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شرکت ملی گاز ایران

مدیریت پژوهش و فنآوری

امورتدوین استانداردها

IGS

مشخصات فنی خرید

شیرهای قفل شونده قبل از رگولاتور جهت انشعابات شبکه های گاز فولادی

Meter Stop Valves for Steel Gas Service Lines

شرکت ملی گازایران

دفترمدیرعامل

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ابلاغ مصوبه هیأت مدیره

مدیر محترم پژوهش و فناوری

باسلام،

به استحضار می‌رساند در جلسه ۱۸۲۱ مورخ ۱۳۹۸/۰۱/۱۸ هیات مدیره، نامه شماره گ۹/۰۰۰/۱۷۰۷۱۴ مورخ ۱۳۹۷/۱۲/۲۵ آن مدیریت درمورد تصویب نهایی استاندارد به شرح زیر:

۱-مشخصات فنی خرید شیرهای قفل شونده قبل از رگولاتور جهت انشعابات شبکه های گاز فولادی IGS-M-PL-019(3)

۲-مشخصات فنی خرید تجهیزات ارسال و دریافت پیگ IGS-M-PL-028(2)

۳- مشخصات فنی خرید واشر حلقوی (کلاس ۱۵۰-۳۰۰-۶۰۰) IGS-M-PL-035(1)

مطرح و مورد تصویب قرار گرفت.

این مصوبه در حکم مصوبه مجمع عمومی شرکت‌های تابعه محسوب و لازم الاجرا می‌باشد.

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Foreword

This standard specification is intended to be mainly used by N.I.G.C. and contractors, and has been prepared based on interpretation of recognized standards and technical documents, as well as knowledge, backgrounds and experiences in gas industries at national and international levels.

Iranian Gas Specification (IGS) are prepared, reviewed and amended by technical standard committees within NIGC standardization division of research and technology management and submitted to "the standards council of NIGC" for approval.

IGSs are subjected to revision, amendment or withdrawal, if required, and thus the latest edition of IGS shall be checked / inquired by NIGC'S users.

This standard must not be modified or altered by NIGC employees or its contractors. Any deviation or conflicts between this specification and other applicable standards, codes, procedure or well-known manufacturer's specifications must be resolved in writing by the user or its representative through Manager, Engineering Department or standardization division of NIGC.

The technical standard committee welcomes comments and feedbacks from concerned or interested corporate and individuals about this standard, and may revise this document accordingly based on the received feedbacks.

General Definitions

Throughout this standard the following definitions, where applicable, should be followed:

1- "STANDARDIZATION DIV." is organized to deal with all aspects of industry standards in NIGC. Therefore, all enquiries for clarification or amendments are requested to be directed to mentioned division.

2- "COMPANY": refers to National Iranian Gas Company (NIGC).

3- "SUPPLIER": refers to a firm who will supply the service, equipment or material to IGS specification whether as the prime producer or manufacturer or a trading firm.

4- "SHALL ": is used where a provision is mandatory.

5- "SHOULD": is used where a provision is advised only.

6- "MAY": is used where a provision is completely discretionary.

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1. Scope

This standard specification cover minimum requirements of NIGC for material, manufacturing, inspection, testing and marking of meter stop valves for steel pipe gas riser sizes 3/4 and 1 inch, pressure rating 125 psi.

Note: *This standard specification cancels and replaces the IGS-M-PL-019(2), which has been technically revised, and up dated.*

2 .References

Throughout this standard specification, the following standards are referred to. The edition of these standards & codes those are in effect at the time of issuing of this standard specification are noted in the references. Applicability of any changes in standards & codes that may occur after issuing the current specification shall be mutually agreed upon by the purchaser and supplier and / or manufacturer.

2.1-ANSI B 16.33:2002", Manually Operated Metallic Gas Valves for Use in Piping Systems up to 125 psi (Sizes NPS 1/2 through NPS 2)".

2.2-ANSI B 1.20.1:2001", Pipe Threads, General Purpose (inch)".

2.3-ASTM A-126:2001", Standard Specification for Gray Iron Casting for Valves , Flanges and Pipe Fittings".

2.4-ASTM B.16:2000", Standard Specification for Free-Cutting Brass Rod, Bar and Shapes for Use in Screw Machines".

2.5-ASTM B.61:2002", Standard Specification for Steam or Valve Bronze Castings".

2.6-ASTM B.62:2002", Standard Specification for Composition Bronze or Ounce Metal Castings".

2.7-ASTM B283:2006", Standard Specification for Copper and Copper-Alloy Die Forgings (Hot-Pressed)".

