900.09
R459_15TT02_TEMP_MODULO_2_VAL0	°C	903.57
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	19.17
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	897.53
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		5.92
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
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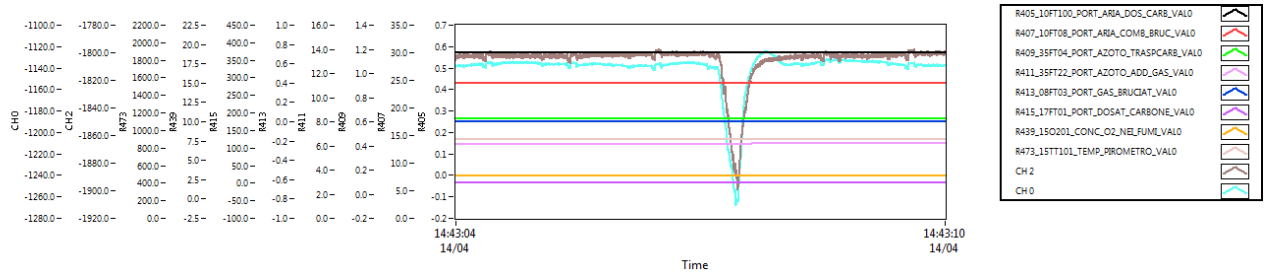
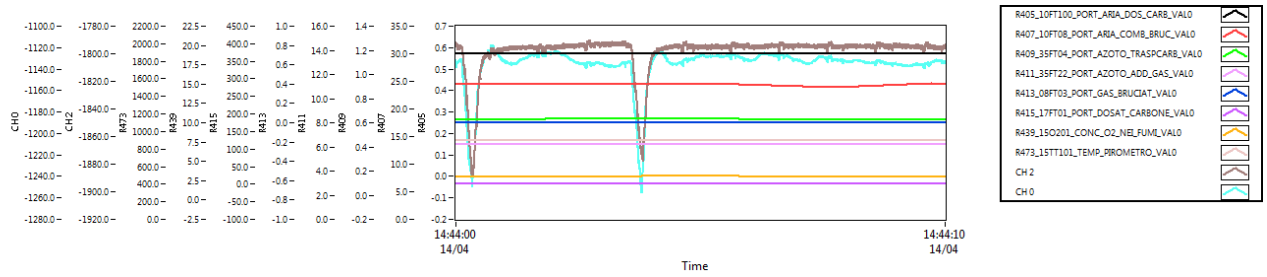
14/04
14:44:36
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:43:04
14/04
14:43:10
14/04
Time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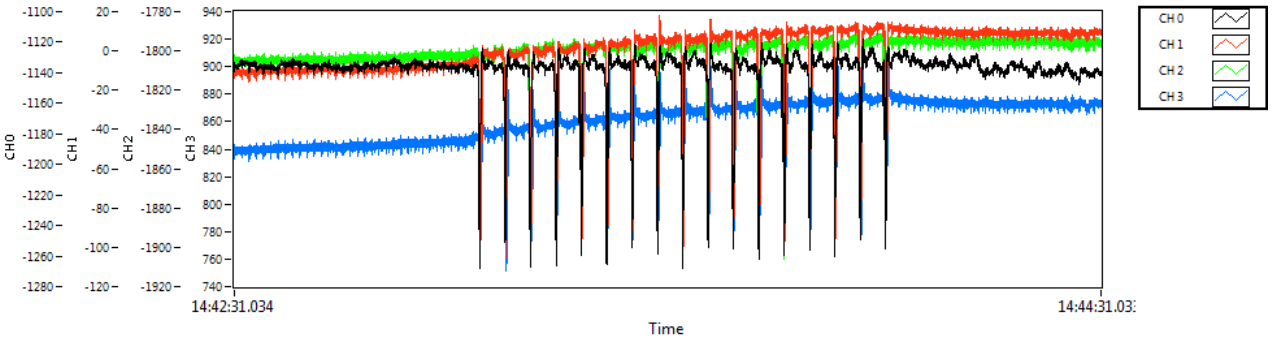
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
14:44:00
14/04
14:44:10
14/04
Time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CH 2
CH 3
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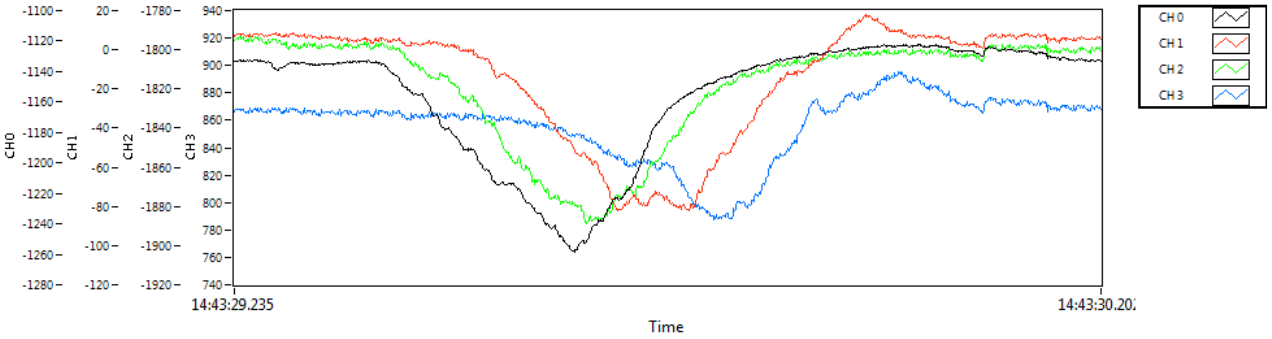
14:44:31.03
Time


CH 0
CH 1
CH 2
CH 3
14:43:29.235
14:43:30.20
Time

Misura 19: 14-04-2011-15-17-00.481.tdms

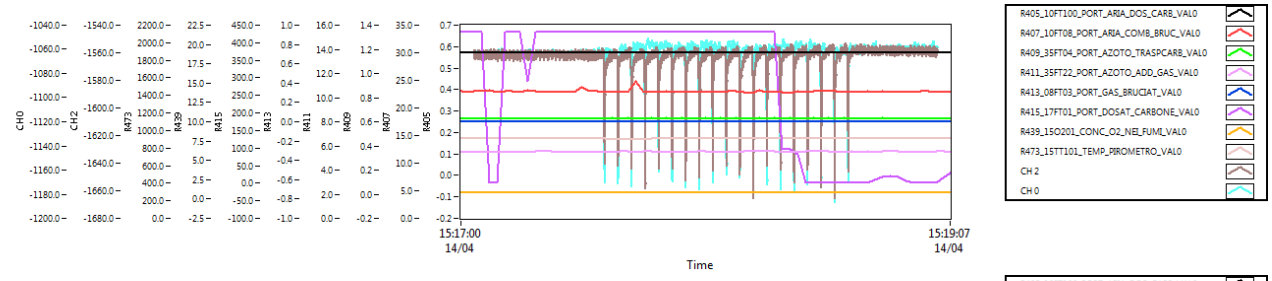
Carbone S.A. TQ > 125 micron
ALIM. nulla-pulsata-nulla110 g/h
Trasporto azoto
O2 0.5 % NEI FUMI
TEMP 900°

Condizioni di misura

data e ora inizio prova	14/4/11 15:17:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaggio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	0
GN bruciatore [Nm3/h] 08ft05	2.3
Aria bruciatore [Nm3/h] 10ft08	22.9
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5.5
Tbruc [°C] (15TT09)	1073
Pirometro portina 5 15TT101	904
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	923
TMOD6[°C] (15TT95)	892
Tquench [°C] (15TT97)	203
Tvalle_quench [°C] (15TT19)	155
Portata carbone(set point) [g/h]	offpulseoff
N2quench_sonda [Nm3/h] 35ft101	18.8
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	11
CO (ppm)	0.46
O2 IN [%vol]	0.8
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	1400
Posizione sonda campionamento mm da uscit	0
qr somma dei campioni dai due cicloni	0.2
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	P6 P7 P8 P9
POSIZIONE SONDE	CH0 P6-CH2 P7-CH1 P8-CH3 P9

Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.58
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	203.31
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	923.53
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.20
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.24
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1074.54
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	153.53
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	177.70
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	74.94
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	22.79
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	28.88
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.32
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	29.58
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.10
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.42
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.49
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.13
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.88
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.03
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.69
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.88
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.01
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	22.97
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.50
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	g/h	284.00
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	giri/min	246.57
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	giri/min	2839.81
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	0.79
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	11.02
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.49
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	899.85
R461_15TT03_TEMP_MODULO_3_VAL0	°C	898.02
R463_15TT04_TEMP_MODULO_4_VAL0	°C	899.30
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.92
R467_15TT06_TEMP_MODULO_6_VAL0	°C	900.04
R469_15TT07_TEMP_MODULO_7_VAL0	°C	878.84
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.96
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.38
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	18.96
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	903.97
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.29
		6.33
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		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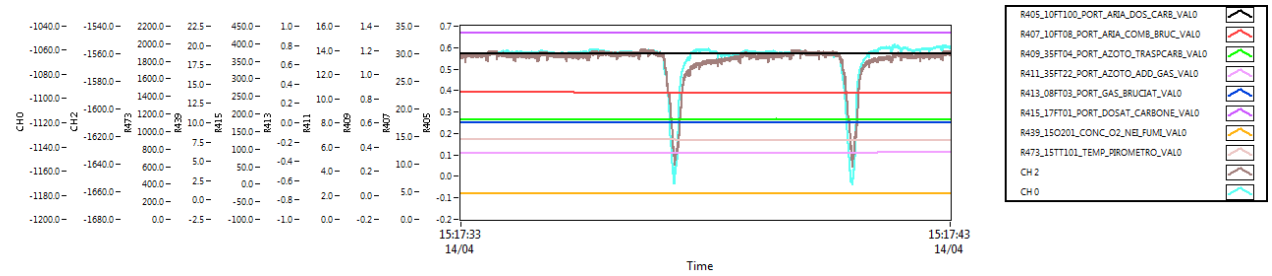
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:17:00
14/04
15:19:07
14/04
Time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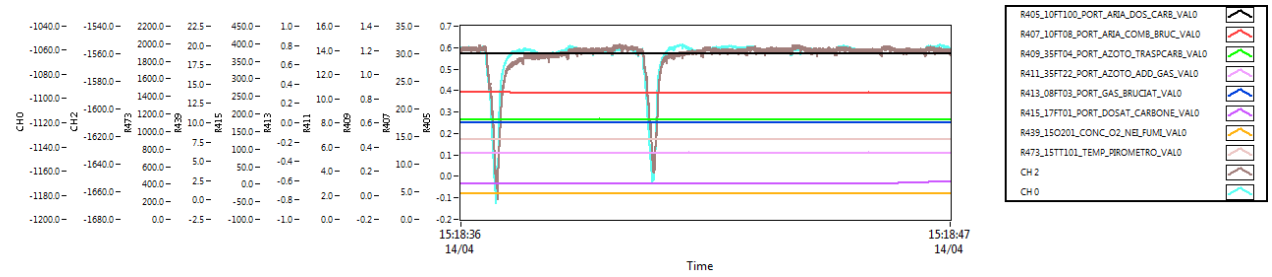
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:17:33
14/04
15:17:43
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
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R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
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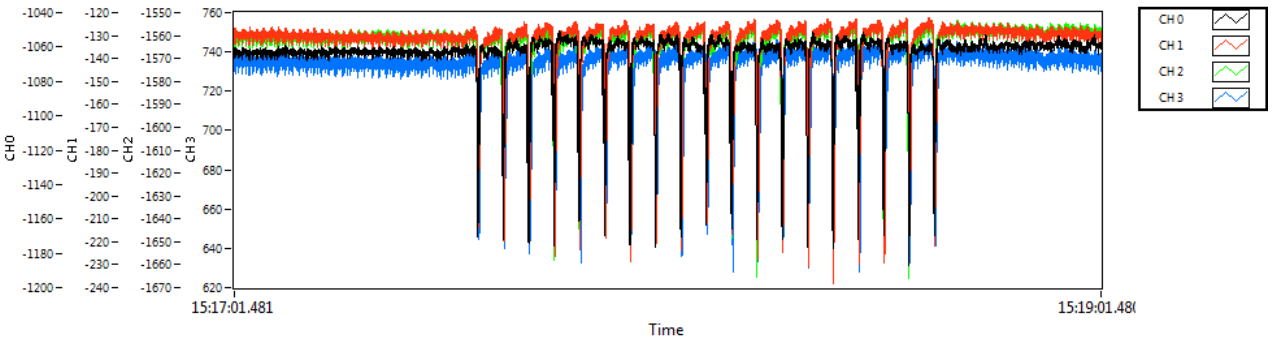
15:18:36
14/04
15:18:47
14/04
Time


CH 0
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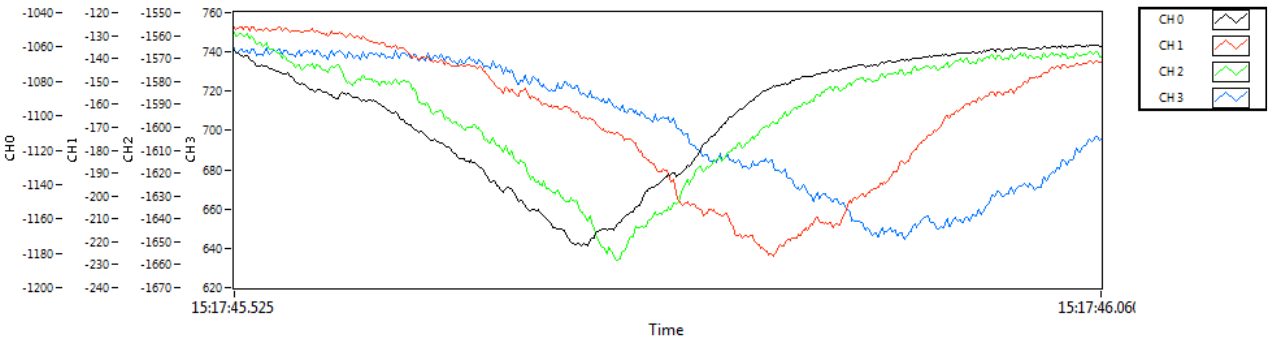
CH 2
CH 3
15:17:01.481
15:19:01.48(
Time


CH 0
CH 1
CH 2
CH 3
15:17:45.525
15:17:46.06(
Time

Misura 20: 14-04-2011-15-41-19.989.tdms

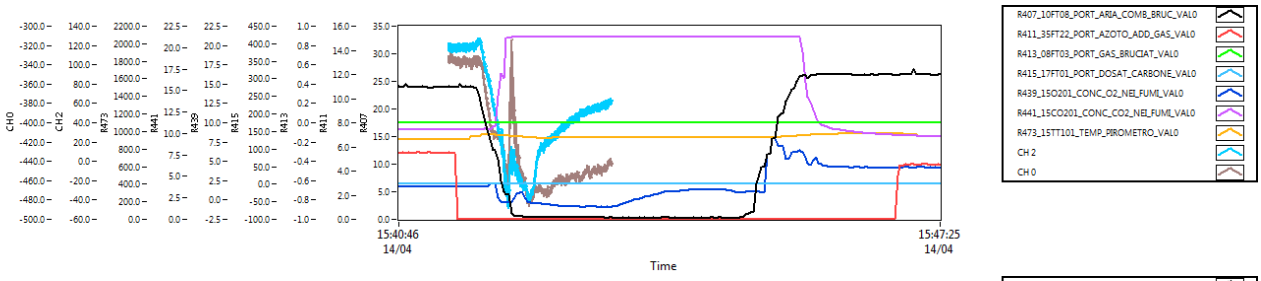
Carbone S.A. TQ > 125 micron
Transitorio diffusivo- oxycombustione
Sonde CHO ass. , CH2 rad Camera Combustione
ALIM. nulla-pulsata-nulla110 g/h
Trasporto azoto
O2 0.5 % NEI FUMI
TEMP 900°

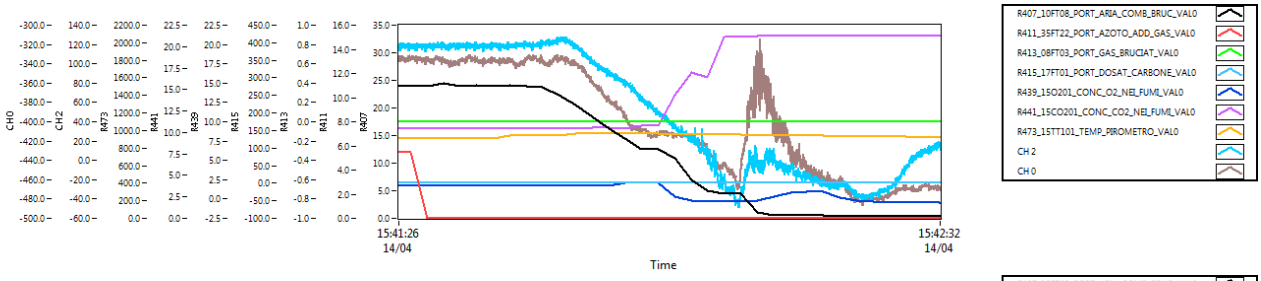
Condizioni di misura

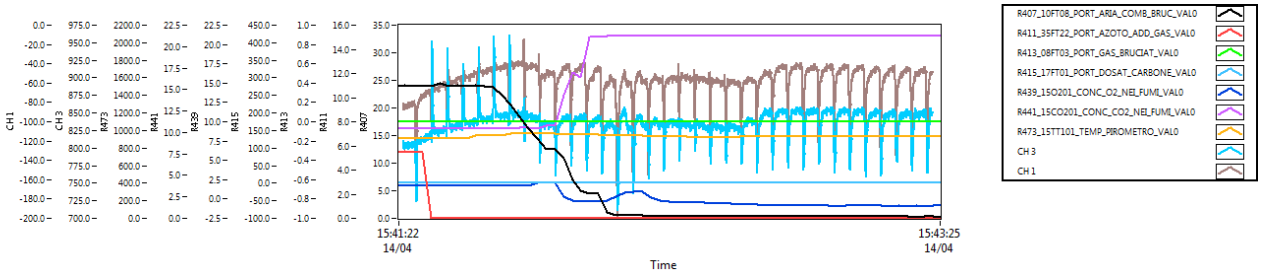
data e ora inizio prova	14/4/11 15:40:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	TRANSITORIO OXY
GN bruciatore [Nm3/h] 08ft05	
Aria bruciatore [Nm3/h] 10ft08	
Ossiqeno	ENTRATA
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	
Pirometro portina 5 15TT101	929
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	924
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	73
Tvalle_quench [°C] (15TT19)	186
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	21.3
CO (ppm)	25
O2 IN [%vol]	1.29
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	ccass ccrad P8 P9
POSIZIONE SONDE	CH0 ccass-CH2 ccrad-CH1 P8-CH3 P9

