Insulated Pipe Support Specifications

Materials and Workflow

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Applicable Reference Sections: *(delete non-applicable sections)*

* 22 07 19 - Plumbing Piping Insulation
* 23 05 29 - Hangers and Supports for HVAC Piping and Equipment
* 23 07 19 - HVAC Piping Insulation
* 23 21 16 - Hydronic Piping Specialties

1. **Pre-Insulated Pipe Supports**
   1. Mechanical Contractor shall install pre-insulated pipe supports at all structural hangers during the pipe installation process to ensure correct pipe elevations are set per plan.
   2. Wood block inserts “notched” into pipe insulation shall not be allowed.
   3. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
      1. Thermal Pipe Shields
      2. Insulation Components, Inc.
      3. Pipe Shields, Inc.
      4. Approved Equal
   4. Basis of Design for all pipe diameters operating between 0 to 1200 °F
      1. T-2000 Calsil manufactured by Thermal Pipe Shields
         1. <https://www.thermalpipeshields.com/product/t2000-calsil/>
      2. Insulation insert shall cover the entire circumference of the pipe and shall be fabricated from filter pressed, water resistant calcium silicate (calsil) per ASTM C533 type I with a factory laminated All Service Jacket (ASJ) vapor retarder meeting ASTM C1136 and a factory applied Self Sealing Lap (SSL) on the longitudinal joints.
      3. Calsil shall have a minimum compressive strength of 200 psi per ASTM C165, minimum flexural strength of 80 psi per ASTM C203 and a flame spread and smoke developed of 0/0 per ASTM E84.
      4. Calsil insert lengths shall be based upon pipe diameter on manufacturer’s published data sheet.
      5. Insulated Pipe Support shall be covered by an integral two-piece 360-degree curved metal shield fabricated from G90 galvanized steel per ASTM A-527. Lengths and gauge thicknesses based upon pipe diameter and hanger type as published on manufacturer’s product data sheet.
         1. Insulation insert shall extend 1” beyond the metal shield on both sides to allow the adjacent mechanical insulation to be sealed with ASJ tape on the circumferential joints.
   5. ***Contractor Voluntary Alternate for pipes operating below 200 °F.***
      1. F-2000 Phenolic manufactured by Thermal Pipe Shields
         1. <https://www.thermalpipeshields.com/product/f2000-phenolic/>
      2. Insulation insert shall cover the entire circumference of the pipe and shall be fabricated from phenolic foam per ASTM C1126 type III with a factory laminated All Service Jacket (ASJ) vapor retarder meeting ASTM C1136 and factory applied Self Sealing Lap (SSL) on the longitudinal joints.
      3. Phenolic foam inserts lengths and densities shall be based upon pipe diameter on manufacturer’s published data sheet.
      4. Insulated Pipe Support shall be covered by an integral two-piece 360-degree curved metal shield fabricated from G90 galvanized steel per ASTM A-527. Lengths and gauge thicknesses based upon pipe diameter and hanger type as published on manufacturer’s product data sheet.
         1. Insulation insert shall extend 1” beyond the metal shield on both sides to allow the adjacent mechanical insulation to be sealed with ASJ tape on the circumferential joints.
   6. When installing pipe without a welded-on shoe-type support saddle (MSS SP-58 type 39) over Roller Style Hangers, mechanical contractor shall install 200 psi minimum calcium silicate insulated pipe support in manufacturer’s standard recommended length AND a secondary Type 40 curved metal shield in accordance with MSS SP-58 table A3:
      1. 12” long x 18-gauge steel for 3 ½” and smaller pipes.
      2. 12” long x 16-gauge steel for 4” pipes.
      3. 18” long x 16-gauge steel for 5” to 6” pipes
      4. 24” long x 14-gauge steel for 8” to 14” pipes
      5. 24” long x 12-gauge steel for 16” to 24” pipes
         1. Secondary metal shield shall be installed directly on the roller hanger and positioned to keep rolling point of contact within the middle one-third of the shield length.

**End of Section**