DIN EN ISO 27509:2013-10 (E)

Petroleum and natural gas industries - Compact flanged connections with IX seal ring (ISO 27509:2012 + Cor. 1:2013); English version EN ISO 27509:2012 + AC:2013, only on CD-ROM

Inhalt

Seite

Introduction 4

1 Scope 7

2 Normative references 7

3 Terms, definitions, symbols and abbreviated terms 8
3.1 Terms and definitions 8
3.2 Symbols 8
3.3 Abbreviated terms 10

4 Design 11
4.1 General 11
4.2 Design principles 11
4.3 Assembly requirements 12
4.4 Standard components 13
4.5 Units of measurements 14
4.6 Rounding 14
4.7 Compliance with piping design codes 14
4.8 Compliance to this International Standard 14

5 Designation 14
5.1 Designation of flanges 14
5.2 Designation of seal rings 15

6 Materials 15
6.1 General 15
6.2 Flange materials 16
6.3 Bolting materials 16
6.4 Seal ring materials 17

7 Strength, pressure/temperature ratings and leak tightness 18
7.1 General 18
7.2 Pressure/temperature ratings 18
7.3 Pressure testing and leak tightness 19

8 Dimensions of flanges 19
8.1 General 19
8.2 Weld neck (WN) dimensions 21
8.3 Blind flange (BL) dimensions 28
8.4 Integral flange (IF) dimensions 31
8.5 Rigid interface (RI) dimensions 38
8.6 Dimensions of paddle blanks (PB) and paddle spacers (PS) 41
8.7 Handle and lifting lugs 44
8.8 Dimensions of orifice spacers (OS) 45
8.9 Dimensions of reducing threaded flanges (RTs) 46
8.10 Auxiliary connections 47
8.11 Flange tolerances 47
8.12 Surface finish 49

9 Marking of flanges 49
9.1 Flanges other than integral flanges 49
9.2 Manufacturer's name or trademark 50
9.3 Nominal size 50

9.4 Pressure class designation 50
9.5 Pipe dimensions 50
9.6 Material designation 50
9.7 Identification of internally threaded flanges 50
9.8 Material traceability 51
9.9 Marking examples 51
9.10 Stamping 51
10 Dimensions of seal rings 52
11 Inspection and testing of seal rings 55
12 Coating and colour coding 55
13 Marking of seal rings 55
14 Quality management systems 55
15 Bolt dimensions and masses 55
Annex A (normative) Pressure temperature ratings and shear capacity of seal rings 56
Annex B (informative) Integral flange angle selection 61
Annex C (informative) Quality management system 71
Annex D (normative) Bolt dimensions and masses 72
Annex E (informative) Handling, installation, assembly and repair of flanges 78
Annex F (informative) Mass of flanges 91
Annex G (informative) Metric bolting 102
Annex H (informative) Additional information on bibliographical references 104
Bibliography 105