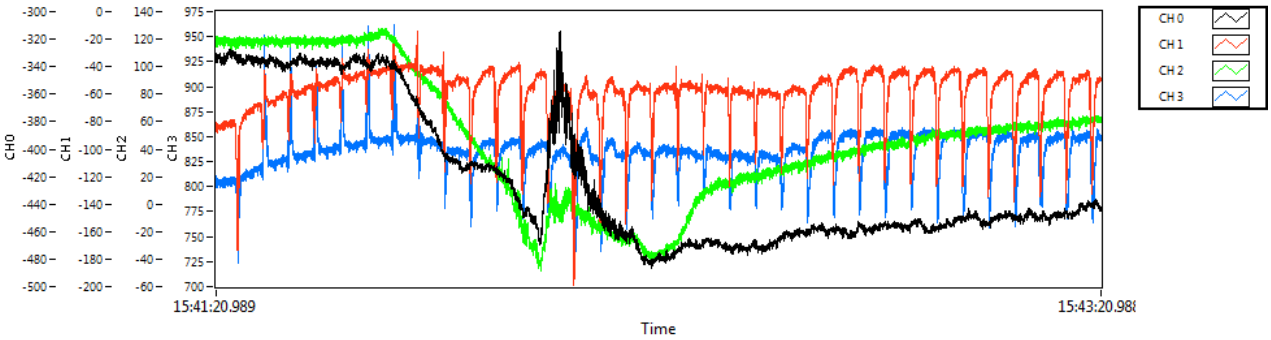
Valori medi variabili di processo

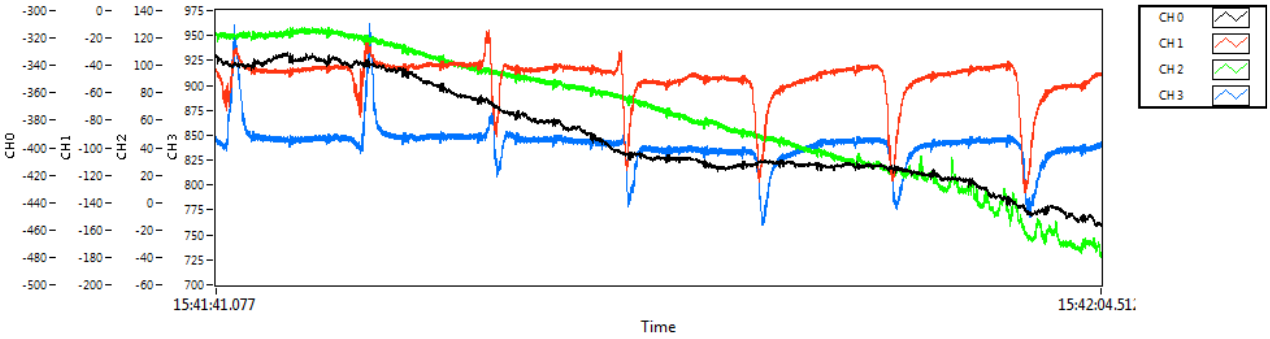
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	transitorio air-oxy
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	
R457_15TT01_TEMP_MODULO_1_VAL0	°C	
R461_15TT03_TEMP_MODULO_3_VAL0	°C	
R463_15TT04_TEMP_MODULO_4_VAL0	°C	
R465_15TT05_TEMP_MODULO_5_VAL0	°C	
R467_15TT06_TEMP_MODULO_6_VAL0	°C	
R469_15TT07_TEMP_MODULO_7_VAL0	°C	
R471_15TT08_TEMP_MODULO_8_VAL0	°C	
R459_15TT02_TEMP_MODULO_2_VAL0	°C	
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

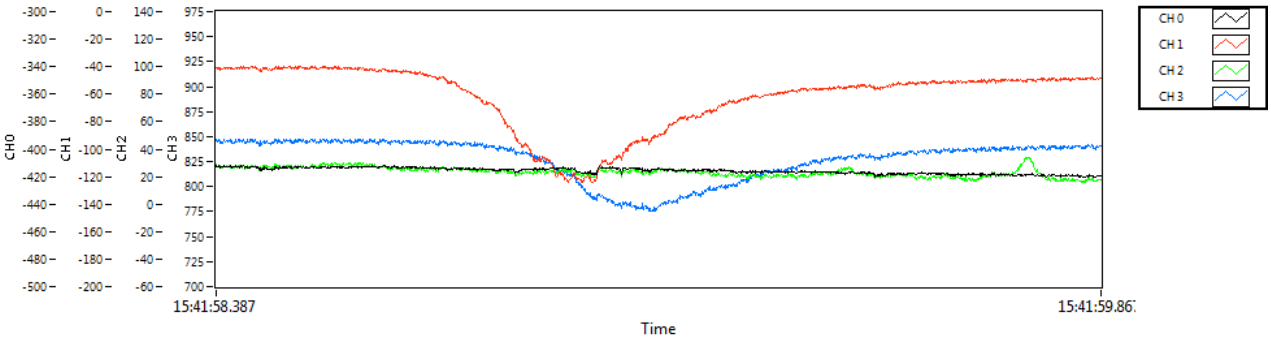

R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:40:46
14/04
15:47:25
14/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:41:26
14/04
15:42:32
14/04
Time


R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 3
CH 1
15:41:22
14/04
15:43:25
14/04
Time


CH 0
CH 1
CH 2
CH 3
15:41:20.989
15:43:20.98
Time


CH 0
CH 1
CH 2
CH 3
15:41:41.077
15:42:04.51
Time


CH 0
CH 1
CH 2
CH 3
15:41:58.387
15:41:59.86
Time

Misura 21: 14-04-2011-15-44-51.271.tdms

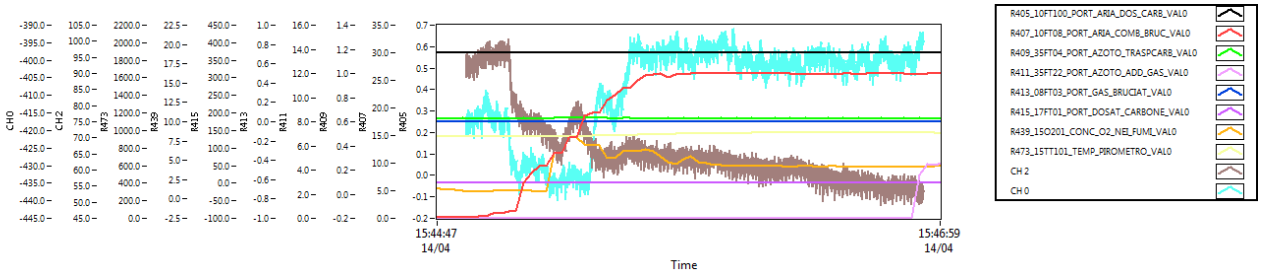
Carbone S.A. TQ > 125 micron
Transitorio oxycombustione-diffusivo
Sonde CHO ass. , CH2 rad Camera Combustione
ALIM. nulla-pulsata-nulla110 g/h
Trasporto azoto
O2 0.5 % NEI FUMI
TEMP 900°

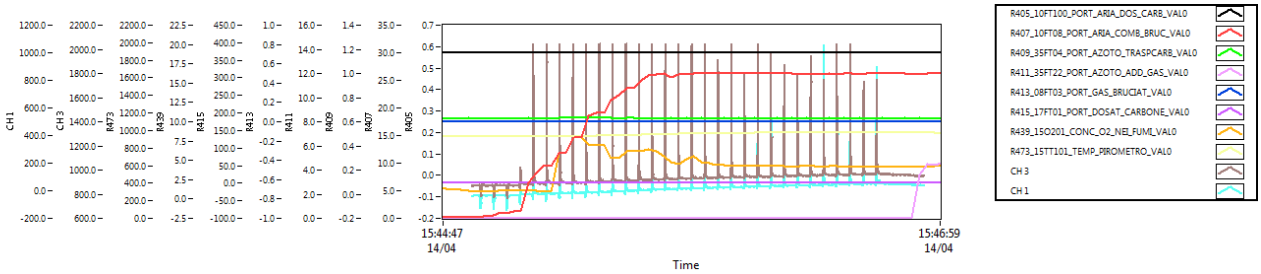
Condizioni di misura

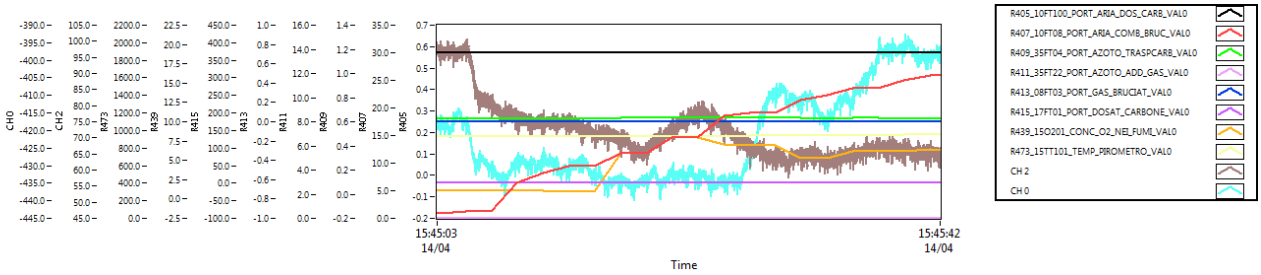
data e ora inizio prova	14/4/11 15:45:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	TRANSITORIO OXY
GN bruciatore [Nm3/h] 08ft05	
Aria bruciatore [Nm3/h] 10ft08	
Ossigeno	USCITA
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	
Tbruc [°C] (15TT09)	
Pirometro portina 5 15TT101	929
TMOD2 [°C] (15TT93)	
TMOD4 [°C] (15TT94)	924
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	73
Tvalle_quench [°C] (15TT19)	186
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	21.3
CO (ppm)	25
O2 IN [%vol]	1.29
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone grande 15cy27	
NOTE	ccass ccrad P8 P9
POSIZIONE SONDE	CH0 ccass-CH2 ccrad-CH1 P8-CH3 P9

