

HPCC SE*

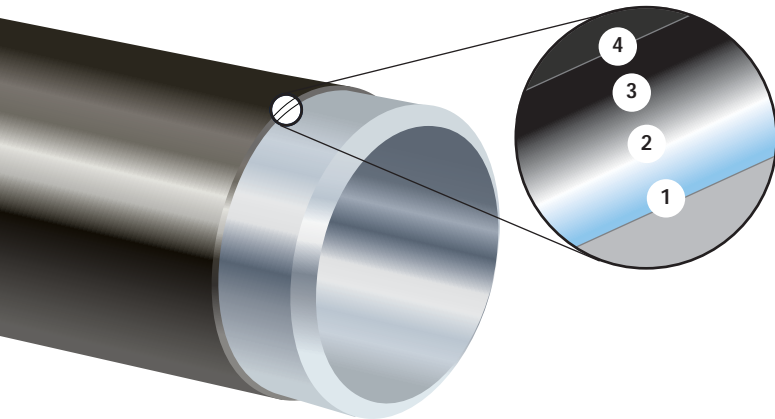
High Performance Composite Coating Side Extruded

* Patent Pending



ANTI-CORROSION

PRODUCT DATA SHEET



1. Steel
2. Fusion Bonded Epoxy
3. FBE/Adhesive Interface
4. High Density Polyethylene

Product Description

High Performance Composite Coating Side Extruded (HPCC SE) is an advanced coating system that represents the latest development in anti-corrosion systems. **The product consists of Fusion Bond Epoxy anti-corrosion, polyolefin adhesive and a tough high density polyethylene, and an extra layer of SE HDPE enhanced with side extrusion for advanced mechanical protection for severe environments.** HPCC SE is designed to protect buried oil and gas pipelines in environments where superior mechanical protection, (especially in areas where the select backfill may not be ideal) moisture and corrosion resistance and moderate to high operating performance characteristics are required.

Applications



Oil & Gas Pipelines



Small Diameter Pipelines



Large Diameter Pipelines



Wet Environments

Related Standards and Specifications

- CSA Z245.21 (System B2)
- ISO 9001:2008

For additional standards and specifications with which this product complies, please contact your Bredero Shaw representative. In Canada, consult Shaw Pipe.



Long Term Corrosion Protection

- The FBE component of HPCC SE provides excellent adhesion to steel, providing superior long term corrosion resistance and protection of pipelines operating up to 85°C.
- The superior adhesion also provide excellent resistance to cathodic disbondment which reduces the cost of cathodic protection during the operation of the pipeline.

Very Good Mechanical Protection

- HPCC SE provides excellent uniform coverage of the weld bead profile, preventing "tenting" and weaknesses in the coating cross section.
- The polyethylene component protects the pipeline during transportation, reducing costly repairs while also providing added in-ground protection against shear forces, chemicals and abrasive soil conditions.
- The additional SE HDPE layer provides increased protection.
- Thickness can be adjusted to meet specific requirements.

Fused Monolithic Coating System

- The unique application process of HPCC SE provides a fused, monolithic profile that prevents delamination and loss of adhesion.
- During construction, the system demonstrates excellent field handling and flexibility characteristics, minimizing construction installation costs.

Flexible Solutions

- Advanced manufacturing techniques allow the HPCC SE System to be customized to your specific project.
- Can be applied to various pipe diameters from 400 mm (16") to over 1220 mm (48").

Features & Benefits

High Performance Composite Coating Side Extruded

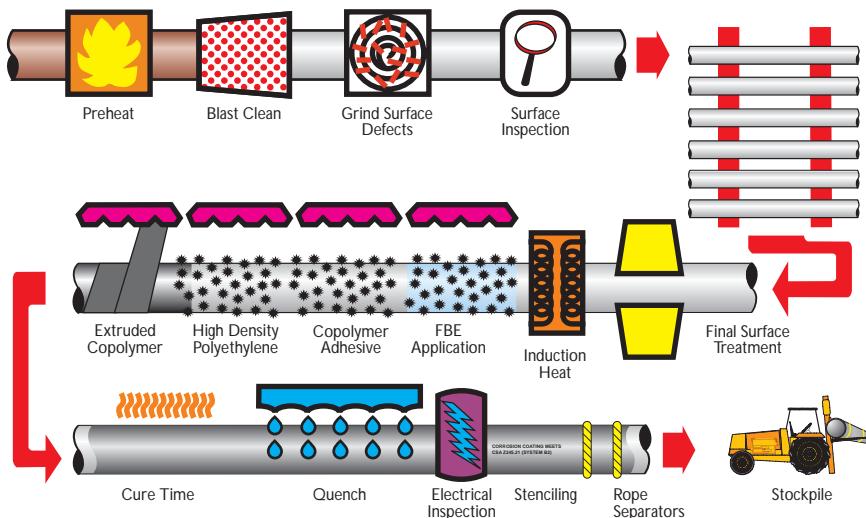
* Patent Pending

Typical Plant Capabilities and Product Properties

Capability/Property	HPCC SE
Minimum Pipe Diameter	400 mm (16")
Maximum Pipe Diameter	1066 mm (42")*
Minimum Pipe Length	18.3 m (60')
Maximum Pipe Length.....	25 m (82')
Minimum Recommended Operating Temperature	-40°C (-40°F)
Maximum Recommended Operating Temperature	85°C (185°F)

Values shown are typical and may vary from plant to plant. Consult Bredero Shaw for special requirements. In Canada, consult Shaw Pipe.
* Larger diameters may be possible.

Product Application Process



HPCC SE_rev021

Plants

North America

Camrose, Alberta
Regina, Saskatchewan

EMAR

Jubail, Saudi Arabia (planned)

About Bredero Shaw

Bredero Shaw is the global leader in pipe coating solutions. With more than 80 years of experience, the largest team of dedicated pipe coating professionals, the most extensive network of strategically located plants worldwide and with proven innovative coating technologies, the company has protected more pipelines in virtually every environment and operating condition than anyone in the industry.

Bredero Shaw offers technologically advanced solutions for anti-corrosion coatings, protective and weight coatings, thermal flow assurance coatings, internal coatings, custom coatings and field joints for both onshore and offshore applications. This broad range of products and services provides Bredero Shaw with the unique capability to service the full spectrum of pipeline protection and flow assurance requirements. Consult your Bredero Shaw representative for your unique project requirements.

HEAD OFFICE
Bredero Shaw
3838 N. Sam Houston Pkwy E.
Suite 300
Houston, Texas
77032-3400, USA
Phone: +1-281-886-2350
solutions@brederoshaw.com

NORTH AMERICA
Bredero Shaw
Two Executive Place,
200, 1824 Crowchild Trail, N.W.
Calgary, Alberta
T2M 3Y7, Canada
Phone: +1-403-263-2255
northamerica@brederoshaw.com

LATIN AMERICA
Bredero Shaw
3838 N. Sam Houston Pkwy E.
Suite 300
Houston, Texas
77032-3400, USA
Phone: +1-281-886-2350
latinamerica@brederoshaw.com

**EUROPE, MIDDLE EAST,
AFRICA & RUSSIA**
Bredero Shaw
Lakeside House
1 Furzeground Way
Stockley Park, Uxbridge
UB11 1BD
Phone: +44 (0) 208 622 3071
EMAR@brederoshaw.com

ASIA PACIFIC
Bredero Shaw
101 Thomson Road
#17-01/02 United Square
Singapore 307591
Phone: +65-6732-2355
asiapacific@brederoshaw.com

Regional Offices