



HIGH PURITY TECHNOLOGY, INC.

50 PERSHING AVENUE * P.O. BOX 870

POUGHKEEPSIE, N.Y. 12602-0870

(845) 452-1103 * FAX (845) 471-8965

PROCESS SPECIFICATION FOR HPT - 200 POLISHED STAINLESS STEEL PRODUCTS

1.0 SCOPE:

1.1 This process is designed to produce a smooth particulate free polished product for use in gas transport and containment systems.

2.0 MATERIAL:

2.1 Approved sources of seamless products are: Sandvik, Handy & Harman and Plymouth.
Approved sources of welded products are: RathGibson and Trent. Other approved sources may be considered.

3.0 RECEIVING/QUALITY INSPECTION:

3.1 All products received must be fully certified with heat code traceable to mill test report.

3.2 Initial quality receiving inspection lot sample shall be a specified percentage of the order. All material will be checked for cleanliness, surface roughness, and mechanical criteria.

4.0 POLISHING:

4.1 Pipe and fittings are progressively mechanically polished to the specified surface finish. Interior surface finish is measured with a stylus profilometer.

5.0 RINSING:

5.1 Mechanically polished components are passivated in a nitric acid solution per ASTM-A380.

5.2 The product is then dried using cryogenic .2 micron filtered nitrogen as a purge in conjunction with class 100 clean room projectiles.

6.0 INSPECTION:

6.1 Each tube is visually inspected using fluorescent light sources to determine if imperfections or non-uniformities exist in the product.

6.2 Results of audit samples and profilometer data is documented and stored for a three-month period.

6.3 The HPT-200 standard inspection can be waived or augmented in favor of specific customer audit requirements.



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7.0 FINAL CLEANING, PACKAGING AND SHIPPING:

- 7.1 All final cleaning will be performed in a Certified Class 100 Clean Room, (Federal Standard # E-209).
- 7.2 The cleaning process consists of thermocouple cleaning using an aqueous degreaser and deoxidizer (Triton X-100) solution prepared using heated deionized water. This process is followed by a heated deionized water rinse and a final rinse with ambient deionized water (18 megohm). The final rinse effluent is monitored for a minimum of 16 megohm resistivity. The product is purged dried with filtered (0.1 micron) cryogenic nitrogen, with moisture less than 1 PPM.
- 7.3 Pipe, tube and fitting ends are capped and double bagged with 6 mil polyethylene. Product is labeled for identification.
- 7.4 Product for HPT stock is placed into double polyethylene heat sealed bags. Depending upon customer specification, product may be individually single bagged, individually double bagged or shipped bulk bagged.
- 7.5 Shipping will be in an appropriately sized 1/4" wall cardboard shipping tube with end caps or a plastic sheeting lined wooden shipping crate depending upon quantity and customer requirements.

8.0 REFERENCE DOCUMENTATION:

- 8.1 HPT General Product Specification for **HP SERIES 1.**

(End)