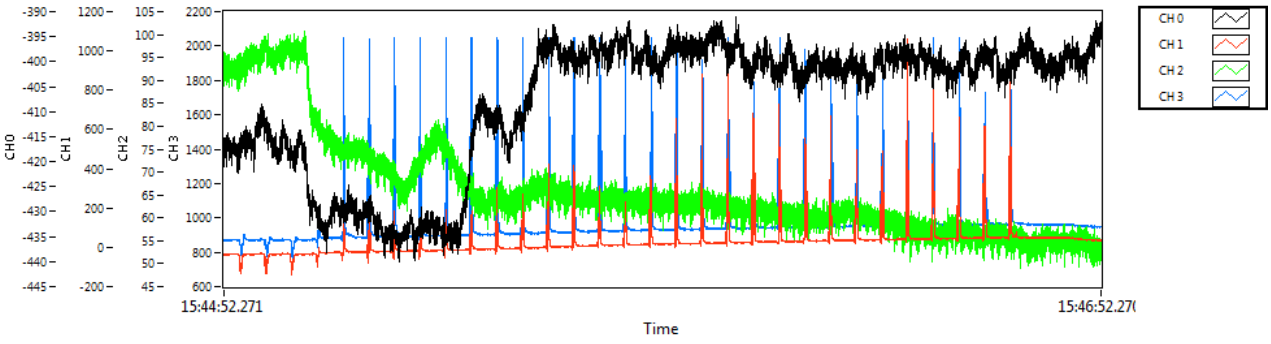
Valori medi variabili di processo

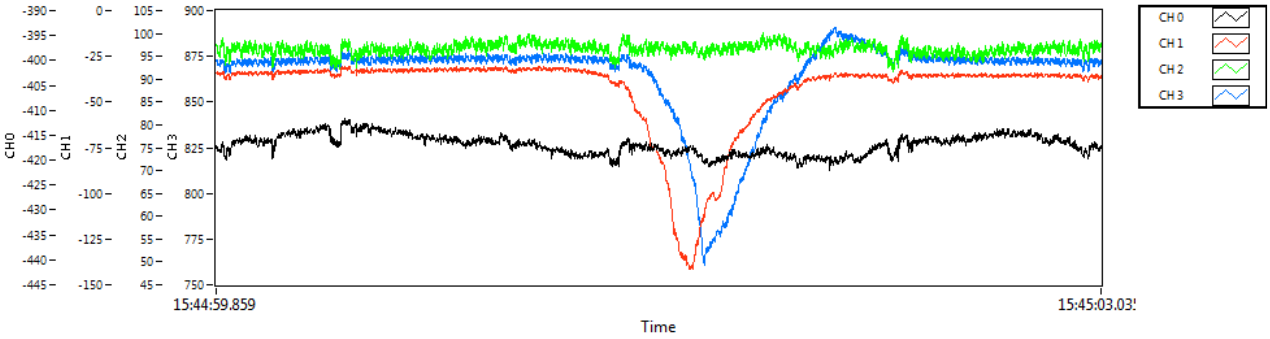
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	transitorio oxy-air
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	
R457_15TT01_TEMP_MODULO_1_VAL0	°C	
R461_15TT03_TEMP_MODULO_3_VAL0	°C	
R463_15TT04_TEMP_MODULO_4_VAL0	°C	
R465_15TT05_TEMP_MODULO_5_VAL0	°C	
R467_15TT06_TEMP_MODULO_6_VAL0	°C	
R469_15TT07_TEMP_MODULO_7_VAL0	°C	
R471_15TT08_TEMP_MODULO_8_VAL0	°C	
R459_15TT02_TEMP_MODULO_2_VAL0	°C	
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		

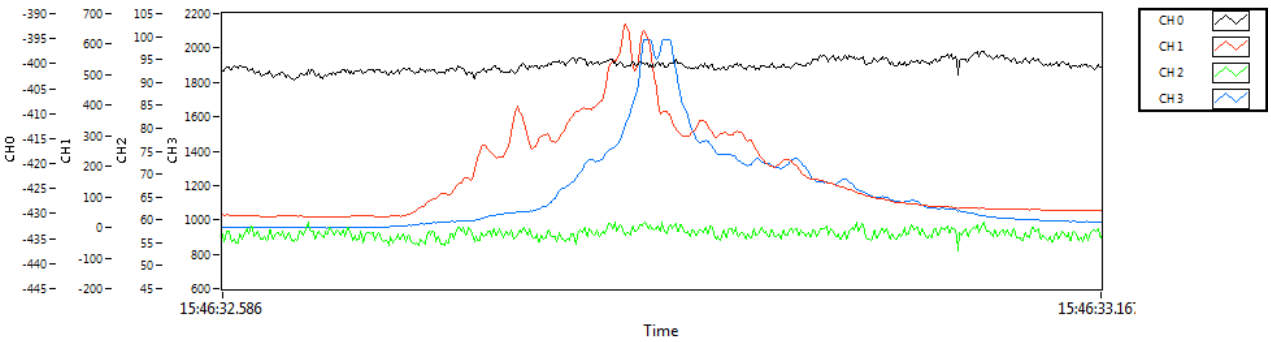

R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:44:47
14/04
15:46:59
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 3
CH 1
15:44:47
14/04
15:46:59
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
15:45:03
14/04
15:45:42
14/04
Time


CH 0
CH 1
CH 2
CH 3
15:44:52.271
15:46:52.27(
Time


CH 0
CH 1
CH 2
CH 3
15:44:59.859
15:45:03.03
Time


CH 0
CH 1
CH 2
CH 3
15:46:32.586
15:46:33.16
Time

Misura 22: 14-04-2011-16-08-39.937.tdms

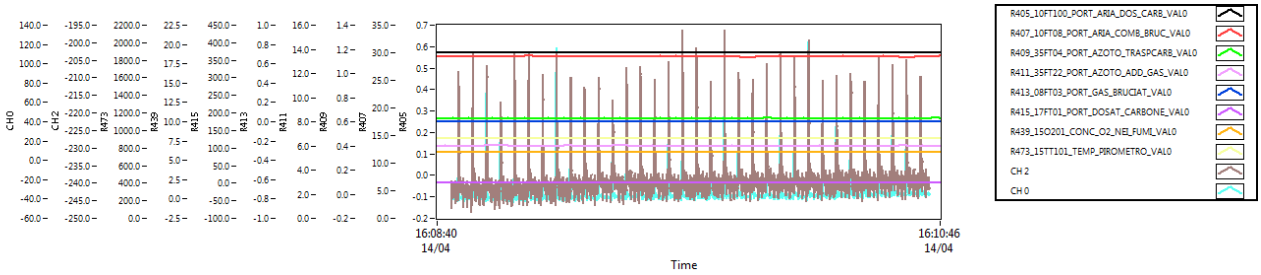
Carbone S.A. TQ > 125 micron
Combustione diffusiva
Sonde CHO P10 , CH2 P12
ALIM. pulsata110 g/h
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

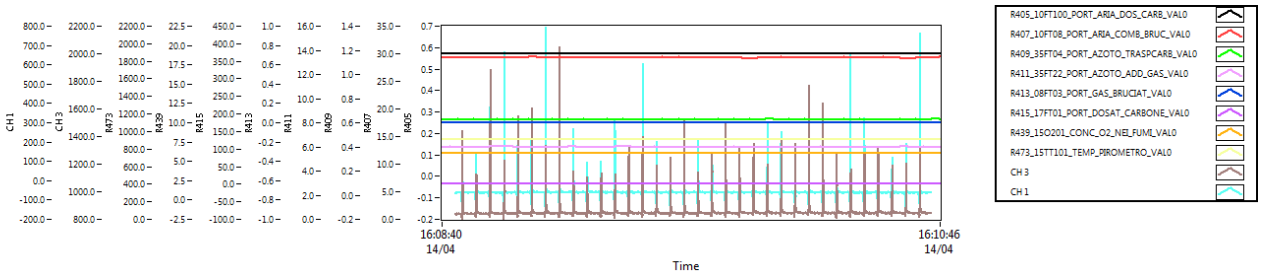
Condizioni di misura

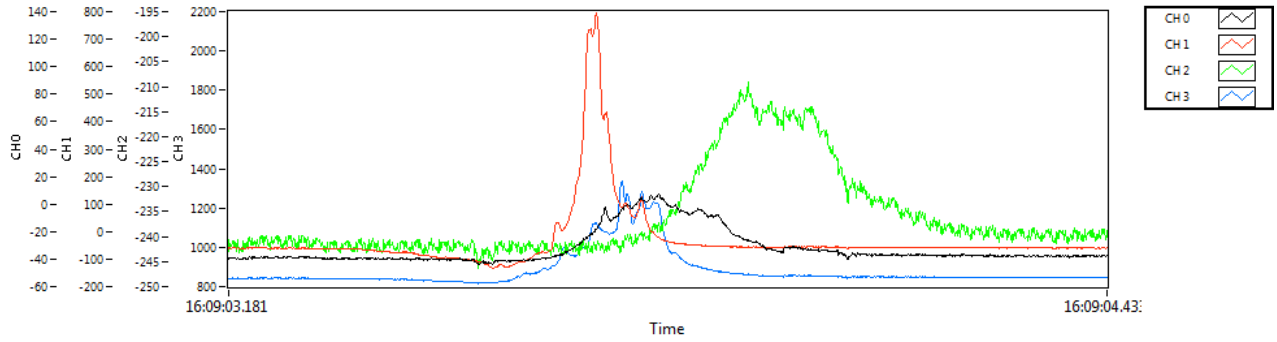
data e ora inizio prova	14/4/11 16:08:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqgio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.2
Aria bruciatore [Nm3/h] 10ft08	29.2
Ossigeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	6
Tbruc [°C] (15TT09)	1026
Pirometro portina 5 15TT101	907
TMOD2 [°C] (15TT93)	877
TMOD4 [°C] (15TT94)	924
TMOD6[°C] (15TT95)	892
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [g/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.2
CO (ppm)	0.15
O2 IN [%vol]	6.07
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P8 P9 P10 P12
POSIZIONE SONDE	CH0 P10-CH2 12-CH1 P8-CH3 P9

