

- 1.8 FIRE BARRIER THROUGH PENETRATION PROTECTION SYSTEMS
- A. Manufacturer: Subject to compliance with requirements, provide fire barrier penetration seals of one of the following:
 - i. 3M Fire Protection Products
 - ii. Hilti Corp.
 - B. Provide seals for any opening through fire-rated walls, floors, roof, or ceilings used as passage for mechanical components such as piping or ductwork.
 - C. Cracks, Voids or Holes Up to 4" Diameter: Use putty or calking, one-piece intumescent elastomer, non-corrosive to metal, compatible with synthetic cable jackets, and capable of expanding 10 times when exposed to flame or heat, UL-listed.
 - D. Openings 4" or Greater: Use sealing system capable of passing 3-hour fire test in accordance with ASTM E-814, consisting of wall wrap or liner, partitions, and end caps capable of expanding when exposed to temperatures of 250 to 350 deg F (121 to 177 deg C), UL-listed.
 - E. Execution: Fill entire opening with sealing compound. Adhere to manufacturer's installation instructions.

SECTION 200700 – INSULATION

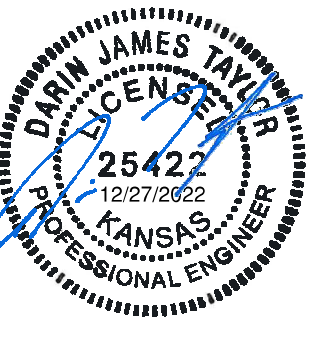
- 1.1 PIPE COVERING
- A. Manufacturers: Johns Manville – Owens Corning – CertainTeed – Knauf.
 - B. Features: All completed insulation of pipe and fittings shall have the following Underwriters Laboratories Fire Hazard Classification:
 - i. Flame spread not to exceed – 25.
 - ii. Fuel contributed not to exceed – 50.
 - iii. Smoke developed not to exceed – 50.
 - B. Four (4 lb.) density glass fiber insulation used for all pipe covering in this section shall have a maximum "K" factor of .23 at 75° F. mean temperature.
 - C. Prepare all exposed insulated covering for painting. Apply insulation over clean dry surface. Butt all longitudinal joints tightly together. Insulate condensate drains in their entirety.
 - D. All pipe insulation to be covered with factory applied flame retardant vapor barrier jacket. Manville Micro-Lok 850 fiberglass AP-T Plus jacket or equal.
 - a. Interior concealed fittings and pipe hangers shall be insulated with flexible glass fiber to a thickness equal to the adjoining pipe insulation. Finish by spiral wrapping with white vinyl and apply a brush coat of vapor barrier mastic. Childers CP-30 or equal.
 - b. Interior exposed fittings shall be insulated with PVC fitting covers installed over flexible glass fiber inserts to a thickness equal to the adjoining pipe insulation. Manville Zeston or equal. Vapor seal all joints with Childers CP-30 or equal.
 - E. In finished rooms or areas where insulated pipes are subject to abuse, additionally finish with .032 embossed aluminum jacketing or 30 mil PVC jacketing for a distance of not less than 9 ft. up from finished floor or to finished ceiling level.
 - F. Provide high density inserts at hanger locations between the pipe and pipe shield for pipe sizes 4" and larger. Maintain a continuous vapor barrier through the hangers and match the jacketing of adjoining pipe insulation.
 - G. Outdoor Piping (exposed to weather): Use the same insulation for interior exposed pipes carrying the same product and add: a jacket of .032 embossed aluminum with factory applied vapor barrier. Finish fittings with Foster Sealas G-P-M 35-00 reinforced with Foster Mast-a-Fab.
 - H. Refrigerant Suction Lines: insulate with 1" thick and condensate drain lines with 1/2" thick Armstrong AP Armaflex, applied in strict accordance with manufacturer's instruction. Finish all exposed piping with two coats of white Armstrong Armaflex finish. Manville Aerotube or Owens-Corning O.C. flexible tubing approved equal.

SECTION 220400 – PLUMBING

- 1.1 CONDENSATE DRAIN PIPING (COOLING COIL DRIP)
- A. Type M copper pipe with sweat drainage fittings, Sched 40 steel pipe with screwed drainage fittings or Schedule 40 PVC plastic pipe with solvent welded fittings.
 - B. Pitch all horizontal lines to drain at a minimum fall of 1" per 10 feet of run.
 - C. Provide air trap at each equipment connection.

SECTION 230923 – TEMPERATURE CONTROL SYSTEMS

- 1.1 SYSTEM SUMMARY
- A. The existing controls are intended to remain. Relocation of existing equipment may require modifications to wiring.



CITY OF WICHITA, KS
 CHENEY VARIABLE FREQUENCY DRIVE
 UPGRADE
 CHENEY, KS

Issue:		
JOB NO.	217043-012	
DATE	DECEMBER 2022	
PM	RDB	
DESIGNED BY	DJT	
DRAWN BY	DJT	
CHECKED BY	DJT	

MECHANICAL SPECIFICATIONS

M3.2

Saved: 12-21-2022 7:06:58 AM by DARRIN TAYLOR
 Plot Scale: 1:1 12-27-2022 11:38:39 AM by NOAH BECKER
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