ISO 10308:2006-01 (E)

Metallic coatings - Review of porosity tests

Contents

Page

Foreword iv

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Principle 2

5 Common features of porosity tests 2

6 Test specimens 2

7 Specific porosity tests 2
7.1 Alizarin test 2
7.2 Anthraquinone test 3
7.3 Cadmium sulfide test 3
7.4 Copper sulfate (Preece) test 3
7.5 Copper sulfate (Dupernell) test 3
7.6 Corrodkote test (CORR) 4
7.7 Electrographic tests 4
7.8 Ferrocyanide test 5
7.9 Ferron test 5
7.10 Ferroxyl test 6
7.11 Flowers-of-sulfur porosity test 6
7.12 Hot-water test 6
7.13 Hydrogen sulfide or sulfur dioxide/hydrogen sulfide test 6
7.14 Haematoxylin test 7
7.15 Magneson test 7
7.16 Nitric acid vapour test 7
7.17 Oxine test 8
7.18 Permanganate test 8
7.19 Polysulfide test 8
7.20 Porotest test 8
7.21 Salt spray tests [neutral (NSS), acetic (AASS) and cuproacetic (CASS)] 9
7.22 Sulfur dioxide test 9
7.23 Sulfurous acid/sulfur dioxide vapour test 9
7.24 Thiocyanate test 9
7.25 Thioacetamlde test (TAA) 10
7.26 Watch-case acetic acid test 10
7.27 Watch-case sodium bisulfite test 10

Annex A (normative) Tables of porosity tests 11

Annex B (informative) Typical report and evaluation of porosity tests 14

Annex C (informative) Schematic representation of types of pore 16

Annex D (informative) Classification of discontinuities in metallic and other inorganic coatings 17

Annex E (informative) Classification of methods of testing coating porosity 18

Annex F (informative) Alphabetical list of tests by substrate and coating 19

Bibliography 30