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Errata 2

Table 9: The table header shall be changed as indicated in the red box:

Temperature		Minimum Average Impact Value, J (ft-lb)			
		Transverse Direction		Longitudinal Direction	
		Wrought or Cast Material, Weld Qualification		Alternate Method for Wrought Materials Only	
Class	Test °C (°F)	PSL 1 and PSL 2	PSL 3 and PSL 4	PSL 1 and PSL 2	PSL 3 and PSL 4

Section 6.3.2.3.4: The first two paragraphs shall be changed to the following:

The values listed in Table 9 and Table 10 shall be the minimum acceptable values for wrought materials tested in the transverse direction, and for castings and weld qualifications.

Wrought materials may be tested in the longitudinal direction instead of the transverse direction and shall meet the requirements of Table 9 and Table 10.

Section 6.3.3.2: The header shall be changed to the following:

6.3.3.2 Hot Working Practices

Section 6.4.2.3.2: The third, fourth, and fifth paragraphs, and NOTES 2 and 3, shall be changed to the following:

For PSL 3, for parts with an ER of less than 127 mm (5 in.), the ER of the QTC shall be equal to or greater than the dimensions of the part it qualifies.

For PSL 3, for parts with an ER of 127 mm (5 in.) or larger, the QTC size shall be 127 mm (5 in.) ER as a minimum, regardless of part size, with the exception for bodies noted in the following.

NOTE 2 A QTC larger than 127 mm (5 in.) ER may be used when specified by the manufacturer or purchaser.

For PSL 3, for bodies that require a yield strength of 75K or greater and where the part's weight during heat-treat is greater than 454 kg (1000 lb), the QTC ER shall be the same or greater than the part it qualifies but is not required to exceed 254 mm (10 in.), with the following exception.

EXCEPTION At the manufacturer's option, a 127 mm (5 in.) ER QTC shall be permitted for parts with an ER greater than 127 mm (5 in.) provided that:

...

NOTE 3 A QTC larger than 254 mm (10 in.) ER may be used when specified by the manufacturer or purchaser.

Section 8.2.3.2: The section shall be changed to the following:

The following apply:

a) For ASTM A453/A453M Grade 660D

ASTM A453/A453M Grade 660D solution-treated and age-hardened bolting shall be acceptable at a hardness of HRC 35 and lower, and a minimum 0.2 % offset yield strength of 725 MPa (105,000 psi) for diameters up to 63.5 mm (2.5 in.) or 655 MPa (95,000 psi) for sizes larger than 63.5 mm (2.5 in.). Environmental and material limits specified in NACE MR0175/ISO 15156 shall apply.

b) For CRA materials

CRA materials shall be acceptable provided they satisfy the minimum requirements of 8.2.3.2 a) for ASTM A453/A453M Grade 660D bolting, with the exception that the maximum hardness shall meet NACE MR0175/ISO 15156 requirements for the CRA used. Environmental and material limits specified in NACE MR0175/ISO 15156 shall apply.

NOTE NACE MR0175 provides material usage limits for H₂S environments. Other forms of cracking may result from the presence of chlorides (such as seawater) and or hydrogen (such as cathodic protection).

Table 16: The table shall change as indicated in the red box:

Pressure Rating MPa (psi)	Nominal Size (in.)	ASTM Bolting Standard(s) and 0.2 % Offset Yield Strength			
		Nonexposed Bolting		H ₂ S-Exposed Bolting	
		A193 GR. B7 (≤ 2.5")	A193 GR. B7 (> 2.5")	A193 GR. B7M (≤ 4.0")	A453 GR. 660D (≤ 4.0")
A320 GR. L7 (≤ 2.5")	A320 GR. L7 (> 2.5")	A320 GR. L7M (≤ 2.5")	(See 8.2.3.2 and 8.2.3.5)		
A320 GR. L43 (≤ 4.0")			CRA		
725 MPa (105 ksi)	655 MPa (95 ksi)	550 MPa (80 ksi)	725 MPa (105 ksi) ≤ 2.5" 655 MPa (95 ksi) > 2.5"		

Section 10.4.2.6.2: The section shall be changed to the following:

For PSL 1 and PSL 2, visual examinations of castings shall be performed in accordance with procedures specified in API 20A. Visual examination of wrought material and weld preparations shall be performed in accordance with the manufacturer's written specifications.

For PSL 1 and PSL 2, the acceptance criteria shall be as follows:

- for castings, in accordance with API 20A;
- for wrought material and weld preparations, in accordance with the manufacturer's written specifications.

