



Magnetic Filtration

Case Study 25 8/12/11



Magnetic Filtration

Company Name: Oxea Chemicals

Location: Bay City, Texas

Eclipse Product Installed: Automag 6

Industry: Solvent processing

Process Type: Chemical reaction and distillation



Application Background

OXEA is a world leader in Oxo chemicals. At this Propanol processing plant, Raney Nickel is used as a catalyst in the first part of the process. The Raney Nickel residue must then be extracted before reaching the next distillation process or the finished product. Raney Nickel has a very low magnetic permeability as a result magnetic filtration had not previously been considered. The previous filtration system being used was filtration bags and cartridges which could extract particles down to 3 or 5 microns in size.

Problem

Particles smaller than 3 microns were passing through into the distillation process. If the Raney Nickel catalyst is still in the chemical at the later stages it continues to react and create an odour. This is a major problem where the solution is used for products such as cosmetics and toiletries where product rejects can be high. In addition the Raney Nickel is expensive, if it is captured within process it can be reused.



Solution

An Automag AM6 was fitted to replace the existing system. The high intensity magnets have been effective in capturing almost 100% of the Raney Nickel catalyst during the first stage of production. Automag's automated cleaning means that the material is recycled back into the process saving costs and alleviating any product quality issues.

Kyle Zalman Operation Leader commented "We are very pleased with the Automag in the short time it has been installed we have seen definite improvements in quality and cost savings. It was simple to install and easy to operate"



Other Opportunities

Oxea have other locations throughout the world:

- Dallas
- Bay City
- Bishop
- Mexico City
- Amsterdam
- Luxembourg
- Marl
- Oberhausen
- Singapore
- Shanghai
- Tokyo



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