

SECTION 22 0100**GENERAL CONDITIONS****PART 1 - GENERAL**

Applicable Provisions of the Conditions of the Contract and Division 1 General Requirements govern work in this section.

1.1 GENERAL CONDITIONS

- A. Before submitting a proposal, Bidders shall examine all related to this work and shall become fully informed as to the extent and character of the work required and its relation to the other work in the building.
- B. Before commencing work, the Contractor will examine all conditions of the project upon which his work is in any way dependent for perfect workmanship according to the intent of this Specification. No "waiver of responsibility" for incomplete, inadequate or defective adjoining work will be considered unless notice has been filed by this Contractor and acceded to by the Owner's representative in writing before the Contractor begins any part of the work.
- C. The Contractor will pay for all licenses, permits and inspection fees required by civil authorities having jurisdiction. Comply with all laws, ordinances, regulations, and fire underwriter's requirements applicable to work herein specified without additional expense to the Owner. (Also local building code requirements.).
- D. It is specifically intended that anything (whether material or labor), which is usually furnished as a part of such equipment, as is hereinafter called for (and which is necessary for the completion and proper operation) shall be furnished as part of this Contract without additional cost the Owner, whether or not shown in detail or described in the Specifications.
- E. When Drawings and Specifications conflict or there is a question as to the proper intent of this Contract, the Contractor shall assume the greater quantity, the higher quality and/or the more expensive method in his pricing. All questions shall be directed to the Architect/Engineer in writing only and only up to ten (10) days prior to bidding.
- F. The Drawings indicate the general runs of the piping, ductwork, etc. systems and the location of equipment and apparatus, however it shall be understood that the right is reserved by the Architect/Engineer to change the location of piping work, ductwork, equipment and apparatus to a reasonable extent as building conditions may dictate, prior to their installation without extra cost to the Owner.
- G. Small scale drilling through walls and floors or cutting of piping insulation which may contain asbestos shall be performed by a person with a "restricted asbestos handler allied trades certificate" and shall have a copy of it in his possession at all times while working of the project. This shall also apply to removal of piping, ductwork or equipment insulation.

- H. Any changes from the Drawings and Specifications and any interpretation thereof shall have the prior approval of the Architect/Engineer. The Contractor shall submit in writing, at the time of signing the Contract, any items of necessary labor and materials, which, in his opinion, are lacking in requirements of the Drawings and Specifications to insure a complete job in all respects. No consideration will be granted to alleged misunderstanding of materials to be furnished, work to be done, or conditions to be complied with, it being understood that the tender of a proposal carries with it the agreement to all items and conditions referred to herein or indicated on the accompanying Drawings.

END OF SECTION

SECTION 22 0110**SCOPE OF WORK****PART 1 - GENERAL**

Applicable Provisions of the Conditions of the Contract and Division 1 General Requirements govern work in this section.

1.1 SCOPE OF WORK

- A. The work under this section includes all labor, materials, equipment, tools, transportation, and the performance of all work necessary and required for the furnishing and installation complete of all work as shown on the Contract Documents, including but not necessarily limited to the following:
 - 1. Provide and install new chimney flue liner system with specified cap and any boiler breaching connections.
 - 2. Modify and provide new chimney wall penetrations. Patch and seal chimney wall penetrations and openings not used to match existing construction.
 - 3. Rigging of equipment.
 - 4. Firestopping per NFPA requirements (UL approved systems).
 - 5. As-Built Drawings - Refer to Division 1.
 - 6. Cutting and Patching - Refer to Division 1.

1.2 REMOVALS

- A. Removals should be coordinated with other trades affected.
- B. Boiler Breaching which penetrates the construction may be cut and capped to protect during construction so that construction over it can be achieved.
- C. All removals shall be removed from the site.

1.3 ALTERATION WORK

- A. Any equipment, piping, control components, etc. to be removed, shall be disposed of or salvaged as directed by the Owner. They shall not be removed from the premises without the Owner's approval.
- B. Any piping to be removed shall be properly plugged or capped so that upon completion of all new work, all abandoned piping shall be concealed in finished areas.
- C. No dead ends shall be left on any piping upon completion of job. The existing system shall be left in perfect working order upon completion of new work.

- D. Location and sizes of existing piping, ductwork, equipment, etc. are approximate. Exact sizes and locations of all existing work shall be verified on the job.

END OF SECTION

SECTION 22 0125**CHIMNEY FLUE LINER****PART 1 - GENERAL**

Applicable Provisions of the Conditions of the Contract and Division 1 General Requirements govern work in this section. Submit shop drawings for checking and approval.

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Field-fabricated metal chimney flue liners.

1.3 ACTION SUBMITTALS

- A. Product Data: For the following:
 - 1. Chimney flue liners.
- B. Shop Drawings: For chimney flue liners. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, methods of field assembly, components, hangers and seismic restraints, and location and size of each field connection.

