

ISO 16573-2:2022-02 (E)

Steel - Measurement method for the evaluation of hydrogen embrittlement resistance of high-strength steels - Part 2: Slow strain rate test

Contents	Page
Foreword	iv
Introduction	v
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Principle	1
5 Specimen preparation	2
5.1 General	2
5.2 Cylindrical type specimen	2
5.3 Flat type specimen	3
6 Hydrogen charging methods	4
6.1 General	4
6.2 Cathodic charging	4
6.2.1 Hydrogen charging solution	4
6.2.2 Hydrogen charging conditions	4
6.3 Hydrogen absorption in aqueous solution at free corrosion potential	5
6.4 Hydrogen absorption in atmospheric corrosion environments	5
6.5 Hydrogen absorption in high pressure hydrogen gas	5
7 Preparation of electroplating solution and electroplating condition	5
7.1 General	5
7.2 Electroplating solution	5
7.3 Electroplating conditions	6
8 Slow strain rate test	6
8.1 General	6
8.2 Procedure	6
8.3 Presentation of the results	7
9 Post-test specimen treatment	9
10 Hydrogen thermal desorption	10
10.1 General	10
10.2 Experimental apparatus (gas chromatograph)	10
10.3 Experimental apparatus (mass spectrometry)	11
11 Test report	11
Bibliography	12