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Contents

1	Scope.....	1
2	Normative References	1
3	Terms, Definitions, Abbreviated Terms, and Symbols.....	4
3.1	Terms and Definitions.....	4
3.2	Abbreviated Terms.....	15
3.3	Symbols.....	15
4	Application and Performance	17
4.1	Applicability	17
4.2	Performance Requirements—General	22
4.3	Service Conditions.....	22
4.3.1	Pressure Ratings.....	22
4.3.2	Temperature Ratings	23
4.3.3	Material Classes	23
4.3.4	Product Specification Level.....	25
5	Design.....	26
5.1	Design Methods.....	26
5.1.1	End and Outlet Connectors.....	26
5.1.2	Hangers, Back-pressure Valves, Lock Screws, and Stems.....	27
5.1.3	Bodies, Bonnets, and Other End Connectors.....	27
5.1.4	Other Parts.....	28
5.1.5	Equipment-specific Requirements	28
5.2	Design Tolerances	28
5.3	Design Documentation	28
5.4	Design Review and Verification.....	28
5.5	Design Validation	28
6	Materials.....	28
6.1	General	28
6.1.1	Applicability and Alloys.....	28
6.1.2	Material Forming Processes	29
6.2	Written Specifications.....	29
6.2.1	Applicability	29
6.2.2	Metallic Requirements	29
6.2.3	Nonmetallic Requirements.....	29
6.3	Bodies, Bonnets, and End and Outlet Connectors.....	30
6.3.1	Materials.....	30
6.3.2	Material Qualification Testing.....	31
6.3.3	Processing	33
6.3.4	Heat-treating	34
6.3.5	Chemical Composition	34
6.4	Qualification Test Coupons.....	35
6.4.1	General	35
6.4.2	Equivalent Round.....	36
6.4.3	Processing.....	38
6.4.4	Material Qualification	39
6.5	Production Heat-treating Equipment	40
6.5.1	General	40
6.5.2	Instrument Accuracy.....	40
6.5.3	Instrument Calibration	40
6.5.4	Production Type Equipment—Batch-type Furnaces.....	40
6.5.5	Production Type Equipment—Continuous-type Furnaces	41

7	Welding.....	41
7.1	General	41
7.2	Nonpressure-containing Welds Other Than Weld Overlays.....	41
7.2.1	Welding Procedure/Performance	41
7.2.2	Application.....	42
7.3	Pressure-containing Fabrication Welds	42
7.3.1	General	42
7.3.2	Joint Design.....	42
7.3.3	Materials.....	42
7.3.4	Welding Procedure Qualifications.....	42
7.3.5	Welder Performance Qualification	42
7.3.6	Welding Requirements	44
7.3.7	Post-weld Heat-treatment.....	45
7.3.8	Welding Controls.....	45
7.4	Pressure-containing Repair Welds.....	46
7.4.1	General	46
7.4.2	Welding Procedure Qualifications.....	46
7.4.3	Weld Repair of Castings	46
7.4.4	Bolt Hole, Tapped Hole, and Machined Blind Hole Repair.....	47
7.5	Weld Overlay.....	47
7.5.1	Corrosion-resistant Overlay (Including Ring Grooves)	47
7.5.2	Weld Overlay for Other Than Corrosion Resistance	49
7.5.3	Repair of Weld Overlays	50
8	Bolting	50
8.1	Closure Bolting.....	50
8.1.1	Tensile Stress	50
8.1.2	Quality	50
8.1.3	Studded Outlet Connection.....	50
8.1.4	Closure Bolting Records	51
8.1.5	Closure Bolting Marking.....	51
8.1.6	Impact Test Marking.....	51
8.2	Closure Bolting for Flanged and Studed End and Outlet Connectors	51
8.2.1	General	51
8.2.2	Design.....	51
8.2.3	Materials	51
8.3	Other Closure Bolting	54
8.3.1	General	54
8.3.2	Design.....	54
8.3.3	Materials	54
8.3.4	Quality	55
9	Packing Mechanisms, Pressure Boundary Penetrations, and Ports.....	55
9.1	Packing Mechanisms	55
9.1.1	Performance Requirements	55
9.1.2	Design	55
9.2	Fittings and Pressure Boundary Penetrations.....	55
9.2.1	General	55
9.2.2	Performance Requirements	55
9.2.3	Design	55
9.2.4	Materials.....	56
9.2.5	Marking.....	56
9.2.6	Storing and Shipping	56
9.2.7	Testing.....	56
9.2.8	Quality Requirements	56
9.3	Test, Gauge, Vent, and Injection Connector Ports	56
9.3.1	Sealing.....	56

