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APPLICATION GUIDE: SURFACE FINISHING INDUSTRY

The Application:

The Surface Finishing Industry conducts Plating, Coating and other Chemical & Electro-Chemical processes, which improve the surface appearance and resistance to wear, abrasion and corrosion for many types of materials.

The Problem:

Maintaining an optimal bath temperature in these processes is crucial. The chemical baths used in this industry are designed to chemically attack metals. Heat exchangers made of metal will corrode and experience a reduction in heat transfer capabilities due to scaling and fouling, leading to higher maintenance cost and shorter service life. Electric immersion heaters have higher operating costs, can cause fires and do not have the ability to cool.

The Solution:

AMETEK Fluoropolymer Immersion Style Heat Exchangers, known as Supercoils, provide the ideal solution for heat exchange needs in Surface Finishing operations. If desired, heating, cooling, and/or maintaining temperature of a bath can be achieved with a single Supercoil. Supercoils provide unmatched resistance to corrosion in a wide variety of bath compositions. The original heat transfer efficiency of the exchanger is preserved by minimizing external fouling and internal scaling. Supercoils can be made with FEP, PFA, or our proprietary "Q" resins. "Q" provides twice the heat transfer rate and enables the overall length of the Supercoil to be decreased to fit smaller finishing tanks.

"Q" Supercoil

The Fluoropolymer Advantage:

AMETEK is the original, and has been the leading manufacturer of Fluoropolymer Heat Exchangers for over 45 years. Our extensive, global experience in the Surface Finishing Industry allows us to provide customers with experience and expertise needed to meet the ever-changing challenges in this competitive market. AMETEK Fluoropolymer Heat Exchangers also offer increased productivity, efficiency, contamination reduction, value-in-use through savings in plant maintenance, and improved heat exchanger service life. All units feature our proven, unique honeycomb structure, which is inert to virtually all types of chemicals and provides a lightweight, compact bundle design. Fluoropolymer Immersion Style Supercoils are backed by AMETEK's excellent quality, service, and support.

The Competitive Summary:

Our Fluoropolymer material solves the typical problems which plague heat exchange equipment used in the Surface Finishing Industry. In demanding finishing applications, operational performance and overall life expectancy of AMETEK's heat exchangers are not compromised by these problems. AMETEK's superior performance and lead time advantage are summarized below.

	No Fouling	No Scaling	No Corrosion	No Fire Hazard	Cooling Capability	Typical Availability
Fluoropolymer	✔	✔	✔	✔	✔	**1-2 weeks**
Titanium	✖	✖	✖	✔	✔	4-6 wks
Zirconium	✖	✖	✖	✔	✔	4-6 wks
Tantalum	✖	✖	✖	✔	✔	10-12 wks
Hastalloy	✖	✖	✖	✔	✔	6-8 wks
Electric Heaters	✖	✔	✖	✖	✖	1-2 wks

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