2.8-ASTM B584:2000", Standard Specification for Copper Alloy Sand Casting for General Applications".

2.9-EN 13787:2001", Elastomers for Gas Pressure Regulators and Associated Safety Devices for Inlet Pressure up to 100 bar".

3. Symbols and abbreviated terms

IGS: Iranian Gas standard
NIGC: National Iranian Gas Company
NPS : Nominal Pipe Size (inch)
NPT: National Pipe Taper Thread
IRHD: International Rubber Hardness Degree
IRM: Industry Reference Materials
tpi: thread per inch

4. Specification

Meter stop valve, manually operated, and lubricated taper plug valve, cast iron body, straight way, tamper proof for above ground installation complete with lock wing for locking the valve in closed position, suitable for gas distribution system.

5. Materials

5.1- The material of body shall be made of gray cast iron at least according to ASTM A126 class B. Plug, retaining nuts and washers shall be according to ASTM B 61 , ASTM B62 , ASTM B283 or ASTM B584 (retaining nuts and washers can be according to ASTM B 16).

5.2- Elastomeric materials used for seals shall conform to the required values and tolerances given in Table 1of ISO 13787.

5.3- The outlet of body shall be male thread which completed with insulating carbon steel half union together with associated malleable/ductile cast iron nut. The insulating material used for electrical insulation shall be of good long term stability and excellent dielectric strength.The half union shall be suitably protected from atmospheric corrosion for long time .

6. Inspection and Tests

6.1- The valve shall be tested in accordance with ANSI B 16.33 .

6.2- The outlet of half union shall be female thread in accordance with ANSI B 1.20.1.

6.3- The body inlet shall be female NPT thread in accordance with ANSI B 1.20.1.

6.4- The lubrication screw hexagonal socket shall be1/8" NPT-27tpi as per Fig 1.

6.5- The assembled valve (body with insulating half union and nut) prior to the hydrostatic test shall be:

6.5.1- Megger tested with 1000 volts D.C. Minimum resistance shall be 4 MOhm.

6.5.2- Dielectric tested at 3000 volts A.C. 50 HZ for one minute. There shall be no breakdown.

6.6- All valves shall be leak tested in closed position pneumatically at 1.5 times of pressure rating. Works inspection certificate shall be submitted by Manufacturer/Supplier.

6.7- Factory material certificates are required.

6.8- Drawings shall be approved by NIGC.

6.9- Sizes NPS ¾ or NPS 1, as per purchase order

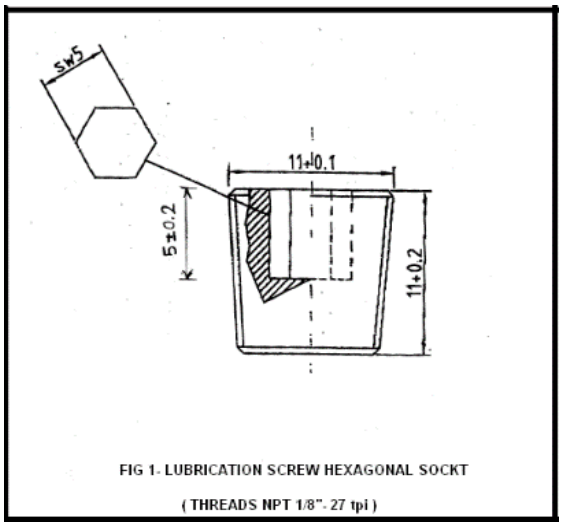


FIG 1- LUBRICATION SCREW HEXAGONAL SOCKT

(THREADS NPT 1/8"- 27 tpi)

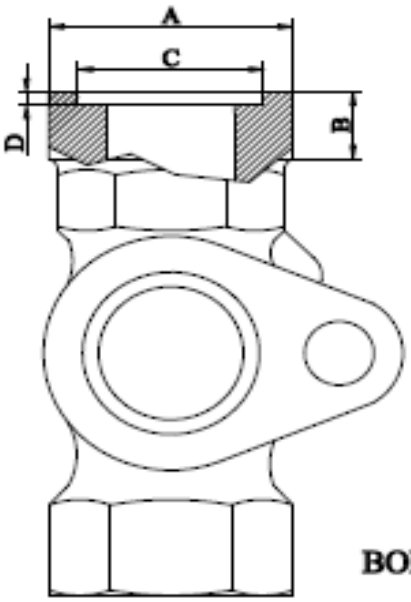
7 .Marking

Marking shall be in accordance with ANSI B 16.33.