9.3.2	Vent and Injection Connector Ports	56
9.3.3	Test and Gauge Connector Ports	56
10	Quality Control	58
10.1	Application	58
10.2	Measuring and Testing Equipment	58
10.2.1	General	58
10.2.2	Pressure-measuring Devices	59
10.3	Personnel Qualifications	59
10.3.1	Nondestructive Examination Personnel	59
10.3.2	Visual Examination Personnel	59
10.3.3	Welding Inspectors	60
10.3.4	Other Personnel	60
10.4	Requirements	60
10.4.1	General	60
10.4.2	Bodies, Bonnets, End and Outlet Connectors, and Clamp Hub End Connectors	60
10.4.3	Stems	73
10.4.4	Valve Bore Sealing Mechanisms and Choke Trim	74
10.4.5	Ring Gaskets and Nonintegral Metal Seals	74
10.4.6	Nonmetallic Seals	78
10.4.7	Assembled Equipment—General	80
10.4.8	Mandrel-type Hangers	81
10.4.9	Slip-type Hangers	85
10.4.10	Bullplugs, Valve-removal Plugs, Back-pressure Valves, and Fittings	86
11	Factory Acceptance Testing	87
11.1	General	87
11.1.1	Scope and Applicability	87
11.1.2	Measurement, Monitoring, and Recording Equipment	89
11.1.3	Test Sequence	89
11.1.4	Leak Detection	89
11.2	Hydrostatic Testing	89
11.2.1	Hydrostatic Testing—General Requirements	89
11.2.2	Hydrostatic Test Acceptance Criteria	90
11.2.3	Hydrostatic Shell Test	90
11.2.4	Hydrostatic Seat Tests and Functional Tests—Valves	92
11.2.5	Conditional Hydrostatic Body Test—PSL 1, PSL 2, and PSL 3	94
11.2.6	Hydrostatic Testing of Back-pressure Valves	94
11.3	Gas Testing—PSL 3G and PSL 4	94
11.3.1	Gas Testing—General Requirements	94
11.3.2	Gas Test Acceptance Criteria—General Requirements	95
11.3.3	Gas Body Test	95
11.3.4	Gas Seat Test—Valves	96
11.3.5	Gas Backseat Test—Gate Valves	96
11.3.6	Conditional Gas Body Test	97
11.4	Drift Testing	98
11.4.1	Full-bore Valves	98
11.4.2	Valves with Nonstandard Bore Sizes	99
11.4.3	Trim Assemblies	99
12	Equipment Marking	99
12.1	Marking Requirements	99
12.2	Marking Method	99
12.3	Nameplates	99
12.4	Hidden Marking	99
12.5	Thread Marking	100
12.6	Size Marking	101

12.7	Temperature Marking.....	101
12.8	Hardness Tests.....	101
12.9	Ring Grooves.....	101
12.10	Clamp Hub End Connectors.....	101
13	Storing and Shipping.....	101
13.1	Draining after Testing.....	101
13.2	Corrosion Protection.....	101
13.3	Sealing-surface Protection.....	102
13.4	Assembly and Maintenance Instructions.....	102
13.5	Ring Gaskets.....	102
13.6	Age Control and Storage of Nonmetallic Seals.....	102
14	Equipment-specific Requirements.....	102
14.1	Integral, Blind, and Test Flanges.....	102
14.1.1	General Application.....	102
14.1.2	Design.....	103
14.1.3	Materials.....	107
14.1.4	Quality Control/Testing.....	107
14.1.5	Marking.....	107
14.1.6	Storing and Shipping.....	108
14.2	Ring Gaskets.....	108
14.2.1	General.....	108
14.2.2	Design.....	108
14.2.3	Materials.....	109
14.2.4	Quality Control/Testing.....	110
14.2.5	Marking.....	110
14.2.6	Storing and Shipping.....	110
14.3	Threaded Connectors.....	110
14.3.1	General.....	110
14.3.2	Design.....	111
14.3.3	Materials.....	111
14.3.4	Quality Control/Testing.....	111
14.3.5	Marking.....	112
14.3.6	Storing and Shipping.....	112
14.4	Tees and Crosses.....	112
14.4.1	General.....	112
14.4.2	Design.....	112
14.4.3	Materials.....	112
14.4.4	Quality Control/Testing.....	112
14.4.5	Marking.....	112
14.4.6	Storing and Shipping.....	113
14.5	Bullplugs.....	113
14.5.1	General.....	113
14.5.2	Design.....	113
14.5.3	Materials.....	114
14.5.4	Quality Control/Testing.....	114
14.5.5	Marking.....	114
14.5.6	Storing and Shipping.....	114
14.6	Valve Removal Plugs.....	114
14.6.1	General.....	114
14.6.2	Design.....	115
14.6.3	Materials.....	115
14.6.4	Quality Control/Thread Gauging.....	115
14.6.5	Marking.....	116
14.6.6	Storing and Shipping.....	116
14.7	Top Connectors.....	116