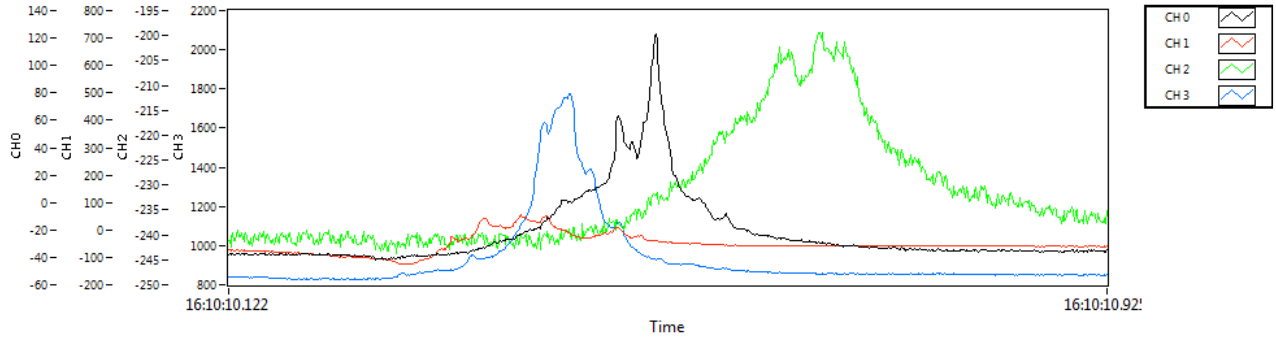
Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.29
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	1614.50
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	923.92
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.19
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.35
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1025.22
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.71
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	36.67
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	108.23
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	877.06
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	30.28
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.28
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	27.64
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.05
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.79
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.45
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	29.11
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.86
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.05
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.72
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.93
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.85
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	29.31
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	6.00
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.04
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	1307.00
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.05
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.19
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.13
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	899.33
R461_15TT03_TEMP_MODULO_3_VAL0	°C	899.37
R463_15TT04_TEMP_MODULO_4_VAL0	°C	900.11
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.81
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.59
R469_15TT07_TEMP_MODULO_7_VAL0	°C	876.25
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.83
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.12
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.39
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	907.62
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.19
		7.08
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:08:40
14/04
16:10:46
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 3
CH 1
16:08:40
14/04
16:10:46
14/04
Time


CH 0
CH 1
CH 2
CH 3
16:09:03.181
16:09:04.43
Time


CH 0
CH 1
CH 2
CH 3
16:10:10.122
16:10:10.92
Time

Misura 23: 14-04-2011-16-14-16.833.tdms

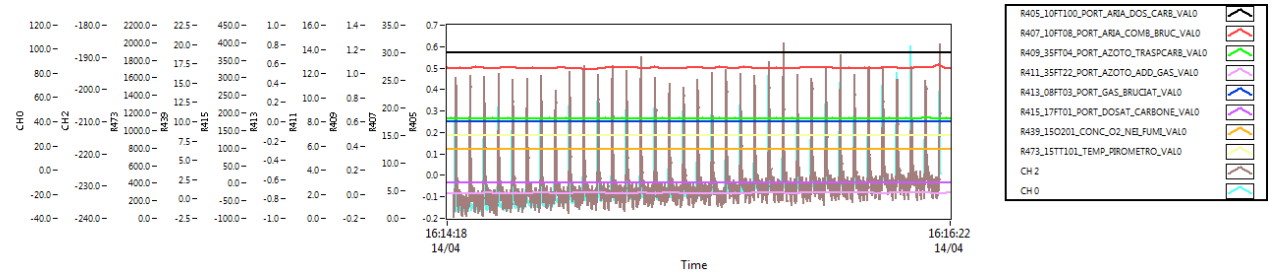
Carbone S.A. TQ > 125 micron
Combustione diffusiva
Sonde CH1 P8, CH3 P9, CHO P10 , CH2 P12,
ALIM. pulsata110 g/h
Trasporto azoto
Riduzione del gas di trasporto
O2 6.0 % NEI FUMI
TEMP 900°

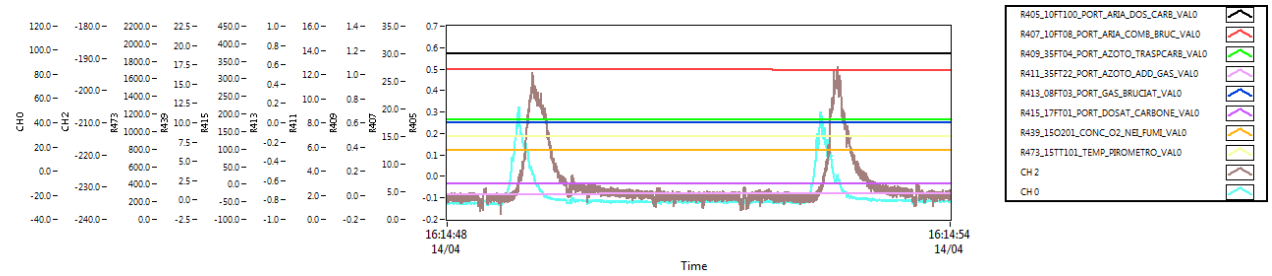
Condizioni di misura

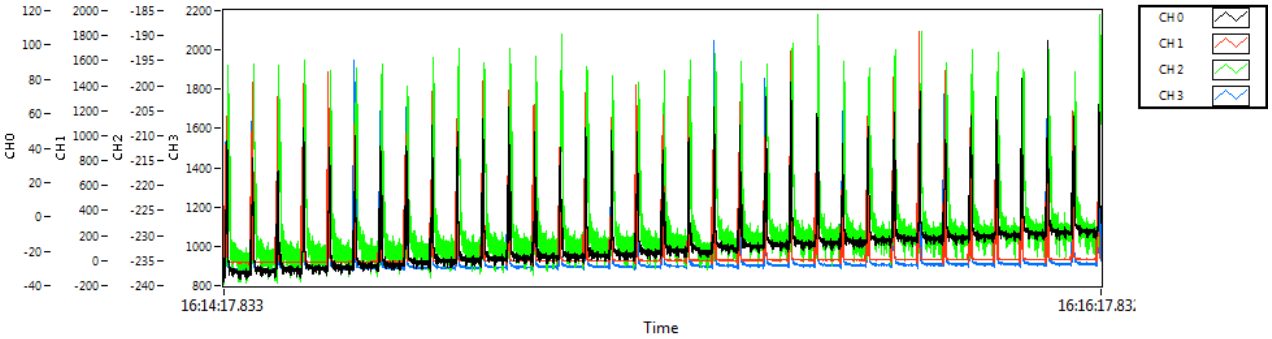
data e ora inizio prova	14/4/11 16:14:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2
Aria bruciatore [Nm3/h] 10ft08	27.2
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	6.4
Tbruc [°C] (15TT09)	1015
Pirometro portina 5 15TT101	944
TMOD2 [°C] (15TT93)	884
TMOD4 [°C] (15TT94)	924
TMOD6[°C] (15TT95)	893
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	210
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8
CO (ppm)	0.04
O2 IN [%vol]	6.4
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P8 P9 P10 P12
POSIZIONE SONDE	CH0 P10-CH2 12-CH1 P8-CH3 P9

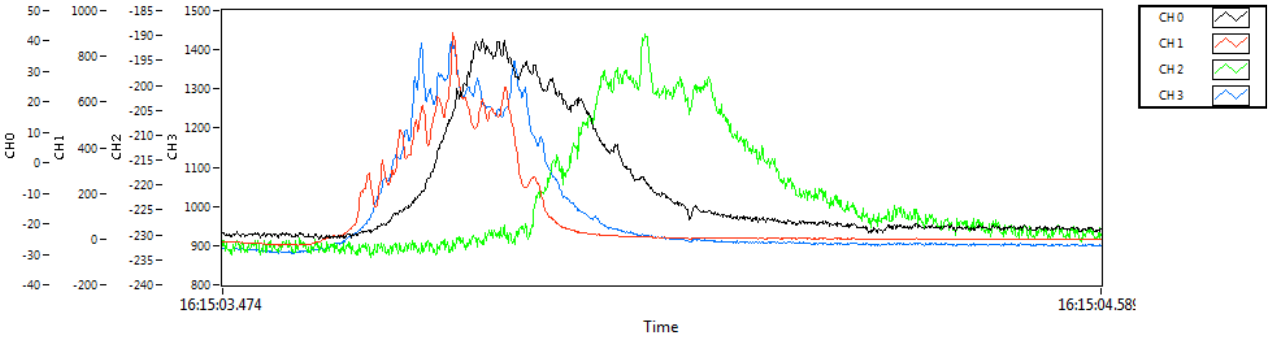
Valori medi variabili di processo

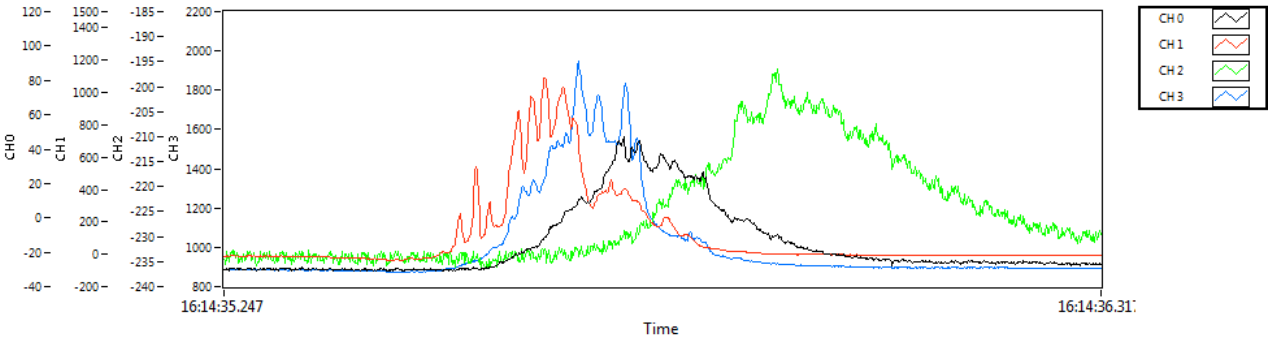
R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	22.23
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	1614.50
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	924.98
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	26.18
R353_15TT95_TEMP_REATT_ZONABASSA_VALI	°C	893.49
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1011.38
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	210.34
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	31.03
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	108.49
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	885.55
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	30.03
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	28.28
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	27.60
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	29.04
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.75
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.46
R377_12TT22_TEMP_RAFF_SONDA_CARB_VALI	°C	29.12
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.85
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.70
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.73
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.86
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	27.27
R409_35FT04_PORT_AZOTO_TRASPCARB_VALI	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	2.09
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.04
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	1034.83
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	6.40
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.00
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.04
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	898.56
R461_15TT03_TEMP_MODULO_3_VAL0	°C	898.89
R463_15TT04_TEMP_MODULO_4_VAL0	°C	899.58
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.95
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.89
R469_15TT07_TEMP_MODULO_7_VAL0	°C	876.00
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.87
R459_15TT02_TEMP_MODULO_2_VAL0	°C	899.04
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.39
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	944.67
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	1.99
		7.17
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:14:18
14/04
16:16:22
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:14:48
14/04
16:14:54
14/04
Time


