

Under jurisdiction of Dhanbad Court and Jharkhand High Court

Bharat Coking Coal Limited

A Mini Ratna Company
(A Subsidiary of Coal India Limited)
Regt. Off: Koyla Bhawan,Koyla Nagar, Dhanbad-826005
CIN: U10101JH1972GOI000918

Office of the General Manager

Materials Management Department Level-III, Commercial Block, Koyla Bhawan, Dhanbad-826005 Phone: 0326-2230181

Fax No.: 0326-2230183

Website: www.bcclweb.gov.in

Supply / Purchase Order

Under jurisdiction of Dhanbad Court and Jharkhand High Court only

Ref no: BCCL/PUR/CS & NR Valve-200mm/MB/2017/06

Date: 21.04.2017

M/s. CRI PUMPS PRIVATE LIMITED,

Unit: Rago Industries,

S.F.no. 10/150, Masagounden Chettipalayam,

Oraikalpalayam, Kunnathur Pudur(P)

Coimbatore-641107.

Contact Person: Mr. Vivekananth S Contact Number: 09626961006

e-mail ld no:vivekananth.s@cripumps.com

BY SPEED POST

Vendor Code: 1/19/M/T/024 Category: Manufacturer.

Sub: Supply of Cast Steel Non-return Valve-200mm.NB.

Ref: BCCL Tender No: BCCL/Pur/Kol/CS&NR Valve-200mm/2016/04 Opened on 09.08.2016 and your e-mail dated 13.04.2016

Dear Sirs,

With reference to the above, we for and on behalf of BCCL hereby place Purchase Order on you for supply of Cast Steel Sluice Valve-200mm.NB (Class-300) (Material Code: 94036180028 at the following price, terms and conditions:

SCOPE OF SUPPLY

Item	Qty.	Basic Rate	Basic Value			
specification & MOC of Broad dimensions as pe Annexure-II attached. The surface quality of Ste	er el Casting	36	31728.00	Rs.11,42,208.00		
- Exc	Rs. 1,42,776.00					
	Sub total:-	Rs.12,84,984.00				
,	CST @2%	6 extra ag	ainst Form 'C':-	Rs. 25,699.68		
	Rs.13,10,683.68					
F	Rs. 33,300.00					
	Rs.13,43,983.68					
Inspection charges @1% on FOR Value:- Service charges @15% on Inspection charges:-	A Section 1					
Total:-	Rs. 15,455	15,455.81				
United to a main of the market and district a few sections and section and			Grand Total:-	Rs.13,59,439.49		
			Rounded off:-	Rs.13,59,440.00		
	1. Cast Steel Non-return Valve as per Broad Tec specification & MOC of Broad dimensions as per Annexure-II attached. The surface quality of Ste shall be as per IS: 8092/1992 with latest Amend Size: 200mm.NB. (Class - 300) Brand: -"" Exc. F Inspection charges @1% on FOR Value:- Service charges @15% on Inspection charges:- Total:-	1. Cast Steel Non-return Valve as per Broad Technical specification & MOC of Broad dimensions as per Annexure-II attached. The surface quality of Steel Casting shall be as per IS: 8092/1992 with latest Amendment. Size: 200mm.NB. (Class - 300) Brand: -"" Excise duty & CCST @2% Freight charge Inspection charges @1% on FOR Value:- Service charges @15% on Inspection charges:- Rs. 13,439 Rs. 2,015	I. Cast Steel Non-return Valve as per Broad Technical specification & MOC of Broad dimensions as per Annexure-II attached. The surface quality of Steel Casting shall be as per IS: 8092/ 1992 with latest Amendment. Size: 200mm.NB. (Class - 300) Brand: -"" Excise duty & Cess @12 CST @2% extra ag Freight charges @Rs. Inspection charges @1% on FOR Value:- Service charges @15% on Inspection charges:- Total:- Rs. 13,439.83 Rs. 2,015.98 Rs. 15,455.81	1. Cast Steel Non-return Valve as per Broad Technical specification & MOC of Broad dimensions as per Annexure-II attached. The surface quality of Steel Casting shall be as per IS: 8092/ 1992 with latest Amendment. Size: 200mm.NB. (Class - 300) Brand: -"" Excise duty & Cess @12.50% on basic: Sub total:- CST @2% extra against Form 'C':- Sub Total:- Freight charges @Rs.925/- per pcs:- Sub Total:- Inspection charges @1% on FOR Value:- Service charges @15% on Inspection charges:- Total:- Rs. 13,439.83 Rs. 2,015.98 Total:- Grand Total:-		