14.7.1	General	116
14.7.2	Design.....	116
14.7.3	Materials	117
14.7.4	Quality Control/Testing/Welding.....	117
14.7.5	Marking.....	117
14.7.6	Storage and Shipping	117
14.8	Crossover Connectors.....	118
14.8.1	General	118
14.8.2	Design.....	121
14.8.3	Materials	121
14.8.4	Quality Control/Testing.....	122
14.8.5	Marking.....	122
14.8.6	Storing and Shipping	122
14.9	Other End Connectors	122
14.9.1	General	122
14.9.2	Design.....	122
14.9.3	Materials	123
14.9.4	Quality Control/Testing.....	123
14.9.5	Marking.....	123
14.9.6	Storing and Shipping	123
14.10	Spools (Adapter and Spacer).....	123
14.10.1	General	123
14.10.2	Design.....	123
14.10.3	Materials	124
14.10.4	Quality Control/Testing.....	124
14.10.5	Marking.....	124
14.10.6	Storing and Shipping	124
14.11	Valves	124
14.11.1	General	124
14.11.2	Design.....	128
14.11.3	Materials	130
14.11.4	Quality Control/Testing.....	131
14.11.5	Marking.....	131
14.11.6	Storing and Shipping	132
14.12	Back-pressure Valves	132
14.12.1	General	132
14.12.2	Design.....	132
14.12.3	Materials	133
14.12.4	Quality Control/Testing.....	133
14.12.5	Marking.....	133
14.12.6	Storing and Shipping	133
14.13	Casing and Tubing Hangers (Slip- and Mandrel-type)	133
14.13.1	General	133
14.13.2	Design.....	133
14.13.3	Materials	137
14.13.4	Quality Control/Testing.....	139
14.13.5	Marking.....	139
14.13.6	Storing and Shipping	140
14.14	Casing and Tubing Heads	141
14.14.1	General	141
14.14.2	Design.....	141
14.14.3	Materials	145
14.14.4	Quality Control/Testing.....	145
14.14.5	Marking.....	145
14.14.6	Storing and Shipping	146
14.15	Chokes.....	146

14.15.1	General	146
14.15.2	Design.....	148
14.15.3	Materials	149
14.15.4	Quality Control/Testing.....	149
14.15.5	Marking.....	149
14.15.6	Storing and Shipping	150
14.16	Actuators.....	150
14.16.1	General	150
14.16.2	Design.....	150
14.16.3	Materials	151
14.16.4	Quality Control/Testing.....	151
14.16.5	Marking.....	153
14.16.6	Storage and Shipping	154
14.17	Safety Valves, Shutdown Valves, and Actuators	154
14.17.1	General	154
14.17.2	Design.....	154
14.17.3	Materials	157
14.17.4	Quality Control/Testing.....	157
14.17.5	Marking.....	157
14.17.6	Storage and Shipping	158
14.18	Tree Assemblies	158
14.18.1	General	158
14.18.2	Design.....	158
14.18.3	Materials	158
14.18.4	Quality Control/Testing/Assembly	159
14.18.5	Marking.....	159
14.18.6	Storing and Shipping	159
15	Records	159
15.1	General	159
15.1.1	NACE MR0175/ISO 15156 Record Requirements.....	159
15.1.2	Record Control	159
15.2	Records Maintained by Manufacturer	159
15.2.1	Records of Pressure Tests.....	159
15.2.2	Body, Bonnet, End and Outlet Connectors, Stem, Valve Bore Sealing Mechanism, Mandrel Tubing Hanger, Mandrel Casing Hanger, Slip Bowl, and Slip Segment Records	160
15.2.3	Ring Gaskets and Nonintegral Metal Seals Records.....	161
15.2.4	Closure Bolting Records	162
15.2.5	Nonmetallic Sealing Material Records	162
15.2.6	Bullplugs, Valve-removal Plugs, and Back-pressure Valve Records	162
15.2.7	Assembled Equipment Records	162
15.2.8	Choke Trim Records	162
15.3	Records Furnished to Purchaser	163
15.3.1	General	163
15.3.2	Body, Bonnet, End and Outlet Connectors, Stem, Valve Bore Sealing Mechanism, Mandrel Tubing Hanger, Casing Hanger, and Back-pressure Valve Records	163
15.3.3	Ring Gasket and Nonintegral Metal Seals Records.....	163
15.3.4	Closure Bolting Records	163
15.3.5	Nonmetallic Sealing Material Records	163
15.3.6	Slip Hanger Records	163
15.3.7	Assembled Equipment Records	163
15.4	SSV, USV, and BSDV Records	164
15.4.1	General	164
15.4.2	Shipping Report	164
15.4.3	Test Data Sheet	164
15.4.4	Records Furnished to Purchaser	164

