

# CON II

## CONTAINMENT PIPING SYSTEM



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THERMACOR'S CON II Hazardous Fluids Containment System is a pre-engineered, factory-fabricated, containment piping system for above or below ground transportation of hazardous fluids. The system is designed with a steel carrier pipe (type and grade specified, as required) and a secondary steel outer pipe to contain and/or drain carrier pipe leaks.

#### Carrier Pipe

- $d \geq 2"$  - A53 ERW Grade B, Std. Wt. Black Steel
- $d < 2"$  - A106 SML, Std. Wt. Black Steel
- Seamless & Schedule 80 pipe are available for all sizes.
- Std. Wt. is the same as Schedule 40 through 10".
- XS is the same as Schedule 80 through 8"
- Stainless Steel

#### Containment Pipe

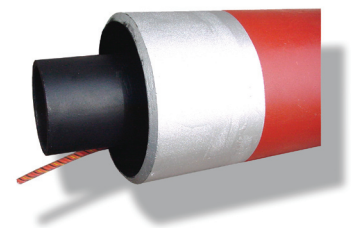
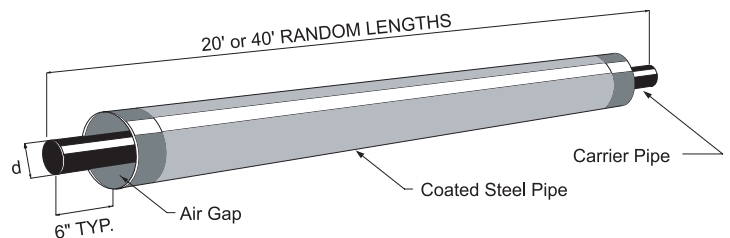
- 10 Gauge, smooth wall black steel conduit.
- A53 ERW Grade B, Std. Wt. Black Steel.

#### Containment Coating

- Novacoat - 30 mils
- Fusion Bonded Epoxy - 20 mils
- Primer Coating for Above Ground
- 100 mil HDPE

#### Optional Systems

- Leak Detection
  - Access Ports for manual checking.
  - Electronic Leak Detection for precise location of leaks.
- Heat Tracing and Skin Effect Heating



## SPECIFICATION GUIDE \*

### GENERAL

All above ground, below ground, and tunnel piping materials transporting hazardous fluids shall be **CON II**, pre-engineered Hazardous Fluid Containment Piping System, as manufactured by **THERMACOR PROCESS INC.** All straight pipe, fittings, and technical support shall be provided by the manufacturer.

### SERVICE PIPE

The carrier or service pipe shall be A-53, Grade B, ERW, Standard Weight for pipe sizes 2" and larger and A106/ A53, Grade B, seamless, standard weight for pipe sizes 1.5" and smaller. Pipe shall be butt-welded for sizes 2" and larger and socket-welded for 1.5" and smaller. Straight sections shall be supplied in 20 or 40 foot random lengths with cutbacks to allow for welding at the field joints.

### CONTAINMENT PIPE

Containment pipe shall be 10 gauge, smooth-walled black steel conduit manufactured in accordance with ASTM A-135. The containment casing shall be sized to accommodate any expansion or contraction of the pipe due to temperature changes. All conduit shall be cylindrical and straight with the ends cut square. Containment pipe shall be factory coated with 30 mil Novacoat or 20 mil FBE and Holiday tested to 125 volts/mil. Conduit straight lengths shall be normally fabricated in 40 foot nominal lengths with five pipe supports per length. Shorter lengths will be fabricated as required and provided with pipe supports not more than nine feet apart and with a pipe support not more than two feet from each end. Centering devices are to be constructed to allow drainage of the system, air flow, and unrestricted installation of leak trace cable (when required). Tees, elbows, and other fittings will be coated and pre-fabricated to straight sections whenever shipping requirements permit.

### FITTINGS

Carrier pipe fittings shall be minimum 2D bends 2" thru 4" or butt-weld fittings conforming to ASTM A-234 and ANSI B16.9 for sizes over 2", or shall be socket weld steel fittings conforming to ANSI B16.11 for sizes 2" and below. Where pipe

is to be joined to other materials or fittings, suitable socketed adapters or flanges shall be used. Dielectric couplings or flanges with isolation gasket sets shall be used when connecting to dissimilar metals, and at all termination points to provide electrical isolation as needed for proper operation of cathodic protection system.

Containment pipe fittings shall be fabricated from the containment pipe material. All pre-fabricated fittings, end plates, and accessories shall be fully welded, liquid tight, and Holiday tested.

### CATHODIC PROTECTION

Containment pipe shall be protected against corrosion using a sacrificial anode cathodic protection system designed by a qualified NACE Corrosion Engineer. System components shall include, but not be limited to, sacrificial anodes (either pre-packed ingots or ribbon anode as appropriate), test stations, shunts, isolation couplings, and gasket sets.

### FIELD JOINTS

Field Joints shall be applied by the installation contractor utilizing the manufacturer's furnished kits and instructions. Field joints shall not be applied until after the carrier pipe has been hydrostatically tested and approved.

### INSTALLATION

Installation of the piping system shall be in accordance with the manufacturer's instructions. The services of a Factory Representative are to be obtained for the purpose of field instructions in the installation of, and observation during the construction of the Hazardous Fluid Containment Piping System. The Factory Representative is to instruct the installation contractor in the prescribed method of system assembly, joint assembly, containment casing joint closure and coating, Holiday testing, and the installation of the leak detection sensors and alarm module. A final report shall state that the installation is in accordance with the manufacturer's recommendations, and that the installation is in accordance with the plans and specifications.

*\* For alternate specifications, please contact THERMACOR.*

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