**Section 205.1520 Thermal and Acoustical Insulation**

a) Insulation shall be provided for the following within the building:

1) Boilers, smoke breeching and stacks.

2) Steam supply and condensate return piping.

3) Hot water piping above 180°F and all hot water heaters.

4) Hot water piping above 120°F that is exposed to contact by patients.

5) Chilled water, refrigerant, other process piping and equipment operating with fluid temperatures below ambient dew point.

6) Water supply and drainage piping with fluid temperatures below ambient dew point.

7) Air ducts and casings with outside surface temperature below ambient dew point.

8) Other piping, ducts, and equipment necessary to maintain the efficiency of the system.

b) Insulation may be omitted from hot water and steam condensate piping not subject to contact by patients when the insulation is unnecessary for preventing excessive system heat loss or excessive heat gain in the surrounding space.

c) Insulation on cold surfaces shall include an exterior vapor barrier.

d) Insulation, including finishes and adhesives on exterior surfaces of ducts, pipes, and equipment, shall have a flame spread rating of 25 or less and a smoke developed rating of 450 or less as determined by an independent testing laboratory in accordance with ASTM E 84. Exception: Duct, pipe, and equipment coverings shall not be required to meet these requirements where they are located entirely outside the building, or do not penetrate a wall or roof, or do not create an exposure hazard.

e) Linings in air ducts and equipment shall meet the erosion test method described in UL Pub. No. 181. These linings, including coatings and adhesives, and insulation on exterior surfaces of pipes and ducts in building spaces used as air supply plenums, shall have a flame spread rating of 25 or less and a smoke developed rating of 450 or less as determined by an independent testing laboratory in accordance with ASTM E 84.

f) Duct linings shall not be used in systems supplying procedure and recovery rooms/areas.

(Source: Amended at 48 Ill. Reg. 13763, effective August 28, 2024)