1. External Chimney Seals, Item SPV.0060.##

A Description

This special provision describes providing external chimney seals on sanitary manholes.

B Materials

Materials furnished and used in this work shall meet the requirements for the class of material named and as hereinafter specified.

Flexible rubber sleeves or extensions shall be extruded or molded from high grade rubber compound conforming to the applicable requirements of ASTM C-923, with a minimum 1,500 psi tensile strength, maximum 18 percent decrease in compression set, and a durometer hardness of 48+/- 5.

The sleeve shall be corrugated with a minimum thickness of 3/16-inch and shall be available in unexpanded vertical heights of 6 and 9 inches. The top section of the sleeve shall contain multiple stealing fins and be designed to extend both over and under manhole frame’s base flange, thereby allowing it to be mechanically locked to the frame. The bottom section of the sleeve shall contain an integrally formed compression band recess and multiple sealing fins.

Any splice used to fabricate the sleeve and extension shall be vulcanized and have strength such that the sleeve withstand a 180 degree bend with no visible separation.

The compression bands used to compress the sleeve against the manhole shall be 16-gauge stainless steel conforming to ASTM A-240, Type 304, with a minimum width of 1-inch.

The top compression band shall have a shape and width sufficient to, when tightened, mechanically lock the sleeve to the manhole frame’s bare flange.

The tightening mechanism on both bands shall have the capacity to develop the pressures necessary to make a water tight seal and shall have a minimum adjustment range of 4 diameter inches. Screws, bolts, and nuts used on the bands shall be stainless steel conforming to ASTM F-593 AND 594, Type 304.

Seals shall be similar and equal to those manufactured by Cretex Specialty Products, Waukesha, Wisconsin.

C Construction

Measure manhole to determine information necessary to order proper size sleeve and extensions.

All sealing surfaces shall be reasonably smooth, clean and free of any form offsets or excessive honeycomb. Top internal portion of cone section shall have a minimum 3-inch high vertical surface.

Install rubber sleeve with printing at top and top edge lined up with alignment marks.

Wipe off outside of stainless steel band and apply moderate coating of band lubricant to slot area and a light to moderate coating to remainder of bands outside surface.

Install band in appropriate band recess with slotted end against rubber surface. Position expansion tool and expand band until locking tabs pop into tightest slots possible. Loosen tool slowly until tabs are fully engaged in slots, then continue to loosen and remove tool. When installing large diameter band, use auxiliary tool slots to start expansion process. Move one tool leg to primary tool slot if necessary to complete expansion.

Lubricate second band and install in other band recess. Attach tool and expand as before, keeping bands parallel. Bands can be put closer together if only limited height is available or if excessive sleeve expansion is desired.

If extension is being used, position it such that top portion of extension fits snugly into lower band recess of chimney seal sleeve, before installing band. Lubricate and install band inside recess formed by top portion of extension and expand as before, thereby compressing both extension and sleeve against manhole surface.

If multiple extensions are required repeat this step.

Position extension’s bottom sealing surface on vertical surface of cone. Lubricate and install third band in lower band recess of extension and expand as before.

Check top and bottom edges of installed sleeve to insure they have been properly compressed against surfaces.

D Measurement

The department will measure External Chimney Seals as each individual unit acceptably complete.

E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER DESCRIPTION UNIT

SPV.0060.## External Chimney Seals EACH

Payment is full compensation for furnishing and installing the chimney seal.

ner-900-020 (20171213)