

DIPRA Facts & Figures

Bonded Coatings vs Polyethylene Encasement

Polyethylene encasement of Ductile Iron Pipe is the most effective and cost-efficient method of corrosion control. Compared to bonded coatings, polyethylene encasement offers exceptional value, ease of installation and convenience while providing an unequaled and reliable means of corrosion control against aggressive soils.

Advantages of using polyethylene encasement:

- DIPRA does not recommend bonded coatings because: it is difficult to apply to the surface of Ductile Iron Pipe; research indicates it has no specific advantage in providing corrosion control; and its costs considerably more.
- Polyethylene encasement is the only method of supplemental corrosion protection for Ductile Iron Pipe that is standardized by the American Water Works Association, which has rejected a standard for the use of bonded coatings on Ductile Iron Pipe.
- A recent American Water Works Association report shows that Ductile Iron Pipe with polyethylene encasement has at least an average expected service life of 105 years—longer than any other pipe material on the market today.
- It's effective and economical—and much easier to install than bonded coatings.
- It works. It has been used for decades on hundreds of millions of feet of iron pipe with outstanding results. Hundreds of inspections of polyethylene-encased cast and Ductile Iron Pipe, including installations from 40 to 50 years in service, show that properly-installed polyethylene encasement provides effective, economical corrosion control.
- Installation is easy. Polyethylene encasement does not require special shipping, handling, or packaging installation occurs on site, so the risk of damage is minimal. The application of bonded coatings requires difficult surface preparations that can result in damage to the pipe surface.
- It doesn't accelerate corrosion. Bonded coatings result in the formation of concentration cells at "holidays," or damage to the coating, where corrosion rates are greater than would occur on uncoated pipe. No such concentration cells occur with polyethylene encasement.
- It's simple. Once installed, polyethylene encasement is a passive system that does not require ongoing maintenance or monitoring.
- It's versatile. While one has option of providing cathodic protection for polyethylene encased Ductile Iron Pipe, it is a requirement for pipes with bonded coatings.



For details about the benefits of Ductile Iron Pipe or the Ductile Iron Pipe Research Association visit www.dipra.org



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