

## **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 SUBMITTALS**

- .1 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures. Include product characteristics, performance criteria, and limitations.
    - .1 Submit two copies of Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS) in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Shop Drawings:
  - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Indicate 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.
    - .8 Installation procedures.
- .3 Quality assurance submittals: submit 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.

### **1.3 QUALITY ASSURANCE**

- .1 Regulatory Requirements: work to be performed in compliance with Provincial regulations.
- .2 Health and Safety:
  - .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Certificates:
  - .1 Catalogued or published ratings: obtained from tests carried out by independent testing agency or manufacturer signifying adherence to codes and standards.

### **1.4 DELIVERY, STORAGE, AND HANDLING**

- .1 Packing, shipping, handling and unloading:
    - .1 Deliver, store and handle in accordance with manufacturer's written instructions and Section 01 61 00 - Common Product Requirements.
  - .2 Waste Management and Disposal:
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- .1 Construction/Demolition Waste Management and Disposal: separate waste materials for reuse in accordance with Section 01 74 00 - Cleaning.

## **2 Products**

### **2.1 BREECHINGS**

- .1 Shop fabricated 20 gauge thick stainless steel with sweep bends from boiler outlet to thimble or chimney as indicated.

### **2.2 PRESSURE CHIMNEY AND BREECHING**

- .1 ULC labelled, 760 °C rated.
- .2 Sectional, prefabricated, double wall with air space, mineral wool insulation with mated fittings and couplings.
  - .1 Liner: 20 gauge thick, type 316 stainless steel, up to 900mm diameter.
  - .2 Shell: 34 gauge thick, type 316 stainless steel, up to 600mm diameter.
  - .3 Outer seals between sections: to suit application.
  - .4 Inner seals between sections: to suit application.
  - .5 Guy section and tensions where required.
  - .6 Storm collar and flashing for non-combustible roofs.
  - .7 Ventilated roof thimble and roof support assembly for combustible roofs.
  - .8 Stack cap.
  - .9 Lateral tee 45°, drain tee cap.
  - .10 Installation thickness: 25mm minimum.

### **2.3 ACCESSORIES**

- .1 Cleanouts: bolted, gasketed type, full size of breeching, as indicated.
- .2 Barometric dampers: single acting, 70% of full size of breeching area.
- .3 Hangers and supports: in accordance with recommendations of Sheet Metal and Air Conditioning Contractors National Association Inc. (SMACNA).
- .4 Rain cap.
- .5 Expansion sleeves with heat resistant caulking, held in place as indicated.

## **3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

### **3.2 INSTALLATION - GENERAL**

- .1 Follow manufacturer's and SMACNA installation recommendations for shop fabricated components.
- .2 Suspend breeching at 1.5 m centres and at each joint.
- .3 Support chimneys at bottom, roof and intermediate levels as indicated.
- .4 Install thimbles where penetrating roof, floor, ceiling and where breeching enters masonry chimney. Pack annular space with heat resistant caulking.
- .5 Install flashings on chimneys penetrating roofs, as indicated.
- .6 Install rain caps and cleanouts, as indicated.

### **3.3 CLEANING**

- .1 Proceed in accordance with Section 01 74 00 - Cleaning.
  - .2 Upon completion and verification of performance of installation, remove surplus
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materials, excess materials, rubbish, tools and equipment.

**END OF SECTION**