ISO/TR 5604:2024-02 (E)

Electrochemical noise measurement for assessing the protection of metal afforded by organic coatings

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Termsanddefinitions 1

4 Principles 2
4.1 Organically coated metal exposed to a corrosive environment - how a resistance measurement can indicate protection 2
4.2 Generation of electrochemical noise from bare and coated metal 3
4.3 Evaluation criteria 3

5 Apparatus 3
5.1 Test cell 3
5.2 Field or site work 3
5.3 Reference electrode 4
5.4 Working electrode 4
5.5 Electrolyte 4

6 Description of the measurement system 4

7 Electrodeconfigurations 5
7.1 General 5
7.2 Bridge (laboratory use) 5
7.3 Single substrate (laboratory use) 5
7.4 No connection to the substrate as used in the laboratory 6
7.5 Field measurement 7

8 Dummy cell and checking/calibration 7

9 Measurement 7

10 Data analysis and data treatment 8

11 Summary 8

Annex A (informative) Description of an experiment with resistors simulating a paint system 9

Annex B (informative) Data analysis and data treatment 11

Annex C (informative) Comparison of noise data from bare metal compared with organically coated metal 12

Bibliography 14