CH 0
CH 1
CH 2
CH 3
16:14:17.833
16:16:17.83
Time


CH 0
CH 1
CH 2
CH 3
16:15:03.474
16:15:04.58
Time


CH 0
CH 1
CH 2
CH 3
16:14:35.247
16:14:36.31
Time

Misura 24: 14-04-2011-16-42-47.574.tdms

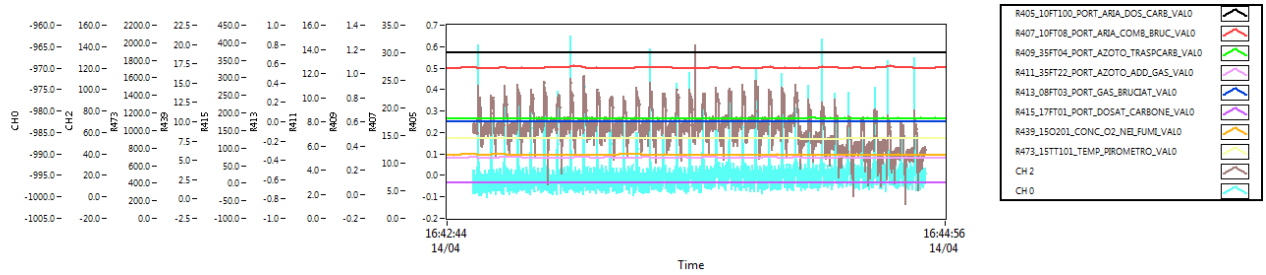
Carbone S.A. TQ > 125 micron
Combustione diffusiva
Sonde CH1 P8, CH3 P9, CHO P10 ,
CH2 sul fondo reattore
ALIM. pulsata110 g/h
Trasporto azoto
O2 6.0 % NEI FUMI
TEMP 900°

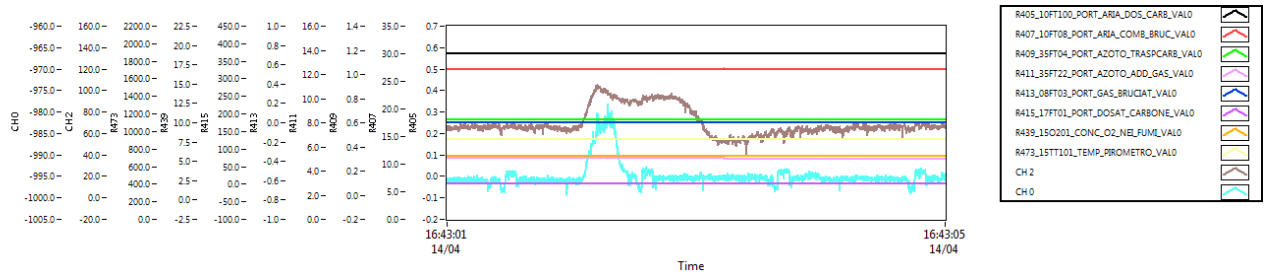
Condizioni di misura

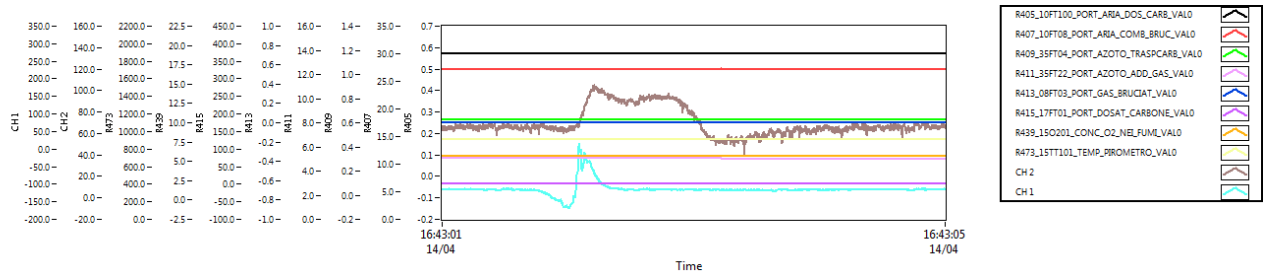
data e ora inizio prova	14/4/11 16:43:00
Tipo di prova	Sonda ENEA
Carbone S.A. TQ >125 micron	250 mmc
Tipo flussaqqio resistenze	azoto
Treattore (set point)	900
Preriscaldamento aria comburente	0
Modulo di alimentazione	2
Porta di ingresso	5
Tipo di quench fumi campionati	azoto
Tipo di quench fumi non campionati	aria
Concentrazione nominale O2 (% vol dry)	6
GN bruciatore [Nm3/h] 08ft05	2.1
Aria bruciatore [Nm3/h] 10ft08	27.2
Ossiqeno	
CO2	
N2 Camera di combustione[Nm3/h] 35ft22	5
Tbruc [°C] (15TT09)	1002
Pirometro portina 5 15TT101	903
TMOD2 [°C] (15TT93)	886
TMOD4 [°C] (15TT94)	922
TMOD6[°C] (15TT95)	892
Tquench [°C] (15TT97)	
Tvalle_quench [°C] (15TT19)	208
Portata carbone(set point) [q/h]	pulse
N2quench_sonda [Nm3/h] 35ft101	
N2_carrier [Nm3/h] 35ft04	0.6
Air_Carrier (10FT100)	0.6
CO2 [%vol]	8.5
CO (ppm)	0.3
O2 IN [%vol]	5.73
O2 OUT [%vol]	
DP ciclone 15VM20 (mm di H2O)	
Aria/azoto Resist. [Nm3/h]	4.8
Tempo residenza ms	
Posizione sonda campionamento mm da uscit	no camp
qr somma dei campioni dai due cicloni	
qr Ciclone piccolo 15cy27	
qr Ciclone qrande 15cy27	
NOTE	P8 P9 P10 Fondo
POSIZIONE SONDE	CH0 P10-CH2 fondo R-CH1 P8-CH3 P9

