SECTION 23 5135
AIR PIPING

PART 1 - GENERAL

1.1 SUMMARY

A. Includes But Not Limited To:
   1. Furnish and install heating equipment exhaust piping and combustion air intake piping as described in Contract Documents.

B. Related Sections:
   1. Sections Under 09 9000 Heading: Painting.
   2. Section 23 0501: Common HVAC Requirements.

1.2 REFERENCES

A. American Society For Testing And Materials:
   1. ASTM D 1785-03, 'Standard Specification for Poly(Vinyl Chloride)(PVC) Plastic Pipe, Schedules 40, 80, and 120.'

PART 2 - PRODUCTS

2.1 MATERIALS

A. Air Piping: Schedule 40 pipe and fittings meeting requirements of ASTM D 1785, ASTM D 2661, or ASTM D 2665.

B. Piping Primer And Cement: Meet requirements of ASTM D 2564.

C. Flexible Foamed Pipe Insulation:
   1. Thickness:
      a. 1/2 inch 13 mm for 2 through 3 inch 50 through 75 mm outside diameter pipe.
      b. 1/2 inch 13 mm sheet for fittings as recommended by Manufacturer.
   2. Category Four Approved Products. See Section 01 6000 for definitions of Categories.
      a. Tubalok by Armaflex.
      b. ImcoLock or ImcoShield by IMCOA.
      c. Therma-Cel by Rubatex.

D. Insulation Joint Sealer:
   1. Category Four Approved Products. See Section 01 6000 for definitions of Categories.
      a. 520 by Armaflex.
      b. Construction Adhesive No. 105 by BFG.
      c. 950 Therma-Cel by Rubatex.
2.2 MANUFACTURERS

A. Contact Information:
   2. BFG Industries, West Columbia, SC  (800) 845-2220 or (803) 796-1380.
   3. IMCOA, Haltom City, TX  www nomacokflex.com.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Installation For Condensing Furnaces:
   1. Run individual vent and individual combustion intake piping from each furnace to concentric roof
      termination kit provided by Furnace Manufacturer. Slope lines downward toward furnace.
   2. Slope combustion chamber drain downward to funnel drain. Anchor to wall with wall clamps,
      allowing free movement through clamp for expansion.
   3. Use concentric roof termination kit provided by Furnace Manufacturer. Install vent and
      combustion air intake piping at clearance and distances required by Furnace Manufacturer.
   4. Attach factory-supplied neoprene coupling to combustion-air inlet connection and secure with
      clamp.
   5. Ensure that factory-supplied perforated metal disc is installed in flexible coupling, unless its
      removal is required.

B. Installation For Condensing Water Heaters:
   1. Run individual vent and individual combustion intake piping from each water heater to roof
      termination as recommended by Water Heater Manufacturer. Concentric roof termination kit may
      be used if approved by and provided by Water Heater Manufacturer. Slope lines downward
      toward water heater.
   2. Slope combustion chamber exhaust drain downward to floor drain.

C. Support:
   1. Support concentric roof termination kit at ceiling or roof line with 20 ga sheet metal straps as
      detailed on Drawings.
   2. Support horizontal sections of pipe in accordance with requirements of Section 23 0501. Anchor
      securely to structure, not allowing pipe to sway.

D. Insulation:
   1. General:
      a. Install insulation in snug contact with pipe and in accordance with Manufacturer's
         recommendations.
      b. Slip insulation on piping before piping sections and fittings are assembled keeping slitting of
         insulation to a minimum.
      c. Joints:
         1) Place 'slit' joint seams of insulation exposed outside building on bottom of pipe.
         2) Stagger joints on layered insulation.
         3) Seal joints in insulation.
      d. Paint exterior exposed insulation with two coats of finish recommended by Insulation
         Manufacturer, color selected by Architect.
   2. Install specified insulation on PVC air piping serving mechanical equipment as follows
      a. Combustion air PVC piping in truss space and in attic.
      b. Combustion vent PVC piping in attic, in truss space, and above roof.
      c. Insulate fittings with sheet insulation and as recommended by Manufacturer.

END OF SECTION