

METERING PUMPS WITH ROTATING VALVE HYDRAULIC MOTION

Innovations and Benefits - Innovative aspects and related benefits. The specific pumping device, patented by ENEA, which adopts common gear or vane pumps for oil, instead of the usual piston-rod-crank system, allows the realization of high performance and low cost metering pumps, with smaller engines and the possibility of remote pumping heads with respect to the electrical parts (ambient with explosion risks).

Uses - Metering of liquid chemicals, Petrochemical Sector, Pharmaceutical Industry, Water Treatment.

Past and Present Activities - The metering pumps developed by ENEA, are realized starting from a fully tested and patented working principle with fixed flowrate, intended for the market of Water-Ammonia absorption chillers and of reverse osmosis dissalation (RM93A000239).

The adding of a simple and reliable patented mechanism (RM2005A000455), in order to modulate the flowrate in linear way (0 - 100%) permitted to realize metering pumps with compatible operation with API 675 standard, based on hydraulic instead of mechanical motion.

The pump is composed by three parts: an oleodynamic unit, a pumping head and a flowrate control system.

The development stage of the device is half industrialized, a prototype, rated 220 liters/hour at 30 Bars is available for viewing near the ENEA's Casaccia Center laboratories.

A request for non exclusive industrial exploitation is ongoing.

