

# POLIGRAT-PRODUCTINFORMATION

## POLIGRAT E 260

Electropolishing Process for Stainless Steel



### Properties and effect

POLIGRAT E 260 is an industrial electropolishing process for austenitic CrNi and CrNiMo stainless steel as well as Ni-based steel i.e. Hastelloy.

The electropolishing process removes metal from the surface of the goods using DC current. Edges are de-burred and soft rounded, while the surface is smoothed and reduced in its micro roughness. The electropolished surfaces are metallic clean, high-gloss finished and upmost passivated.

The electropolishing results are influenced by the composition of the alloy, the crystal structure and the surface condition caused by the mechanical or thermic pre-treatment. The process parameters can be adapted to achieve the optimum results :

- polishing parameter: 4 - 50 A/dm<sup>2</sup>
- process temperature: 25 - 50 °C

POLIGRAT E 260 is ideal for the electropolishing of tanks, vessels and large scaled components, due to the moderate temperature requirement. The low current density demand allow the homogeneous electropolishing of large surfaces or thin sheets with reduced risk of burn marks.

### Application

POLIGRAT E 260 is operated as immersion process in suitable tanks. The work pieces can be treated either on jigs or as bulk goods in electropolishing barrels or by special POLIBOX equipment. The electrolyte can be operated to polish the insides of parts ( i.e. tubes or vessels) as well as to polish the outside of parts.

POLIGRAT E 260 is suitable for the tampon polishing technique.

POLIGRAT E 260 is delivered as starter electrolyte (E 260 A) and replenishment electrolyte (E 260 E).

POLIGRAT E 260 is available as concentrate too, which can be mixed to POLIGRAT E 260 E.

POLIGRAT E 260 is based on phosphoric and sulfuric acid. POLIGRAT E 260 (A/E/K) is free of hexavalent chromium and suppresses the forming of Cr<sup>6+</sup> during the electropolishing process. The electrolyte and the rinse water from the process are acidic and contain the dissolved metal. They have to be treated and disposed according to the statutory laws and regulations.



### Supply

1. Liquid – ready to use or as concentrate

Packing units:

- Single-use canister 50 kg ( 28 l)
- Barrel 344 kg ( 200 l)
- IBC 1,720 kg ( 1,000 l)

2. Concentrate POLIGRAT E 260 K ( 1: 10 )

Mixing for 100 l ready to use electrolyte:

phosphoric acid 85%	60 l
sulfuric acid 96%	30 l
POLIGRAT E 260 K	10 l

- Single-use canister 50 kg ( 30 l)
- Barrel 324 kg ( 200 l)
- IBC 1,620 kg ( 1,000 l)

### Your advantage

- low process temperature
- electropolishing of larger surface
- electropolishing of Ni-base material