1.4 INFORMATIONAL SUBMITTALS

- A. Welding certificates.
- B. Manufacturer Seismic Qualification Certification: Submit certification that site-fabricated chimney flue liners; accessories; and components will withstand seismic forces as defined for Mt Vernon NY.
 - 1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation.
 - a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

2. Dimensioned Outline Drawings of chimney flue liners: Identify center of gravity and locate and describe mounting and anchorage provisions.
3. Detailed description of anchorage devices on which the certification is based and their installation requirements.

C. Warranty: Special warranty specified in this Section.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain listed system components through one source from a single manufacturer.
- B. Delete first paragraph below if no welding. Retain "Welding certificates" Paragraph in "Informational Submittals" Article if retaining below. AWS states that welding qualifications remain in effect indefinitely unless welding personnel have not welded for more than six months or there is a specific reason to question their ability.
- C. Welding: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code--Steel," for hangers and supports and AWS D9.1/D9.1M, "Sheet Metal Welding Code," for shop and field welding of joints and seams in vents, breechings, and stacks and B2.1-1/8-010:2015.

1.6 COORDINATION

- A. Retain first paragraph below for chimneys and stacks supported on concrete bases. Coordinate size and location of concrete bases. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

1.7 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of venting system that fail in materials or workmanship within specified warranty period. Failures include, but are not limited to, structural failures caused by expansion and contraction.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 FIELD-FABRICATED METAL CHIMNEY FLUE LINERS

- A. Fabricate chimney flue liners from ASTM A 304 Stainless Steel or AL29-4C Stainless Steel, with continuously welded joints, complying with NFPA 211 for minimum metal thickness.
 1. Equal to or Less Than 1.069 Sq. Ft. (0.099 Sq. m.) or 14 Inches (356 mm) in Diameter: 0.053 inch (1.35 mm).
 2. Up to 1.396 Sq. Ft. (0.129 Sq. m) or 16 Inches (406 mm) in Diameter: 0.067 inch (1.7 mm).

3. Up to 1.764 Sq. Ft. (0.164 Sq. m.) or 18 Inches (457 mm) in Diameter: 0.093 inch (2.36 mm).
 4. Larger Than Above: 0.123 inch (3.12 mm).
- B. Fabricate chimney connectors from 304 stainless steel, complying with NFPA 211 for minimum metal thickness.
1. Larger Than 16" in diameter: 0.056 inch (1.42 mm).
- C. Fabricate cleanout doors from compatible material, same thickness as flue liners, bolted and gasketed.

2.2 GUYING AND BRACING MATERIALS

- A. Cable: Three galvanized, stranded wires of the following thickness:
1. Minimum Size: 1/4 inch (6 mm) in diameter.
 2. For ID Sizes 4 to 15 Inches (100 to 381 mm): 5/16 inch (8 mm).
 3. For ID Sizes 18 to 24 Inches (457 to 610 mm): 3/8 inch (9.5 mm).
- B. Pipe: Two galvanized steel, NPS 1-1/4 (DN 32).
- C. Angle Iron: Two galvanized steel, 2 by 2 by 0.25 inch (50 by 50 by 6 mm).

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of work.
1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLICATION

- A. Field-Fabricated Metal Chimney Flue Liners: Dual-fuel boilers, oven vents, water heaters, exhaust for engines, fireplaces, and other solid-fuel-burning appliances.
- B. Field-Fabricated Metal Breechings and Chimneys: Steel pipe for use with engine exhaust.

3.2 INSTALLATION OF UNLISTED, FIELD-FABRICATED BREECHINGS AND CHIMNEYS

- A. Suspend chimney flue liners independent of their appliance connections.

- B. Install, support, and restrain according to seismic requirements.
- C. Align flue sections at connections, with smooth internal surface and a maximum 1/8-inch (3-mm) misalignment tolerance.
- D. Lap joints in direction of flow.
- E. Support chimney flue liners from building structure with bolts, concrete inserts, steel expansion anchors, welded studs, C-clamps, or beam clamps according to manufacturer's written instructions.

3.3 CLEANING

- A. After completing system installation, including outlet fittings and devices, inspect exposed finish. Remove burrs, dirt, and construction debris and repair damaged finishes.
- B. Clean flue linings internally, during and after installation, to remove dust and debris. Clean external surfaces to remove welding slag and mill film. Grind welds smooth and apply touchup finish to match factory or shop finish.
- C. Provide temporary closures at ends of chimneys that are not completed or connected to equipment.

END OF SECTION

SECTION 22 0490

GUARANTEE

PART 1 - GENERAL

Applicable Provisions of the Conditions of the Contract and Division 1 General Requirements govern work in this section.

1.1 GUARANTEE

- A. The Contractor shall remove, replace and/or repair at his own expense and at the convenience of the Owner, any defects in workmanship, materials, ratings, capacities and/or characteristics occurring in the work within one (1) year or within such longer period as may be provided in the Drawings and/or Section of the Specifications, which guarantee period shall commence with the final acceptance of the entire Contract in accordance with the guarantee provisions stated in the General Conditions, and the Contractor shall pay for all damage to the system resulting from defects in the work and all expenses necessary to remove, replace, and/or repair any other work which may be damaged in removing, replacing and/or repairing the work.

END OF SECTION