Annex A

(Informative)

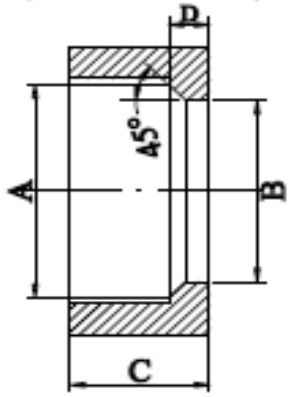
Dimensions (mm) for Meter Stop Valve



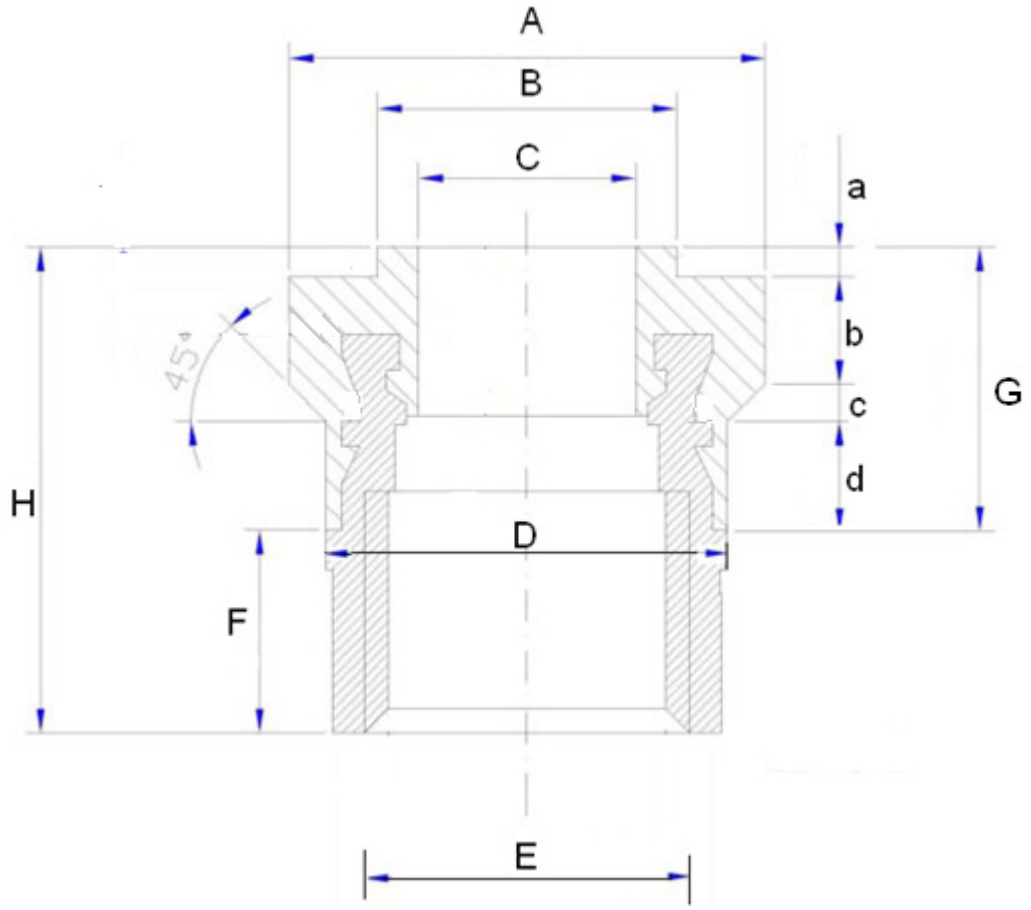
BODY		A	B	C	D	DIMS
SIZE VALVE	3/4"	M 42*2	12 +2	32±0.1	2.3±0.3	MM
	1"	M50* 2	15 +2	38.5±0.2	3+0.2	MM

BODY 3/4-1 "

CAST IRON NUT
(VALVE 3/4"-1")



CAST IRON NUT		A	B	C	D	DIMS
SIZE VALVE	3/4"	M 42*2	35 ±0.5	24±1	7 +0.5	MM
	1"	M50*2	41.5±0.2	28+1	7 +0.5	MM



INSULATING HALF UNION

SIZE	mm											
	A	B	C	D	E	F	G	H	a	b	c	d
3/4	39.5	24.8	18	33.3	3/4"NPT	16.8	23.5	40.3	2.5	9	3	9
1	47	31.5	25	41	1" NPT	15.8	28	43.8	3	9.5	3	12.5

O RING		A	B	
SIZE VALVE	3/4"	31.5	3.7	NBR
	1"	38	4	NBR