DIVISION 2 – SITEWORK

Section 02610 - Site Chilled Water and Heating Water Utilities

Introduction

Piping of site utilities

CHILLED WATER, HEATING WATER

Part 1 - General

- Refer to Section 15050 common piping materials and methods.
- Refer to Section 15250 for insulation requirements.
- Refer to Section 15980 for meter requirements.

Part 2 - Products

- Pipe Schedule:

<table>
<thead>
<tr>
<th>Service</th>
<th>Size</th>
<th>Pipe</th>
<th>Fittings</th>
<th>Joints</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chilled Water</td>
<td>4&quot;</td>
<td>Ductile iron, lined</td>
<td>Ductile iron, lined</td>
<td>Bell &amp; spigot or mechanical joint</td>
</tr>
<tr>
<td></td>
<td>16&quot; and larger</td>
<td>May Use Concrete cylinder</td>
<td>Concrete cylinder</td>
<td>bell &amp; spigot</td>
</tr>
<tr>
<td></td>
<td>Below 4&quot;</td>
<td>Type K copper seamless Hard drawn</td>
<td>wrought copper</td>
<td>15% silver solder</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Heating Water Pre-insulated Pipe System</th>
<th>All sizes</th>
<th>Copper - Type &quot;K&quot; Seamless Hard Drawn</th>
<th>Wrought Copper</th>
<th>15% Silver Brazed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Or</td>
<td>Schedule 40 Steel</td>
<td>Or</td>
<td>Or</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Forged carbon steel</td>
<td></td>
<td>Bevel welded</td>
</tr>
</tbody>
</table>

- Pipe & fittings
  - Ductile iron pipe and fittings to be cement lined and coated with bituminous material per AWWA.
  - Concrete cylinder pipe and fittings to be cement or cement-mortar lined and coated per AWWA.
  - Pre-insulated pipe system, Terra-Gard System by Perma-Pipe or approved equal
    - Copper carrier tube, ASTM B88, Type K, seamless, hard temper
• Steel carrier pipe to be ASTM A53, seamless, carbon steel, Schedule 40
• Polyurethane, closed cell insulation
• PVC jacket per ASTM D1784

• Valves – Buried
  • Chilled Water
    • Resilient seated gate valves for pipe up to 12”.
    • Butterfly valve for pipe over 12” conforming to AWWA C504 and Tucson Water Specification No. 1411
  • Heating Water
    • Butterfly valve conforming to AWWA C504 and Tucson Water Specification No. 1411

• Joint Restraint Devices
  • Ductile iron mechanical joints – Megalug joint restraint
  • Ductile iron flange connection – Megaflange joint restraint flange adapter
  • Integral ductile iron joint – TR Flex restrained joint
  • Concrete cylinder pipe - welded

• Valve Boxes – cast iron box and cover
• Air Relief Valve Vaults – cast in place concrete with 30” diameter cover
• Air Relief Valves – APCO Series 140C, cast iron body, SS float, SS lever, Buna –N seat

Part 3 - Execution

• Chilled water piping
  • Ductile iron pipe to be installed per AWWA C600 and Tucson Water Standard Specification No. 1401.
  • Concrete cylinder pipe to be installed per AWWA M9 and manufacturer’s recommendations.

• Hot water piping
  • Installed per pre-insulated piping system manufacturer’s instructions

  • Testing: Hydrostatic, no leakage permitted@100 psig, witnessed by UA Inspector before joints are concealed.

End of Section 02610