SECTION 15082P - MECHANICAL EQUIPMENT INSULATION

PART 1 GENERAL

1.1 SUMMARY

A. Section includes equipment insulation, covering, including vapor retarders, jackets and accessories.

B. Related Sections:
1. Section 01702 – Material Storage Requirements
2. Section 15060 – Hangers and Supports: Execution requirements for inserts for placement by this section.
3. Section 15075 Drawing – Mechanical Identification: Product requirements for mechanical identification for placement by this section. ¹

PART 2 PERFORMANCE REQUIREMENTS

2.1 Insulation installer shall warranty against condensation for the first year. All staining or visible insulation damage caused by condensation shall be replaced at no cost to Owner in the first year.

2.2 Closed cell foams such as Armaflex or Rubaflex are not allowed.

2.3 Polyisocyanurate & formaldehyde insulations are not permitted within conditioned, occupied, or adjacent connected spaces.

2.4 MAN MADE MINERAL FIBER, FLEXIBLE BLANKET OR BATTS

A. Insulation: Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications. Type I.

B. Vapor Retarder Jacket: Type II Flexible and Low Permeance Vapor Retarders for Thermal Insulation.
1. For systems operating at temperatures below ambient, close and secure seams and joints. When outward clinching staples are used, seal penetrations.

C. Vapor Retarder Lap Adhesive:
1. Compatible with insulation.

D. Insulating Cement/Mastic:
1. ASTM C195.

¹ Listing of related sections is for convenience and is not all-inclusive.
2.5 GLASS FIBER, RIGID

A. Insulation: ASTM C612 or ASTM C592; rigid, noncombustible.
   1. ‘K’ factor: ASTM C177 or ASTM C518, 0.24 at 75 °F.
   2. Maximum Service Temperature: 450 °F.
   3. Maximum Moisture Absorption: 0.1 percent by volume.
   4. Density: 2.0 lb/cu ft.

B. Vapor Retarder Jacket Flexible, Low Permeance Vapor Retarders for Thermal Insulation, Type II.

C. Facing: 1 inch galvanized steel hexagonal wire mesh stitched on one face of insulation.

D. Vapor Retarder Lap Adhesive:
   1. Compatible with insulation.

E. Insulating Cement/Mastic:
   1. ASTM C195.

2.6 PVC PLASTIC.

A. Equipment Jacket: Sheet material, off-white color.
   1. Minimum Service Temperature: -40 °F.
   2. Maximum Service Temperature: 150 °F.
   3. Moisture Vapor Transmission: ASTM E96; 0.002 perm-inches.
   4. Thickness: 15 mil.

B. Covering Adhesive Mastic:
   1. Compatible with insulation.

2.7 INSTALLATION

A. Factory Insulated Equipment: Do not insulate.

B. Insulated equipment containing fluids below ambient temperature:
   Insulate entire system.

C. For hot equipment containing fluids over 140 degrees F, insulate flanges and unions with removable sections and jackets.

D. Mineral fiber insulated equipment containing fluids above ambient temperature: Provide standard jackets, with or without vapor retarder, factory-applied or field-applied. Finish with glass cloth and adhesive.

E. Equipment in Mechanical Equipment Rooms or Finished Spaces: Finish with PVC jacket and fitting covers.