15.4.5	Minimum Contents of Manufacturer's Operating Manual	166
15.4.6	Failure Reporting.....	166
Annex A	167
Annex B (informative)	Purchasing Guidelines.....	168
Annex C (informative)	Conversion Procedures—Units of Measure	187
Annex D (normative)	Dimensional Tables—SI Units	191
Annex E (normative)	Dimensional Tables—USC Units	251
Annex F (informative)	Design Validation Procedures for PR2 (PR2F Level)	311
Annex G (informative)	Design and Rating of Equipment for Use at Elevated Temperatures	347
Annex H (informative)	Recommended Assembly at Closure Bolting.....	351
Annex I (informative)	Recommended Bolt Lengths.....	356
Annex J (normative)	Weld-neck Flanges	365
Annex K (informative)	Top Connectors	369
Annex L (informative)	Segmented Flanges	382
Annex M (normative)	Heat-treat Equipment Survey	391
Bibliography	393

Figures

Figure 1	—Typical Wellhead Assembly Nomenclature	19
Figure 2	—Typical Wellhead Assembly Nomenclature	20
Figure 3	—Typical Tree Nomenclature.....	21
Figure 4	—Equivalent Round Models.....	37
Figure 5	—Test and Gauge Connector Ports for 103.5 MPa and 138.0 MPa (15,000 psi and 20,000 psi) Rated Working Pressure.....	57
Figure 6	—Ring Gasket Hardness Test Location	77
Figure 7	—Crossover Spool with Restricted-area Packoff Supported by the Lower Head.....	119
Figure 8	—Crossover Spool with Restricted-area Packoff Supported by the Upper Spool.....	119
Figure 9	—Multistage Crossover Spool.....	120
Figure 10	—Crossover Adapter	120
Figure 11	—Single-string and Dual-string Multiple Valve Assemblies	125
Figure 12	—Regular Swing Check Valve	126
Figure 13	—Full-opening Swing Check Valve	127
Figure 14	—Regular Lift Check Valve	127
Figure 15	—Typical Reduced-opening Vertical Bore.....	143
Figure 16	—Typical Adjustable Choke.....	147
Figure 17	—Typical Positive Choke	147
Figure 18	—Example of a Safety Valve Shipping Report	164
Figure 19	—Example of a Safety Valve Factory Acceptance Test Data Sheet.....	165
Figure B.1	—Wellhead Equipment Data Sheet—General.....	169
Figure B.2	—Wellhead Equipment Data Sheet—Casing-head Housing	170
Figure B.3	—Wellhead Equipment Data Sheet—Casing-head Spool.....	171
Figure B.4	—Wellhead Equipment Data Sheet—Tubing-head Spool.....	172
Figure B.5	—Wellhead Equipment Data Sheet—Crossover Flange.....	173
Figure B.6	—Wellhead Equipment Data Sheet—Tubing-head Adapter	173
Figure B.7	—Wellhead Equipment Data Sheet—Tree and Choke	174
Figure B.8	—Wellhead Equipment Data Sheet—Multistage Crossover Spool	175
Figure B.9	—Wellhead Equipment Data Sheet—Wellhead Safety Valves	177
Figure B.10	—Equipment Data Sheet—Boarding Shutdown Valves	177
Figure B.11	—Wellhead Equipment Data Sheet—Choke Sizing.....	178