(Rupees Thirteen lakhs Fifty Nine thousand Four hundred Forty only)

TERMS & CONDITIONS:

- 1. Payment Terms: 100% within 21 days of receipt and acceptance of the materials or from the date of receipt of Bills, whichever is later, by the consignee.
- 2. Prices: FIRM and FOR destination.
- 3. Excise Duty: Excise Duty extra as applicable at the time of supply. Presently @12.5%. Cenvatable Invoice is to be submitted by the firm in favour of BCCL as per Rule.
- 4. Central Sales Tax: CST extra as applicable at the time of supply against C Form. Presently @2%.
- 5. Freight charges: Freight charges shall be paid extra at actual, subject to ceiling limit against documentary evidence @Rs.925 per pcs for Cast Steel Non-return valve of 200mm.NB.
- 6. **DELIVERY SCHEDULE**: -- Supply to be completed within 4(Four) months or earlier from the date of receipt of supply order. Delivery shall be reckoned from the 10th day from the date of order and the date of receipt of materials at our stores shall be treated as the date of delivery from the date of receipt of order.
- 7. **Security Money:** You are requested to furnish a sum of Rs.135944.00 by way of Demand Draft payable at Dhanbad or through a Bank Guarantee (Format as per Appendix-II) of any schedule Bank drawn in favour of "BHARAT COKING COAL LIMITED" as Security Deposit within 15 days which will be refunded after satisfactory completion of the order.
- 8. Inspection Pre-despatch Inspection shall be carried out by CMPDIL, Ranchi at your Works premises. Inspection Fees @1% on FOR destination price and Service Tax @15% on inspection charges shall be paid initially by you along with your Inspection Call, which shall be subsequently reimbursed by BCCL along with your supply bills against documentary evidence e.g. money receipt etc. Final inspection shall be carried out at the consignee end after receipt of materials.
- 9. Transit Insurance Shall be arranged and covered by you for safe arrival of materials to the consignee end at your cost and risk.

10. PENALTY FOR FAILURE TO SUPPLY IN TIME

The delivery of stores stipulated in Purchase order shall be deemed to be of the essence of the contract and delivery of the stores must be completed by the date specified. No materials should be supplied beyond the specified delivery period, unless specific approval has been obtained from the purchaser.

In the event of failure to deliver the stores within the stipulated date/ period in accordance with the samples and/or specification mentioned is the supply order, and in the event of breach of any terms and conditions mentioned in the supply order. Bharat Coking Coal Limited reserves the right:

- a) To recover from successful tenderer, as agreed liquidated damages, a sum not less than 0.5% (half percentage) of the price of the stores which successful tenderer has not been able to supply (for this purpose part of a unit supplied will not be considered) as aforesaid for each week or part of a week during which the delivery of such stores may be in arrears limited to 10%. Where felt necessary the limit of 10% can be increased to 15% at the discretion of Head of the Materials Management Division.
- b) To purchase elsewhere, after due notice to the successful tenderer on the account and at the risk of the defaulting supplier the stores not supplied or others of a similar description without canceling the supply order in respect of consignment not yet due for supply or
- c) To cancel the supply order or a portion thereof, and if so desired to purchase the store at the risk and cost of the defaulting supplier and also
- d) To extend the period of delivery with or without penalty as may be considered fit and proper. The penalty, if imposed shall not be more than the agreed liquidated damages referred to in clause (a) above.
- e) To encash any Bank guarantee which is available for recovery of the penalty or
- f) To forfeit the security deposit full or in part.
- g) Whenever under the contract a sum of money is recoverable from and payable by the supplier, BCCL shall be entitled to recover such sum by appropriating, in part or whole by deducting any sum or which at any time thereafter may be due to the successful tenderer in this or any other contract with Bharat Coking Coal Ltd. or any subsidiary of Coal India Ltd. Should this sum be not sufficient to cover the full amount recoverable, the successful tenderer shall pay BCCL on demand the remaining amount. The supplier shall not be entitled to any gain under this clause.

