

IGS-M-PL-002-3(0)

Aug. 2017

Approved

مصوب



شرکت ملی گاز ایران
مدیریت پژوهش و فناوری
امور تدوین استانداردها

IGS

مشخصات فنی خرید

شیرهای توپی جوشی و فلنجی اندازه ۲ تا ۵۶ اینچ
کلاس ۱۵۰، ۳۰۰ و ۶۰۰

Flanged / Welded End Ball Valves Size 2" to 24" Class Rating
150,300 and 600



Documents
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ابلاغ مصوبه هیأت مدیره



مدیر محترم پژوهش و فناوری



باسلام،



به استحضار می‌رساند در جلسه ۱۷۴۵ مورخ ۱۳۹۶/۶/۵ هیأت مدیره، نامه شماره گ/۰۰۰/۷۱۳۱۰ مورخ ۹۶/۶/۱ مدیر پژوهش و فناوری در مورد تصویب نهایی استانداردها به شرح زیر مطرح و مورد تصویب قرار گرفت:



۱. مشخصات فنی شیرهای توپی ۲ الی ۵۶ اینچ کلاس‌های ۱۵۰، ۳۰۰ و ۶۰۰



IGS-M-PL-002-3(0)



۲. دستورالعمل بازرسی سامانه‌های حفاظت کاتدی (ابزار و دستگاه‌های اندازه‌گیری)



IGS-I-TP-001(0)

۳. دستورالعمل بازرسی سامانه‌های حفاظت کاتدی (روش اجرایی)

IGS-I-TP-002(0)



۴. دستورالعمل کنترل نشت در تاسیسات خطوط انتقال و شبکه‌های تغذیه و توزیع گاز طبیعی



IGS-O-SF-04(1)

این تصمیم به منزله مصوبه مجمع عمومی شرکت‌های تابعه محسوب و برای کلیه شرکت‌های تابعه لازم الاجرا می‌باشد.



الهام ملکی

دبیر هیأت مدیره



روفاشت : مدیرعامل محترم شرکت ملی گاز ایران و رئیس هیأت مدیره

: اعضای محترم هیأت مدیره

: مشاور و رئیس دفتر محترم مدیرعامل

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1. SCOPE

1.1. General

(Sub.)

This standard covers the minimum requirements for flanged/welded end carbon steel ball valves with NPS 2 through NPS 56, ASME classes 150, 300 and 600, service temperature range from -29 °C to +60 °C, meeting the requirements of ASME B 31.8 suitable for non-sour natural gas transmission and distribution system.

Design, manufacturing, materials, dimensions, tolerances, inspection, testing and marking shall be according to API 6D, 24th edition: 2014 except as supplemented or amended by this specification.

Note: This specification supersedes IGS-M-PL-10-1 (2): 2010 "Ball Valves Class Rating 150" , IGS-M-PL-10-2(2)): 2010 "Ball Valves Class Rating 300" and IGS-M-PL-10-3 (2): 2010 "Ball Valves Class Rating 600".

1.1. 1. Guidance for use of this specification:

(Add)

The amendments/ supplements to API Spec. 6D. 24th edition: 2014 given in this specification are directly equivalent sections or clauses in API 6D. All other paragraphs which are not amended by this supplementary shall remain valid as written. The following annotations, as specified hereunder, have been used at the beginning of each paragraph to indicate the type of change made to that paragraph of API 6D.

Sub. (Substitution) "The paragraph in API Spec. 6D shall be deleted and replaced by the new paragraph in this supplementary "

Del. (Deletion) "The paragraph in API Spec. 6D shall be deleted without any replacement"

Add. (Addition) "The new paragraph with the new number shall be added to the relevant section of API Spec. 6D"

Mod. (Modification) "Part of the clause or paragraph in API Spec. 6D shall be modified and/or the new description and/or statement shall be added to that clause or paragraph as given in this supplementary.

2. Normative References

(Add.)

Throughout this standard specification the standards and codes which mentioned in API 6D: 2014 and the following standard are referred to. The applicability of changes in

standards and codes that occur after the date of this standard that referred shall be mutually agreed upon by the purchaser and supplier and / or manufacturer

API 6 D: 2014 ," Specification for pipeline and piping valves".

