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Affected Publication: API Specification 6D, *Specification for Pipeline and Piping Valves*, Twenty-fourth Edition, August 2014

ADDENDUM 2

General (throughout the document), *replace*:

pneumatic

with

gas

Page 3, **2 Normative References**, *add*:

ASTM E8, *Standard Test Methods for Tension Testing of Metallic Materials*

Page 3, **2 Normative References**, *change*:

ISO 5208:~~2008~~ *Industrial valves—Pressure testing of valves*

to

ISO 5208:~~2008~~ *Industrial valves—Pressure testing of valves*

Page 5, **3.1.14**, *add definition and renumber all subsequent definitions*:

3.1.14
ductile material

Material that fractures after achieving more than 0.5% extension of the gauge length when loaded in tension.

Page 6, **3.1.22**, *add definition and renumber all subsequent definitions*:

3.1.22
non-ductile material

Material that fractures at or below 0.5% extension of the gauge length when loaded in tension.

Page 6, **3.1.24**, *revise to read*:

3.1.24
off-site

Related facility location other than the assembler's/manufacture's where a required process activity is performed, with the activities conforming to an API Q1 or ISO 9001 quality management system (QMS)

Page 6, **3.1.25**, *revise to read*:

3.1.25
on-site

Assembler's/manufacture's facility.

Page 7, **3.1.27**, *revise to read*:

3.1.27

outsourcing

Function or process that is performed by an external supplier conforming to a quality management system for the activities performed on behalf of the assembler/manufacturer.

Page 7, **3.1.36**, *revise to read*:

3.1.36

receiving verification

Verify that the inward goods are received by the assembler/manufacturer and are in conformance with purchase order requirements.

Page 9, **3.1.52**, *revise to read*:

3.1.52

welding

Fusion of materials, with or without the addition of filler materials on parts or final assemblies.

Page 13, **Section 5.2**, *add paragraph*:

When an intermediate rated class is specified by the purchaser the valve shall be marked with the agreed intermediate rated class on the body and nameplate (see Table 7, item 2b and Annex M).

after

If intermediate design pressures and temperatures are specified by the purchaser, the pressure–temperature rating shall be determined by linear interpolation in accordance with ASME B16.34. Valves with flanged end(s) shall not be designed to an intermediate rating due to the risk of the valve being transferred to a different application, which may utilize the full flange rating.

Page 21, **Section 6.2**, *revise to read*:

6.2 Tensile Test Requirements

Tensile test specimens shall be removed from a test coupon (TC) after the final heat-treatment cycle.

Pressure containing and pressure controlling parts made from ductile materials shall have a minimum of one tensile test performed at room temperature in accordance with ASTM A370, ASTM E8, or ISO 6892-1. For metallic materials the yield strength shall be determined using the relevant industry material standards. The minimum elongation at break shall be in accordance with the industry material standard, but not less than 15 % minimum.

Pressure controlling parts made from non-ductile metallic materials shall have a minimum of one tensile test performed using the ASTM method for that material. Where no test method exists, the testing shall be in accordance with ASTM A370, ASTM E8, or ISO 6892-1.

For wear resistant alloys as defined per NACE MR0175/ISO 15156 a tensile test shall not be required.

Non-ductile materials shall not be used for pressure containing parts.

NOTE If the results of the tensile test(s) do not satisfy the applicable requirements, two additional tests (removed from the same TC with no additional heat treatment) may be performed in an effort to qualify the material.

The results of each additional test shall satisfy the applicable requirements.

Page 25, **Section 7.3**, second paragraph, *revise to read*:

Impact testing shall be performed on carbon, alloy, and stainless steel (except austenitic grades) for the qualification of procedures for welding on valves with a design temperature below $-20\text{ }^{\circ}\text{F}$ ($-29\text{ }^{\circ}\text{C}$).

Page 29, **Section 9.1**, fifth paragraph, *delete the following sentence*:

By agreement, lightweight oil having a viscosity not exceeding that of water may be used as test fluid.

Page 30, **Section 9.2**, fourth paragraph, *revise to read*:

Acceptance criteria: No visually detectable leakage during the test duration at test pressure on any external surface of the shell.

Page 34, **Table 7**, *add the following*:

2a	Pressure class (except when 2b applies)	On body and/or nameplate
2b	Intermediate pressure rating (upon agreement)	Agreed upon rated class on body and nameplate

Page 36, **Section 12**, third paragraph, *revise to read*:

Protective covers made of wood or wood fiber shall be fitted with a nonporous moisture barrier between the cover and the metal flange or welding end. Protective covers shall be weather resistant and shall be used to seal the valve ends in order to avoid foreign material or moisture from entering the valve bore.

