



Manufacturers of high purity equipment

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STANDARD PROCEDURE FOR ELECTROPOLISHING OF STAINLESS STEEL & HASTELLOY COMPONENTS

SCOPE

This procedure details the method for electropolishing components. Electropolishing enhances surface cleanliness, generally reduces surface roughness and improves the corrosion resistance of stainless steel & hastelloy materials.

METHOD

1. On initial inspection examine all surfaces, checking for scratches or damage. If damage is evident, please contact the customer immediately.
2. Jig up components and electropolish in Electrolyte solution at 50 – 80 °C for a suitable time period (typically 2 – 30 mins) at a current density of 15 – 25 amps per sq dm.
3. Rinse free of Electrolyte and un-jig.
4. Immerse in Passivation solution at 22°C temperature for a suitable time period (minimum 30 minutes).
5. Wash with cold high pressure water to remove all Passivation solution.
6. Final rinse in de-ionised water.
7. Inspect and if jig marks present, remove the marks and repeat steps 4 – 6.
8. Dry and inspect components to ensure customer standards have been achieved.
9. Package in accordance with customer specifications suitable for delivery. If possible, please return or recycle any packaging materials used.
10. In the instances where product is required back urgently and therefore wet, the components will be labelled as wet and should be handled with gloves. We will check the components with litmus paper prior to shipment but cannot because of the complexity of some of the components absolutely guarantee that all acid residue is removed and therefore needs to be handled with more caution. We will also require a signature from our customers' "goods in" acknowledging and accepting that the product has been delivered wet.

Notes:

The usage of PPE is mandatory (Rubber Boots, Rubber Gloves, Rubber Apron, Eye Protection) and work staff are to have a complete knowledge of acids being used and the actions to take in case of an emergency. Operators need to avoid contact of acids with skin or eyes and avoid breathing mists.

All operators working outside core hours should be left with clear instructions regarding the product they are processing and should also be supervised by a staff member who is competent with inspection duties.

Electrolyte solution is Phosphoric Acid/Sulphuric Acid/Surfactant based.

Passivation solution is 30% Nitric Acid(60% Strength)/70% De-ionised Water.

This procedure is compliant with ASTM B912.



A  stainless **technologies** Company

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