

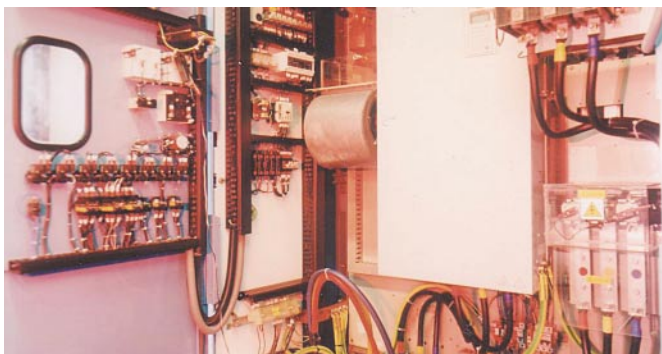
Industry: Water

Products Used: Drives

# Southern Water get started on energy saving

Southern Water had a problem with some of its pumping systems due to the age of the inverters used to control the pumps. The control technology had become inadequate for the job so they searched for experts in the field of inverter technology in order to obtain a new optimised solution.

Southern Water awarded the contract to replace the pump control system to Logicon Systems Ltd. One of the key factors was that Logicon were able to demonstrate extensive experience of retrofitting solutions to existing installations. They also specified the post installation performance and provided performance guarantees.



Logicon selected the Mitsubishi Electric Meltrac MT A140E inverter, because of its small physical size and the option to have either the "auto energy saving facility", or the "sensor-less vector control" which gives 150% torque at low speed - which is ideal for their purposes.

The system was installed within the time available, and where possible, the existing control panel layout was retained in order to aid user familiarity. The performance so far has exceeded expectations. The Mitsubishi inverter also has the ability to allow the motor to go 200% over its nominal current rating for up to 6 seconds, which is easily enough to overcome initial load. Consequently, the sensor-less vector control is not required on a day to day basis, but can still be used by an operator for a particularly demanding occasion.

As a bonus for using the Mitsubishi inverters, Southern Water can expect to make up to 15% "intelligent" energy savings over the speed range used (4050Hz). In addition, because the system produces a far cleaner waveform, the hysteresis loss due to harmonics is far less and the pump runs considerably cooler.

*Application story first released July 1997 by Mitsubishi Electric UK*