



# PCCP: THE CHOICE FOR POWER GENERATION

Ease of installation driven by rigid pipe, testable joints and harness clamps



## PROJECT OVERVIEW

When the Lansing Board of Water and Light announced the development of Delta Energy Park, a \$500 million natural gas-fired facility, leaders touted the benefits. The location will replace two coal-fired plants and is scheduled to reduce emissions by 80%. Upon completion Delta Energy Park will provide electricity to nearly 100,000 customers and keeps costs low. In this common power industry scenario, prestressed concrete cylinder pipe (PCCP) is the preferred pipe of choice for the cooling water systems for new efficient facilities such as the Delta Energy Park.



## PCCP, A POWERFUL HISTORY

Since 1954 Thompson Pipe Group manufacturing facilities have produced prestressed concrete cylinder pipe, AWWA C301, for hundreds of power plants worldwide. Concrete gives the pipe the necessary structural strength and rigidity to withstand heavy external loads. The steel components of the pipe, the joint ring, cylinder and high-strength prestressing wire, are protected by a cement-rich mortar coating on the outer wall.

## ADDITIONAL BENEFITS

- ▶ Custom design – Each pipe section and fitting are designed to meet pressure loads and special configurations.
- ▶ Wide variety of diameters – 16"-144". This project included lined PCCP in diameters of 24", 30", 36" and 48".
- ▶ Due to rigid design, PCCP requires no special bedding or backfill.
- ▶ Built in corrosion protection – the steel cylinder is completely encased in Portland cement mortar or concrete to provide superior corrosion protection.
- ▶ Joint restraint – PCCP can be installed with Thompson Pipe Group's custom Snap Rings<sup>®</sup> or harness clamps. No welding is required for either and both are protected by Portland rich cement.
- ▶ Testable joints – Available for pipe diameters of 36" or larger, testable joints eliminate the time and effort to seal and fill the completed line with water. Contractors can air test joints in the field and eliminate hydro testing.

## POWERFUL RESTRAINT

### *Harness Clamps*

Lansing Board of Water and Light used harness clamps on this project. The two-part harness clamp is positioned around the joint and secured simply by tightening drawbolts on each side.