

ISO 18797-1:2016-09 (E)

Petroleum, petrochemical and natural gas industries - External corrosion protection of risers by coatings and linings - Part 1: Elastomeric coating systems - polychloroprene or EPDM

Contents		Page
Foreword		v
Introduction		vi
1	Scope	1
2	Normative references	1
3	Terms and definitions	3
4	Abbreviated terms	5
5	Pre-work requirements	6
5.1	General	6
5.2	Health, safety and environmental (HSE)	6
5.3	Qualification of coating/lining application and inspection personnel	6
6	Materials	7
6.1	General requirements	7
6.2	Material requirements	8
6.3	Materials packing, handling and storage	9
6.4	Coating materials	9
7	Bare pipes transportation, handling and storage	10
7.1	Transportation and handling of pipes	10
7.2	Storage of pipes	10
8	Surface preparation	10
8.1	General	10
8.2	Pipe imperfections/damages removal	11
8.3	Contaminants removal	11
8.4	Abrasive blast cleaning	11
9	Coating application for risers	13
9.1	General	13
9.2	Priming and coating on abrasive blast-cleaned surface	13
9.3	Polychloroprene or EPDM application and vulcanization	14
9.4	Manual coating application on clamps, guides, bolt holes, inner sections of flanges and pipe section used for modifications at worksites	15
9.5	Coating application of field joints	16
9.6	Coating repair	16
10	Inspection and testing	17
10.1	General	17
10.2	Testing of elastomer properties	17
10.2.1	General	17
10.2.2	Cure and hardness	17
10.2.3	Specific gravity	17
10.2.4	Rheological properties	17

10.2.5	Tensile strength, tear strength and elongation at break	17
10.2.6	Compression set	18
10.2.7	Abrasion resistance	18
10.2.8	Ozone resistance	18
10.2.9	Adhesion	18
10.2.10	Resistance to seawater	18
10.2.11	Thermal conductivity	18
10.2.12	Vulcanization characteristics (rotorless curemeters)	18
10.2.13	Cathodic disbondment	19
10.2.14	Volume resistivity	19
10.3	Inspection/testing of coated pipes	19
10.3.1	Visual inspection	19
10.3.2	Holiday detection	19
10.3.3	Thickness test	20
10.3.4	Adhesion (bond) test	20
10.3.5	Hardness testing	20
10.3.6	Ultrasonic inspection	20
10.3.7	Sound testing	20
10.3.8	Rejection	20
10.4	Inspection and testing of field joint coating	21
10.5	Test reports and certificate of compliance	21
11	Coating damage/defect repair	21
11.1	Defect acceptance criteria	21
11.2	Repair procedures	21
12	Handling and stacking of coated pipes	22
13	Quality requirements	22
14	Documentation	23
Annex A (informative)	inabatchcertificate	24
Annex B (normative)	Physical properties of polychloroprene or EPDM elastomer	25
Annex C (normative)	Riser pipe external coating progress chart	26
Bibliography	28