11. PRICE FALL CLAUSE.

- i) The prices charged for the stores supplied under the contract by the supplier shall in no event exceed the lowest price at which the supplier offer to sell the stores of identical description to any other organization from date of offer till completion of supply under the contract.
- ii) If at any time during the said period the supplier offers lower sale price of such stores to any other organization at a price lower than the price chargeable under this contract, the supplier shall forthwith notify such reduction or sale to the consignee concerned under intimation to CGM (MM), Bharat Coking Coal Limited, Commercial Block, Level –III, Koyla Bhawan, Koyla Nagar, Dhanbad and the price payable under the contract for the stores supplied after the date of coming into force of such reduction or sale, shall stand correspondingly reduced. The above stipulated will not, however apply to exports by the supplier.
- 12 **Submission of Bills**-100% value of bill duly stamped, signed & pre-receipted in quadruplicate as per terms of the order should be submitted initially to the consignee, which will be subsequently forwarded by the consignee to the Paying Authority for payment.

Bill should be submitted along with receipted delivery challan in original, Consignee note (if any), packing list if any, Guarantee/ Warranty certificate, Hydrostatic Test pressure report for each valve as per clause no.5 of the technical specification under heading 'TEST' of Annexure-'I' of 200mm CS Non-Return valve (#300), Copy of Inspection Note of CMPDIL, Price Certificate and other relevant documents, as per order should be raised and submitted to the Consignee for payment through Paying Authority.

NB: all documents to be submitted shall be authenticated.

- 13. Guarantee / Warranty Materials supplied should be guaranteed for a period of 12 months from the date of commissioning or 18 months from the date of receipt and acceptance of material at consignee end whichever is earlier against any manufacturing defects / workmanship / inferior quality. Any defect observed on this account shall be attended within 07 days from the date of receipt of report and replace the materials within 30 days free of cost.
- 14. PRICE CERTIFICATE: You should submit a certificate along with bill as stated below "The rates of the stores under this contract are the lowest at which we are selling to any other customer/Govt. Deptt. / Subsidiaries of CIL/ Other PSUs. If the materials are sold at any lower rate than that mentioned in this contract to any other agency, the same will automatically be applied to this contract from that date "
- 15 Packing Consignment shall be supplied in suitable standard proper packing as per NIT.

16 Force Majeure Clauses -

If the execution of the Contract / Supply Order is delayed beyond the period stipulated in the Contract / Supply Order as a result of hostilities, declaration of embargo or blockade or flood, acts of nature or any other contingency beyond the supplier's control due to act of God, then BCCL may allow such additional time by extending the delivery period as is considered justified by the circumstances of the case and its decision shall be final. In case additional time is granted by BCCL for execution of the Contract/ Supply Order, the Contract/Supply Order shall be read and understood as if it had contained from its inception the delivery date as extended.

a) The successful bidder will advise, in the event of his having to resort to this clause, by a registered letter, duly certified by the local chamber of commerce, or statutory authorities, the beginning and end of the causes of the delay, within 15 days of the occurrence and cession of such force majeure conditions. In the event of delay lasting out of force majeure, BCCL will reserve the right to cancel the contract, and provisions governing termination of contract as stated in the bid documents will apply.

b) For delay arising out of Force majeure, the bidder will not claim the extension in completion date for a period exceeding the period of delay attributable to the causes of force majeure and neither BCCL nor the bidder shall be liable to pay extra cost provided it is mutually established

that the force majeure conditions did actually exist.

