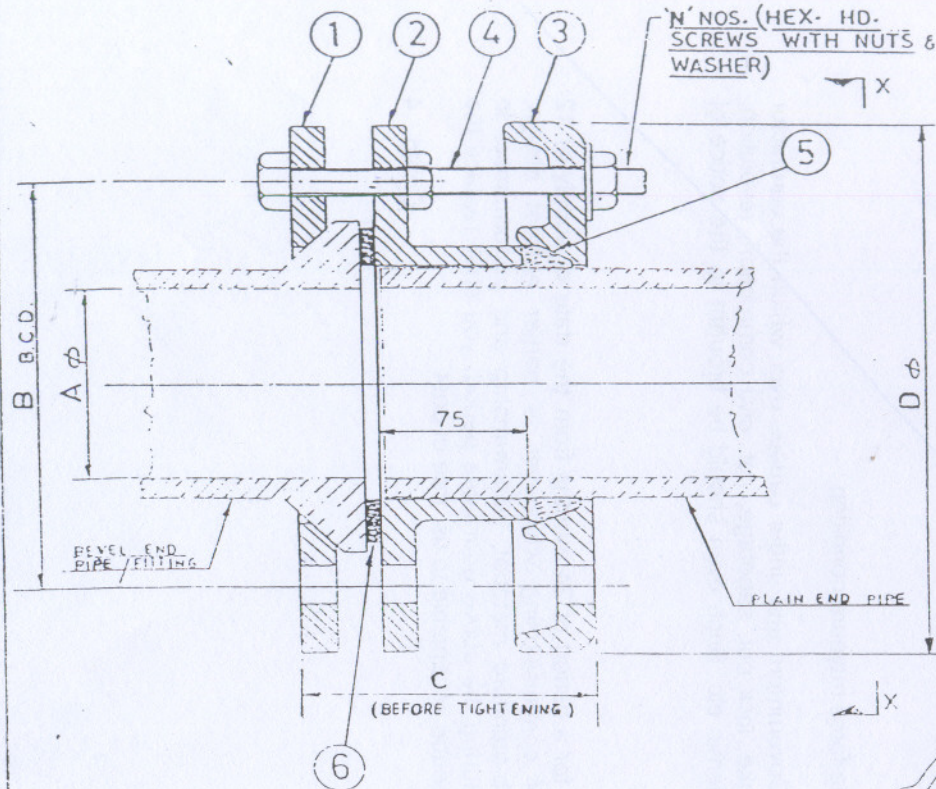




6	GASKET — FLAT	1	NITRILE — BS: 2494
5	GASKET — SPLIT	1	GRAPHITE COATED ASBESTOS
4	M-20 SCREWS WITH NUTS & WASHERS	SEE TABLE	STEEL IS:1367 GALVANISED
3	FLANGE CLAMP	1	C.I. FG-220, IS:210
2	B/A TYPE ADAPTER	1	C.I. FG-260, IS:210
1	FLANGE CLAMP HALF	2	STEEL, GR.200-4.00W IS:1030/SG IRON, IS:1865
PART NO	DESCRIPTION	QTY.	MATERIAL
BILL OF MATERIAL			

MACHINING SYMBOLS	MATERIAL	SHOP PAINTING	NOTICE: (1) THIS DRAWING OWNED BY DC INDUSTRIAL PLANT SERVICES PVT. LTD. IS CONDITIONALLY LOANED. THE RECIPIENT OF DRAWING AGREES NOT TO REPRODUCE OR COPY IT IN WHOLE OR IN PART OR FURNISH INFORMATION FROM IT TO OTHERS OR TO MAKE ANY USE OF IT THAT IS OR MAY BE INJURIOUS TO DCPS AND TO RETURN IT UPON REQUEST (2) THE EQUIPMENT AND DESIGN SHOWN ON THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF DCPS
HAIR GRINDING	SEE BOM.	AS PER SEPARATE APPROVED PAINTING DATA SHEET / SCHEDULE	
SMOOTH UNMACHINED	ESTIMATED WEIGHT	HYDROSTATIC TEST PRESS	REQUIRED NOS.
ROUGHING	SEE TABLE	FOR B/A ADAPTER (PART NO. 2)	AS PER LAYOUT
SMOOTHING		4 KG/C.M ² (3)	
FINISHING			
RELEASED FOR CONSTRUCTION			
NOT VALID IF NOT SIGNED			
DRAWN DESIGNED CHECKED			
BY DATE			
REVISION AS MARKED			
NO DATE REVISION PARTICULARS BY CHK'D DATE			
1 22-212 REVISED AS MARKED			
MO DATE			
SCALE			
JOB NO			

