URECON
PRE-INSULATED PIPE

SUBMITTAL PACKAGE

Project: Gables Bridge Stowe

DETAILED SPECIFICATION
Aluminum Spiwrap® jacket with
Standard "U.I.P®." System

1) General

The pipe will be insulated using the unique two-fill U.I.P.® factory insulation process, as supplied by Urecon Ltd. Insulation of associated joints, fittings and accessories shall be as per Urecon's recommendations, depending on the size and type of pipe involved. The product shall be manufactured in accordance to ISO 9001 Standards, or approved equal.

2) Pipe preparation

Pipe and the spiral metal jacket shall be cleaned of surface dust or dirt, if necessary, to insure adhesion of the foam to the pipe and inner jacket surface.

3) Core pipe

Pipe supplied for the project:

- 7 x 17.5 ft lengths of 12”ø McWane ductile iron class 53 pipe (nominal thickness of 0.40” and OD of 13.20”) with grooved ends;
- 1 x 7.5 ft length of 12”ø McWane ductile iron class 53 pipe(nominal thickness of 0.40” and OD of 13.20”) with grooved ends.

4) Insulation

a) Material: rigid polyurethane foam, factory applied;
b) Thickness: Nominal 2 in;
c) Density: (ASTM D 1622) *2.2 to 3.0 lbs/ft^3;*
d) Closed cell content: (ASTM D 6226) 90%, minimum.
e) Water absorption: (ASTM C272) 4.0% by volume;
f) Thermal conductivity: (ASTM C518) *0.14 to 0.17 Btu • in/ft^2 •hr •^{0}F.*

5) System Properties

a) System compressive strength: (modified ASTM D 1621) *200 lbs/in^2*.
b) Service temperature range: Insulation, from cryogenic to *200°F* ; the overall factory insulated system limitations are dependant on core pipe type and application.

6) Outer Jacket

18 gauge Aluminum Spiwrap® System (18" nominal OD).

7) Insulation kits for fittings & pipe joints

Insulation kits for fittings shall consist of rigid polyisocyanurate complete with a thin elastomeric coating for strength during transit and installation, and fabricated aluminum outer protective jacket consistent with that on the factory insulated pipe. All metal to be field positioned in such a way as to shed water. All kits to be supplied complete with stainless steel bands and gear clamps to suit.

Rigid Polyisocyanurate Insulation:

.1 Density (ASTM D1622) *1.7 to 2.0 lbs/ft^3;*
.2 Compressive strength (ASTM D1621) *19 to 23 lbs/in^2;*
.3 Closed cell content 90%, minimum;
.4 Water absorption: (ASTM D2842) 4.0% by volume;
.5 K factor: (ASTM C 518) *0.19 Btu • in/ft^2 • hr • ^{0}F*;
.6 Thickness, to match pipe insulation thickness.

Polymer Coating, Urecon BL-20-20EP

.1 Two component high density polyurethane coating, black in color;
.2 Density 73 lbs/ft^3;
.3 Durometer D scale 60;
.4 Tensile strength 1610 lbs/in^2;
.5 Tear strength 151 lbs/in;
.6 Thickness: 20 mils.