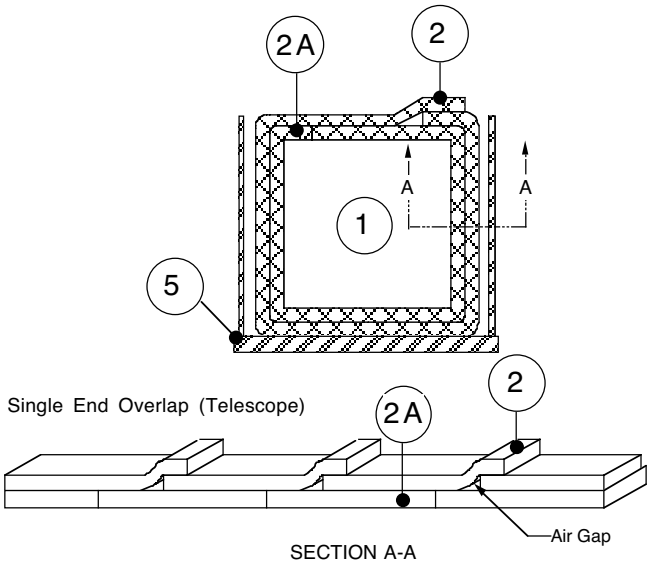
Design No. VAD 517 F

VENTILATION DUCT PROTECTION

Stability - 1 hr

Insulation - 1 hr

Integrity - 1 hr



1. VENTILATION DUCT: A continuously-welded, airtight L-shaped duct system with both horizontal and vertical shafts constructed of 22 GA sheet steel with outside dimensions of max. 24-in. high x max. 84-in. wide. Reinforce the duct to SMACNA requirements for a 1/2-in. WC underpressure and to carry the weight of the ventilation duct assembly covered with insulation. Use min. 3/4 x 3/4 x 3/16-in. mild steel angle on max. 24-in. centers of the 24-in wide spans of the duct. Use min. 1-1/2 x 1-1/2 x 1/8-in. mild steel angle on max. 24-in. centers of the 84-in wide spans of the duct. Secure the angle to the duct using fasteners spaced a max. 8-in. o.c. Construct the ventilation duct using sections affixed to each other with 1-in. standing seams that occur a max. 48 in. on the 84 in. span and a max. of 96 in. on the 24 in. span and at every corner except the inside corner of the transition elbow.

2. INSULATION: Cover the ventilation duct with two layers of min. 1-1/2-in. thick by min. 24-in. wide Firetemp® Wrap with a nom. density of 8 pcf. The blanket was fully encapsulated with a foil scrim facing. All joints on the first layer of blanket were compressed and butt joined (2a). All joints on the second layer were overlapped a minimum of 3 in. (2) All joints on both layers were covered with nominal 4-in. wide aluminum foil tape.

Listed Manufacturer:

Johns Manville Corporation -

Applied Fireproofing

Ceramic Blanket

Firetemp® Wrap

3. FASTENERS: Prior to installing the insulation, fit the duct with 6 in. long, 12 GA. copper coated mild steel impaling pins. Apply the pins with a capacity discharge welder.

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After the insulation (Item 2) is placed over the impaling pins, secure the wrap in place to the pins with galvanized steel speed washers. Evenly distribute speed washers on a mn. 20% of the pins after the installation of the first layer of insulation and on all of the pins after the second layer of insulation is installed. Space the pins on each horizontal side of the ventilation duct as follows:

A. Horizontal Sides - set rows a max. 6 in. from the each horizontal duct edge and a max. 10-1/2 in. between pins in a row with a max. distance between multiple rows of 12 in.

B. Vertical Sides - set rows a max. 2 in. from the each horizontal duct edge and a max. 10-1/2 in. between pins in a row with a max. distance between multiple rows of 12 in.

C. Bottom Side - set rows a max. 6 in. from the each horizontal duct edge and a max. 10-1/2 in. between pins in a row. Max. spacing between the edge row and the adjacent row is 6 in. Max. distance between all other rows is 12 in.

D. Vertical Transition Bottom Side - place the first three pins of each edge row a max. of 2 in. from the edge on the bottom side of the horizontal duct where it intersects with the vertical duct forming an "L".

4. BANDING: After the ventilation duct is wrapped, secure the insulation in place using a mi. 1/2-in. wide, min. 0.020-in. thick stainless steel banding. Tighten the banding but do not cut into the insulation. Then crimp steel clips over the ends of the banding to secure it. Space the banding a min. 10-1/2-in o.c.

5. SUPPORTS: Support the duct enclosure using a conventional trapeze arrangement or simply rest it on the ceiling support structures. The supports must be capable of supporting the weight of the Firetemp® Wrap and the weight of the duct assembly. Space supports a max. of 4 ft o. c. Trapeze supports use min. 2 x 2 x 3/16-in. steel angles a max. 104-1/2 in. long and 1/2-in. all-thread rods spaced max. 2-1/8 in. from the end of the steel angle and a max. of 4 in. from the insulation. Attach the all-thread rods to the steel angle using lock washers and nuts.

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