

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