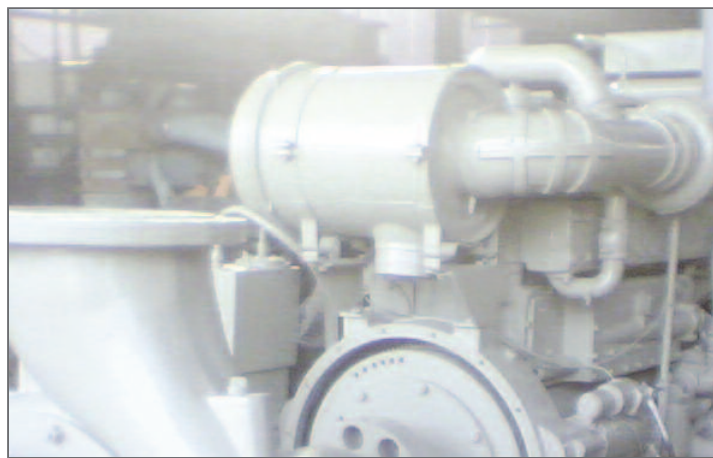


CG APPLICATIONS

CARLO GAVAZZI



Application Note : March 2011

Market involved : Water Treatment

Product : RSDR Series

Customer : Water Treatment

Subject : Water hammering in pumps

CUSTOMER ISSUE :

A common phenomenon observed in pumps known as water hammering is the result of sudden stopping of the pump which results in a high pressure shock on the pump and relative components.

Excessive pressure surges in pipes and valves result in frequent damage and higher costs incurred for maintenance activities.

OUR SOLUTION:

The RSDR 3-phase soft-starters provide smooth and stepless acceleration and deceleration of the load.

Ramp-up time, ramp-down time and initial torque can be independently adjusted to fine tune the settings to suit the particular application.

The RSDR series of softstarters covers squirrel cage induction motor loads up to 280kW with internal bypassing of the semiconductors resulting in reduced heat dissipation.

ACHIEVED BENEFITS:

- Smooth ramp-up and ramp-downs reduce the pressure surges and water shocks during starting and stopping of the pump reducing effects of water hammering and hence resulting in less maintenance activities and costs.
- The compact footprint of RSDR ensures an easy fit in electrical panels and can easily replace star/delta starters.
- The additional reduction in the inrush currents can also result in the use of smaller cables and fusing with a corresponding reduction of installation and operating cost.