

## **SUGGESTED CONDENSED MANHOLE FRAME SEAL SPECIFICATION**

**(New Construction w/LSS Internal Seal)**

### **PART 1 GENERAL**

#### **1.01 WORK REQUIRED**

The Contractor shall install a frame seal in all new sanitary manholes included in this project. The frame seal shall span the entire adjustment area of the manhole by connecting to the bottom of the frame casting and top of the manhole cone.

#### **1.02 SUBMITTALS**

The manufacturers of all manhole frame seals shall submit a notarized certification to the Engineer stating that their product meets the design life, performance and applicable material requirements of this specification.

### **PART 2 PRODUCTS**

#### **2.01 FRAME SEAL**

Frame seals shall remain flexible throughout a 50 year design life, allowing repeated vertical movement of the frame of not less than 2 inches and/or repeated horizontal movement of not less than ½ inch.

The flexible rubber sleeve shall be extruded or molded from a high grade rubber conforming to the applicable material requirements of ASTM C-923, with a minimum 1500 psi tensile strength, a maximum 18% compression set and a hardness (durometer) of 48±5. The sleeve shall be corrugated and available in four widths with unexpanded vertical heights of 8 inches (LSS 0-6), 10 inches (LSS 6-12), 14 inches (LSS 12-18) and 18 inches (LSS 18-24). The sleeve shall have a minimum thickness of .130 inches and a range of coverage which allows a span of up to 24 vertical inches of chimney without the use of an extension. The area of the seal that compresses against the manhole frame casting and the chimney/cone shall have a series of sealing fins to facilitate a watertight seal.

The expansion bands shall be integrally formed from 16 gauge stainless steel conforming to the applicable material requirements of ASTM C-923, Type 304, with no welded attachments. The expansion bands shall have a minimum adjustment range of 2-1/2 diameter inches and a positive locking mechanism which secures the band in its expanded position after tightening.

- A. Acceptable Manufacturers
  - 1. Cretex Specialty Products

### **PART 3 EXECUTION**

#### **3.01 SURFACE PREPARATION AND SEAL INSTALLATION**

The surface preparation required to install the frame seal and the installation of the seal shall be in accordance with the manufacturer's instructions.

### **PART 4 MEASUREMENT AND PAYMENT**

#### **4.01 FRAME SEAL**

All costs for furnishing and installing a internal frame seal shall be included in the unit price bid for sanitary manholes.

**NOTE:** A specifier is within his rights to issue a proprietary specification that names only one brand. If in the informed and professional judgment of the specifier, his client's needs will be best served by naming a particular brand, then he has the responsibility to limit his specification to one source. This practice is even acceptable on publicly funded projects. This principle of proprietary specification has found legal support in the case of Whitten Corp v. Paddock Pool Builders, Inc., a Federal District Court case from Massachusetts (376 F. Supp125). Further support came in 1975 when the U.S. Supreme Court rejected further appeal and review.

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