- c) If any of the force majeure conditions exist in the place of operation of bidder even in the time of submission of bid, he will categorically specify them in his bid, and state whether they have been taken in to consideration in their quotation.
- 17. Consignee Depot Officer, Central Stores, Ekra, PO: Bansjora, BCCL, Dhanbad.
- 18. Paying Authority- HOD(F)MM,BCCL,Koyla Bhavan,Dhanbad.

- 19. MODE OF DESPATCH: The consignment should be dispatched by road transport under intimation to the consignee as well as to this office.
- 20. **Issue of Road Permit** Road Permit if required may be obtained directly from the Consignee under intimation to this office.

21. ALL DISPUTES ARE SUBJECT TO DHANBAD COURT AND JHARKHAND HIGH COURT JURISDICTION ONLY.

ALL OTHER TERMS & CONDITIONS AND TECHNICAL SPECIFICATIONS ALONG WITH SCOPE OF SUPPLY WILL STRICTLY BE AS PER OUR NIT and drawing enclosed.

This contract is concluded with the issuance of this order. We are enclosing 2 copies of the Purchase order, one of which should be returned to us duly stamped and signed. This issues with the approval of the Competent Authority.

Yours faithfully, For & on behalf of Pharat Coking Coal Ltd.

Chief Manager (MM),

INDENT REFERENCE

Sr. No	Indent no & IR no. and date	Budget Certification no. & dt.	Indenting Authority			
proved.	MB for 14-15 and MB:15-16 have been merged and the reviewed quantity is projected as the requirement of MB:2016-17.	BC No. BCCL/ HQ/PUR. FIN/ Rev.Bud/17-18/Other Stores (UG)/03 dtd.11.4.2017 and e-BC no.31 dtd.11.4.2017. FC No:BCCL/PUR.FIN/FC/03 dtd.11.4.2017 and e-FC no.07 dtd.11.4.2017 both for Rs.2622278.00	GM (E&M), Koyla Bhavan, Dhanbad.			

Copy to:

- 1. GM (MM), BCCL, Koyla Bhavan, Dhanbad.
- 2. GM (E&M)I/C, BCCL, Koyla Bhavan, Dhanbad.
- 3. GM(MM)S, BCCL, Koyla Bhavan, Dhanbad
- 3. HOD (F)MM, BCCL, Koyla Bhavan, Dhanbad
- 4. Depot Officer, Central Store, Ekra, PO:Bansjora, BCCL, Dhanbad.
- 5. MM (Tech Cell), MM Div, Koyla Bhavan. Dhanbad.
- 6. GM (E&M) Inspection, CMPDIL, Gondowana Place, Kanke Road, Ranchi-834008 Jharkhand
- 7. Master File/Office Copy

Ref no:BCCL/PUR/CS & NR Valve-200mm/MB/2017/ M/s. KRI PUMPS PRIVATE LIMITED

BROAD TECHNICAL SPECIFICATION FOR SWING CHECK TYPE NON RETURN VALVE

GENERAL

1. Name & Address of the tenderer: M/s. CRI Pumps Pvt.Ltd.

Unit:Rago Industries, 10/150, Masagounden Chetti

Palayam, Oraikalpalayam, Kunnathur, Pudur (P), Koimbatore-641107.

2. Name & Address of the manufacturer: - As above -

TECHNICAL DETAILS

1. Make, type & model of the valve: 'CRI' make.

2. Class and size for which suitable: 8 inch (200mm), Class-300.

3. M S Pipe size for which suitable for: 200 mm.Dia

4. Working pressure for which suitable: Class 300

5. Designed Pressure: Class 300

i) Shell test water-77.5 Kg/Sq.cm.

ii) Seat test: Water-57.0 Kg/Sq.cm

Test Pressure: Working 51.5 Kg/cm.square.