Figure B.12—Wellhead Equipment Data Sheet—Actuator and Bonnet	179
Figure B.13—Typical Wellhead and Tree Configuration for a 34.5 MPa (5000 psi) Rated Working Pressure	180
Figure B.14—Typical Wellhead and Tree Configuration for a 69.0 MPa (10,000 psi) Rated Working Pressure	181
Figure B.15—Recommended Minimum PSL for Primary Parts	183
Figure F.1—Test Procedure	320
Figure F.2—Load Cycle Testing for Hangers	336
Figure F.3—Group 2 and Group 3 Hangers	337
Figure F.4—Group 3 Hangers with Crossover Seal.....	338
Figure F.5—Pressure/Temperature Cycles for Group 3 Slip and Mandrel-type Hangers without Bottom Casing Packoff.....	340
Figure F.6—Pressure/Temperature Cycles for Group 3 Slip and Mandrel-type Hangers with Bottom Casing Packoff Tested Separately	341
Figure F.7—Pressure/Temperature Cycles for Group 3 Slip and Mandrel-type Hangers with Bottom Casing Packoff Tested Concurrently	341
Figure F.8—Pressure/Temperature Cycles for Group 3 Slip and Mandrel-type Hangers with Bottom Casing Packoff Tested Concurrently	342
Figure H.1—Recommended Bolting Make-up Patterns.....	352
Figure I.1—Flange Bolting Configurations	356
Figure I.2—Studded Bolting Configurations	356
Figure J.1—Weld-neck Flange Dimensions.....	366
Figure J.2—Recommended Weld End Preparation for Type 6B and 6BX Weld-end Flanges	368
Figure K.1—Top Connector for Tree—SI Units	371
Figure K.2—Top Connector for Tree—USC Units.....	375
Figure K.3—Back-up Ring for Seal—SI Units.....	379
Figure K.4—Back-up Ring for Seal—USC Units	381
Figure M.1—Thermocouple Locations—Rectangular Furnace (Working Zone).....	391
Figure M.2—Thermocouple Locations—Cylindrical Furnace (Working Zone)	392

Tables

Table 1—Pressure Ratings for Internal Threaded End or Outlet Connectors	23
Table 2—Temperature Ratings	23
Table 3—Material Requirements.....	24
Table 4—Applicability of Product Specification Levels	26
Table 5—PSL Application.....	26
Table 6—Tolerances, Unless Otherwise Stated	28
Table 7—Standard and Nonstandard Material Applications for Bodies, Bonnets, and End and Outlet Connectors	31
Table 8—Standard Material Property Requirements for Bodies, Bonnets,.....	31
Table 9—Charpy V-notch Impact Requirements—10 mm x 10 mm	32
Table 10—Adjustment Factors for Subsize Impact Specimens (PSL 1 to PSL 3)	32
Table 11—Steel Composition Limits for Bodies, Bonnets, and End and Outlet Connector Materials	35
Table 12—Phosphorus and Sulfur Concentration Limits	35

Table 13 (intentionally removed with Addendum 2)

Table 14—Chemical Composition of the Nickel-based Alloy UNS N06625.....	48
Table 15—Minimum Requirements for Closure Bolting.....	50
Table 16—Acceptable Closure Bolting for 6B and 6BX Flanged and Studded Connections	51
Table 17—Allowable Closure Bolting by Temperature Class.....	53
Table 18—Threads for Closure Bolting Used on 6B and 6BX Flanged and Studded End or Outlet Connectors	53
Table 19—Casting Specification Level Cross-reference to PSL	61
Table 20—Minimum Hardness Values	62
Table 21—Maximum Length of Elongated Indication.....	68
Table 22—Requirements for Welding Bodies, Bonnets, and End and Outlet Connectors	69