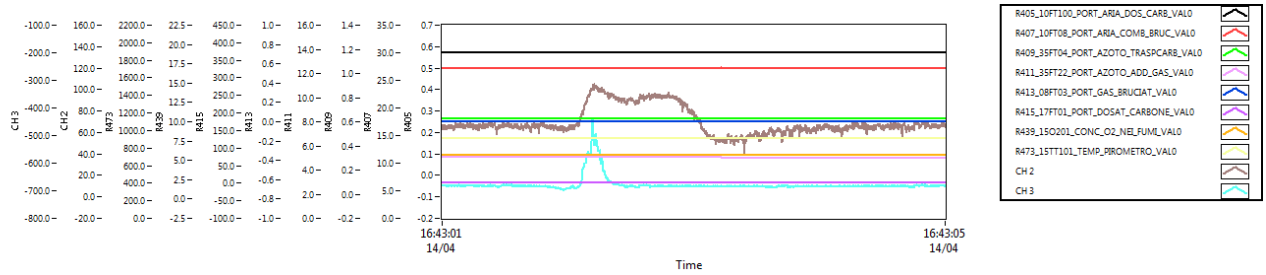
Valori medi variabili di processo

R303_10TT12_TEMP_RISC_ARIA_BRUC_VAL0	°C	21.55
R337_15TT97_TEMP_USCITA_REATT_VAL0	°C	1614.50
R349_15TT94_TEMP_FUMI_MODULO_4_VAL0	°C	922.21
R351_12TT07_TEMP_RAFFRED_C_7_VAL0	°C	25.77
R353_15TT95_TEMP_REATT_ZONABASSA_VAL	°C	892.63
R355_15TT09_TEMP_INTERNA_PRECOMB_VAL	°C	1011.58
R357_15TT19_TEMP_USC_FUMI_REATT_VAL0	°C	209.90
R359_15TT16_TEMP_FUMI_SONDA_PREL_VAL0	°C	27.64
R361_15TT23_TEMP_FUMI_FILTRO_MAN_VAL0	°C	109.53
R363_15TT93_TEMP_FUMI_MODULO_1_VAL0	°C	886.59
R365_12TT36_TEMP_RAFFRED_C_D_VAL0	°C	29.77
R367_12TT45_TEMP_RAFFRED_C_C_VAL0	°C	27.90
R369_12TT29_TEMP_RAFF_SONDA_PREL_VAL0	°C	27.21
R371_12TT50_TEMP_RAFFRED_C_B_VAL0	°C	28.70
R373_12TT17_TEMP_RAFFRED_C_E_VAL0	°C	28.40
R375_12TT67_TEMP_RAFFRED_BRUCIAT_VAL0	°C	28.09
R377_12TT22_TEMP_RAFF_SONDA_CARB_VAL	°C	28.72
R379_12TT69_TEMP_RAFFRED_C_A_VAL0	°C	28.47
R381_10PT13_PRESS_ARIA_COMB_BRUC_VAL0	bar	0.04
R383_15PT10_PRESS_INT_PRECOMB_VAL0	mbar	0.71
R395_12PT43_PRESS_H2O_MANDATA_VAL0	bar	3.74
R397_12PT42_PRESS_H2O_RITORNO_VAL0	bar	0.94
R399_08PT14_PRESS_GAS_BRUCIAT_VAL0	mbar	0.00
R401_15DPT22_PRESS_DIFF_FILTRO_M_VAL0	mbar	-0.85
R403_15PT92_PRESS_ARIA_USC_REATT_VAL0	mbar	0.00
R405_10FT100_PORT_ARIA_DOS_CARB_VAL0	Nm3/h	0.57
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0	Nm3/h	27.27
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL	Nm3/h	0.63
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0	Nm3/h	5.02
R413_08FT03_PORT_GAS_BRUCIAT_VAL0	Nm3/h	#DIV/0!
R415_17FT01_PORT_DOSAT_CARBONE_VAL0	q/h	-0.04
R435_15VMAS19_GIRI_VENTIL_FUMI_VAL0	qiri/min	1176.67
R437_15VMAS20_GIRI_VENTIL_SONDA_VAL0	qiri/min	-543.75
R439_15O201_CONC_O2_NEI_FUMI_VAL0	%	5.71
R441_15CO201_CONC_CO2_NEI_FUMI_VAL0	%	8.46
R443_15CO01_CONC_CO_NEI_FUMI_VAL0	ppm	0.35
R445_15NOX01_CONC_NOX_NEI_FUMI_VAL0	ppm	-18.75
R447_15NSO201_CONC_SO2_NEI_FUMI_VAL0	ppm	-468.75
R451_15O202_CONC_O2_NEI_FUMI2_VAL0	%	-4.69
R457_15TT01_TEMP_MODULO_1_VAL0	°C	898.36
R461_15TT03_TEMP_MODULO_3_VAL0	°C	898.60
R463_15TT04_TEMP_MODULO_4_VAL0	°C	899.33
R465_15TT05_TEMP_MODULO_5_VAL0	°C	899.77
R467_15TT06_TEMP_MODULO_6_VAL0	°C	899.49
R469_15TT07_TEMP_MODULO_7_VAL0	°C	875.12
R471_15TT08_TEMP_MODULO_8_VAL0	°C	899.85
R459_15TT02_TEMP_MODULO_2_VAL0	°C	898.85
R3045_35FT101_MISURA_PORTATA_VAL0	Nm3/h	-0.39
R473_15TT101_TEMP_PIROMETRO_VAL0	°C	904.32
R413_08FT05_PORT_GAS_BRUCIAT_VAL0	Nm3/h	2.09
		7.08
portata O2	Nm3/h	
portata CO2	Nm3/h	
note		


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:42:44
14/04
16:44:56
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 0
16:43:01
14/04
16:43:05
14/04
Time


R405_10FT100_PORT_ARIA_DOS_CARB_VAL0
R407_10FT08_PORT_ARIA_COMB_BRUC_VAL0
R409_35FT04_PORT_AZOTO_TRASPCARB_VAL0
R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
R439_15O201_CONC_O2_NEI_FUMI_VAL0
R473_15TT101_TEMP_PIROMETRO_VAL0
CH 2
CH 1
16:43:01
14/04
16:43:05
14/04
Time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R411_35FT22_PORT_AZOTO_ADD_GAS_VAL0
R413_08FT03_PORT_GAS_BRUCIAT_VAL0
R415_17FT01_PORT_DOSAT_CARBONE_VAL0
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CH 2
CH 3
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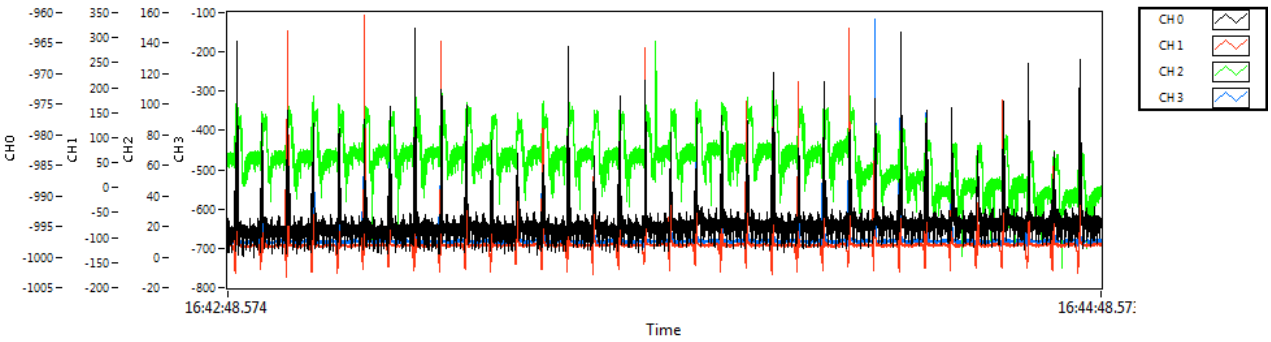
14/04
16:43:05
14/04
Time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CH 1
CH 2
CH 3
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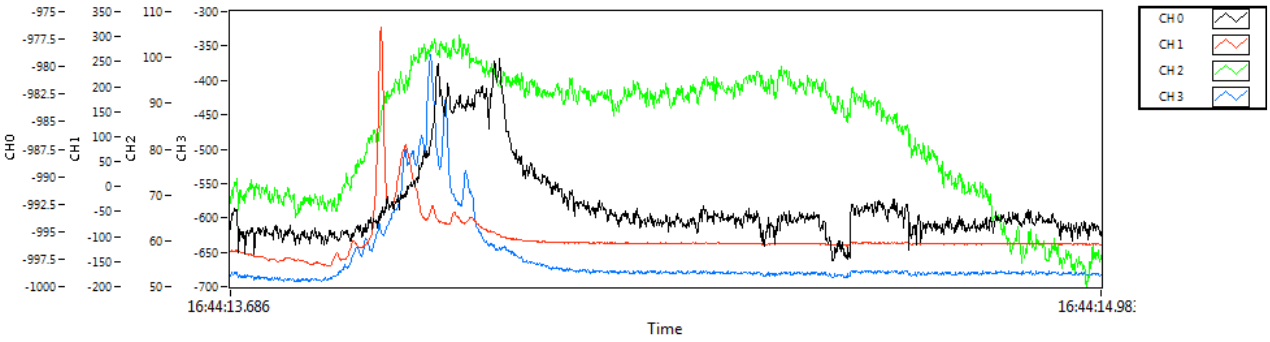
16:44:48.57
Time


CH 0
CH 1
CH 2
CH 3
16:44:13.686
16:44:14.98
Time

9. APPENDICE

9.1. Caratteristiche del carbone Sud-Africano-ENEL

Analisi termogravimetrica

Sample	Description	Moist [%wt]	VM [%wt]	FC [%wt]	Ash [%wt]	VM [%wt,db]
1	Tal quale	2.032	24.7	57.21	16.058	25.21
2	< 38 mm	1.811	25.66	55.75	16.779	26.13
3	38 - 45 mm	2.447	23.91	56.75	16.893	24.51
4	45 - 90 mm	2.109	25.54	57.04	15.311	26.09
5	90 - 125 mm	1.229	24.99	57.94	15.841	25.30
6	> 125 mm	2.375	25.58	58.37	13.675	26.20

Analisi elementare

Sample	Description	C [%wt]	H [%wt]	N [%wt]	Moist [%wt,af]	C [%wt,db]
1	Tal quale	67.480	3.877	1.501		
2	Tal quale	67.690	3.889	1.491		
	Media	67.585	3.883	1.496	2.421	69.262
3	< 38 mm	66.690	3.755	1.452		
4	< 38 mm	66.190	3.759	1.431		
	Media	66.440	3.757	1.442	2.176	67.918
5	38 - 45 mm	66.470	3.719	1.559		
6	38 - 45 mm	66.220	3.850	1.527		
	Media	66.345	3.785	1.543	2.944	68.358
7	45 - 90 mm	67.440	4.042	1.573		
8	45 - 90 mm	67.480	4.035	1.538		
9	45 - 90 mm	67.740	4.064	1.550		
	Media	67.553	4.047	1.553	2.490	69.279
10	90 - 125 mm	66.940	3.948	1.522		
11	90 - 125 mm	66.930	3.967	1.499		
	Media	66.935	3.958	1.511	1.460	67.927
12	> 125 mm	68.500	4.080	1.516		
13	> 125 mm	68.850	4.109	1.530		
	Media	68.675	4.095	1.523	2.751	70.618

Dati elaborati

Description	Moist [%wt]	C [%wt,db]	H [%wt]	N [%wtdb]	O [%wtdb]	Ash [%wt,db]
Tal quale	2.032	69.262	1.499	1.533	25.286	16.391
< 38 mm	1.811	67.918	1.616	1.474	26.816	17.088
38 - 45 mm	2.447	68.358	0.866	1.589	26.243	17.317
45 - 90 mm	2.109	69.279	1.596	1.593	25.042	15.641
90 - 125 mm	1.229	67.927	2.534	1.533	26.545	16.038
> 125 mm	2.375	70.618	1.381	1.566	23.683	14.008

9.2. Matrice sperimentale

Abbreviazioni
Carbone:

S.A. > sud africano
TQ > talquale (TAR + CHAR)
TAR > fase liquida
CHAR > fase solida

Biomassa:
Semi di girasole > SG
spremuti e macinati > SM

Variabili di processo

Flusso
Cnt > continuo
Puls > pulsato
Trans > transitorio = passaggio da una portata nulla ad una continua o pulsata
Nullo > nessuna immissione di combustibile nel reattore

