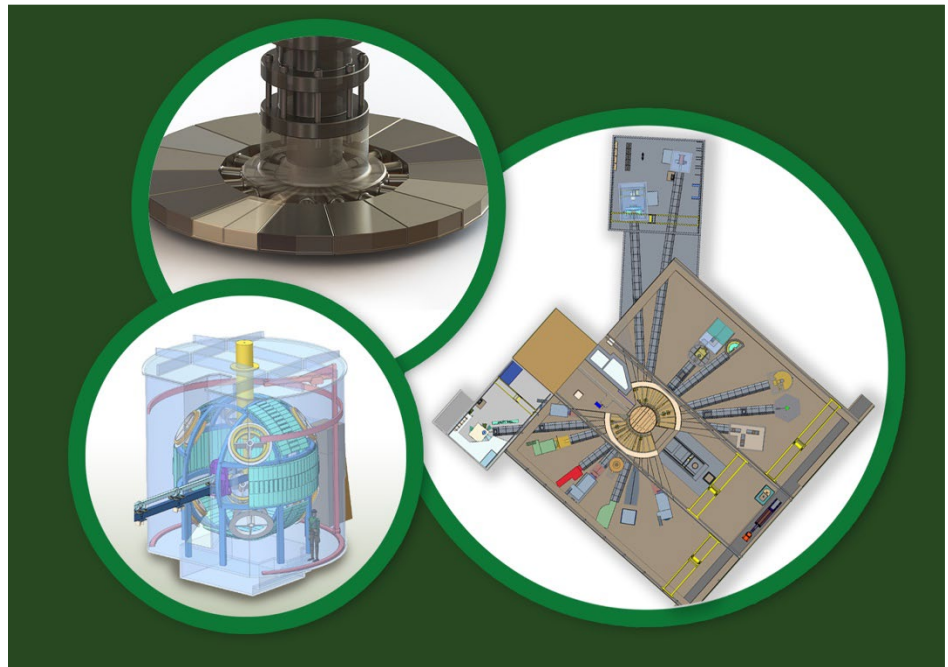


SECOND TARGET STATION (STS) PROJECT

Procedure – Part cleaning for objects to be Hot Isostatically pressed.



Aaron Jacques

July 2026

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SECOND TARGET STATION (STS) PROJECT

Procedure – Target Block Part Cleaning

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1 REQUIREMENTS FOR CLEANING

SCOPE:

This specification establishes the method and procedures required for cleaning indicated parts and surfaces for surfaces to undergo diffusion metallurgy (HIP or VHP). Cleaning is to occur whenever the surfaces to be bonded are exposed to oxygen (ambient) and must be performed prior to enclosure in welded container (EBW welding) or placed in the VHP or HIP Furnace.

This specification becomes part of the detail drawings on which it is specified. If the requirements of this specification conflict with those on the detail drawing, the drawing shall have precedence.

GENERAL CLEANING PROCESS:

Where noted, surfaces and parts shall be cleaned per the following process.

- Wipe off any excess oil, grease, or other residuals using IPA Wipes.
- Immerse parts in heated degreaser (OAKITE 61 B) for 2 minutes. (110°F - 130°F)
- [TUNGSTEN ONLY] – Grit blast with 60 μ m silicon carbide, all surfaces. (remove Recast Layer From EDM process)
- Use "Scotch-Brite" to perform manual abrasion. Use light pressure during Scotch Brite process to help with cleanliness while preserving cosmetic appearance
- Hand grind all surfaces with 70 μ m diamond abrasive paste and ethanol to remove oxide layers
- After grinding, rinse all surfaces with ethanol and leather pad to remove all surface impurities
- Carefully inspect all surfaces to make sure they are clean and free of debris
- Blow off parts with filtered Nitrogen.
- Package in a first clear bag, purged with Nitrogen, vacuum and heat seal.
- Attach label on to a bag showing P/N, Rev. #, Supplier/Vendor ID, S/O #, P/O #.
- Package into second clear bag, purged with Nitrogen, vacuum and heat seal.
- Wrap in a foam and package in a cardboard box for the part safety during transportation
- The vendor shall maintain the cleanliness of components by utilizing clean room handling techniques and tools. At all times, cleaned components shall be handled with clean lint-free cotton gloves.

CLEANING OF PARTS IMMEDIATELY PRIOR TO EBW WELDING, VHP, OR HIP

- Hand grind all surfaces with 70 μ m diamond abrasive paste and ethanol to remove oxide layers
- After grinding, rinse all surfaces with ethanol and leather pad to remove all surface impurities
- Carefully inspect all surfaces to make sure they are clean and free of debris
- Blow off parts with filtered Nitrogen.
- The freshly prepared object must be placed in the oxygen-deprived environment (EBW enclosure) within two hours of final cleaning. This is necessary to avoid rapid oxidation.

Conformance with the above process shall be captured by one of the following methods (unless stated directly):

- Initials on process traveler for each step above (preferred)
- Photographic documentation for each step, each part