Table 23—Maximum Length of RT Discontinuities.....	71
Table 24—Maximum Length of UT Discontinuities.....	71
Table 25—Requirements for Stems.....	73
Table 26—Requirements for Valve Bore Sealing Mechanisms and Choke Trim.....	75
Table 27—Hardness Requirements.....	78
Table 28—Inspection Locations for Ring Gaskets.....	78
Table 29—Physical Property Data for Qualification of Homogeneous Elastomers.....	80
Table 30—Applicability of Factory Acceptance Testing.....	88
Table 31—Summary of Factory Acceptance Testing Requirements by Equipment Type and PSL.....	88
Table 32—Pressure-holding Periods for Hydrostatic Testing.....	91
Table 33—Hydrostatic Shell Test Pressure.....	92
Table 34—Drift Dimensions for Individual Valves and Trees.....	98
Table 35—Guide to Marking Requirements.....	100
Table 36—Rated Working Pressures and Size Ranges of Flanges.....	103
Table 37—Marking for Blind and Test Flanges.....	107
Table 38—Marking for Studded and Flanged Outlet Connectors.....	108
Table 39—Marking for Ring Gaskets.....	110
Table 40—Marking for Tees and Crosses.....	113
Table 41—Recommended Bullplug Installation Procedure.....	114
Table 42—Marking for Top Connectors.....	118
Table 43—Performance Requirements for Crossover Connectors.....	121
Table 44—Marking for Crossover Connectors.....	122
Table 45—Performance Requirements for Other End Connectors.....	123
Table 46—Marking for Spools.....	124
Table 47—Operating Cycle Requirements for Valves.....	128
Table 48—Marking for Valves.....	132
Table 49—Marking for Actuated Valves (Assemblies of Actuators with Valves Prepared for Actuators).....	132
Table 50—Performance Requirements for Slip Hangers.....	135
Table 51—Performance Requirements for Mandrel Hangers.....	135
Table 52—Marking for Hangers.....	140
Table 53—Performance Requirements for Group 1 Tubing-head Adapters.....	141
Table 54—Performance Requirements for Group 2 Tubing-head Adapters.....	141
Table 55—Marking for Wellhead Equipment.....	145
Table 56—Marking for Wellhead Connectors.....	146
Table 57—Performance Requirements for Chokes.....	148
Table 58—Marking for Chokes.....	149
Table 59—Marking for Choke Beans.....	150
Table 60—Performance Requirements for Actuators.....	151
Table 61—Marking for Actuators.....	153
Table 62—Summary of Validation Requirements for Safety Valves.....	155
Table 63—Marking for Safety Valves.....	158
Table 64—Marking for Trees.....	159
Table B.1—Relative Corrosivity of Retained Fluids as Indicated by CO ₂ Partial Pressure.....	186
Table B.2—Recommended Service Limits for Castings.....	186
Table C.1—Pressure Rating Conversion between SI and USC for API 6A Equipment.....	188
Table C.2—Conversions for the Radius at Back Face.....	188
Table C.3—Rounding Values for Hole Sizes and Tolerances.....	189
Table D.1—Type 6B Flanges for 13.8 MPa.....	193
Table D.2—Type 6B Flanges for 20.7 MPa.....	195
Table D.3—Type 6B Flanges for 34.5 MPa.....	197
Table D.4—Type 6BX Flanges for 69.0 MPa.....	199
Table D.5—Type 6BX Flanges for 103.5 MPa.....	201
Table D.6—Type 6BX Flanges for 138.0 MPa.....	203
Table D.7—Type 6BX Large-bore Flanges for 13.8 MPa, 20.7 MPa, and 34.5 MPa.....	205
Table D.8—Type R Ring Grooves.....	207
Table D.9—Type R Ring Gaskets.....	209