Body : ASTM-A216 Gr.WCB

Seat : ASTM A105 + Stellite 6

MATERIAL SPECIFICATION AND ISS/BS REF. OF MAIN PART

1. Body : ASTM-A216 Gr.WCB.

2. Disc : ASTM-A217 Gr.CA 15

3. Cover : ASTM-A216 Gr.WCB

4. Gasket: SS 316 + Graphite filled.

5. Hinge & Hinge Pin: ASTM-A275 SS -410.

6. Body Ring: ASTM-A105 + ST 6

7. Bolts & Nuts etc: Stud - ASTM A-193.Gr-B7; Stud Nut: ASTM A-194.Gr-2H.

8. Dimensions and ISS/BSS to which those conforms: BS-1868

All major dimensions like:

J. I hil lil	alor mir	TIGITOTOTTO								
Valve size	A	ØB	ØC .	ØD	ØF	ØG	J	H	N	
8" or 200mm	660.0	420.0	270.0	203.0	32.0	349.0	55.6	470.50	12	

10. Sectional view and nomenclature of main parts: As per GAD XC1009.

11. Weight of the valve in working condition: As per relevant IS.

12. Scope of supply - Standard

13. Details of lubrication arrangement: As per relevant IS.

14. Any other technical details/special feature, of the valve: As per GAD & relevant IS.

Ref no:BCCL/PUR/CS & NR Valve-200mm/MB/2017/ M/s. CRI PUMPS PRIVATE LIMITED

BROAD TECHNICAL SPACIFICATION FOR SWING CHECK TYPE NON RETURN VALVE

This specification broadly covers design, manufactures and supply of Cast steel both flanged reflux/Non Return Valve of single door swing check type to be used for mines dewatering operation, water supply system and other similar application in coalfields Area in BCCL.

1.SERVICE CONDITION:

The valve offered shall be compact and of robust construction to withstand the service conditions. It shall be capable of performing satisfactory service in heavy dust laden atmosphere; ambient temperature of 45 degree

C and related humidity of 98% and other service conditions prevalent in coalfield Area.

2. DESIGN, CONSTRUCTIONAL, FEATURES AND MATERIAL SPECIFICATION.

a. The Valve shall conform to relevant I.S. specification/B.S. Specification.

b. The material of valve parts shall be so chosen so as to be compatible and match tribologically to provide prolonged trouble free service life and shall require very less maintenance. All the parts shall be manufactured to standard manufacturing practices to ensure interchangibility of the parts. All the parts shall strictly conform to relevant IS Specification/B.S.Specification, whichever applicable.

c. The valve design shall be such that it provides quick operation and requires very less maintenance.

design of the valve shall be such that it eliminates possibilities of corrosion and erosion at all seating surfaces and shall provide leak proof tightness. It shall give minimum of turbulence and provide least resistance to flow and pressure loss shall be minimum.

d. All casting shall be clean and sound without any defects that may impair their service. No plugging,

welding or repairing of such defects is allowed.

e. The dimensions, design and shapes of the body, door, cover, etc. shall be suitably selected to ensure that area of flow passage at any cross section of the valve is not less than area of the nominal bore of the valve.

f. The non return valve offered shall be of single door pattern type, with inclined seating & side by-

pass arrangement.

g. The design or the hinges, hinge pin, door suspension pin, etc. shall be suitable to ensure free swinging of the door in close position of the valve, the door face shall have close face contact with body ring.

h. The design of doors & hinge shall be suitable so as to withstand satisfactory the repeated impacts

likely to occur during service.

I. The design of valves used in vertical pipe lines shall be such that in the working position, the valve positively close when the flow in the pipe comes to a stop.

j. Each valve shall carry an arrow very prominently to indicate the direction of flow. The arrow shall be cast integrally on the body of the valve.

k. The arrow shall be located on the left hand side of the observer while he faces in the direction of flow.

1. The by-pass arrangement is not applicable

3. DIMENSIONS;

- a. The valves flanges on both sides shall be to standard dimensions and shall conform to relevant ISS/BSS/ASME.
- b) The valves flange standard as per ASME B 16.5

4. Valve sizes, Class/Type and nominal pressure:

a. Valve Sizes:200mm.