ASME B36.10: 2004 "Welded and Seamless Wrought Steel pipe"

ASME B16.20:2012 "Metallic Gaskets for Pipe Flanges"

ASTM A 105:2014,"Standard specification for carbon steel forgings for pipeline applications".

ASTM A 106:2011 "Standard specification for Seamless carbon steel pipe for High-Temperature service.

ASTM A 193: 2016 ," Standard specification for alloy steel and stainless steel bolting materials for high temperature service".

ASTM A194:2015 ,"Standard specification for carbon and alloy steel nuts for bolts for high pressure of high temp. Service or both".

ASTM A216:2016 ," Standard specification for carbon steel casting, suitable for fusion welding, for high temperature service".

ASTM B650:95(2013),"Standard specification for electrodeposited engineering chromium coatings on ferrous substrates".

ASTM B733:2015 Standard specification for autocatalytic (electro less) Nickel-Phosphorus coatings on metal

EN 10204: 2004,"metallic products-Type of inspection documents"

ISO 5211:2001," Part-turn Actuator Attachments"

ISO 9001:2015 ," Quality management system-Requirements".

ISO TS 29001:2010 "Petroleum, Petrochemical and Natural Gas Industries-Sector Specific Requirements-Requirements for Product and Service Supply Organization".

ISO 10497:2010 "Testing of valves-Fire type –testing requirements"

ISO 10474: 2013"Steel and Steel Products-Inspection Documents"

MSS SP-6:2012 ," Standard Finishes for Contact Face of Pipe, Flanges and Connecting-End Flanges of Valves and Fittings".

SSPC-paint 22:1982" Epoxy polyamide paint

MIL-C-83286 B " Urethane, Aliphatic Isocyanate Coating

IGS-M-PL-007(0): 1990," Gas over Oil Actuator ".

IGS-M-PL-009(0):2005," Hand wheel Operated Gear Box for Ball, Plug and Butterfly Valve".

3. Terms, Definitions, Acronyms, Abbrevitions, Symbols,and Units.

3.1. Terms and Definitions

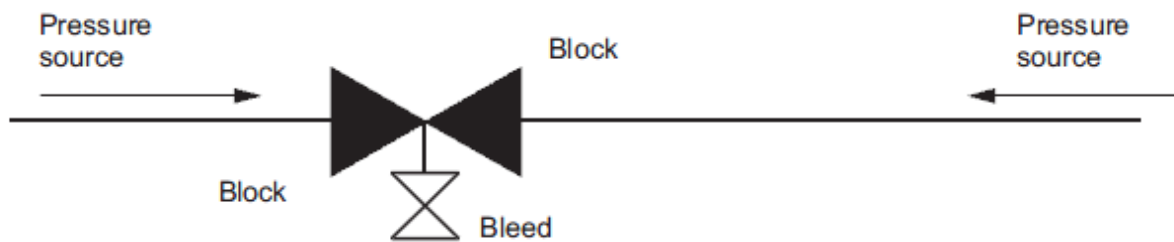
(Sub.)

For the purposes of this standard specification the definitions mentioned in API 6D and the following definitions apply:

3.1.10 Double block and bleed valve (DBB)

(Sub.)

Single valve with two seating surface that, in the fully closed and fully opened position, provides a seal against pressure from both ends to valve cavity of the valve which allows for venting gas and draining of liquid from the body cavity.



Double Block and Bleed-Type B

3.1.18 Maximum pressure differential (MPD)

(Mod.)

Maximum differential between the upstream and downstream pressure across the obturatore base on valve's ASME class rating.

Anti-Seize Thread Lubricant

(Add.)

A highly refined lubricant use during assembly to prevent galling, corrosion and seizing/gripping of threads due to weathering or chemicals.

Approval Agency

Authorized certifying body which approved by technical inspection division.

Subsidiaries of National Iranian Gas Company in order to identify these companies should refer to the URL (<http://inspect.nigc.ir>) for list of qualified companies in this field of use

Carbon equivalent

(Add.)

