STAINLESS STEEL

ELECTROPOLISH

INTRODUCTION

Stainless Steel Electropolish can be used on stainless steels as an alternative to expensive mechanical polishing. The process can be used for decorative and functional applications. Carbon and low alloy steels may also be fine deburred (steel may be subject to color change depending on the carbon content of the steel). Temperatures for 300 and 400 series stainless steels are provided.

Electropolish Additive is available for an enhanced smooth, pit free surface.

BENEFITS

- Ideal alternative where mechanical polishing is difficult or expensive
- Mirror finish on high quality materials
- Surface of steel is not work hardened
- No component size limitations - needles to automotive trim can be handled
- Wide variety of alloys can be processed
- Process can be made up with ready-to-use solution with or without polish additive
- Electropolish Additive can be used with existing polish solution

SOLUTION MAKE-UP

Stainless Steel Electropolish RTU	100%
OR	
Stainless Steel Electropolish RTU **Electropolish Additive***	92.6% v/v 7.4% v/v

*Remove portion of approved bath prior to adding Additive

Manufactured for North America exclusively by FOCUSTECH ™

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OPERATING DATA

Temperature : **Austenitic (300 grades) / Duplex Steels** **Ferritic (400 grades) / Martensitic Steels**	 115 – 140°F (120°F optimum) 165 – 195°F (175°F optimum)
Dwell Time	5 – 30 min
Anode Current Density	45 – 370 ASF
Voltage	7 – 15 Volts
Metal Removal	0.20 – 1.6 mils
Agitation	Work movement

EQUIPMENT

Tank	Lead or PVC lined mild steel.
Heaters	PTFE electric immersion heaters or lead coated steam coils.
Cooling	Optional solution cooling may be required on high usage installations. Use PTFE cooling coils or external water jacketing.
Cathodes	Chemical lead or stainless steel sheets should be used.
Racks	Titanium construction is preferred, alternatively brass or copper insulated with PVC Plastisol provided the limited life is acceptable.
Ventilation	Required

MAINTENANCE AND CONTROL

Stainless Steel Electropolish is controlled by solution density and iron concentration:

Specific Gravity	1.70 – 1.76 (at 64ºF)
Water	8% v/v
Iron Concentration	<25 g/L
AMP-HR Additions (guide)	3.4 L Stainless Steel Electropolish per 1000 A-H 0.25 L Electropolish Additive per 1000 A-H

MAINTENANCE AND CONTROL (cont.)

Under normal working conditions the solution density will rise. Excess drag-in of water or absorption of water from the atmosphere will cause the density to fall. Under these circumstances the solution should be heated but not worked in order to drive off excess water.

Iron is normally controlled by drag-out and does not increase rapidly. Some insoluble sludge will result as nickel and iron accumulate in solution. Tanks need periodic de-sludging.

STORAGE

Store in original containers above 40°F

SAFETY

CAUTION! Stainless Steel Electropolish concentrates and working solutions contain acidic ingredients. Avoid contact with eyes, skin and clothing. Wear chemical handler's gloves, goggles and protective clothing when handling. Read and understand Material Safety Data Sheet before using this product.

DISPOSAL

Neutralize by pH adjustment to 8.0 (approx.) and settling of the precipitated heavy metal hydroxides. The clear liquid can be passed to the effluent treatment plant and the sludge dealt with by an approved contractor who must observe local and national regulations. All waste must be safely contained and clearly labeled.

PRODUCT GROUPS

The following products are referred to in this data sheet.

PRODUCT NAME	PRODUCT NUMBER
Stainless Steel Electropolish RTU	287002
Electropolish Additive	287006

NOTICE

The information and recommendations of PMD (UK), Ltd. and Automated Chemical Solutions, Inc., and its representatives, regarding this product are, to the best of our knowledge, true and accurate. We make no guarantee of results because the conditions of actual use are beyond our control. We assume no liability for damages or penalties resulting from the use of this product or following our recommendations. Our recommendations and suggestions for use of this product are not intended to grant license to operate under or infringe any patent.