Ref no:BCCL/PUR/CS & NR Valve-200mm/MB/2017/ M/s. CRI PUMPS PRIVATE LIMITED

b. The valve shall be of the following nominal size: 200mm.

c. The nominal size shall refer to the nominal bore of the water ways. The actual bore at any point shall not be less than the nominal size given in b.

d. The class of the valve offered shall be as per relevant B.S. Specification. Corresponding pressure retain shall be as follows:-

Class Pressure rating

300 50+1.0 Kg/Cm. sq.(720 lbs/sq.")

e .Pressure rating indicated above means maximum working pressure of the valve.

f .All the parts of the valve shall be designee so as to withstand the test pressure indicated herein the specification.

g. The tenderer shall supply the following class of valve for the sizes indicated against each: Class For valve sizes to be supplied 300 200mm(8") dia

5. TESTING:

a. All the valves shall be subjected to hydrostatic tests and other tests specified in the relevant ISS/BSS and to the test pressure indicated below:-

Class Hydrostatic Test Pressure

Body Seat

Minimum Test pressure Minimum test pressure shall

Shall be 1.5 times the be equal/ higher of the pressure

300 Pressure rating of the valve rating of the valve.

b. The valves shall be show no sign of leakage under these tests.

6.MANUFACTURER'S CERTIFICATE;

The manufacturers shall supply, free of cost a certificate stating that each valve supplied has been subjected to all the tests laid down in this specification and relevant ISS and BSS specifications and confirm in all respects to the requirements therein .

7. MARKING;

The following information shall be cast on each valve body in raised letters, as per the standard practices: -

i. Manufacturer's name or Trade Mark.

ii. The class of valves and nominal pressure

iii. Size of the valves.

7.1. MOC & Broad dimensions as per Annexure -II.

8.PACKING AND STORES;

a. PACKING:

Bright parts shall be protected against rust .Valves of small diameter may be packed in wooden cases . Valves with smooth finished flanged joint faces shall be suitably protected against damage. Parts liable to injury in transit shall be wrapped with wood wool or similar material as a protection.

b. STORAGE: Valves shall be stored in covered stores away from dirt.

9. GUARANTEE;

The tenderer/manufacturer shall, stand guarantee for the material, the design and the operation of the valves offered and covered under the order to the extent that if any defects chargeable to faulty work man ship, design or material are found in the valve within a period of 12 months from the date of installation or 18 months from the date of supply, whichever is earlier the tenderer shall arranges free of charge replacement.

10.DEVIATION:

No deviation shall be allowed from the stipulated parameters.

M

Ref no:BCCL/PUR/CS & NR Valve-200mm/MB/2017/ M/s. CRI PUMPS PRIVATE LIMITED

MOC & BROAD DIMENSIONS OF THE COMPONENT

Technical description of swing type check (Non-return) valve.

MOC

- 1. Body ASTM A 216 Gr.WCB.
- 2. Body Seat Ring ASTM A105 + Stellite 6
- 3. Disc ASTM A 216 Gr. WCB + 13% Cr.Steel.
- 4. Hinge ASTM A 216 Gr WCB
- 5. Disc Washer 13% Cr Steel
- 6. Disc Nut SS 304
- 7. Disc Nut Pin 13% Cr Steel
- 8. Hinge Pin ASTM A 276 Type 410
- 9. Gasket Spiral wound SS 316 + Graphite/Compressed Asbestos
- 10. Cover ASTM A 216 Gr WCB
- 11. Stud ASTM A 193 Gr.B 7
- 12. Stud Nut ASTM A 194 Gr 2 H
- 13. Hinge Pin Cover ASTM A 105
- 14. Hinge Pin Cover Bolt ASTM A 193 Gr B7
- 15. End Connection Flanged to ASME B 16.5 class 300 RF
- 16. Valve Size 200 mm.
- 17 Pressure Class /Rating 300
- 18. Bonnet ASTM A 216 Gr. WCB.
- 19. Minimum wall thickness Of Shell. 17.0 mm

STANDARDS FOR SWING TYPE CHECK (NON RETURN) VALVE:

