

DIN 55633-2:2023-03 (E)

Paints and varnishes - Corrosion protection of steel structures by powder coating systems - Part 2: Assessment of epoxy cathaphoretic and powder coating systems and execution of coating

Contents

Page

Foreword	4
Introduction	5
1 Scope	6
2 Normative references	6
3 Terms and definitions.....	7
4 Corrosivity categories.....	9
5 Corrosion protection systems.....	11
5.1 General	11
5.2 Coating materials — piece work coating.....	11
5.2.1 Epoxy CDC coating materials.....	11
5.2.2 Powder coating materials.....	11
5.3 Durability.....	12
5.4 Requirements	13
5.4.1 Coating materials	13
5.4.2 Surface preparation and surface pre-treatment of unalloyed or low-alloy steel.....	13
5.4.3 Execution of coating	13
5.4.4 Film thickness of coating systems for piece work coatings.....	13
6 Corrosion protection design of the components.....	14
7 Packaging, transport, storage and assembly of components.....	14
8 Subsequent processing of coated components.....	14
9 Testing for quality assurance	14
9.1 General	14
9.2 Test pieces	15
9.3 Corrosion tests	15
9.3.1 General	15
9.3.2 Coating thickness	15
9.3.3 Condensation test.....	15
9.3.4 Salt spray test	16
9.3.5 Cross-cut test	17
10 Marking of the corrosion protection system.....	17
Annex A (informative) Examples of corrosion protection systems with assignment to corrosivity categories	21
Bibliography	23

Figures

Figure 1 — Salt spray test piece	17
--	----

Tables

Table 1 — Categories of corrosivity of the atmosphere and examples of typical environmental conditions.....	10
Table 2 — Typical binding agents for powder coatings	11
Table 3 — Test times for atmospheric corrosivity categories	16
Table 4 — Testing the coating system applied to unalloyed or low-alloy steel.....	18
Table 5 — Assessment of artificial ageing for the specified duration.....	20
Table A.1 — Examples of epoxy CDC coating systems and powder coating systems (piece work coating) on unalloyed steel or low-alloy steel.....	22