

DIN EN 14879-2:2007-02 (E)

Organic coating systems and linings for protection of industrial apparatus and plants against corrosion caused by aggressive media - Part 2: Coatings on metallic components

Contents

	Page
Foreword	5
1 Scope	6
2 Normative references	6
3 Terms and definitions	7
4 General	8
4.1 Selection criteria	8
4.1.1 General	8
4.1.2 Exposing media	8
4.1.3 Type and frequency of fluid loading	11
4.1.4 Thermal loading	11
4.1.5 Changes in temperature	11
4.1.6 Mechanical loading	12
4.1.7 Climatic influences	12
4.1.8 Additional requirements	12
4.2 Load profile	12
4.3 Requirements	12
4.3.1 Components	12
4.3.2 Coating materials	12
4.3.3 Coating system	13
4.3.4 Coated components	14
5 Coating systems	14
5.1 Laminate coating systems	14
5.1.1 Coating system design	14
5.1.2 Description of layers	15
5.1.3 General requirements	15
5.1.4 Coating process	17
5.1.5 Requirements for the coating system	19
5.2 Trowelled coating systems	20
5.2.1 Coating system design	20
5.2.2 Description of layers	21
5.2.3 General requirements	21
5.2.4 Coating process	22
5.2.5 Requirements for the coating system	24
5.3 Sprayed coating	26
5.3.1 Coating system design	26
5.3.2 Description of layers	26
5.3.3 General requirements	27
5.3.4 Application	28
5.3.5 Requirements for the coating system	29
5.4 Powder coating	31
5.4.1 Coating system design	31
5.4.2 Description of layers	32
5.4.3 Component design and surface condition	33
5.4.4 Coating materials	33

5.4.5	Ambient conditions	34
5.4.6	Surface preparation	34
5.4.7	Application	34
5.4.8	Requirements for the coating system	34
5.5	Protection of existent coatings	36
5.5.1	General	36
5.5.2	Packaging and handling	36
5.5.3	Storage	37
5.5.4	Assembly	37
5.5.5	Repair	37
 6	 Designation	 38
6.1	Laminate coating	38
6.2	Trowelled coating	38
6.3	Sprayed coating	39
6.4	Powder coating	39
 7	 Testing	 39
7.1	General	39
7.2	Suitability testing	39
7.3	Receiving inspection of coating material	40
7.3.1	General	40
7.3.2	Container marking	40
7.3.3	Viscosity or flow time	40
7.3.4	Density	40
7.3.5	Colour	40
7.3.6	Non-volatile matter content	40
7.3.7	Gel time	40
7.3.8	Binders	40
7.4	Testing of coating systems during application	40
7.4.1	General	40
7.4.2	Suitability of component for coating	40
7.4.3	Ambient conditions	41
7.4.4	Application method	41
7.4.5	Thickness of coating layers	41
7.5	Acceptance testing	41
7.5.1	General	41
7.5.2	Acceptance testing of coated component	41
7.5.3	Acceptance testing of specimens	41
7.6	Routine testing	42
7.7	Inspection report	42
 8	 Suitability verification and tests	 42
8.1	Requirements	42
8.1.1	General	42
8.1.2	Laboratory testing	43
8.1.3	In-service testing (field tests)	45
8.1.4	Testing on reference objects	45
8.2	Tests	45
8.2.1	Sample bodies	45
8.2.2	Fluid load, resistance and tightness	45
8.2.3	Thermal loading	47
8.2.4	Temperature change loading	47
8.2.5	Adhesion strength	47
8.2.6	Ageing behaviour	47
8.2.7	Dissipation capability	48
 Annex A (informative)	Specimen form	49
 Annex B (informative)	Information to be given by the coating material manufacturer	50
 Annex C (informative)	Information to be given by the coating manufacturer	51

Annex D (informative) Resistance of resins to various chemicals at ambient temperature	52
Annex E (normative) Testing the dissipation capability	53
E.1 General	53
E.1.1 Dissipation resistance	53
E.1.2 Ground dissipating resistance	53
E.2 Testing the dissipation resistance of test samples	53
E.2.1 Instruments	53
E.2.2 Test procedure	53
E.2.3 Test report	53
E.3 Measuring the ground dissipation resistance on the laid surface protection system	54
E.3.1 Instruments	54
E.3.2 Preparation	54
E.3.3 Test procedure	54
E.3.4 Test report	55
Annex F (normative) Test fluid groups for verification of suitability for material/media combinations	56
Annex G (informative) Selection criteria for surface protection systems	58
G.1 Load profiles and suitable protection for gutters, trenches, pipes etc	58
G.2 Load profiles and suitable protection for containers	59
Annex H (informative) Sample form for acceptance inspection report	60
A-Deviation: National deviation due to regulations, the alteration of which is for the time being outside the competence of the CEN/CENELEC member	61
Bibliography	62