INSULATION

DESIGN GUIDELINES

1. Summary
   a. Section includes Insulation

2. Design
   a. Ductwork
      • Duct insulation shall meet the energy code.
      • All supply duct shall be insulated even if located within a return air plenum.
   b. Piping
      • Pipe insulation shall meet the energy code.
      • Insulate all hot water, steam, chilled water, condensate, or any other piping that will condense water and increase the possibility of mold, wall and/or ceiling damage, etc.
      • Hard/Rigid insulation with PVC jacket is required for piping and ductwork 10'-0" AFF and below.
      • All 90° elbows require rigid insulation. Elbows with stuffed insulation are not acceptable.
      • Elastomeric foam insulation by Armaflex or others is not allowable on heating hot water piping.
      • Any chilled water piping insulation shall be installed with continuous airtight seal.
      • Custom made insulation jackets are required for steam valves and accessories that require servicing.
   c. Pipe Hangers
      • Piping hangers shall be installed with rigid insulation spacer between pipe and hangers for continuously insulated pipe and vapor barrier.
      • Rigid insulation shall be installed to avoid crushing insulation at hangers.
   d. Valves
      • Insulate all valves and include insulation on valve stem extensions.
      • All insulation at valves, accessories and equipment shall be sealed airtight. Condensation will occur if air enters past insulation barrier and will collect and damage insulation over time.
   e. Removable Insulation and Jackets are required for
      • Steam pressure regulating valves
      • Condensate receiver tanks
f. Shell and tube heat exchanger heads shall not be insulated where the tube sheet meets the bonnet. The insulation would cover the gasket; therefore, if the gasket leaks, it will not be seen until there is a major issue.

3. Related Sections
   a. Piping and Valves – Hydronic
   b. Ductwork

EQUIPMENT and PRODUCT REQUIREMENTS

1. Exterior Insulation
   a. Elastomeric insulation installed outside shall have aluminum, stainless steel jacketing or UV resistant polymer covering by Armaflex.

END OF SECTION