Valve Design - BS 1868

Pressure - Temperature rating - ASME B 16.34

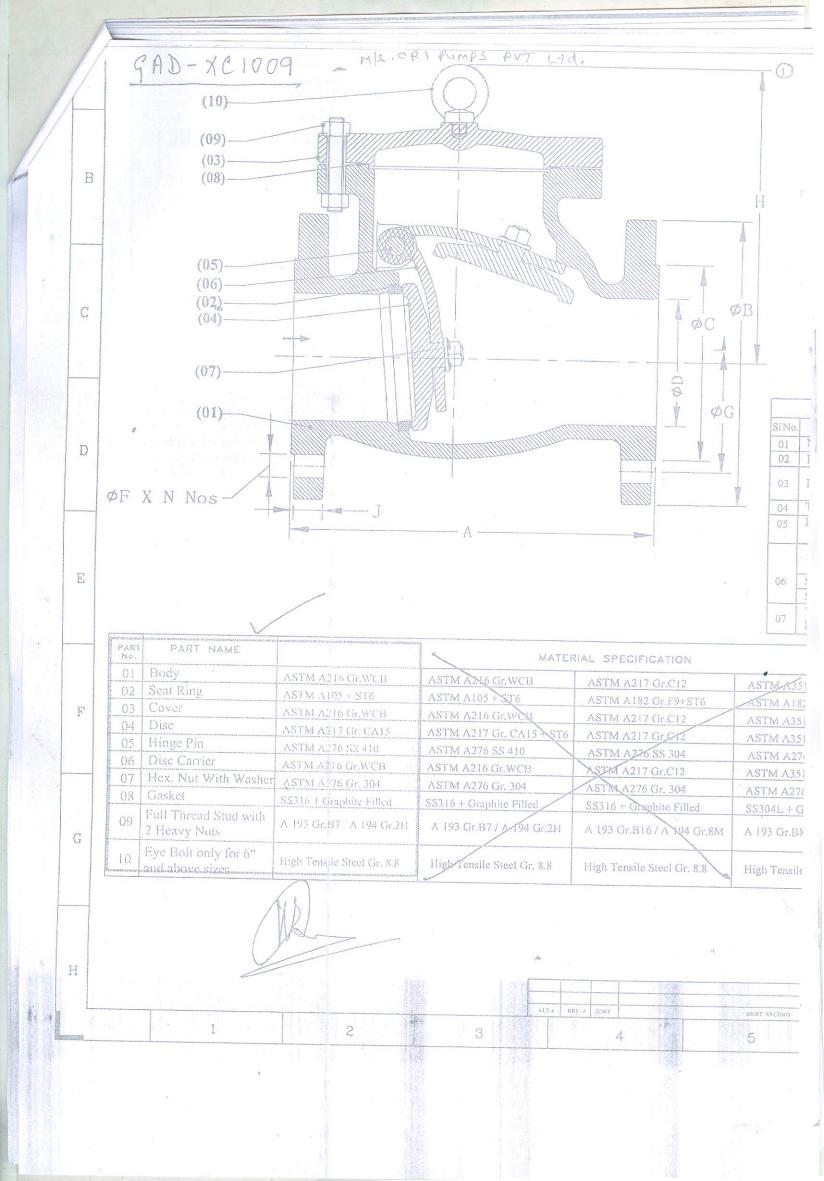
Face to face dimension - ASME B 16.10

Valve Inspection & Testing - BS 6755 Pt 1

IMPORTANT NOTE: -

Hydrostatic Test pressure report for each valve as per clause no.5 of the specification shall be submitted with the consignment.

BCCL may get few valves tested as per the specification, if felt necessary, at any Govt. test House, to check the conformity of the test report.



