DIN EN ISO 9351:2025-07 (E)

Galvanic anodes for cathodic protection in seawater and saline sediments (ISO 9351:2025)

Contents

Page

Foreword ... **iv**

Introduction ... **v**

1 Scope ... **1**

2 Normative references ... **1**

3 Terms and definitions ... **1**

4 Symbols and abbreviations ... **4**
4.1 Symbols ... 4
4.2 Abbreviations ... 5

5 Competence of personnel ... **5**

6 Galvanic anode materials and their properties ... **5**
6.1 General ... 5
6.2 Anode alloy composition ... 5
6.3 Electrochemical properties ... 6
6.4 Electrochemical testing ... 6
6.4.1 General ... 6
6.4.2 Performance testing ... 6
6.4.3 Short-term testing for quality control ... 7
6.5 Anode consumption rate ... 7

7 Anode design and acceptance criteria ... **8**
7.1 General ... 8
7.2 Chemical composition ... 9
7.3 Electrochemical properties ... 9
7.4 Anode shape ... 9
7.5 Physical properties ... 9
7.6 Anode core materials ... 10
7.7 Cable connections to anodes ... 11

8 Environmental impact ... **11**

Annex A (informative) **Seawater** ... **13**

Annex B (normative) **Physical tolerances for galvanic anodes** ... **14**

Annex C (informative) **Composition and performance properties for galvanic anodes** ... **19**

Annex D (informative) **Description of various electrochemical tests** ... **26**

Annex E (informative) **Environmental impact considerations** ... **29**

Annex F (informative) **Inspection and test plan (ITP)** ... **33**

Bibliography ... **40**