

Form No:	 PE&SD	BHARAT HEAVY ELECTRICALS LIMITED PROJECT ENGINEERING & SYSTEMS DIVISION	PY 52 127	
		TECHNICAL SPECIFICATION		Rev. No. 02
		WEDGE GATE VALVE, CAST IRON, IS14846 PN1.6, OUTSIDE SCREW RISING SPINDLE		Page 1 of 4

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1.0 GENERAL

1.1 SCOPE

This standard specifies the requirements of **Cast Iron Outside Screw Rising Spindle Type Wedge Gate Sluice Valves of Rating PN1.6 as per IS-14846.**

1.2 The Gate Valves supplied according to this specification shall conform to the requirements of latest version of the Standard IS-14846 and comply with the additional requirements indicated in this specification.

1.3 APPLICATION

The valves procured according to this standard are intended to be used for Fire Water Application only.

2.0 DESIGNATION:

A hand operated Gate valve of nominal pipe bore 150 NB, conforming to IS 14846 standard, cast iron material, with pressure rating of PN 1.6 and with flat face (FF) flanged end connections conforming to 150 class rating of ANSI B16.5 shall be designated as:

GATE VALVE CI 150NB PN1.6 HO FL 150# FF

A hand operated Gate valve of nominal pipe bore 150 NB, conforming to IS 14846 standard, cast iron material, with pressure rating of PN 1.6 and with flat face (FF) flanged end connections conforming to PN16 rating of IS 1536, IS 1538, IS 9523 & IS 8329 shall be designated as

GATE VALVE CI 150NB PN1.6 HO FL PN16 FF

3.0 GENERAL TECHNICAL REQUIREMENTS:

CL	REQUIREMENTS	COMPLIANCE
3.1	Size	As indicated in material description
3.2	Nominal Pressure Rating (PN)	PN 1.6 as per IS 14846
3.3	Material of construction	Shall be as per Preferred material as per table 1 of IS 14846 with below deviations:
i)	Body, bonnet, dome, stool cover, wedge, stuffing box, gland, thrust plate and cap	Grey cast iron - IS-210 Gr FG 260
ii)	Hand wheel	Grey cast iron - IS-210 Gr FG 260
iii)	Stem	Stainless steel to AISI-410 13% Cr.St.
iv)	Gear housing	Grey cast iron - IS-210 Gr FG 260
3.4	Construction	As per IS-14846 & Outside Screw Rising Spindle type
3.5	Mode of Operation	As indicated in material description
	Hand Operated (HO) Gear Operated (GO) Motor Operated (MO)	

Refer Doc	LAYOUTS & PIPING ENGINEERING PROJECT ENGINEERING & SYSTEMS DIVISION	PREPARED	CHECKED	APPROVED	DATE
		 CH MANOJ	 SRIKANTH G	 S B RAO	15.09.15

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3.6	End Connections: a) Flanged Connection b) Flange Facing	As indicated in material description Either one of 150# - As per ASME B16.5 PN16 - As per IS-1536, IS-1538, IS-8329 or IS-9523 The Flange Facing shall be Flat Face (FF)
3.7	Dimensions & Tolerances	As per Preferred Dimensions-PD (short body) indicated in table 2 of IS 14846
3.8	Testing	As per IS-14846
3.9	Surface Preparation, Coating, Painting (Unless otherwise indicated in Project specific Painting Schedule attached along with the Enquiry)	Surface Preparation as per IS-14846 Primer - Zinc Rich Epoxy Finish - Aliphatic Polyurethane Shade - RAL3000 (P.O.RED) Total DFT - 125 Microns (Minimum)
3.10	Marking, Packing & Storage	As per IS-14846

4.0 ORDERING INFORMATION AS PER ANNEXURE-D OF IS-14846:

4.1	Nominal pressure of valve required	PN 1.6
4.2	Size of valve required	As indicated in material description
4.3	Whether Hand wheel or Cap is required	Hand wheel
4.4	Whether Hand wheels are required with special finish	No
4.5	Whether water is specially corrosive	For Fire Water Application
4.6	Whether valves are for use in pipeline or in unsupported or in terminal positions	In Pipe line duly supported
4.7	Tests required	Both Open and Closed ends
4.8	Whether additional tests other than those are required	No
4.9	Whether contrary to the specification, counter clockwise rotation for closing is required	No
4.10	Nature of operation — Vertical, horizontal or inclined	Shall be suitable for all types of Installation - Vertical / Horizontal
4.11	Flanges / Flange dimensions specific, if any	As indicated in material description Refer point 3.6 indicated above
4.12	Whether tail pieces or adaptors are required to suit special types or for proprietary or other joints	No
4.13	Type of power operation required, if any	As indicated in material description

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4.14	Type of gear required (construction as per IS 14846)	a) Gear operator required for sizes 250 NB & Above (default) b) For sizes less than 250 NB gear operator to be provided as per material description
4.15	Thrust bearings, if required on stem collar	Yes
4.16	By pass arrangement	Required for 250 NB & ABOVE as per IS 14846

5.0 ACCESSORIES OR OPTIONAL FEATURES FOR SLUICE VALVES (AS PER ANNEXURE-A OF IS-14846) AND OTHER SPECIAL REQUIREMENTS:

- 5.1 Locking arrangement for Hand wheel: **To be provided**
- 5.2 Valve gate position indicator: **To be provided**
- 5.3 Anti-friction devices / Thrust bearing for stem collars: **To be provided**
- 5.4 By-pass arrangement valve: **To be provided for 250 NB & above**
- 5.5 Drain plug: **To be provided**
- 5.6 Gear operation: **To be provided for 250 NB & above (default)**
(To be provided for sizes below 250 NB if specified in the material description)
- 5.7 Gate valve shall be provided with back seating bush to facilitate gland renewal during full open condition of valve
- 5.8 **Gate valve shall be Outside Screw Rising Spindle type.**

6.0 DOCUMENTATION:

6.1 Along with the offer:

One copy of each of the following documents shall be submitted along with the offer:

- G.A. drawings/ leaflets/ catalogues for the item with binding dimensions, material specification details, weight etc.
- Signed and stamped copy of this specification accepting the scope of supply as indicated in the specification.

6.2 After PO Placement:

Four copies each of the following documents shall be submitted for approval.

G.A. Drawings for the offered item with binding dimensions, material specification details, tests to be conducted, weight etc.

Schedule for document submissions:

S.no	Description	Schedule
1	Submission of GA drawing by vendor	7 days from the date of P.O.
2	Approval GA drawing by BHEL	14 days from drawing submission *

* The GA drawing submitted by vendor shall be strictly in compliance to all applicable standards and specification. The approval of GA drawing in no way absolves the supplier from meeting this specification requirement

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RECORD OF REVISIONS:

Rev No	Date	Revision Detail	Revised by	Approved by
00	15.09.2015	FIRST ISSUE	 SRIKANTH G	 S B RAO
01	21.10.2017	GENERALLY REVISED	 G KALYAN	 SRIKANTH G
02	20.12.2017	REMOVED TRIM/DISC FROM 3.3 (i)	 G KALYAN	 SRIKANTH G

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