ISO 13678:2010-12 (E)

Petroleum and natural gas industries - Evaluation and testing of thread compounds for use with casing, tubing, line pipe and drill stem elements

Contents

Page

Foreword iv

Introduction v

1 Scope 1

2 Conformance 1
2.1 Dual citing of normative references 1
2.2 Units of measurement 1

3 Normative references 2

4 Terms and definitions 2

5 Thread compound characteristics 3
5.1 Product characteristics 3
5.2 Physical and chemical characteristics 4

6 Thread compound performance properties 8
6.1 Small-scale test 8
6.2 Frictional properties 8
6.3 Extreme surface contact pressure (gall resistance) properties for casing, tubing and line pipe 9
6.4 Fluid sealing properties for casing, tubing and line pipe 10

7 Quality assurance and control 10

8 Marking requirements 11
8.1 Marking 11
8.2 Labelling 11

Annex A (informative) API modified thread compound 12

Annex B (normative) Casing, tubing and line pipe reference standard formulation 16

Annex C (normative) Penetration test 18

Annex D (normative) Evaporation test 19

Annex E (normative) Oil separation test 20

Annex F (normative) Application/adherence test 21

Annex G (normative) Gas evolution test 22

Annex H (normative) Water leaching test 26

Annex I (informative) Frictional properties test 29

Annex J (informative) Extreme surface contact pressure (galling) test for casing, tubing and line pipe 39

Annex K (informative) Fluid sealing test for casing, tubing and line pipe 40

Annex L (informative) Corrosion inhibition tests 43

Annex M (informative) Compound high-temperature stability test 44

Bibliography 45