













# QUALITY INSPECTION BEFORE SHIPMENT

INSPECTION ITEM	TYPICAL STANDARD / CONTROL BASIS	WHAT IS CHECKED BEFORE RELEASE
 <b>Surface Cleanliness</b>	ISO 21809-2 / CSA Z245.20 / Project ITP	Pipe surface should be free from oil, grease, moisture, dust, loose rust, and visible contamination. Soluble salt test can be added when required.
 <b>Blast Cleaning Grade</b>	Sa 2.5 / SSPC-SP 10 / NACE No. 2, or project requirement	Near-white metal blast cleaning is verified before powder application. Poor blasting may reduce adhesion between steel and the FBE coating layer.
 <b>Anchor Profile</b>	Epoxy powder TDS / Project coating procedure	Surface roughness profile is checked after blasting to support mechanical bonding.
 <b>Preheat Temperature</b>	Powder manufacturer TDS / Approved coating procedure	Pipe temperature is controlled before powder application, commonly around 180–250°C depending on pipe wall thickness, line speed, and epoxy powder grade.
 <b>FBE Pipe Coating Thickness</b>	ISO 21809-2 / CSA Z245.20 / AWWA C213 / Project DFT requirement	Dry film thickness is measured at specified locations. Standard external FBE coating is commonly 250–500 µm, but final acceptance follows project specification.
 <b>Holiday Detection</b>	ASTM G62 / CSA Z245.20 / Project ITP	Holiday testing is performed to detect pinholes, voids, skips, or coating discontinuities that may expose the steel surface to corrosion.
 <b>Adhesion Check</b>	Project specification / Approved coating procedure	Adhesion is checked to confirm that the cured epoxy layer is properly bonded to the prepared steel surface.
 <b>Cure Condition</b>	Epoxy powder TDS / Project inspection procedure	Cure condition is checked by the approved method, such as solvent rub, thermal analysis, or other project-required testing.
 <b>Impact / Damage Check</b>	CSA Z245.20 / AWWA C213 / Project requirement	Coated pipe surface is checked for handling damage, impact marks, dents, or coating cracks.
 <b>Pipe End Cutback</b>	Purchase order / Field joint coating requirement	Cutback length is measured to make sure pipe ends are suitable for welding, bevel protection, and field joint coating.
 <b>Repair Inspection</b>	Approved repair procedure / Project ITP	Repaired coating areas are visually checked, thickness checked, and holiday tested again. Repair location, method, and result should be recorded.
 <b>Marking and Documents</b>	PO / MTC / Coating report / Packing list	Pipe marking, heat number, coating batch, inspection records, repair log, packing list, and shipment photos should match before loading.