



OUR FLAGSHIP FACILITY

Wasco's Kuantan pipe coating facility - one of the world's most advanced coating facilities - is strategically located adjacent to major shipping routes in the South China Sea. This facility offers complete anti-corrosion coatings, concrete weight coating, internal flow assurance coating, thermal insulation coating, custom coatings and cathodic protection anodes, all in one location. The Kuantan facility also boasts a dedicated pipe storage area and advanced pipe asset tracking system, while its teams are well versed in sorting out logistical matters from the pipe mill to pipe installation locations. It also incorporates advanced HSE features.

Plant Capabilities

	Outer Diameter (")		Length (m)		Application Process
	min.	max.	min.	max.	
Anti Corrosion					
3LPE	4.0"	60"	9m	24m	Spray and Extrusion
3LPP	4.0"	60"	9m	24m	Spray and Extrusion
FBE	4.0"	60"	9m	24m	Spray
DFBE	4"	60"	9m	24m	Spray
AE	4"	48"	9m	13m	Spray and Wrap
Concrete Weight Coating					
Impingement	4"	60"	9m	12.8m	Impingement
Flow Assurance Coating					
Multi-layer polypropylene	4.0"	30"	9m	24m	Spray and Extrusion
Glass Syntactic Polyurethane	4.0"	30"	no limit	13m	Injection Mould
Pipe-in-Pipe	4"	30"	9m	13m	Foaming
Internal					
Internal Epoxy Coating	4"	60"	9m	19m	Spray
internal preservation linepipe	4"	60"	9m	19m	Spray
Custom Coating					
Custom Coatings	4"	48"	no limit	8.5m	Spray
Hanger flanges	4"	60"	no limit	8m	Spray
3 coat systems	4"	48"	no limit	8.5m	Spray
HSS	4"	60"	no limit	13m	Manual
AE bends	4"	60"	no limit	13m	Manual
CWC bends	4"	60"	no limit	13m	Gunnite
Internal preservation bends	4"	60"	no limit	8.5m	Blast
pipe in pipe bends	4"	30"	no limit	8.5m	Foaming



Accreditations

- ▶ **ISO-9001:2008:**
Quality Management System
- ▶ **ISO 14001:2004:**
Environmental Management System
- ▶ **OSHAS 18001:**
Occupational Safety and Health Management System
- ▶ Target to go for **ISO17025**
Laboratory Certification by 2015.

* ALL TYPE OF FLANGES CAN BE COATED INTERNALLY AND EXTERNALLY
IE:- FLANGES, ELBOWS, TEE PIECES, REDUCES, END CAPS, PIPE SPOOLS. IT CAN BE COATED EITHER WITH POWDER OR LIQUIDE EPOXY.

Access Method

Truck

Located within the confines of Kuantan Port, trucking route to plant site is approximately six kilometers on well paved asphalt roads. Trucking services to and from Singapore, Johor Bahru, Port Klang and Thailand are readily available from local transportation companies.

Marine

Multiple load in and load out operations are also possible with Wasco's exclusive jetty and crane, if required. This facility includes 3 multi-purpose cranes with 40 tones of capacity each, and is an all weather deep sea commercial port. The port handles hundreds of thousands of tones of linepipes per annum and has developed into one of the world's leading ports for the import of bare steel and re-export of coated pipes. It has 725m of multipurpose berth, 400m of container berth, 1,510m of liquid/chemical berth and 140m Service Jetty for pipe barges. Located on the east coast of Peninsular Malaysia, frequent feeder vessels ply Kuantan Port from Singapore, Port Klang and Tanjung Pelepas Port where container vessels call.



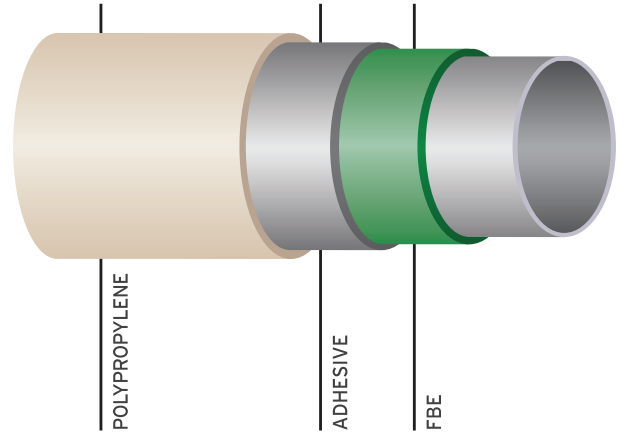
3 Layer Polypropylene Coating

Operating Conditions

3 layer polypropylene coating provides excellent corrosion protection, based on the use of a fusion bonded epoxy primer with the mechanical protection afforded by polypropylene. Suitable for application on water, oil and gas pipelines at service temperatures up to 140°C, 3LPP has an excellent track record.

Application and Standards

Wasco Coatings applies 3LPP in accordance with recognized international standards such as CSA Z245.21., DIN 30670, DIN 30678 and NF A49-711, as well as many customer specifications. Where required, Wasco Coatings can provide details of in house specifications for this product, or to help develop a projectspecific coating specification.



Typical Properties

Description	Reference Standard	Typical Value*
Cathodic Disbondment	CSA-Z245.20-02 (12.8) 24 hours, 3.5V, 65°C 28days, 1.5V, 20°C	1.5 to 2.5 2.5 to 3.5
Adhesion	CSA-Z245.20-02 (12.14) 75°C, 24 hours	Rating 1
Impact resistance	DIN 30670	15 - 20.0 J
Hardness	Shore D ASTM D2240-97 60	
Flexibility	CSA-Z245.20-02 (12.11) 3°/PPD @-30°C	Pass
Minimum Pipe Diameter		4.5"
Maximum Pipe Diameter		60"
Minimum Pipe Length		9.0 m
Maximum Pipe Length		24.4 m
Minimum Operating Temperature		-20°C
Maximum Operating Temperature		140°C

*Typical values are quoted but may vary as a result of surface treatments and materials used.



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