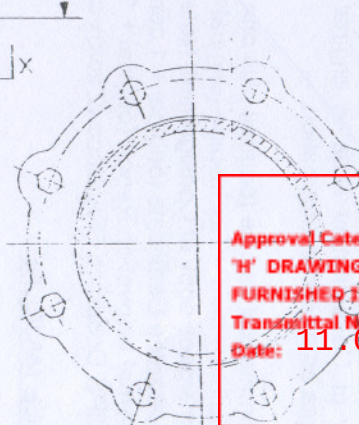
119 PARK STREET KO, KATA-700 016, INDIA

TABLE

SL NO.	PIPE/FITTING SIZE	A φ	B (BCD)	C	D φ	N (NO. OF SCREW WITH NUT & WASHER) PART NO. 4	EST. WT. IN KG. (APPROX.)	DO NOT SCALE IF IN COGIT. 25%
1	250 NB. MS. IS: 3589 (9.52 THK)	254	362	185	409	12 SETS	35	
2	300 NB. MS. IS 3589 (9.52 THK)	305	432	166	472	12 SETS	40	

NOTES:

- ALL DIMENSIONS ARE IN mm. UNLESS OTHERWISE SPECIFIED.
- ALL TESTING WILL BE DONE AS PER APPROVED QAP.
- 2.5 DEGREE ANGULAR DISPLACEMENT ALLOWED.



VIEW -- X X

NOS. OF BOLTS SHOWN IN THIS VIEW ARE INDICATIVE. FOR EXACT NO. SEE TABLE

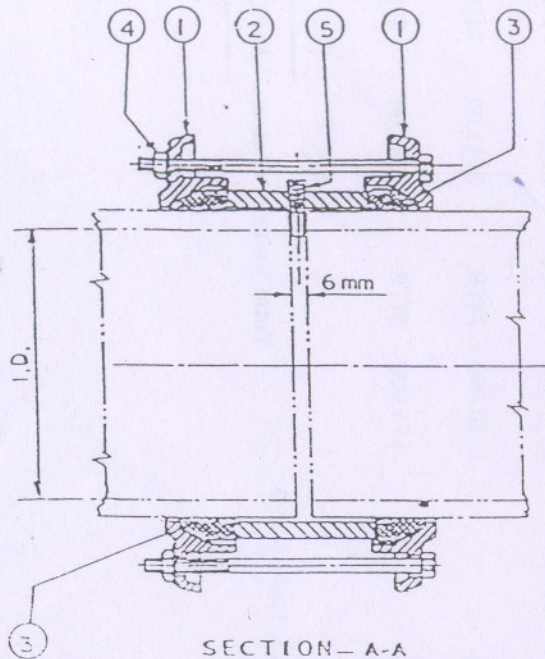
Approval Category:

'H' DRAWING NOT FOR APPROVAL, ONLY FOR INFORMATION. INFORMATION FURNISHED IN THE DRAWING IS NOTED

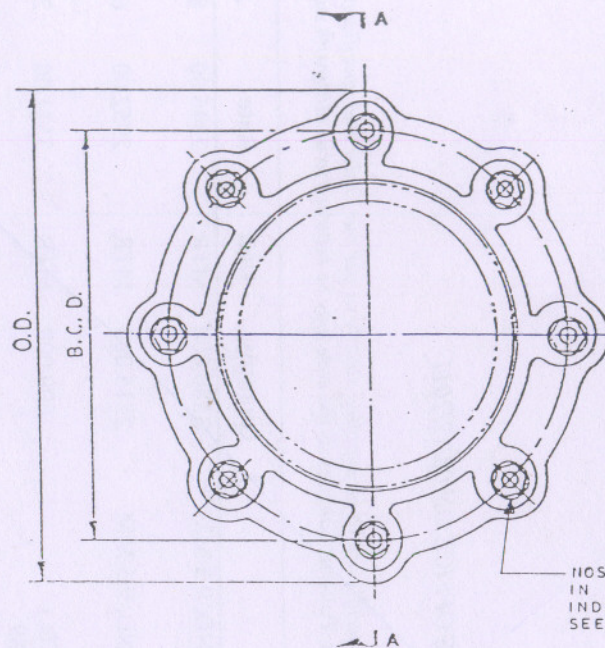
Transmittal No. P.001794/TE-IN/BHEL/ISG/129
Date: 11.04.2012

Name of person approving the drwg. / doc.
Anup Kumar Prusty

OWNER/PROT	KARNATAKA POWER CORPORATION LIMITED
	BELLARY TPS, UNIT-3 1100MW
	ASH HANDLING SYSTEM
TRACTEBEL Engineering	TRACTEBEL ENGINEERING PVT. LTD
	CONSULTANT
BHEL	BHARAT HEAVY ELECTRICALS LTD.