Table D.10—Type RX Ring Gaskets	211
Table D.11—Type BX Ring Grooves.....	213
Table D.12—Type BX Ring Gaskets	215
Table D.13—Flanged Crosses and Tees	217
Table D.14—Studded Crosses and Tees	221
Table D.15—Bullplugs	225
Table D.16—VR Plug Dimensions, 13.8 MPa, 20.7 MPa, 34.5 MPa, and 69.0 MPa	227
Table D.17—VR Preparation Dimensions, 13.8 MPa, 20.7 MPa, 34.5 MPa, and 69.0 MPa.....	229
Table D.18—VR Plug Thread Gauging Dimensions, 13.8 MPa, 20.7 MPa, 34.5 MPa, and 69.0 MPa	231
Table D.19—VR Preparation Thread Gauging Dimensions, 13.8 MPa, 20.7 MPa, 34.5 MPa, and 69.0 MPa...	232
Table D.20—HPVR Plug Dimensions, 103.5 MPa and 138.0 MPa	233
Table D.21—HPVR Preparation Dimensions, 103.5 MPa and 138.0 MPa.....	235
Table D.22—Flanged Full-bore Gate Valves	237
Table D.23—Flanged Plug and Ball Valves.....	239
Table D.24—Flanged Swing and Lift Check Valves	241
Table D.25—Center Spacing of Conduit Bores for Dual Parallel Bore Valves for 13.8 MPa, 20.7 MPa, 34.5 MPa, and 69.0 MPa	243
Table D.26—Center Spacing of Conduit Bores for Triple, Quadruple, and Quintuple Parallel Bore Valves for 13.8 MPa, 20.7 MPa, 34.5 MPa, and 69.0 MPa.....	245
Table D.27—Maximum Hanger Outside Diameter for Wellheads	247
Table D.28—Minimum Vertical Full-opening Wellhead Body Bores and Maximum Casing Sizes	248
Table D.29—Pipe Thread Counterbore and Standoff Dimensions	249
Table D.30—Gauging of Casing and Tubing Threads	251
Table E.1—Type 6B Flanges for 2000 psi	255
Table E.2—Type 6B Flanges for 3000 psi	257
Table E.3—Type 6B Flanges for 5000 psi	259
Table E.4—Type 6BX Flanges for 10,000 psi.....	261
Table E.5—Type 6BX Flanges for 15,000 psi.....	263
Table E.6—Type 6BX Flanges for 20,000 psi.....	265
Table E.7—Type 6BX Large-bore Flanges for 2000 psi, 3000 psi, and 5000 psi.....	267
Table E.8—Type R Ring Grooves	269
Table E.9—Type R Ring Gaskets	271
Table E.10—Type RX Ring Gaskets.....	273
Table E.11—Type BX Ring Grooves.....	275
Table E.12—Type BX Ring Gaskets.....	277
Table E.13—Flanged Crosses and Tees	279
Table E.14—Studded Crosses and Tees.....	283
Table E.15—Bullplugs.....	287
Table E.16—VR Plug Dimensions, 2000 psi, 3000 psi, 5000 psi, and 10,000 psi.....	289
Table E.17—VR Preparation Dimensions, 2000 psi, 3000 psi, 5000 psi, and 10,000 psi.....	291
Table E.18—VR Plug Thread Gauging Dimensions, 2000 psi, 3000 psi, 5000 psi, and 10,000 psi	293
Table E.19—VR Preparation Thread Gauging Dimensions, 2000 psi, 3000 psi, 5000 psi, and 10,000 psi.....	294
Table E.20—HPVR Plug Dimensions, 15,000 psi and 20,000 psi.....	295
Table E.21—HPVR Preparation Dimensions, 15,000 psi and 20,000 psi	297
Table E.22—Flanged Full-bore Gate Valves	299
Table E.23—Flanged Plug Valves and Ball Valves	301
Table E.24—Flanged Swing and Lift Check Valves	303
Table E.25—Center Spacing of Conduit Bores for Dual Parallel Bore Valves for 2000 psi, 3000 psi, 5000 psi, and 10,000 psi	305
Table E.26—Center Spacing of Conduit Bores for Triple, Quadruple, and Quintuple Parallel Bore Valves for 2000 psi, 3000 psi, 5000 psi, and 10,000 psi	307
Table E.27—Maximum Hanger Outside Diameter for Wellheads	309
Table E.28—Minimum Vertical Full-opening Wellhead Body Bores and Maximum Casing Sizes.....	310
Table E.29—Pipe Thread Counterbore and Standoff Dimensions	311
Table E.30—Gauging of Casing and Tubing Threads	313
Table F.1—Ambient Temperature Gas Leakage Acceptance Criteria.....	317