						11 11 11 11			1 5 2 1		Har Bu	2011	5 8	T _v	
~ 4 MA - XC 10	V 7				7	Contraction of the Contraction o	NII L	101 .	NO H SPANN Prings	one of the same of		NAME OF THE PARTY	4%	C	
	200	1 000 0	4.0		D. D.	IMENSI	ON DET.	A 11.S - #3	(H)				paraceter)		
	51. No.	NIS	DN	h. h.	193B	000	(11)	()[·	OG	.5	11	N	NACO-AND NACO NA		
	01		362	26730	165.0	92.0	52.0	19.11	127.0	20,7	147.50	8	MANAGANA	-	
Valve Technical Data Specification Specification	02	3,7	8n	3 N. 11	210.0	1270	76.4	22.20	168,30	27.0	179.0	8.	consortion		
2" to 12"					X							57.	esetários por constituiros		
dord BS\\68, A\\$ME B16.10,	03		100	35639	2634	157.0	102.0	22.20	200.0	30.2	208.0	8	enterpresson.	I	
dard ASMEB16.34	04	- 6"	150	444,0	3520.0	216.0	153.0	22.20	270.0	35.0	306.0	12	CO-SOUTH CONTRACT	1	
dard API 598 Conformity ASME B16.5	0.5	8.4	200	52(5.11	380.0	270.0	203.0	25.40	330.20	39.7	387,0	12	errendaments		
#150,#300 ɘ BAR #150 #300 #600	06	I()**	250	622.9	-145.0	324.8	254.0	28.50	387.40	\$6.}	444.i)	16	**************************************		
Water 30 77.5 154.0	87	127	300	711.0	520.0	381,0	395,0	32.0	451.0	49.3	347.0	16	corectorda		
ssure (Max 22 57.0 113.0	orthonormus ((maget nonconcentron)		100.7 Service (100.7 00.7 00.7 00.7 00.7 00.7 00.7 00.7	CERT MANAGEMENTS	ABOT OF BRIDE POR	adian managara sa	n ferensia de araza	A Charles and Charles and		- Comment	es Legas stations	Ž		
oom Temp.) 20 51.5 102.5	SI.	*Valve	Size		DI	MENSI	ON DET	AILS - #6	500				7		
1	No.	NPS	. DN	.A	OB	ØC.	ØD	ØF	ØG	J	H	N			
	01	2"	50	292.0	165.0	92.0	52.0	19.0	127.0	25.4	161.0	8		-	
ASTM A351 Gr.CF3M	02	3"	80	356.0	210.0	127.0	76.0	22.20	168.30	31.8	184.0	8			
ASTM A182 Gr. F316L ASTM A351 Gr.CF3M	-		479000								104.0			F	
AŜTM A35 / Gr, CF3M	03	46 14	100	432.0	275.0	157.0	102.0	25.40	216.0	38.1	218.0	8		1	
ASTM A276 SS 316L	04	6"	150	559.0	355.0	216.0	152.0	28.50	292.0	47.7	344.0	12			
A\$\text{M} A351 Gr.CF3M A\$\text{FM} \text{A276 Gr. 316L}	05	8,,	200	660.0	420.0	270.0	203.0	32.0	349.0	55.6	470.50	12			
SS316L + Syaphite Filled	06	10"	250	787.0	510.0	324.0	254.0	35.0	432.0	63.5	497.50	16			
r.8M A 193 Gr.B8M XA 194 Gr.8M	0.7	12"	300	838.0	560.0	381.0	298.0	35.0	489.0	66.7	596.50	20			
High Tensile Steel Gr. 8-8		\		1						300.00			- Volume	G	
mgir tensile steet of, eta	M			7 0									The state of the s		
	(WE														
e C	CH. GAD DETAILS - 2" to 12" #150,#300 ɘ								PRIC.R.I.PUMPS PVT.LTD.				ette spreathalterin sagel		
				DRG, No.:		Rev.No.:	2016	SIGN	DATE	Connin Ol	VIT RAGO I	NDUSTI	RIES		
(310) CXXXX	I CXXX	C877 1 -	-	XC1	009	00	DRN	KDK	15.07.2016	WEIGHT	RM TIN	SHEET		Н	
Fig. a lim a est y est y and est y in		7 7 7 7	▽ ~ "" "	MAT.:-			-	JP	16.07.2016		ONS ARE IN tons	A	-	L	
DATE 29 GKURS N V) MI SH	K1 N1 2	of sec sec min	MII 112				APD	DKN	16,07,2016	SCALE:-N	I.T.S		1		
6 7		8				9				10					