Data gg	Num Mis	Comb.	qualità	granulo	Gas di trasporto	Flusso Cont/Puls Trans. Cnt/Pul	Temp. reattore	Tasso di O2	Processo Diffusivo Oxy-comb	CH0	CH1	CH2	CH3
12-04-2011	1					Nullo			Diff	P6	P8		
“	2	S.A.	TQ	> 125µm	azoto+aria	Pulsato	1100°C	0.5%	“	P6	P8		
“	3	S.A.	TQ	> 125µm	azoto+aria	Continuo	1100°C	0.5%	“	P6	P8		
“	4	S.A.	TQ	> 125µm	azoto+aria	Continuo	1100°C	0.5%	“	P6	P8		P9
“	5	S.A.	TQ	> 125µm	azoto+aria	Nullo	1100°C	0.5%	“	P6	P8		P9
“	6	S.A.	TQ	> 125µm	azoto+aria	Pulsato	1100°C	0.5%	“	P6	P8		P9
“	7	S.A.	TQ	> 125µm	azoto+aria	Continuo	1100°C	0.5%	“	P6	P8		P9
“	8-9	S.A.	TQ	> 125µm	azoto+aria	Pulsato	1100°C	0.5%	“	P6	P8	P7	P9
“	10	S.A.	TQ	> 125µm	azoto+aria	Trans.Puls	1100°C	0.5%	“	P6	P8	P7	P9
“	11	S.A.	TQ	> 125µm	azoto+aria	Trans.Cnt	1100°C	0.5%	“	P6	P8	P7	P9
“	12	S.A.	TQ	> 125µm	azoto+aria	Trans.Cnt	1100°C	3.3%	“	P6	P8	P7	P9
“	13	S.A.	TQ	> 125µm	azoto+aria	Trans.Puls	1100°C	3.3%	“	P6	P8	P7	P9
“	14	S.A.	TQ	> 125µm	azoto+aria	Pulsato	1100°C	3.3%	“	P6	P8	P7	P9
“	15	S.A.	TQ	> 125µm	azoto+aria	Continuo	1100°C	3.3%	“	P6	P8	P7	P9
“	16	S.A.	TQ	> 125µm	azoto+aria	Continuo	1100°C	6.2%	“	P6	P8	P7	P9
“	17	S.A.	TQ	> 125µm	azoto+aria	Trans.Cnt	1100°C	6.2%	“	P6	P8	P7	P9
“	18	S.A.	TQ	> 125µm	azoto+aria	Pulsato	1100°C	6.2%	“	P6	P8	P7	P9
“	19	S.A.	TQ	> 125µm	azoto+aria	Trans.Puls	1100°C	6.2%	“	P6	P8	P7	P9
13-04-2011	1				azoto+aria	Nullo	1100°C	0.7%	“	P6	P8	P7	P9
“	2	S.A.	TQ	38-90 µm	azoto+aria	Cnt	1100°C	0.7%	“	P6	P8	P7	P9
“	3	S.A.	TQ	38-90 µm	azoto+aria	Trans.Cnt	1100°C	0.7%	“	P6	P8	P7	P9
“	4-5	S.A.	TQ	38-90 µm	azoto+aria	Pulsato	1100°C	0.7%	“	P6	P8	P7	P9
“	6	S.A.	TQ	38-90 µm	azoto+aria	Trans.Puls	1100°C	0.7%	“	P6	P8	P7	P9
“	7				azoto+aria	nullo	1100°C	3.3%	“	P6	P8	P7	P9
“	8	S.A.	TQ	38-90 µm	azoto+aria	Pulsato	1100°C	3.3%	“	P6	P8	P7	P9
“	9	S.A.	TQ	38-90 µm	azoto+aria	Trans.Puls	1100°C	3.3%	“	P6	P8	P7	P9
“	10	S.A.	TQ	38-90 µm	azoto+aria	Continuo	1100°C	3.3%	“	P6	P8	P7	P9
“	11	S.A.	TQ	38-90 µm	azoto+aria	Trans.Cnt	1100°C	3.3%	“	P6	P8	P7	P9
“	12				azoto+aria	nullo	1100°C	6.2%	“	P6	P8	P7	P9
“	13	S.A.	TQ	38-90 µm	azoto+aria	Continuo	1100°C	6.2%	“	P6	P8	P7	P9
“	14	S.A.	TQ	38-90 µm	azoto+aria	Trans.Cnt	1100°C	6.2%	“	P6	P8	P7	P9
“	15	S.A.	TQ	38-90 µm	azoto+aria	Pulsato	1100°C	6.2%	“	P6	P8	P7	P9
“	16	S.A.	TQ	38-90 µm	azoto+aria	Trans.Puls.	1100°C	6.2%	“	P6	P8	P7	P9
“	17	S.A.	TQ	38-90 µm	azoto	Pulsato	1100°C	6.2%	“	P6	P8	P7	P9
“	18	S.A.	TQ	38-90 µm	azoto	Continuo	1100°C	6.2%	“	P6	P8	P7	P9
“	19	S.A.	CHAR	90-125 µm	azoto	Continuo	1100°C	6.2%	“	P6	P8	P7	P9
“	20	S.A.	CHAR	90-125 µm	azoto+aria	Continuo	1100°C	6.2%	“	P6	P8	P7	P9
“	21	S.A.	CHAR	90-125 µm	azoto+aria	Pulsato	1100°C	6.2%	“	P6	P8	P7	P9
“	22-24	S.A.	CHAR	38-90 µm	azoto+aria	Trans.Puls.	1100°C	6.2%	“	P6	P8	P7	P9
“	23	S.A.	CHAR	38-90 µm	azoto+aria	Pulsato	1100°C	6.2%	“	P6	P8	P7	P9
“	25	S.A.	CHAR	45-90 µm	azoto+aria	Continuo	1100°C	6.2%	“	P6	P8	P7	P9
“	26	S.A.	CHAR	45-90 µm	azoto+aria 10% O2	Continuo	1100°C	6.2%	“	P6	P8	P7	P9
“	27	S.A.	CHAR	45-90 µm	azoto+aria 10% O2	Trans.Cnt	1100°C	6.2%	“	P6	P8	P7	P9
“	28	S.A.	CHAR	45-90 µm	azoto	Continuo	1100°C	6.2%	“	P6	P8	P7	P9
“	29-31	S.A.	TQ	>125 µm	azoto	Continuo	1100°C	6.2%	Diff-Oxy	P6	P8	P7	P9
Data gg	Num Mis	Comb.	qualità	granulo	Gas di trasporto	Flusso Cont/Puls	Temp.	Tasso	Processo Diffusivo	CH0	CH1	CH2	CH3

						Trans. Cnt/Pul	reattore	di O2	Oxy-comb				
“	34	S.A.	TQ	>125 µm	azoto	Continuo	1100°C	6.2%	Oxy-Diff	P6	P8	P7	P9
“	35	S.A.	TQ	>125 µm	azoto	Continuo	1100°C	6.2%	Diff-Oxy	cc ass	P8	cc rad	P9
“	36	S.A.	TQ	>125 µm	azoto	Continuo	1100°C	6.2%	Oxy	cc ass	P8	cc rad	P9
“	37	S.A.	TQ	>125 µm	azoto	Continuo	1100°C	6.2%	Oxy-Diff	cc ass	P8	cc rad	P9
14-04-2011	1-2	Biomas	Se_Gir	secc-mac	azoto	pulsato	900°C	6.0%	Diffusivo	P6	P8	P7	P9
“	3-5	Biomas	Se_Gir	secc-mac	azoto	Trans-puls	900°C	6.0%	Diffusivo	P6	P8	P7	P9
“	4-6	Biomas	Se_Gir	secc-mac	azoto	continuo	900°C	6.0%	Diffusivo	P6	P8	P7	P9
“	7	Biomas	Se_Gir	secc-mac	azoto	Trans-cnt	900°C	3.0%	Diffusivo	P6	P8	P7	P9
“	8	Biomas	Se_Gir	secc-mac	azoto	pulsato	900°C	3.0%	Diffusivo	P6	P8	P7	P9
“	9	Biomas	Se_Gir	secc-mac	azoto	Trans-puls	900°C	3.0%	Diffusivo	P6	P8	P7	P9
“	10	Biomas	Se_Gir	secc-mac	azoto	pulsato	900°C	0.5%	Diffusivo	P6	P8	P7	P9
“	11	Biomas	Se_Gir	secc-mac	azoto	Trans-puls	900°C	0.5%	Diffusivo	P6	P8	P7	P9
“	12	Biomas	Se_Gir	secc-mac	azoto	continuo	900°C	0.5%	Diffusivo	P6	P8	P7	P9
“	13	Biomas	Se_Gir	secc-mac	azoto	Trans-cnt	900°C	0.5%	Diffusivo	P6	P8	P7	P9
“	14	S.A.	TQ	>125 µm	azoto	Continuo	900°C	6.0%	Diffusivo	P6	P8	P7	P9
“	15	S.A.	TQ	>125 µm	azoto	Trans-cnt	900°C	6.0%	Diffusivo	P6	P8	P7	P9
“	16	S.A.	TQ	>125 µm	azoto	Pulsato	900°C	6.0%	Diffusivo	P6	P8	P7	P9
“	17	S.A.	TQ	>125 µm	azoto	Trans-puls	900°C	6.0%	Diffusivo	P6	P8	P7	P9
“	18	S.A.	TQ	>125 µm	azoto	Trans-puls	900°C	3.0%	Diffusivo	P6	P8	P7	P9
“	19	S.A.	TQ	>125 µm	azoto	Trans-puls	900°C	0.5%	Diffusivo	P6	P8	P7	P9
“	20	S.A.	TQ	>125 µm	azoto	Trans-puls	900°C	0.5%	Diff-Oxy	cc ass	P8	cc rad	P9
“	21	S.A.	TQ	>125 µm	azoto	Trans-puls	900°C	0.5%	Oxy.Diff	cc ass	P8	cc rad	P9
“	22-23	S.A.	TQ	>125 µm	azoto	pulsato	900°C	6.0%	Diff	P10	P8	P12	P9
“	24	S.A.	TQ	>125 µm	azoto	pulsato	900°C	6.0%	Diff	P10	P8	Bott-R	P9