

REFERENCE PROJECT | Mission accomplished: Reduced Nickel salt consumption yields outstanding results

Taking bigger steps...
to leave a smaller footprint

The combination of a water softener and a MacDermid Envio Nickel recovery system yielded outstanding results for a German storage solutions manufacturer.



"I am very happy that we opted for a NiCycle: The system is not only low-maintenance, it also works flawlessly, saves us a lot of time and reduces our water consumption considerably. In addition, in situ nickel sulfate production also saves us money."

Hartmut Birth, Plating Manager

THE CHALLENGE

The strategy at a German metal processing manufacturer was to become more sustainable. Therefore, the company set out on a mission to reduce nickel salt consumption and its impact on wastewater treatment. They understood this would significantly improve their environmental footprint whilst also reducing operating costs.

THE MACDERMID ENVIO SOLUTION

The company operates two Copper, Nickel, and Chrome plating facilities with segregated waste streams.

To reduce nickel salt consumption, a nickel recovery system (NiCycle) developed by MacDermid, was selected as a possible solution. However, high calcium levels in the mains water supply posed a challenge to efficient system operation. MacDermid recommended installing a water softener based on experience with similar issues at other customers.

The results speak for themselves. Over 1.5 tonnes of nickel sulphate are being recovered every month since installing the NiCycle. The plating quality is excellent and only minimum labour is required to operate the system. In addition, there are no more problems with algae formation and the frequency of the rinse dumps went from weekly to monthly. These longer intervals lead to higher nickel rinse concentrations which improves the efficiency of the NiCycle unit.

THE RESULT

The combined water softener & nickel recovery solution yielded the following results:

- Since the installation of the NiCycle unit, only very small quantities of nickel sulphate have to be purchased externally
- Reduced sludge formation
- Independent of volatile Nickel prices
- 50% reduction in treatment time of the nickel containing wastewater
- Substantial reduction in environmental footprint
- Significant savings in water due to reduced dump frequency

The customer has eliminated the purchasing of around 1.67 tons of Nickel Sulphate per month which amounts to considerable cost savings. Congratulations, mission accomplished!



See our website for more details
www.macdermidenvio.com

Email: isenquiries@macdermidenvio.com

© 2023 MacDermid Envio



An Element Solutions Inc business