SECTION - A-A



NOS. OF BOLTS SHOWN
IN THIS VIEW ARE
INDICATIVE FOR EXACT NO.
SEE TABLE.

BILL OF MATERIALS

DO NOT SCALE,
IF IN DOUBT, ASK.

PART NO.	DESCRIPTION	QTY	MATERIAL
1.	FLANGE CLAMP	2	C.I. FG. 220 AS PER IS:210
2.	ALIGNING RING 9mm THK. (100 mm LONG APPX.)	1	C.I. FG. 260 AS PER IS:210
3	GASKET	2	GRAPHITE COATED ASBESTOS
4	HEX HD BOLT WITH NUT	SEE TABLE	STEEL IS:1367 GALVANISED
5.	TAPPER PIN	3	M.S. GALVANISED

SL. NO.	PIPE SIZE	I.D.	B.C.D.	O.D.	PART NO. 4		EST. WT. IN Kg. (APPROX.)
					BOLT NUT & WASHER	QTY.	
1	250NB MS. IS:3589(9-52THK)	254	362	400	M20X220Lg BOLT	12 SETS	26
2	300NB. MS. IS:3589(9-52THK)	305	432	472	M20X220Lg BOLT	12 SETS	30

NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
2. ALL TESTING WILL BE DONE AS PER APPROVED GAP.
3. 2-5 DEGREE ANGULAR DISPLACEMENT ALLOWED.

TRACTEBEL Engineering
GDR 3VEZ

Approval Category:

'H' DRAWING NOT FOR APPROVAL, ONLY FOR INFORMATION. INFORMATION
FURNISHED IN THE DRAWING IS NOTED

Transmittal No. P.001794/TE-IN/BHEL/ISG/129

Date: 11.04.2012

Name of person approving
the drwg. / doc.

Anup Kumar Prusty

FOR INFORMATION

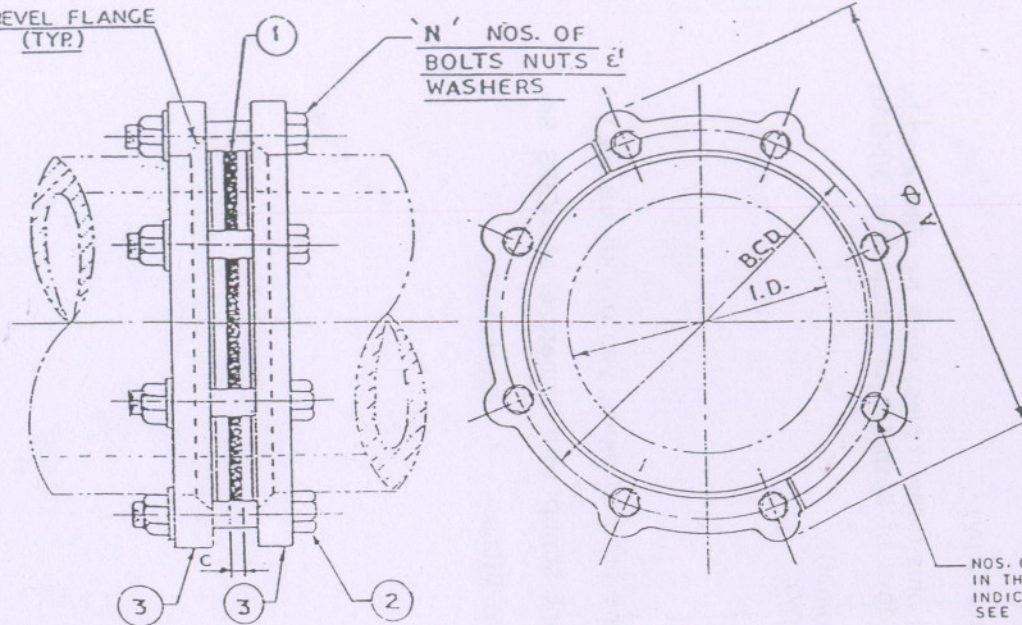
MACHINING SYMBOLS		MATERIAL	REF. DRAWING NOS.	SHOP MARKING	NOTICE: (1) THIS DRAWING ISSUED BY DC INDUSTRIAL PLANT SERVICES PVT. LTD. IS CONDITIONALLY LOANED. THE RECEIPT OF DRAWING AGREES NOT TO REPRODUCE OR COPY IT IN WHOLE OR IN PART OR FURNISH INFORMATION FROM IT TO OTHERS OR TO MAKE ANY USE OF IT THAT IS OR MAY BE INJURIOUS TO DCPS AND TO RETURN IT UPON REQUEST (2) THE EQUIPMENT AND DESIGN SHOWN ON THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF DCPS										RELEASED FOR CONSTRUCTION				DWG NO
	HAND FINISHING	SEE BOM.	AS PER SEPARATE APPROVED PAINTING DATA SHEET/SCHEDULE	HYDROSTATIC TEST PRESS REQUIRED NOS.	1	22-2-12	REVISED AS MARKED	1	RK	NOT VALID IF NOT SIGNED				BY	CHKD	DATE	SCALE	JOB NO	
	SMOOTH UNMACHINED									DRAWN									DESIGNED
	ROUGHING	ESTIMATED WEIGHT	ALIGNING RING (PART NO-2)	AS PER LAYOUT															
	SMOOTHING	SEE TABLE	4 Kg/Cm ² (s)																
	FISHING																		

