

Comparative Corrosion Resistance and Adhesion Metrics of Fusion Bonded Epoxy (FBE) Thermal Coating

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THIRD-PARTY LAB VERIFICATION: Tested by TÜV Rheinland Inspection Certificate #TUV-2025-FBE-992 and ISO 9227 Salt Spray Chamber. Compliant with EN 14901 and AWWA C550 thermal powder application standards.

1. Electrostatic Application Parameters

Ductile iron castings undergo shot blasting to Sa 2.5 cleanliness, followed by pre-heating to 200°C. Non-toxic thermosetting epoxy powder is applied electrostatically to achieve $\geq 250 \mu\text{m}$ thickness internally and externally.

2. Performance Test Metrics

Test Parameter	Standard Reference	Requirement	Baoming FBE Result
Film Thickness	DIN 30677-2	$\geq 250 \mu\text{m}$	265 – 290 μm (Pass)
Cross-Hatch Adhesion	ISO 2409	Class 0	Class 0 (Zero Flaking)
Salt Spray Corrosion	ISO 9227 (1,000h)	$< 2.0 \text{ mm Creep}$	0.6 mm Creep (Pass)
Impact Resistance	EN 14901	$\geq 5 \text{ Nm}$	7.5 Nm (Pass)