Table F.2—Standard Test Fluids for Nonmetallic Seals.....	322
Table F.3—Nominal End Connector Sizes	325
Table F.4—Nominal Pipe Sizes	325
Table F.5—Scaling for Nonmetallic Seals.....	326
Table F.6—Summary of Design Validation Requirements for Valves.....	329
Table F.7—Summary of Design Validation Requirements for Actuators	332
Table F.8—Summary of Design Validation Requirements for Chokes	333
Table F.9—Summary of Design Validation Requirements for Casing-head Housings, Casing-head	335
Table F.10—Summary of Design Validation Requirements for Group 2 Slip-type Hangers	336
Table F.11—Summary of Design Validation Requirements for Group 3 Slip-type Hangers	337
Table F.12—Summary of Design Validation Requirements for Group 4 Slip-type Hangers	338
Table F.13—Summary of Design Validation Requirements for Group 1 Mandrel-type Hangers	339
Table F.14—Summary of Design Validation Requirements for Group 2 Mandrel-type Hangers	339
Table F.15—Summary of Design Validation Requirements for Group 3 Mandrel-type Hangers	340
Table F.16—Summary of Design Validation Requirements for Group 4 Mandrel-type Hangers	342
Table F.17—Summary of Design Validation Requirements for Group 5 Mandrel-type Hangers	343
Table F.18—Summary of Design Validation Requirements for Packing Mechanisms	344
Table F.19—Summary of Design Validation Requirements for Group 2 Tubing-head Adapters.....	344
Table F.20—Summary of Design Validation Requirements for Other End Connectors	345
Table G.1—Temperature Ratings.....	347
Table G.2—Optional Pressure-temperature Ratings for 6B Flanges	347
Table G.3—Optional Material De-rating Factors for Elevated Temperature.....	350
Table G.4—Optional Material De-rating Factors for Elevated Temperature.....	350
Table H.1—Recommended Torques for Flange Bolting (SI Units).....	353
Table H.2—Recommended Torques for Flange Bolting (USC Units).....	354
Table I.1—Stud Bolt Length Table for 6B Flange Connectors with “R” and “RX” Gaskets	358
Table I.2—Stud Bolt Length Table for 6BX Flange Connectors	359
Table I.3—Tap End Stud Length Table for 6B Studded Flange Connectors with “R” and “RX” Gaskets	361
Table I.4—Tap End Stud Length Table for 6BX Studded Flange Connectors	362
Table I.5—Stud Bolt Length Table for 6B Flange Connectors with “R” Gaskets (USC Units)	363
Table I.6—Tap End Stud Length Table for 6B Studded Flange Connectors with “R” Gaskets	364
Table K.1—Standard Top Connector Sizes	370
Table K.2—Top Connector Body, Inside and Outside Diameter Combinations	370
Table K.3—Dimensions for Top Connectors—SI Units.....	372
Table K.4—Dimensions for Top Connectors—USC Units	376
Table K.5—Seals for Top Connector Plugs for H ₂ S Service	380
Table K.6—Back-up Ring for Seal—SI Units	380
Table K.7—Back-up Ring for Seal—USC Units	381
Table L.1—Dimensions for 34.5 MPa Rated Working Pressure, Segmented Flanges for Dual Completion.....	383
Table L.2—Dimensions for Type RX Ring Grooves and Ring Gasket Used on Segmented Flanges for Dual Completion.....	387

Introduction

The International System of Units (SI) is used in this specification. However, nominal sizes are shown as fractions in the inch system.

The fractions and their decimal equivalents are equal and interchangeable. Metric conversions and inch dimensions in this specification are based on the original fractional inch designs. Functional dimensions have been converted into the metric system to ensure interchangeability of products manufactured in metric or inch systems; see also Annex C.

An “—” symbol when used in tables means that the applicable size, value, or dimension does not apply.

It is necessary that users of this specification be aware that further or differing requirements can be needed for individual applications. This specification is not intended to inhibit a vendor from offering, or the purchaser from accepting, alternative equipment or engineering solutions for the individual application. This can be particularly applicable where there is innovative or developing technology. Where an alternative is offered, it is the responsibility of the vendor to identify any variations from this specification and provide details.

Specification for Wellhead and Tree Equipment

1 Scope

This specification identifies requirements and gives recommendations for the performance, dimensional and functional interchangeability, design, materials, testing, inspection, welding, marking, handling, storing, shipment, and purchasing of wellhead and tree equipment for use in the petroleum and natural gas industries.

This specification does not apply to field use or field testing. This specification also does not apply to repair of wellhead and tree equipment except for weld repair in conjunction with manufacturing. Tools used for installation and service (e.g. running tools, test tools, wash tools, wear bushings, and lubricators) are outside the scope of this standard.

This specification is applicable to the equipment identified in 4.1 and Section 14.

This specification establishes requirements for four product specification levels (PSLs): PSL 1, PSL 2, PSL 3, and PSL 4. A supplemental designation of PSL 3G applies to PSL 3 products that have satisfied the additional requirements of gas testing. The PSL designations define different levels of technical quality requirements.

Subject matter of Annexes B, C, D, E, F, G, H, I, J, K, L, and M has been arranged in a way that minimizes the impact of changes on users of this document.

2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies, except that new editions may be used on issue and shall become mandatory upon the effective date specified by the publisher or 12 months from the date of the revision (where no effective date is specified).

API Recommended Practice 5A3, *Recommended Practice on Thread Compounds for Casing, Tubing, Line Pipe, and Drill Stem Elements*

API Specification 5B, *Threading, Gauging, and Inspection of Casing, Tubing, and Line Pipe Threads*

API Specification 5CT, *Casing and Tubing*

API Standard 6ACRA, *Age-hardened Nickel-based Alloys for Oil and Gas Drilling and Production Equipment*

API Standard 6AV1, *Validation of Safety and Shutdown Valves for Sandy Service*

API Standard 6X, *Design Calculations for Pressure-containing Equipment*

API Recommended Practice 14F, *Design, Installation, and Maintenance of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class 1, Division 1 and Division 2 Locations*

API Specification 16A, *Specification for Drill-through Equipment*