



Case study Neutralac® SLS45

Neutralization and precipitation of chromium from effluents from a surface treatment plant

Customer Application and Activity

BeL'M is a specialist front door manufacturer with over 30 years experience that provides 200 different models and has established itself as one of the leading manufacturers in its field in the French market. It was looking for a high strength liquid lime that could replace its current use of lime for purifying its effluents and optimizing its operational costs.

Problem to be solved

The effluents from the factory's surface treatment plant at Machecoul (France) were predominantly contaminated with chromium. Lhoist devised an overall approach that addressed:

1. Ease of implementation
2. Simple integration into the existing installations
3. Compatible reaction speed for time sensitive processes in the installation
4. Water savings

Neutralac® SLS45 Solution

Lhoist proposed Neutralac® SLS45, a ready-to-use liquid lime reagent. With 45% Ca(OH)₂ solids by weight being delivered at a viscosity below 300cP, it is more reactive (KIWA T90 < 5sec) and more fluid than any other liquid lime. Through patented manufacturing technology, Neutralac® SLS45 incorporates highly stable, low settling characteristics for convenient integration into existing pumping and dosing systems. Lhoist's technical assistance team first completed an audit of the current lime installation already in place to check its technical feasibility and examine the injection device, dosing unit, etc. Lhoist then monitored the injection of Neutralac® SLS45 reagent.

Key Achievements

The utilization of Neutralac® SLS45 displayed positive effects on the effluent treatment process. Following on from the initial Field Trial, BeL'M was able to instigate the immediate substitution of the previous chemical reagents used for Neutralac® SLS45 and has benefited from:

1. Reduced water consumption by 125 m³ per year
2. fewer preparations per week
3. Reduced operating hours by almost 40% without loss in productivity

Conclusion

Through the supply of Neutralac® SLS45, Lhoist has been able to meet BeL'M's expectations by:

1. Supplying an easy to use, innovative high quality product
2. Providing a solution compatible with the existing process without needing additional investment
3. Providing a high performance reagent