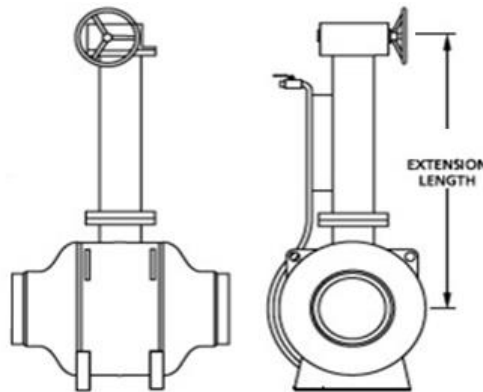
The carbon equivalent (CE) calculated in accordance with the Equation below:

$$(CE_{IIW} = C + \frac{Mn}{6} + \frac{(Cr + Mo + V)}{5} + \frac{(Ni + Cu)}{15})$$

Extension Length

(Add.)

The distance from belowground valve centerline to hand wheel centerline/ operating level.

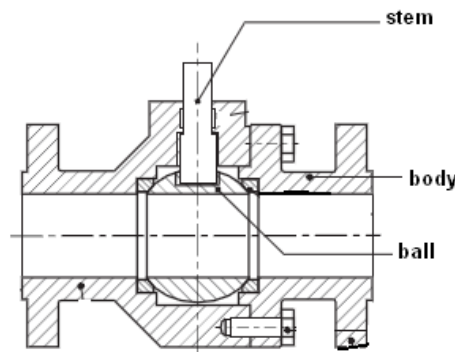


Stem Extension Details (informative)

Floating ball

(Add.)

Valve in which, the ball floats inside the body towards the seat rings and it is not fixed to the valve bottom. Under process pressure ball is pressed into the seat ring. By that, the valve is tight downstream.

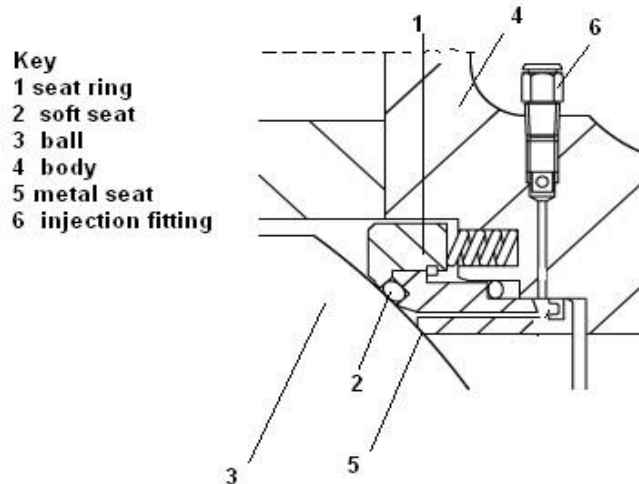


Floating ball valve (informative)

PMSS sealing system

(Add.)

In primary metal, secondary soft seats (PMSS) sealing is achieved by the simultaneous contact of primary metal seat ring and secondary soft insert with the ball.

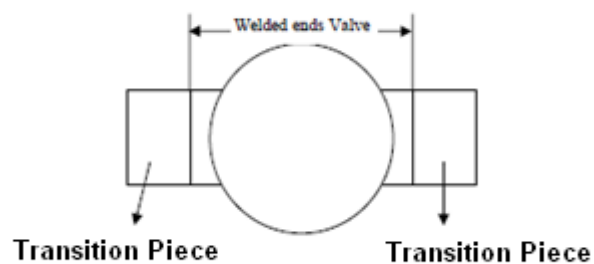


PMSS sealing system (informative)

Transition piece

(Add.)

A piece of pipe welded to end of valve allow for transition between the valve body and the adjacent pipe to which the valve is intended to be connected. These pieces will be ordered with the necessary extra length by purchaser. The thickness and material grade of the pieces and welding process shall be met the criteria of ASME B31.8 (material, grade, thickness, etc.).



Transition piece sketch