Conley Composites
an ANDRONACO INDUSTRIES company

CONDUCTIVE FURAN SCHEDULE 40 EXTRA HEAVY DUTY PIPING

ASTM DESIGNATION CODE RTRP-11IW1-2113

Conley Piping Specification

1.0 SCOPE

1.1 This piping specification covers the requirements for machine made reinforced thermosetting resin pipe and fittings, 1" - 30", manufactured according to ASTM D-2996, the standard specification for filament wound pipe. These specifications shall cover Schedule 40 Conductive heavy duty process pipe and fittings for use with a broad base of corrosive chemical environments including chemical sewers, acids, caustics, and a wide range of solvents.

Both pipe and fittings shall be manufactured with a Nexus® synthetic veil reinforced Conductive Furan inner corrosion barrier, an Epoxy filament wound fiberglass reinforced cage with a conductive filament, and a Nexus® reinforced external corrosion / UV resistant barrier. See the ***Conley Product Data*** for pressure/temperature ratings and span dimensions of each schedule.

2.0 MATERIAL

2.1 Raw materials will meet or exceed specifications for Furan and Epoxy thermoset resin systems and fiberglass materials.

2.2 The resin, reinforcement, pigments, fillers and other materials, when combined as a composite structure shall produce a pipe that shall meet or exceed the requirements of the classification system listed in ASTM D2310.

3.0 PIPE CONSTRUCTION

3.1 The pipe shall consist of three specific layers; the corrosion resistant conductive Furan liner; the filament wound aromatic amine cured Epoxy cage with conductive filament for structural reinforcement, and the corrosion / UV resistant external cover. This material shall then be post-cured to form an integral structure and provide optimum cross-linking density.

3.1a The 60 mil ***internal corrosion barrier*** (inner liner) shall consist of a minimum two layers of Nexus® synthetic veil saturated with conductive Furan resin, aromatic amine cured. This layer shall be a maximum of 90% resin and 10% reinforcement to increase impact and chemical resistance.

3.1b The reinforcement shall be continuous glass roving wound with a conductive filament at an angle of 54 3/4 degrees using aromatic amine cured premium Epoxy resin. This structural layer shall be not less that 65% glass for maximum strength and flexibility, and shall be conductive.

3.1c The external layer shall be Nexus® synthetic veil reinforced for corrosion resistance, for U.V. resistance, and to control the O.D. of the pipe, required for straight socket design.

8.0 PRESSURE AND VACUUM SERVICE

8.1 ***Please refer to the Conley Product Data for specific rating of each size.***

9.0 RECOMMENDED INSTALLATION PRACTICE

9.1 Pipe hangers and spacing - Hangers shall be band type hangers contacting a minimum of 120 degrees of the pipe surface, and with a minimum width of 1" or pipe diameter divided by 6, whichever is greater.

9.2 Underground Installation - The pipe shall be designed for burial of 3 feet to 20 feet under standard soil and bedding conditions. Manufacturer shall design pipe for required burial conditions.

9.3 Expansion - The manufacturer shall specify thermal loads, expansion and contraction, and shall convey this design information to the end user or customer for consideration in the proper design of the piping system.

9.4 Bolts, Nuts, and Washers - Bolts, nuts, and washers shall be furnished by the customer. Metal SAE washers shall be used under all nut and bolt heads. All nuts, bolts and washers shall be of materials suitable for use in the exterior environment.

9.5 Gaskets - Gaskets shall be furnished by the customer. Recommended gasket materials shall be a minimum of 1/8 inch in thickness with a suitable chemical resistance to the service environment. Gaskets shall have a Shore A hardness of 50 to 70. ***See the Conley Installation & Fabrication Manual for bolt torque requirements.***

9.6 Fabrication - Fabrication procedures and certification of fabricators shall be in accordance with the ***Conley Installation & Fabrication Manual***.

10.0 QUALITY ASSURANCE AND INSPECTION

10.1 Conley's Quality Assurance program is in compliance with ISO 9001 and. Pipe and fittings shall be inspected and measured at each stage of manufacture, i.e. liner, reinforcement and external corrosion barrier. For optimum strength and corrosion resistance, all pipe and fittings shall be post cured.

ISO 9001:2008
CERTIFIED
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