

SECTION 15063

COPPER PIPE & FITTINGS

PART 1 - GENERAL

1.1 DESCRIPTION

- A. Work Included: Furnish and install copper pipe and fittings of the type(s) and size(s) and in the location(s) shown on the Drawings and as specified herein.
- B. Related Work Specified Elsewhere:
 - 1. Pipe & Pipe Fittings - General is specified in this Division.

1.2 QUALITY ASSURANCE

- A. Pipe: Seamless copper water tube, ASTM B88 (pressure) and ASTM B-306 atmospheric.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Pipe Use (When Applicable):
 - 1. Domestic water (interior).
 - a. Type K, soft annealed, 1 inch and smaller.
 - b. Type K, hard temper, 1-1/4 inches and larger.
 - 2. Process fluids, compressed air, vacuum, inert gas, general use and where indicated (interior).
 - a. Type K, hard temper.
 - 3. Fuel oil piping (where indicated):
 - a. Type K soft temper.
- B. Fittings:
 - 1. Wrought copper and bronze solder joint pressure fittings: ANSI B16.22.
 - 2. Cast bronze solder joint pressure fittings: ANSI B16.18.
 - 3. Cast bronze solder joint drainage fittings: ANSI B16.23.
 - 4. Cast bronze fittings for flared copper tubes: ANSI B16.26.
- C. Solder and Flux:
 - 1. Solid string or wire solder; 50 percent tin, 50 percent lead on atmospheric piping and non-potable water or 95 percent tin, 5 percent antimony.
 - 2. Solid string or wire solder, 95 percent tin, 5% antimony on all pressure piping and potable water.
 - 3. Silver solder, 45% brazing silver alloy (where indicated).
 - 4. Flux: Non-corrosive paste type as required for type of solder.
 - 5. Acid core, paste type, or solder/flux combinations are not permitted.
 - 6. Solder or flux containing lead in any form will not be permitted on any potable water system.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Jointing:
 - 1. Solder Joints:
 - a. Ream or file pipe to remove burrs.
 - b. Clean and polish contact surfaces of all joints.
 - c. Apply flux to both male and female ends.
 - d. Insert ends of tubes into fittings, the full depth of the sockets.
 - e. Bring the joints to soldering temperature in as short a time as possible.
 - f. Form continuous solder beads around the entire circumferences of the joints.
- B. Bending Pipe:
 - 1. Bend pipe by the method and to the radius to comply with the manufacturer's recommendation.
 - 2. Bends shall be free of any cracks or buckles.
- C. Support: Support all pipes in accordance with the "Pipe Hangers & Supports" Section in this Division.
- D. To permit convenient disassembly for alterations and repairs, install unions where shown on the Drawings and:
 - 1. In long runs of piping,
 - 2. In bypasses around equipment,
 - 3. In connections to traps, tanks, pumps, and other equipment,
 - 4. Between shutoff valves, and
 - 5. In other locations as directed by the Engineer.
- E. Remove all valve internals when soldering into pipelines.

END OF SECTION