

HandiChem™ System improves water treatment and eliminates drum handling concerns at Injection Molding Plant in Ireland

Background

An injection molding plant in Ireland running 15 molding machines had two water treatment companies looking after the water treatment on site: Chem-Aqua treated the cooling tower, while a competitor was treating the process loop. Customer decided to go for a unique supplier for water treatment.

Analysis

The main challenges for water treatment on this site were caused by the space limitations. Despite being a small plant, 3-4 different chemicals were required at all times. Reliable and efficient operation of the cooling water systems is essential for plant production. The water treatment chemicals took valuable floor space and where required in hard to reach areas.

Although the Chem-Aqua liquid water treatment program for the cooling provided good results, chemical storage, handling, and disposal presented significant sustainability concerns. The HandiChem Solid Water Treatment System was proposed by Chem-Aqua in order to address these concerns.

With Chem-Aqua's HandiChem Water Treatment System, chemicals are provided as solid concentrates in either 5 kg recyclable plastic bottles or 400 gr. HandiPak™ Solid sticks (STX), rather than liquid in drums. HandiPak Solid Concentrates from plastic bottles are dissolved as needed into a small plastic reservoir using a HandiFeed™ Mixing Board. The feed solution is pumped into the system being treated, just like with liquid chemicals. The HandiPak Solid sticks (STX), wrapped in a water soluble film can be fed via an Aquapass bypass feeder.

Solution

The HandiChem System replacing the previous liquid cooling tower treatment program is now installed on a panel next to the tower controller for a much easier access and tower chemistry control.

Competitor's liquid for the process loop treatment was replaced by HandiPak STX fed via the Aquapass unit. Apart from chemical dosing, the Aquapass allows also an on-line cleaning due to integrated filtration kit therefore reducing dramatically the problems encountered previously at the molding machines.

The new HandiChem System provided by Chem-Aqua responded the best to customer needs:

- Dramatically reduced chemical handling hazards and improved workplace safety
- Solved the problem of access for liquid chemicals and pump re-priming in inconvenient locations
- Provided a better solution for the process side (system protection and on-line cleaning), reducing downtime required for cleaning
- Eliminated disposal costs of up to €30/drum for empty liquid drums

The HandiChem System is a simple, safe and effective alternative to liquid water treatment chemicals.



Tower location on site



Before Installation: liquid chemical dosing point



After installation:
HandiChem System for
cooling tower treatment



Aquapass with
HandiPak sticks
(STX) for process
loop treatment