ISO 8483:2019-08 (E)

Gla ss-reinforced thermosetting plastics (GRP) pipes and fittings - Test methods to prove the design of bolted flange joints

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Normative references 1

3 Terms and definitions 1

4 Principle 2

5 Apparatus 2
5.1 End-sealing devices 2
5.1.1 General 2
5.1.2 Capable of applying the end loads 3
5.1.3 Not capable of applying the end loads 3
5.2 Supports 3
5.2.1 End thrust supports 3
5.2.2 Straps or cradles 3
5.2.3 Special supports 3
5.3 Source of hydrostatic pressure 3
5.4 Pressure gauges 3
5.5 Vacuum pump 3
5.6 Means for applying the required bending force 3
5.7 Bolt torque test apparatus 3

6 Test pieces 4
6.1 Test arrangement for tests detailed in 9.2, 9.4 and 9.5 4
6.2 Test arrangement for tests detailed in 9.3 5
6.3 Test arrangement for tests detailed in 9.6 7
6.4 Number of test pieces 8

7 Conditioning 8

8 Test temperature 8

9 Procedures 8
9.1 General 8
9.2 Negative pressure 9
9.3 Resistance to bending with pressure and end thrust 10
9.3.1 Method A 10
9.3.2 Method B 10
9.4 Resistance to internal cyclic pressure 11
9.5 Resistance to maintained internal pressure 11
9.6 Resistance to bolt-tightening torque 12

10 Test report 12

Annex A (normative) Calculation of the additional force FA and limiting deflection used in 9.3, Method A 14

Annex B (normative) Calculation of the bending load FB used in 9.3, Method B 15