

Softening Plant Helps Production at PQ Silicas, UK Chemicals | Case Study

The Client

PQ Corporation is a leading worldwide producer of specialty inorganic performance chemicals and catalysts. The PQ Silicas facility at Warrington manufactures sodium silicate which is used in a wide variety of applications including detergent manufacture, paper pulp and foundries.

The process involves heating sand with soda ash to produce a glass which is then dissolved in water and steam. The water has to be completely softened to allow effective processing of the sodium silicate liquor.



Key Figures

- Softened water critical to production
- Short installation time

The Client's Needs

The water softener which supplied process water for sodium silicate manufacture was becoming aged and unreliable for the plant. It was clearly time for a replacement. Plant Manager, Hedley Long, had two concerns: performance and time.

Making any change to a critical process unit is a worry for manufacturing. A new softener would need to produce water of the right quality and not adversely affect the product. It would also need to be installed in a four day window over a weekend; any delays would result in loss of production at a huge daily cost.

The Solution

Veolia Water Technologies' solution was an Ionsoft Duplex softener which was large enough to meet PQ's planned expansion. The softeners would work in parallel providing 100% spare capacity for a continuous supply of softened water.



The project management challenge was to remove the old softener system and install and commission the new one without interrupting the critical softened water supply. Much of the new equipment was skid mounted off-site to minimise on-site work and ensure that installation was completed smoothly and efficiently. Aware of the criticality of the soft water supply for production, Veolia Water Technologies' Project Manager arranged to have an Mobile Water Services plant on standby to connect to PQ's system.

Results

The project was completed quickly and efficiently, according to programme; the Mobile Water Services plant was not required, but its presence was reassuring. The new softener has performed very well and with a more efficient regeneration regime, PQ achieves annual savings of £2,000 in salt consumption.

The Benefits

- Efficient project planning/execution
- Security of Mobile Water Services
- Cost savings of £2,000 per annum