DIN EN ISO 16773-2:2016-12 (E)

Electrochemical impedance spectroscopy (EIS) on coated and uncoated metallic specimens - Part 2: Collection of data (ISO 16773-2:2016)

Contents

Page

European foreword ... **3**

Foreword ... **4**

1 Scope ... **5**

2 Normative references ... **5**

3 Terms and definitions ... **5**

4 Principle ... **5**

5 Electrochemical cell ... **6**
5.1 General ... 6
5.2 Electrodes ... 7
5.3 Exposed area ... 7
5.4 Electrolyte ... 7

6 Procedure ... **8**
6.1 Grounding ... 8
6.2 Shielding ... 8
6.3 Cell cable ground contacts ... 8
6.4 Local conditions ... 8
6.5 Measurement equipment characteristics ... 9
6.6 Confidence test ... 9
6.6.1 General ... 9
6.6.2 Use of interlaboratory test cells for confidence test ... 10
6.6.3 Error estimate and accuracy ... 10
6.7 Specimens ... 10
6.7.1 Preconditioning of specimens ... 10
6.7.2 Environmental control ... 10
6.8 Evaluation of laboratory and field coating specimens ... 10
6.9 Number of specimens and repeatability of results ... 11

7 Instrumental parameters ... **11**
7.1 General ... 11
7.2 Conditioning potential and conditioning time ... 12
7.3 Frequency spectrum ... 12
7.4 Data point spacing and points per decade ... 12
7.5 D.C. potential control ... 12
7.6 Amplitude of perturbation ... 13
7.7 Current range settings ... 13
7.8 Data averaging settings ... 13

8 Data presentation ... **13**
8.1 General ... 13
8.2 Bode plot ... 13
8.3 Nyquist plot ... 14

9 Exchange file format ... **15**

10 Test report ... **15**

Annex A (informative) **Determination of maximum measurable impedance with the open-lead test** ... **17**

Annex B (normative) **Data exchange file format** ... **19**

Annex C (informative) **Considerations about the precise determination of the exposed area** ... **23**

Bibliography ... **28**