



CASE STUDY

Silver WWT – High Voltage Metal Plating Factory, Italy

Overview

In 2013, ToxSorb committed to retrofit silver filtration systems at an Italian Galvanic factory named AG Technical, which specializes in silver-plated metal fasteners production for high voltage systems. The purpose of these systems is to remove the silver from rinsing basins which are used to wash the metal fasteners, after being dipped in a concentrated silver solution. Treating the silver with ToxSorb's systems provides AG Technical with the following benefits:

1. No Authority Regulations: ToxSorb's Zero Liquid Discharge system does not discharge into the sewage system
2. Water Quality: ToxSorb ensures high quality water (i.e. low electro-conductivity) in the final washing basin, critical to the quality of the metal coating process
3. Water Savings: ToxSorb delivers substantial savings in water through the recirculating system

Requirement

Since the factory had highly concentrated silver solutions, ToxSorb's systems are required to be able to remove heavy spikes of silver quickly, in order to clean the basin before the next rinse.

Design

To treat the rinse water, ToxSorb designed a full scale filter system using its specialized media to treat all of AG Technical's three silver coating lines. At March 2014, ToxSorb's systems was installed as a kidney attached to the last rinsing tank of each coating line, located after the silver coating and passivation process. The system regeneration component was integrated to ToxSorb's system, allowing the entire process to be controlled on site and remotely from Israel.

In order to reduce AG Technical's capital investment in the project, ToxSorb retrofitted AG Technical's existing Treatment System, using



Client: AG Technical
Location: Italy
Project type: Silver
Commissioned: 2013
Capacity: 50 m3/d
Status: Ongoing operations

ToxSorb's design know-how and specialized media for silver removal.

Performance Results

ToxSorb's filtration system reduced the Silver concentration in the factory's rinsing basins and ensures that the Silver concentration, pH, and EC are all within acceptable parameters. ToxSorb's system translates to extremely low operational costs due to a meaningful reduction of chemical consumption and media regeneration frequency (by a factor of 20), while maintaining low Electro conductivity value in the washing basin ($< 50 \mu\text{s}$). Based on the good results generated by ToxSorb's solution, Ag Technical is considering further engaging ToxSorb to treat additional wastewater streams in the factory.



Tel. +972-4-6901014 Fax. +972-4-6946230

PO Box 293, Kfar Giladi, Israel 12210

Email info@wfi-group.net

www.wfi-group.net

Selective removal of pollutants