

ICS 23.060.01

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**NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC
OF CHINA**

中华人民共和国国家标准

GB/T 12243-2005

Replace GB/T 12243-1989

Spring Loaded Safety Valves

弹簧直接载荷式安全阀

(JIS B 8210: 1994, Steam Boilers and Pressure Vessels—Spring Loaded Safety Valves,
MOD)

Issued on February 21, 2005

Implemented on August 01, 2005

**Issued by General Administration of Quality Supervision, Inspection
and Quarantine of the People's Republic of China**

**Standardization Administration of the People's Republic of
China**

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Foreword

This standard is the revised edition of GB/T 12243-1989 *Spring Loaded Safety Valves*.

This standard is modified on the basis of JIS B 8210 *Steam and Gas Spring Safety Valve* (Japanese Edition, 1994).

There are some significant differences between this standard and JIS B 8210:1994 as follows:

--The original code is modified from editing according to the requirements of GB/T 1.1.

--The normative references are added in this standard according to the requirements of GB/T 1.1-2002.

--Article 4.5 of JIS B 8210:1994 is deleted in this standard with reference to the requirements of API Std 527:1991 "Valve Seat Tightness of Pressure Release Valve".

--Article 6.2 (flange measurement chart) of JIS B 8210:1994 is deleted in this standard.

There are some significant changes in this standard over GB/T 12243 — 1989 as follows:

--Major technical contents are modified correspondingly: the requirements of liquid safety valve are added; the tightness requirements and test procedures are modified according to API Std 527: 1991.

--Pressure scope of application is modified from "nominal pressure PN0.1~32MPa" to "set pressure 0.1MPa~42.0MPa."

--Malleable iron castings, spheroidal graphite iron castings and copper alloy castings are added in valve material parts, so the scope of application of this standard in material aspect is enlarged.

--"Design, material and structure" is stated in one Chapter separately (Chapter 4) including Chapter 3 "technical requirements" of the original standard, and "performance requirements" therein are excluded which form a new Chapter-Chapter 5.

--Deviation table of building ring distance is deleted; see the provisions of GB/T 12241 "General Requirements of Safety Valve" for the requirements of spring ring pitch.

--In the Chapter 5 “performance”, the start-stop pressure difference of steam boiler safety valve is increased by “ $\leq 4\%$ set pressure” as the adopted requirements negotiated by the seller and buyer.

--In the Chapter 5 “performance” and the Chapter 6 “test and inspection”, the tightness requirements and test procedures are modified for air, other gas, water or other liquid safety valves.

This standard replaces GB/T 12243-1989.

This standard is put forward by the Machinery Industry Association.

This standard is under jurisdiction of China valve TCST (SAC/TC 188).

Drafting organization of this standard: Shanghai Anderson-Greenwood-Crosby valve Co., Ltd.; Hefei General Machinery Research Institute.

Chief drafting staff of this standard: Huang Guanyu, Wang Deping and Wang Xiaojun.

This standard replaces the following previous editions issued:

--GB/T 12243-1989.

Spring Loaded Safety Valves

1 Scope

Design, material, structure, performance, test & inspection, marking & lead sealing and delivery of spring loaded safety valves are specified in this standard.

This standard is applicable to steam boiler, pressure vessel and pipe safety valves whose set pressures are 0.1MPa~42.0MPa and flow diameters are greater than or equal to 8mm.

2 Normative References

The articles contained in the following documents have become this standard when they are quoted herein. For the dated documents so quoted, all the modifications (excluding corrections) or revisions made thereafter shall not be applicable to this Standard. For the undated documents so quoted, the latest editions shall be applicable to this Standard.

GB/T 1239.2 “Cold Coiled Helical Compressions Springs—Technical Specifications”

GB/T 1239.4 “Hot Coiled Helical Springs—Technical Specifications”

GB/T 1239.6 “Design of Helical Springs”

GB/T 9440 “Malleable Iron Castings”

GB/T 12220 “General Purpose Industrial Valves—Marking” (GB/T 12220-1989, idt ISO 5209: 1977)

GB/T 12224 “General Requirements for Industrial Steel Valves”

GB/T 12225 “General Purpose Industrial Valves—Specification of Copper Alloy Castings”

GB/T 12227 “General Purpose Industrial Valves—Specification of Spheroidal Graphite Iron Castings”

GB/T 12228 “General Purpose Industrial Valves—Specifications of Carbon Steel Forgings”

GB/T 12229 “General Purpose Industrial Valves—Specification of Carbon Steel Castings”

GB/T 12230 “General Purpose Industrial Valves—Specifications of Austenitic Steel Castings”

GB/T 12241 “Safety Valve—General Requirements” (GB/T 12241—2005, ISO



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