Page 37, **Section 13.1**, item h, *revise to read*:

- h) for valves NPS 2 (DN 50) and larger:
 - 1) material test report for body, bonnet/cover(s), and end connector(s)/closure(s) traceable to the unique valve serial number;
 - 2) material test report for stems
 - 3) serial number;
 - 4) pressure test results (including hydrostatic and or gas);
 - 5) certificate of conformance to NACE MR0175, ISO 15156 (all parts), or NACE MR0103, for sour service valves, if applicable.

Page 88, **Section H.4.2.2**, first list item, *revise to read*:

- No visually detectable leakage allowed through any pressure-containing part. A maximum of 0.27 cc/min of (nitrogen + helium) from each mechanical joint.

Page 95, **Section J.3**, *change*:

J.3 Hydrostatic/Pneumatic Testing

Table J.3 defines the additional test requirements for QSL-2, QSL-3, and QSL-4. All QSL-4 pressure tests shall be recorded on time-based equipment. There are no additional testing requirements for QSL-1. The high-pressure shell and seat test pneumatic test listed in QSL-3 and QSL-4 are only required when the valve is for gas service. QSL-4 requires that the high-pressure shell and seat pneumatic testing shall be submerged in water.

to

J.3 Hydrostatic/Gas Testing

Hydrostatic/gas testing shall be performed for QSL-1, QSL-2, QSL-3, and QSL-4 as identified in Table J.3.

The high-pressure shell and seat gas test listed in QSL-3 and QSL-4 shall be required only when the valve is intended for gas service.

High-pressure shell and seat gas testing per QSL4 shall be performed submerged in a water bath. All QSL-4 pressure tests shall be recorded on time-based equipment.

Page 97, **Table J.3**, *replace table with the following*:

Table J.3—Pressure Testing Requirements per for Quality Specification Levels

Test Type	Quality Specification Level				
	QSL 1	QSL 2	QSL 3	QSL 4	
High-pressure hydrostatic shell test @ 1.5 times the rated pressure per 9.3	Test per 9.3	Test per 9.3	Test per QSL2 and two additional required tests: Tests 1-2-3 each conform to 9.3. After each test, reduce pressure to zero. Test duration as stated in Table 5 for each test.	Test per QSL2 and three additional required tests. Tests 1-2-3-4 each conform to 9.3. After each test, reduce pressure to zero.	Tests 1-3-4: Test duration as stated in Table 5. Test 2: An extended duration of four times (4X) that stated in Table 5.
High-pressure hydrostatic seat test @ 1.1 times the rated pressure per 9.4	Test per 9.4	Test per 9.4	Test per QSL2 and two additional tests required on each seat. Tests 1-2-3 each conform to 9.4. Test duration as stated in Table 6 applies to each test. After each test, reduce pressure to zero and cycle fully open and fully closed.	Test per QSL2 and three additional tests required on each seat. Tests 1-2-3-4 each conform to 9.4. After each test, reduce pressure to zero and cycle fully open and fully closed.	Tests 1-2-4 (seat A & B): Test duration as stated in Table 6. Test 3 (seat A & B): An extended duration of four times (4X) that stated in Table 6. See Note 1.
Low-pressure gas seat test @ 80 psi per Annex H, H.3.3 Type II	None	Test each seat per H.3.3 Type II	Test per QSL2 and two additional tests required on each seat. Tests 1-2-3 each conform to H.3.3 Type II. Test duration as stated in Table 6 applies to each test. After each test, reduce pressure to zero and cycle fully open and fully closed.	Test per QSL2 and three additional tests required on each seat. Tests 1-2-3-4 each conform to H.3.3 Type II. After each test, reduce pressure to zero and cycle fully open and fully closed.	Tests 1-2-4 (seat A & B): Test duration as stated in Table 6. Test 3 (seat A & B): An extended duration of four times (4X) that stated in Table 6. See Note 1.
High-Pressure Gas Shell Test @ 1.1 times the rated pressure per	None	None	Two shell tests are required. Tests 1 & 2 each conform to H.4.2. Test duration as stated in Table H.1 applies to each	Three shell tests are required. Tests 1-2-3 each conform to H.4.2. After each test, reduce	Tests 1 & 3: Test duration as stated in Table H.1. Test 2: An extended duration of four times (4X) that stated in H.1.

Annex H, H.4.2			test. After each test, reduce pressure to zero.	pressure to zero.	
High-pressure gas seat test @ 1.1 times the rated pressure per Annex H, H.4.3	None	None	Two tests required on each seat. Tests 1 and 2 each conform to H.4.3. Test duration as stated in Table H.1 applies to each test. After each test, reduce pressure to zero and cycle fully open and fully closed.	Three tests required on each seat. Tests 1-2-3 each conform to H.4.3. After each test reduce, pressure to zero and cycle fully open and fully closed.	Tests 1 and 3 (seat A and B): Test duration as stated in Table H.1. Test 2 (seat A and B): An extended duration of four times (4X) that stated in Table H.1. See Note 1.
Note 1 Check valves shall only have a single seat tested.					