

PART 1 GENERAL

1.1 REFERENCES

- .1 Sheet Metal and Air Conditioning Contractors National Association (SMACNA)
- .2 Underwriters' Laboratories of Canada (ULC)
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

1.2 STANDARDS

- .1 NFPA: In compliance with NFPA 211 "Standard for Chimneys, Fireplaces, Vents and Solid Fuel Burning Appliances".
- .2 UL: In compliance with applicable "UL Safety Standards" portion; provide products that have been UL listed and bear the certification label.
- .3 SMACNA: In compliance with "SMACNA Low Pressure Duct Standards for fabricated breeching and smoke pipe".
- .4 AWS: In compliance with "AWS Structural Welding Code for welders' qualifications, welding details, and workmanship standards".
- .5 ASHRAE: In compliance with "ASHRAE Equipment Handbook for Chimney, Gas Vent, and Fireplace Systems, material requirements and design criteria".

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet. Submit product data including materials, dimensions, weight, and accessories. Include product characteristics, performance criteria, and limitations.
 - .1 Submit two (2) copies of Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS).
- .2 Shop Drawings:
 - .1 Submit required shop drawings.
 - .1 Submit shop drawings stamped and signed by professional engineer registered or licensed in the Canadian province.
 - .2 Submit a detailed drawing of the layout, plans and elevations, including clearances, assembly, supports and installation instructions.
 - .2 Indicate the following:

- .1 Methods of sealing sections.
 - .2 Methods of expansion.
 - .3 Details of thimbles.
 - .4 Bases/Foundations.
 - .5 Supports.
 - .6 Guy details.
 - .7 Rain caps.
- .3 Quality assurance submittals: submit the following in accordance with Section 01 33 00 – Submittal Procedures.
- .1 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
- .4 Closeout Submittals
- .1 Submit operation and maintenance data for incorporation into manual specified in Section 01 78 00 – Closeout Submittals.

1.4 QUALITY ASSURANCE

- .1 Regulatory Requirements: work to be performed in compliance with applicable Provincial /Territorial regulations.
- .2 Certificates:
 - .1 Catalogued or published ratings: obtained from tests carried out by independent testing agency or manufacturer signifying adherence to codes and standards.
 - .2 When applicable: Submit certificates of compliance of materials with the required ASTM, UL, and ASHRAE specifications.
 - .3 When applicable: Submit a comprehensive engineering report certifying that the chimneys meet the requirements of seismic design and wind loads.

PART 2 PRODUCTS

2.1 BREECHINGS

- .1 **Double-wall** chimneys and breechings: Shop fabricated, positive-pressure stainless steel.
 - .1 Manufacturers: Subject to compliance and requirements, provide double-wall chimneys in stainless steel of the following type:
 - .1 Model IPPL2 from Cheminée Lining.e Inc.
 - .2 Factory prefabricated product must be manufactured in accordance with NFPA 211. This system will be designed and installed to form a gas-tight assembly. It must be tested and approved in accordance with UL 103 and ULC-S604-M91 to withstand a positive pressure up to 1524 mm C.E., and this will bear the UL label only. This system will be designed to compensate for thermal expansion due to the gas flow. A 50 mm-

thick, high temperature mineral wool insulation will be factory installed between the liner and shell of the chimney. The clearances for combustible materials will be specified in the installation instructions.

- .3 The joint assembly will be tongue and groove male/female with edge jointing and a V-band. An inner sleeve at the joint will be used for quick alignment of parts and for long-term protection of the joint against condensation and temperature. Sealing will be done through the liner. Non-tongue and groove joints are not acceptable.
- .4 The double-wall product will consist of a liner in type 304 stainless steel, gauge 20 (0.9017 mm). The shell will be type 304 stainless steel, gauge 24 (0.6070 mm). The materials and construction of modular sections will comply with the requirements of product UL approval.
- .5 The complete outlet nozzle system for apparatus will be provided by the same manufacturer.
- .6 The chimney and breechings will be guaranteed against any operational anomaly due to material or manufacture defect for a period of ten years from the delivery date.
- .7 As-built drawings drawn to scale of the project will be provided by the manufacturer. The system will be installed as shown on the manufacturer's drawings in accordance with the manufacturer's 10-year warranty, as well as in accordance with standard engineering practices.
- .8 The inside diameter of the chimney and breeching shall be verified using manufacturer's calculations. The calculation shall be technically recognized, and shall follow the ASHRAE calculation method and demonstrate the flow characteristics inside the liner.
- .9 Technical support: The prefabricated modular system shall be provided by a sales organization that assumes the design, installation and service coordination, and that provides a unified responsibility to the owner during and after the warranty period.
- .10 The entire system shall be manufactured in the province of Quebec.

2.2 ACCESSORIES

- .1 Cleanouts: bolted, gasketed type, full size of breeching, as indicated.
- .2 Rain caps.
- .3 Expansion sleeves with heat resistant caulking, held in place as indicated.

PART 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- .1 System will be installed in compliance with manufacturer's instructions. Jointing of the sections will be done with the inner and outer band provided by the manufacturer and the appropriate high temperature sealant. Openings in flammable walls and roof spaces will be protected by the parts manufactured and designed for this purpose by the manufacturer.

- .2 When installed in compliance with manufacturer's installation instructions, the chimney must bear 1.5 times its own weight per linear foot of pipe.

3.2 INSTALLATION - GENERAL

- .1 Follow manufacturer's installation recommendations for shop fabricated components.
- .2 Support chimneys at bottom, roof and intermediate levels as indicated.
- .3 Install sleeves where penetrating roof, floors, ceilings and where breeching enters masonry chimney. Pack annular space with heat resistant caulking.
- .4 Install flashings on chimneys penetrating roofs, as indicated.
- .5 Install rain caps and cleanouts, as indicated.

END OF SECTION