
**Notification of the General Administration of Quality Supervision
Inspection and Quarantine of the P. R. China
No.43, 2009**

Notification for the announcement of The First Revision to the Safety
Technical Supervision Regulation for Safety Valves

According to the implementation of the Safety Technical Supervision Regulation for Safety Valves (TSG ZF001-2006), we hereby announce the First Revision to the Safety Technical Supervision Regulation for Safety Valves (TSG ZF001-2006). The revised provisions will take effect as of August 1, 2009.

Appendix: The First Revision to the Safety Technical Supervision Regulation for Safety Valves (TSG ZF001-2006)

May 8, 2009

Safety Technical Supervision Regulation for Safety Valves

(TSG ZF001-2006)

The First Revision to the first edition of Dec. 2006

1. Revisions to the original text

Article	Original text	Revisions
Second paragraph of Article 6	The procedures for type test of safety valves include invitation and acceptance, design review, sampling, inspection and testing, issuance of type test report and license.	The procedures for type test of safety valves include invitation and acceptance, design review, sampling, inspection and testing, issuance of type test report and license. During the on-site shop review for manufacture Licensing, the appraisal and assessment team shall verify if the type test report meets the requirements.
Second paragraph of Article 7	The end users of safety valves may conduct the inspection by themselves if condition permits. The end users of safety valves who have no ability to inspect safety valves by themselves can commission the inspection to inspection and testing organizations that have relevant qualifications.	The end users of safety valves may conduct the inspection by themselves after notification to the provincial quality & technical supervision bureaus. The end users of safety valves who have no ability to inspect safety valves by themselves shall commission the inspection to inspection and testing organizations that have relevant qualifications.

2. Revisions to Appendix B Safety Technical Requirement for Safety Valves

2.1 Revisions to Table B-1

Original text			Revisions		
No.	Standards reference No.	Standards Name	No.	Standards reference No.	Standards Name
17	TB/T 5103-1993	Oil-hardened and tempered carbon steel wire for mechanical springs	17	YB/T 5103-1993	Oil-hardened and tempered carbon steel wire for mechanical springs
18	TB/T 5104-1993	Oil-hardened and tempered Si-Mn alloy wire for mechanical	18	YB/T 5103-1993	Oil-hardened and tempered Si-Mn alloy wire for mechanical

		springs			springs
19	TB/T 5136-1993	V-Cr alloy steel wire for valves	19	YB/T 5136-1993	V-Cr alloy steel wire for valves

2.2 Revisions to the articles

Article	Original text	Revisions
B2.17.2.(1)	safety valve type	Safety valve structure type
Article 1 of B3.1.3.2	To ensure long time stable operation, springs shall have prestressing treatment following below:	To ensure long time stable operation, springs shall have prestressing treatment (This is not applicable to springs used for safety valve whose flow diameter is no more than 8mm and nominal pressure is lower than 1.6MPa), and the forced pressure report shall meet the following requirements:
B3.1.3.4	Springs manufacturer shall provide spring performance test report, heat treatment report and quality certificate for each spring. NDT report shall be also provided when safety valves manufacturers request. Every spring must be tested and accepted before it is installed onto the safety valve.	Springs manufacturer shall provide spring performance test report, heat treatment report of the same furnace and quality certificate to springs piece by piece. NDT report shall be also provided when safety valve manufacturers request. Every spring must be tested and accepted before it is installed onto the safety valve.

3 Revisions to Appendix C Requirements for Safety Valve Manufacture Licensing

3.1 Revisions to Table C-1

Original text	Revisions
Limit range of product	Limit range
Product name, specification	Product structure type, specifications(refers to the nominal diameter and nominal pressure)

3.2 Revisions to Table C-4

Original text	Revisions
A1	A1
2 persons each for MT and PT Level II	1 person each for MT and PT Level II

3.3 Revisions to Table C-5

	Licensing grade	A1	A2	B
Original text	Construction area	$\geq 1400\text{mm}^2$	$\geq 900\text{mm}^2$	$\geq 600\text{mm}^2$
Revisions	Construction area (m^2)	≥ 1400	≥ 900	≥ 600