119 PARK STREET, KOLKATA-700 016, INDIA

OWNER/PROJECT:	KARNATAKA POWER CORPORATION LIMITED BELLARY TPS, UNIT-3 12700MW ASH HANDLING SYSTEM
TRACTEBEL Engineering	TRACTEBEL ENGINEERING PVT. LTD CONSULTANT
	BHARAT HEAVY ELECTRICALS LTD. INDUSTRIAL SYSTEMS GROUP

SEVEL FLANGE
(TYP.)

'N' NOS. OF
BOLTS NUTS &
WASHERS



NOS. OF BOLTS SHOWN
IN THIS VIEW ARE
INDICATIVE. FOR EXACT NO
SEE TABLE.

TABLE

SL. NO.	PIPE/FITTING SIZE	I.D.	B.C.D.	Aφ	'C' (THK.)	N NO. OF BOLT	WT. (Kg.) (APPROX.)	DO NOT SCALE IF IN DOUBT, ASK
1	250NB MS. IS:3589(9-52THK)	254	362	404	5	12	15	
2	300NB MS. IS:3589(9-52THK)	305	432	48	6	12	20	

NOTES:

- ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
- ALL TESTING WILL BE DONE AS PER APPROVED QAP.
- 2.5 DEGREE ANGULAR DISPLACEMENT ALLOWED.

TRACTEBEL Engineering
GDR Svez

Approval Category:

'H' DRAWING NOT FOR APPROVAL, ONLY FOR INFORMATION. INFORMATION FURNISHED IN THE DRAWING IS NOTED

Transmittal No: P.001794/TE-IN/BHEL/ISG/129

Date: 11.04.2012

Name of person approving

the drwg. / doc.

Anup Kumar Prusty

3.	FLANGE CLAMP HALF	4	STEEL, GR 200-400 IS:1030 / SG IRON IS:1855
2.	HEX. BOLT WITH NUT TO IS:1363	SEE TABLE	STEEL IS:1367 GALVANISED
1.	GASKET	1	NITRILE - BS 2494
ITEM NO.	DESCRIPTION	QTY.	MATERIAL
BILL OF MATERIAL			

MAKING SYMBOLS	MATERIAL	SHOP PAINTING	NOTICE: (1) THIS DRAWING OWNED BY DC INDUSTRIAL PLANT SERVICES PVT. LTD. IS CONDITIONALLY LOANED. THE RECEIPT OF DRAWING AGREES NOT TO REPRODUCE OR COPY IT IN WHOLE OR IN PART OR FURNISH INFORMATION FROM IT TO OTHERS OR TO MAKE ANY USE OF IT THAT IS OR MAY BE INJURIOUS TO DCIPS AND TO RETURN IT UPON REQUEST (2) THE EQUIPMENT AND DESIGN SHOWN ON THIS DRAWING ARE THE EXCLUSIVE PROPERTY OF DCIPS	RELEASED FOR CONSTRUCTION	DWG NO.
○ HAND GRINDING	SEE BOM.	AS PER SEPARATE APPROVED PAINTING DATA SHEET / SCHEDULE		NOT VALID IF NOT SIGNED	
○ SMOOTH UNMACHINED	ESTIMATED WEIGHT	HYDROSTATIC TEST PRESS	REQUIRED NOG.	DRAWN DESIGNED CHECKED	SCALE
▽ ROUGHING	SEE TABLE	AS PER LAYOUT		BY	JOB NO.
▽▽ SMOOTHING				DATE	
▽▽▽ FINISHING					

PROJECT:	KARNATAKA POWER CORPORATION LIMITED
	BELLARY TPS, UNIT-3 1x700MW
	ASH HANDLING SYSTEM
TRACTEBEL Engineering	TRACTEBEL ENGINEERING PVT. LTD.
	CONSULTANT
BHEL	BHARAT HEAVY ELECTRICALS LTD.
	INDUSTRIAL SYSTEMS GROUP
	BANGALORE