DIN 30678-1:2024-01 (E)

Polypropylen coatings of steel pipes and fittings - Part 1: Requirements and testings of factory-applied extruded coatings

Contents

Page

Foreword 5

1 Scope 6

2 Normative references 6

3 Terms and definitions 8

4 Symbols and abbreviations 8

5 Coating 9

6 Information to be supplied by the purchaser 9
6.1 Mandatory information 9
6.2 Order options 9

7 Application of the coating 10
7.1 General 10
7.2 Surface preparation 10
7.3 Structure of the coating 10
7.3.1 General 10
7.3.2 Epoxy resin primer 11
7.3.3 Polypropylene adhesive (PP adhesive) 11
7.3.4 Polypropylene coating 12
7.3.5 Cutback 12

8 Requirements and testing 12
8.1 General 12
8.2 Coating properties 12
8.3 Test methods 17
8.4 Inspection documents 17

9 Repairs 17
9.1 General 17
9.2 Minor damage 17
9.3 Serious damage 18

10 Marking 18

11 Handling, transportation and storage 18

Annex A (normative) Measuring thickness 19

A.1 General 19
A.2 Test report 19

Annex B (normative) Degree of cure of the epoxy resin layer 20

B.1 General 20
B.2 Apparatus 20
B.3 Description of method 20

B.3.1 Sampling 20
B.3.2 Measurement procedure 20
B.3.3 Evaluation 21
B.4 Test report 21

Annex C (normative) Cathodic disbondment (CD test) 22

C.1 General 22
C.2 Apparatus 22
C.3 Description of method 24
C.3.1 Sample preparation 24
C.3.2 Measurement procedure 24
C.3.3 Evaluation 24
C.4 Test report 25

Annex D (normative) Peel strength 26

D.1 General 26
D.2 Apparatus 26
D.3 Description of method 29
D.3.1 Sample preparation 29
D.3.2 Measurement procedure 29
D.3.3 Evaluation 29
D.4 Test report 29

Annex E (normative) Continuity (holiday detection) 30

E.1 General 30
E.2 Test apparatus 30
E.3 Procedure 30
E.4 Test report 31

Annex F (normative) Strain at break 32

F.1 General 32
F.2 Test apparatus 32
F.3 Description of method 32
F.3.1 Sample preparation 32
F.3.2 Measurement procedure 32
F.3.3 Evaluation 33
F.4 Test report 33

Annex G (normative) Impact resistance and low temperature impact resistance 34

G.1 General 34
G.2 Test apparatus 34
G.3 Description of method 34
G.3.1 Sample preparation 34
G.3.2 Procedure and evaluation 34
G.4 Test report 35

Annex H (normative) Indentation resistance 36

H.1 General 36
H.2 Test apparatus 36
H.3 Description of method 36
H.3.1 Sample preparation 36
H.3.2 Procedure and evaluation 36
H.4 Test report 36

Annex I (normative) Specific electrical coating resistance 37

I.1 General 37
I.2 Test apparatus 37
I.3 Description of method 37
I.3.1 Sample preparation 37
I.3.2 Procedure and evaluation 37
I.4 Test report 38

Annex J (normative) UV resistance 39

J.1 General 39
J.2 Apparatus 39
J.3 Description of method 39
J.3.1 Sample preparation 39
J.3.2 Measurement procedure 39
J.3.3 Evaluation 39
J.4 Test report 40

Annex K (normative) Thermal ageing resistance 41

K.1 General 41
K.2 Test apparatus 41
K.3 Description of method 41
K.3.1 Sample preparation 41
K.3.2 Measurement 41
K.3.3 Evaluation 41
K.4 Test report 41

Bibliography 43