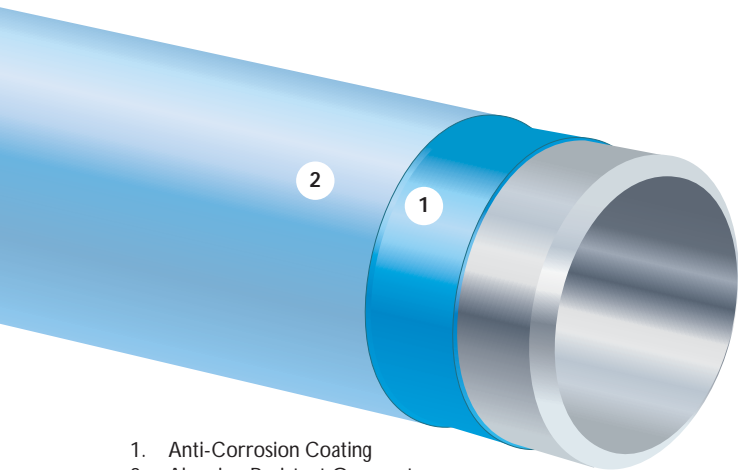




ANTI-CORROSION

# Dual Layer FBE

## Dual Layer Abrasion Resistant Fusion Bond Epoxy Coating



1. Anti-Corrosion Coating
2. Abrasion Resistant Overcoat

### Product Description

Dual Layer Abrasion Resistant FBE Systems provide excellent properties for a variety of service applications which may include directional drilling and anti-abrasion for road and river crossings, and elevated temperatures in wet environments and anti-slip applications.

### Applications



Oil & Gas Pipelines



Large Diameter Pipelines



Small Diameter Pipelines



Waterworks Pipelines

### Related Standards and Specifications

- CSA Z245.20
- ISO 9001:2008

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



### High operating temperature capabilities

- Dual Layer FBE provides excellent adhesion to steel, providing superior long term corrosion resistance and protection of pipelines operating up to 105°C.
- The superior adhesion properties of the anti-corrosion coating provide excellent resistance to cathodic disbondment, reducing the cost of cathodic protection during the operation of the pipeline.

### Excellent abrasion and impact resistance

- Provides excellent abrasion and impact resistance and sufficient flexibility to protect against possible damage to the anti-corrosion coating during pipe transportation, pipeline construction, road bores, and directional drills.

### Improved handling characteristics

- Provides tough physical properties that minimize damage during handling, transportation, installation and operation.

### Fully Bendable

- Pipe is fully bendable to 1.5°/pipe diameter length.

### Global Availability

- Dual Layer FBE can be manufactured in a single plant or in multiple coating plants to improve project logistics.
- High capacity within the Bredero Shaw plant network allows the client to benefit from single source advantages, ultimately providing more cost effective management of pipe coating needs.

# Dual Layer FBE

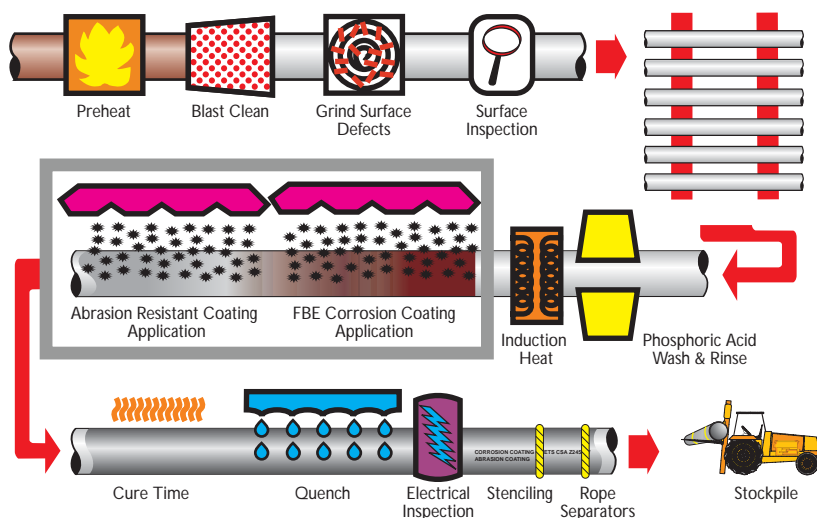
## Dual Layer Abrasion Resistant Fusion Bond Epoxy Coating

### Typical Plant Capabilities and Product Properties

Capability/Property	Dual Layer FBE
Minimum Pipe Diameter .....	90 mm (3.5")*
Maximum Pipe Diameter .....	1220 mm (48")
Minimum Pipe Length .....	5.5 m (18')
Maximum Pipe Length.....	25.0 m (80')
Minimum Recommended Operating Temperature .....	-40°C (-40°F)
Maximum Recommended Operating Temperature .....	105°C (220°F)

Values shown are typical and may vary from plant to plant. Consult Bredero Shaw for special requirements. In Canada, consult Shaw Pipe. \* NPS 3 and 4 depend on wall thickness.

### Product Application Process



DLFBE\_rev022

### Plants

#### North America

Camrose, Alberta  
Regina, Saskatchewan  
Portland, Oregon  
Fontana, California  
Vineyard, Utah  
Pearland, Texas

#### Latin America

Monterrey, Mexico  
Veracruz, Mexico  
Belo Horizonte, Brazil

#### EMAR

Leith, Scotland  
Jubail, Saudi Arabia  
Ras Al Khaimah, UAE

#### Asia Pacific

Kuantan, Malaysia  
Kabil, Batam Island, Indonesia  
Kembla Grange, Australia

### 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

The information contained herein is indicative of the types of coatings provided by Bredero Shaw, and is not intended to be a guarantee that a particular coating will be suitable for a given application. Since many unique environmental, operating, and design conditions must be considered, the user shall determine the suitability of the coating for the intended use and assume all the risks and liabilities in connection therewith. Bredero Shaw's liability is stated in our standard conditions of sale.