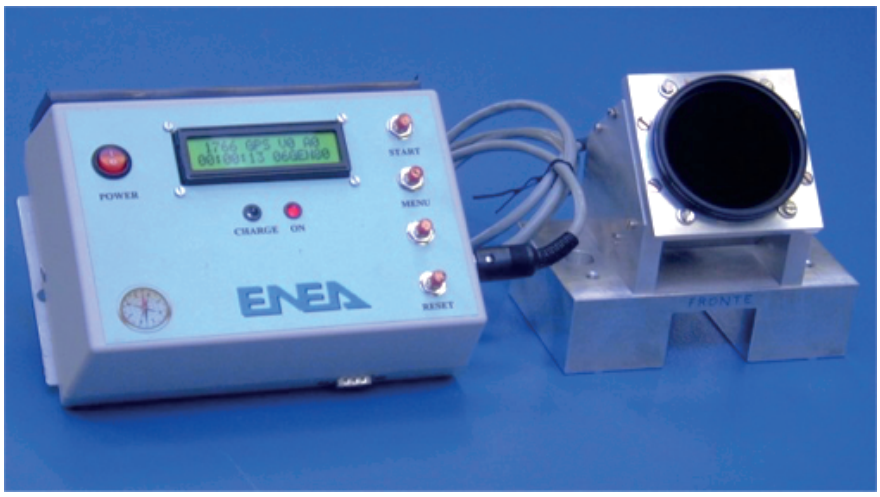
NACE CODE C26

ELECTRONIC SOLAR COMPASS

Innovations and Benefits - The ENEA electronic solar compass attains true North with very high precision and accuracy (it is at least 60 times more accurate than magnetic compasses). It is completely automated and with digital data handling. Insensitive to magnetic interferences and to the possible presence of ferrous bodies or buildings nearby. It works everywhere (even at the poles and in other planets of the Solar System). It simplifies the operation of solar power plants and decreases their installation costs. Whenever marketed, the ENEA electronic solar compass is expected to have an excellent performance-to-cost ratio.

Uses - Automated determination of the geographic North direction (no operator required). Motion control of solar panels or mirrors which have to constantly track the sun position. Environmental surveys. Motion control of each mirror in the solar thermodynamic or CSP plants. Remote control of robot orientation in contaminated areas. Robot orientation control during extra-terrestrial missions. Ship orientation. Calibration of other compasses (e.g. gyroscopic compass).

Past and Present Activities - Experimental tests are underway for applications to solar thermodynamic plants, in cooperation with D.D. s.m.e. of Udine (Italy). A compass version is being designed, which can be operated on mobile transport means (ships, trains, etc.) and in cloudy conditions.



RESEARCH TO PROVE FEASIBILITY | TECHNOLOGY DEMONSTRATION | SYSTEM TEST, LAUNCH & OPERATIONS

BASIC TECHNOLOGY RESEARCH | TECHNOLOGY DEVELOPMENT | SYSTEM/SUBSYSTEM DEVELOPMENT

TRL 1 | TRL 2 | TRL 3 | TRL 4 | TRL 5 | TRL 6 | TRL 7 | TRL 8 | TRL 9

TECHNOLOGY READINESS LEVEL

ENEA
Italian National agency for new technologies, Energy and sustainable economic development
www.enea.it

Fusion and Technology for Nuclear Safety and Security Department
Fusion Physics Division
Sources, Antennas and Diagnostics Laboratory
Contact: Francesco Flora, francesco.flora@enea.it