FUSION BONDED EPOXY (FBE) COATING

General Description:

Fusion Bonded Epoxy is a one-part, heat cured, thermosetting epoxy coating that is applied as a dry powder to the sandblasted surface of a pre-heated valve and then fused and cured in a high-temperature oven. The result is a durable coating with exceptional abrasion and chemical resistance ideally suited for valves in water and wastewater applications.

Advantages of FBE:

1. The coating is applied in accordance with AWWA Standard C550 “Protective Epoxy Coatings for Valves and Hydrants” and certified by to the requirements of ANSI/ NSF Standard 61 - “Drinking Water System Components - Health Effects” for coating valves and fittings.
2. FBE coatings are applied in an automated one-part process so that the mixing, surface preparation, and multiple-coat problems associated with liquid paints are eliminated.
3. The electrostatic application process for FBE provides a smooth, even coating thickness with no runs, sags, or thin spots common with applying liquid paints.
4. FBE coatings are durable and provide twice the impact strength of liquid epoxies. The surface provides high abrasion resistance and has become a standard seating material for resilient gate and check valves.
5. FBE has a long-term performance history in water and sewage environments including salt water, slurries, methane and hydrogen sulfide exposure.

Application Process:

1. FBE is applied in an automated manufacturing process in accordance with the coating manufacturers’ procedures and industry standards to assure consistency and high quality.
2. The valve is cleaned, sandblasted, and preheated in an oven.
3. An electrical charge is applied to the body and the powder is deposited over the surfaces of the valve to the specified thickness.
4. The epoxy is post cured in an oven to cure specifications and allowed to air cool to room temperature.
5. The final surface is visually and electrically (when specified) tested to verify thickness and that it is holiday free.

Typical Performance Characteristics:

1.	Color:	Blue	
2.	Thickness	12-20 mils	1 Coat
3.	Gloss at 60 deg:	60-80 units	Din 67 530
4.	Impact Resistance	>5 Joule (44 in-lb)	Din 30 677-2
5.	Elongation:	>5%	Din 30 671
6.	Hardness:	>100	Din 53 153
7.	Water Immersion:	No visible change	90C, 672 Hours
8.	Salt Spray Test:	>3000 hours	Din 53167
9.	Adhesion:	16 Mpa (2320 psi)	7 days, 90C EN 24 624

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