Section 10.4.2.10.2: The header and the first paragraph shall be changed to the following:

10.4.2.10.2 Wrought Material

For wrought material, the following shall apply.

Section 10.4.2.11.2: The header and the first paragraph shall be changed to the following:

10.4.2.11.2 Wrought Material

For wrought material, the following shall apply.

Section 10.4.2.12.1: The second paragraph shall be changed to the following:

For PSL 3 and PSL 4 (castings and wrought material) as far as practical, the entire volume of each part shall be volumetrically inspected (radiography or ultrasonic) after heat-treatment for mechanical properties and prior to machining operations that limit effective interpretation of the results of the examination. For quench-and-tempered products, the volumetric inspection shall be performed after heat-treatment for mechanical properties exclusive of stress-relief treatments or re-tempering to reduce hardness.

Section 10.4.2.12.2: The second paragraph shall be changed to the following:

For PSL 3 and PSL 4 wrought material, ultrasonic examination shall be performed in accordance with the flat-bottom hole procedures specified in ASTM A388/388M (except that the immersion method may be used) and ASTM E428.

Section 10.4.2.12.4: The first paragraph shall be changed to the following:

For PSL 2 and PSL 3 castings, and for PSL 3 and PSL 4 wrought material, radiographic examination shall be performed in accordance with methods specified in ASME *BPVC*, Section V, Article 2 (or equivalent) with a minimum sensitivity of 2 % (2-2T). Both X-ray and gamma-ray sources shall be acceptable within the inherent thickness range limitation of each.

Section 10.4.2.12.5:

The header shall be changed to the following:

10.4.2.12.5 Radiographic Examination Acceptance Criteria—Wrought Materials

The first sentence shall be changed to the following:

For PSL 3, the following acceptance criteria shall apply:

NOTE 1 shall be changed to the following:

NOTE 1 The PSL 3 requirements do not apply to PSL 4.

NOTE 2 shall be changed to the following:

NOTE 2 The PSL 4 requirements do not apply to PSL 3.

Section 10.4.3.2.2: The first paragraph shall be changed to the following:

Inspection shall be performed in accordance with the methods of 10.4.2.12 for wrought materials. If ultrasonic inspection is performed, each stem (or bar from which stems are machined) shall be ultrasonically inspected from the outside diameter and ends by the straight-beam technique. Stems that cannot be examined axially using the straight-beam technique shall be examined using the angle-beam technique.

Section 10.4.8.6: The third and fourth paragraphs shall be changed to the following:

Visual examination shall be performed on wrought material in accordance with the manufacturer's written specifications.

Acceptance criteria for wrought material shall be in accordance with the manufacturer's written specifications.

Section 14.2.3.3.1: Item c) shall be changed to the following:

c) Hot working practices: Wrought materials shall be hot worked throughout. Ring gaskets may be made from pierced tubing or pipe, rolled rings, or rolled and welded bar or plate.

Section 14.13.3.2.3.3: Item a) shall be changed to the following:

a) Water quenching: The temperature of the water used to approximate the cooling rate of water shall not exceed 38 °C (100 °F) at the start of the quench. For bath-type quenching, the temperature of the water shall not exceed 49 °C (120 °F) at any time during the quench cycle.

Table 63: The table shall be changed as indicated in red::

Rated working pressure	Nameplate and/or body and outside diameter of each connector
Maximum valve differential pressure ^d	
Thread size (threaded products only)	Nameplate, body, or near thread
Ring groove type and number	Near each connector

Section 15.2.2.2: The first paragraph shall be changed to the following:

For PSL 2, the following records shall be maintained for bodies, bonnets, end and outlet connectors, stem, valve bore sealing mechanisms, mandrel tubing hangers, and mandrel casing hangers:

Section 15.2.2.3: The first paragraph shall be changed to the following:

For PSL 3, the following records shall be maintained for bodies, bonnets, end and outlet connectors, stem, valve bore sealing mechanisms, mandrel tubing hangers, and mandrel casing hangers:

Section 15.2.2.4: The first paragraph shall be changed to the following:

For PSL 4, the following records shall be maintained for bodies, bonnets, end and outlet connectors, stem, valve bore sealing mechanisms, mandrel tubing hangers, and mandrel casing hangers shall be the same as PSL 3 (15.2.2.3).

Section F.1.14.3.2.3: The NOTE shall be changed to the following:

NOTE For valves of the same product family (as defined in F.1.14.2), where entries in Table F.3 group two sizes together, such as "1¹³/₁₆ in. or 2¹/₁₆ in.," the size groupings may be considered as one size for scaling purposes.