



# THOMPSON PIPE GROUP MANUFACTURES JOINTS WITH THREE LAYERS OF PROTECTION

Zinc Coating – Cement Mortar – Typar/Ethafoam

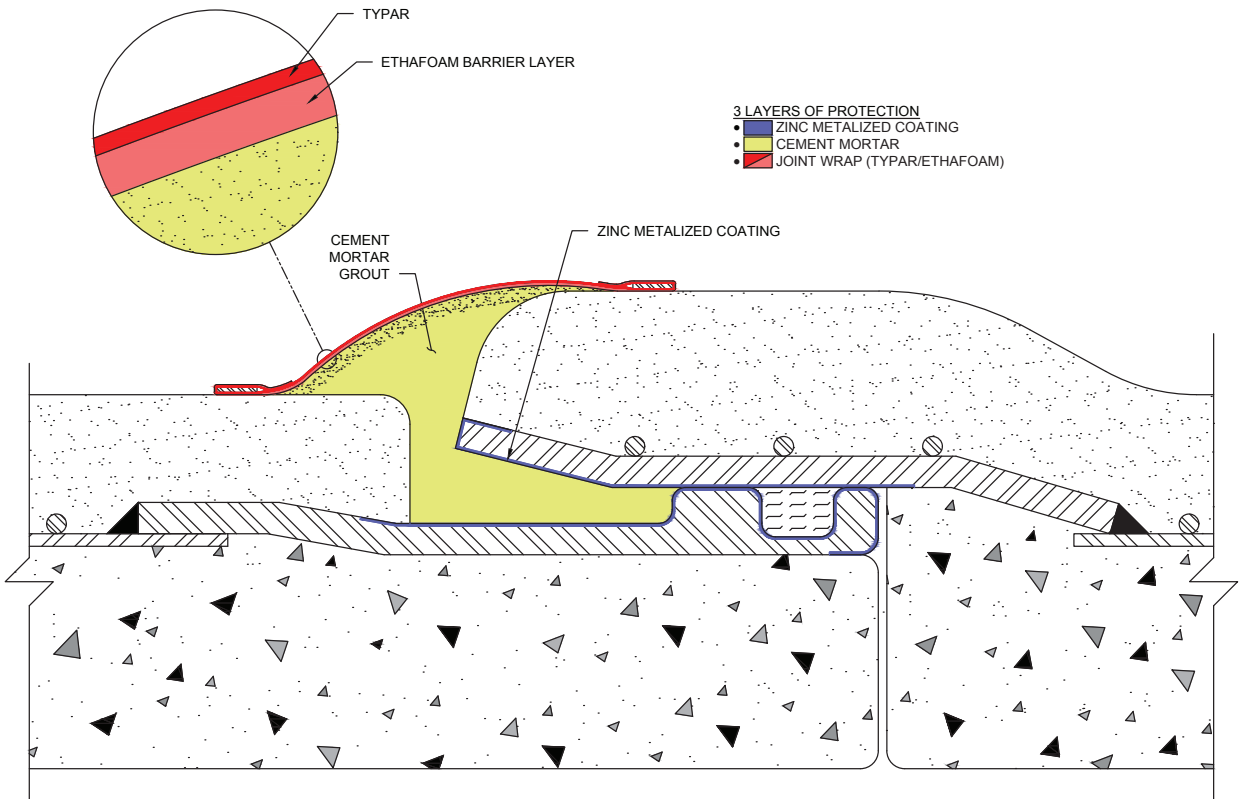




# OVERVIEW

Concrete pressure pipe is a proven, long-lasting pressurized water or wastewater conduit. Pipe installed as early as World War II is still in operation today. To ensure today's pipe has the same longevity, Thompson Pipe Group manufactures joints with three layers of protection. Unlike the pipe itself, in which steel components are encased in protective concrete, sealing portions of the steel joint rings are not encased. To protect these steel components, Thompson Pipe Group incorporates three layers of exterior protection:

- ▶ Zinc metallized coating
- ▶ Cement mortar
- ▶ Typar/Ethafoam



## ZINC METALLIZED COATING

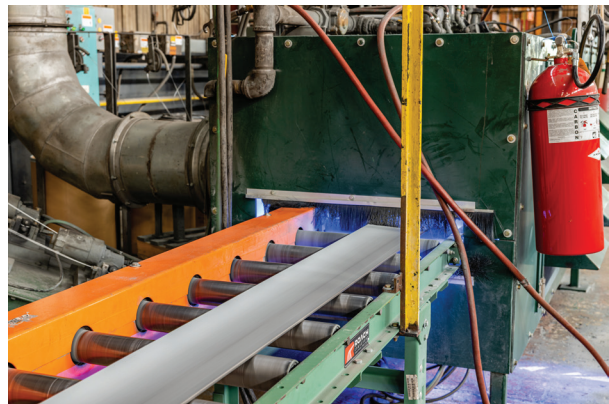
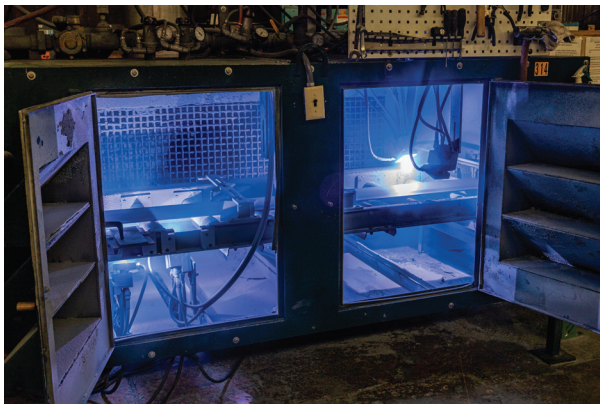
The Thompson Pipe Group facility in Bakewell, Tennessee, manufactures and metalizes steel joint rings. These rings are used in all Thompson facilities to produce prestressed concrete cylinder pipe (AWWA C301) and bar-wrapped pipe (AWWA C303). The use of zinc metallized rings provides corrosion protection for the steel joint rings and eliminates the need to mortar point the interior joints on water and treated wastewater lines.

Zinc metalizing provides corrosion protection for the steel in two ways: as a barrier and through galvanic action.

## APPLICATION

Steel joint ring stock moves through a cabinet to be abrasively cleaned. Once properly cleaned of all scale and rust, the steel sections move down a conveyor belt into an enclosed metal cabinet.

Once a section reaches the enclosure, zinc wire is fed into multiple applications, atomized and propelled onto steel. Heat atomizes the zinc into tiny droplets. A nozzle directs a stream of high pressure compressed air and sprays the zinc droplets onto the steel. The liquid cools quickly and provides a continuous protective barrier.



## **CEMENT MORTAR**

During installation joints are covered in portland cement. The primary function is to protect exposed steel components of the joint. Portland cement provides electrochemical protection. When steel is encased in a highly alkaline environment like grout, with high pH between 12.5 and 13.5, the surface of the steel is passivated and will not oxidize.



## **TYPAR/ETHAFOAM**

Concrete pressure pipe comes with two-ply diaphragms that consist of a Typar synthetic fabric layer with a ¼ inch closed-cell foam lining, which provides an additional layer of protection. This combination of Typar and Ethafoam creates a barrier between the joint rings and corrosive material in the soil or groundwater.