3.4 Revisions to articles

Article	Original text	Revisions
C2.4.2	<p>Safety valve manufacturing shall include the production process such as rough and raw material purchase and inspection, surface treatment (rough casting, acid cleaning), cryogenic treatment (low temperature safety valves), spring scroll and treatment, seal surface surfacing welding, heat treatment before and after welding, NDT, stem quenching, machining (lathe, mill, grind, drill), lapping, assembly, test and final inspection.</p> <p>Of the above production processes, spring scroll, NDT, spring heat treatment and safety valve surface treatment for Level A2 and B manufacturers can be sub-contracted.</p>	<p>Safety valve manufacturing shall include the production process such as rough and raw material purchase and inspection, cryogenic treatment treatment (low temperature safety valves), spring scroll and forced pressure treatment, seal surface surfacing welding, heat treatment before and after welding, NDT, machining (lathe, mill, grind, drill), lapping, assembly, test and final inspection.</p> <p>Of the above production processes, spring scroll and NDT can be sub-contracted.</p>
<p>Add Note (4) to C2.5.3: For safety valve manufacturers, the physical and chemical examination and testing can be subcontracted. The punctuation “period” at the end of Note (3) shall be revised to a semicolon.</p>		

3.5 Revisions to Table C-6

	Original text		Revisions
A1	<p>Cutting machine meeting production requirement, no less than 6 digital control machine tools, machining equipment (lathe, milling machine, grinder, driller etc) meeting machining requirement, spring heat treatment equipment and spring pre-stress treatment equipment meeting manufacturing requirement, at least 1 plasma bead welding machine, 2 welding machines, pre-heat and post-heat treatment machines before and after welding required for bead welding of hard alloy, surface treatment machine, 2 seal surface lapping machines</p>	A1	<p>Cutting machine meeting production requirement, no less than 6 digital control machine tools. Machining equipment (lathe, milling machine, grinder, driller etc) meeting manufacturing requirement, 2 welding machines, pre-heat machines before welding and heat treatment machines after welding for surfacing welding of hard alloy, 2 seal surface lapping machines</p>

3.6 Revisions to Table C-7

Original text		Revisions	
A1	Quantitative chemical composition analysis device which can analyze more than 10 elements such as C, Si, Mn, S, P, Cr, Mo, Ni, Ti, V etc, spectrum qualitative analysis device, at least 1 sclerometer (test HB,HRC)	A1	Quantitative chemical composition analysis device which can analyze more than 10 elements such as C, Si, Mn, S, P, Cr, Mo, Ni, Ti, V etc, and hardness tester (test HB,HRC) at least 1 piece for each

3.7 Revisions to Table C-8 Thickness measurement device

	Device name	Licensing grade		
		A1	A2	B
Original text	Thickness measurement device	1 ultrasonic thickness gauge, and special callipers for measuring thickness		Special calibers for measuring thickness of valve body
Revisions	Thickness measurement device	At least 1 ultrasonic thickness gauge		Special calibers for measuring thickness of valve body

4. Revisions to Appendix D Safety Valve Type Test

4.1 Revisions to Articles

Article	Original text	Revisions
D1.1.2	One item shall be added at the end of this Article: The aforementioned Manufacture Process Document Review shall be conducted in combination with the product review by the appraisal and assessment team during the on-site shop review for manufacture licensing.	
Article 1 of D2	The type test range of safety valve with the same name, type or structure and function (including materials when necessary) is as follows:	The type test range of safety valves with the same type and function (including materials when necessary) is as follows:
First sentence of Article 1 of D3	Two samples with different specification (usually with the combination of big diameter, low pressure and small diameter, high pressure) are selected from the sample pool by name and type (structure) for type test.	Usually, two safety valve samples of different specifications (usually with the combination of big diameter, low pressure, and small diameter, high pressure) are selected for type test.

4.2 The original form for Design Review is abolished and replaced by the following form

Design Review

Manufacture code /standard		Design standard and code	
No.	Design review items	Review result	Remarks
1	Design drawings and calculations		
2	Design data and applied calculation method		
3	Design structure		
4	Standard & code applied		
5	Material for main parts		
6	Welding requirements		
7	Technical requirements and heat treatment		
8	NDE test and location		
Conclusion:			
Inspected by:		Date:	Approved by:
			Date:

5. Revisions to Appendix E Safety Valve Inspection and Repair

Article	Original text	Revisions
Third sentence of E3.2	When the set pressure is less than or equal to 0.5MPa, the allowable deviation between the actually measured set pressure and the required set pressure is ± 0.015 MPa; when the set pressure is higher than 0.5MPa, the allowable deviation is $\pm 3\%$ of the set pressure.	The deviation for set pressure shall be in accordance with the requirements of GB/T 12243 or the requirements of corresponding regulations and codes
Appendix E-1	Seat diameter	Flow diameter