

**SECTION 15475
ASME N509 ADSORBERS**

PART 1 - GENERAL

1.1 SCOPE

- A. This specification addresses the design, materials, testing and inspection, preparation for shipment, and documentation of ASME N509 Adsorbers.

1.2 INDUSTRY CODES AND STANDARDS

- A. The Adsorbers shall be designed, fabricated, tested, and inspected in accordance with ASME N509 Nuclear Power Plant Air-Cleaning Units and Components, 1989.
- B. DOE-STD-1020-94 with Change Notice No. 1, January 1996.

1.3 RELATED DOCUMENTS

- A. Data Sheet FLTR-2201
- B. Drawing J3.32.31

1.4 QUALITY ASSURANCE

- A. Adsorbers shall be furnished by a firm which is qualified and regularly engaged in this type of work. The firm shall maintain a shop and facilities for fabrication of subject items.
- B. Materials and products used in the fabrication of Adsorbers shall be new. Materials shall be furnished and installed in strict accordance with Sub-Tier Supplier's current published recommendations, recognized good practices, Buyer supplied component drawings, and these specifications.
- C. The Supplier shall have an approved quality assurance program that complies with the requirements of ASME N509. The program shall provide control over activities affecting quality to an extent consistent with their importance. The Supplier's quality assurance program shall be reviewed and approved by the Buyer.
- D. The Buyer reserves the right to access the Supplier's and Sub-Tier Supplier's facilities at which work is being performed. Access shall be provided for any personnel designated by the Buyer. The purpose of accessing the facilities shall be to perform assessments, reviews, surveillance, inspections, investigations, or test witnessing applicable to the work being performed by the Supplier or Sub-Tier Suppliers under this specification.
- E. The Supplier shall resolve all deficiencies noted, to the Buyer's satisfaction. The Buyer's concurrence with "use-as-is" or "repair" disposition of any nonconformance must be obtained. Concurrence will not be unreasonably withheld. The terms "use-as-is", "repair", and "rework" are defined below.
 - 1. "Use-as-is" is a disposition permitted for a nonconforming item when it can be established that the item is satisfactory for its intended use.
 - 2. "Repair" is the process of restoring a nonconforming characteristic to a condition to ensure that the capability of an item to function reliably and safely is unimpaired, even though that item still does not conform to the original requirements.
 - 3. "Rework" is the process by which an item is made to conform to the original requirements by completion or correction.

- F. Witness and hold points are specific points in the fabrication process requiring witnessing or verification by the Buyer. Activities shall not proceed past a hold point without witness or verification by the Buyer unless specifically waived in writing by the Buyer
- G. All provisions contained herein shall be extended to cover the Sub-Tier Suppliers employed by the Supplier.

PART 2 - PART 2 – PRODUCTS

2.1 DESCRIPTION

- A. The Adsorber and shielding shall be designed to withstand the seismic loading defined in DOE-STD-1020 for PC-2 equipment. The site specific acceleration (C_a) is 0.21 and I_p is 1.5.

PART 3 - PART 3 – EXECUTION

3.1 FABRICATION REQUIREMENTS

- A. Controls are to be exercised during all stages of fabrication to minimize exposure of stainless steel to contaminants including chlorides and carbon steel. Any compounds, liquids, or markers that come into contact with stainless steel surfaces shall not contain more than 250 ppm by weight chlorides.
- B. Carbon arc or iron powder cutting shall not be used on stainless steel. All cut or raw edges shall be deburred and shall be smooth to the touch.
- C. In order to preserve the original finish of stainless steel sheet material, care shall be exercised to prevent scratching, abrading, nicking, and denting during receiving, storage, fabrication and handling. The original protective coating shall be preserved as long as practical.
- D. Grinding wheels and wire brushes shall either be new or previously used only on austenitic stainless steel. Wire brushes shall have stainless steel bristles.

3.2 SUBMITTALS

- A. A current copy of the Supplier's Quality Assurance Manual shall be submitted with the proposal.
- B. The Supplier shall submit a complete package of material certifications for all materials used in the fabrication and assembly of items, including, but not limited to, stainless steel sheet, structural steel, welding filler rods, and fasteners. Material certifications shall be legible copies of Certified Mill Test Reports (CMTR) indicating chemical analysis, physical test data and heat number. Certificates of Conformance (CoC) may be submitted in lieu of CMTRs, with prior approval by the Buyer.
- C. The Supplier shall submit Fabrication and As-Built drawings of the Adsorber.
- D. The Supplier shall submit structural and mechanical calculations for the Adsorber.
- E. A detailed Operating and Maintenance Manual shall be furnished by the Supplier.
- F. The Supplier shall complete the equipment data sheet originally prepared by the Buyer.

- G. A Fabrication Schedule shall be provided showing all fabrication steps, hold points, tests, and inspections. The Supplier shall provide the Buyer with a revised Fabrication Schedule within seven (7) working days of a modification to the contract document, which revises the required delivery date or when other approved Buyer modifications change a scheduled assembly step, hold point, test, or inspection.
- H. The other documents listed in the Table 15475-1 are requirements that stem directly from ASME N509.

Table 15475-1 Documentation Requirements

<i>Document Description</i>	<i>With Proposal</i>	<i>Prior to Fabrication</i>	<i>Prior to Shipment</i>
Quality Assurance Program Manual	X		
CMTRs for all Adsorber Components		X	X
Fabrication and As-Built Adsorber Drawings		X	X
Structural and Adsorber Housing Calculations		X	
Operating and Maintenance Manual			X
Completed Data Sheet	X	X	
Fabrication Schedule	X		
Adsorber Drawings		X	
Qualification Report		X	
Adsorber Clamping Device Drawings		X	
Factory Visual Inspection Reports			X
Factory Housing Leak Test Results			X
Factory Airflow Distribution Test Results			X
Factory Air-Aerosol Mixing Uniformity Test Results			X

END OF SECTION 15475