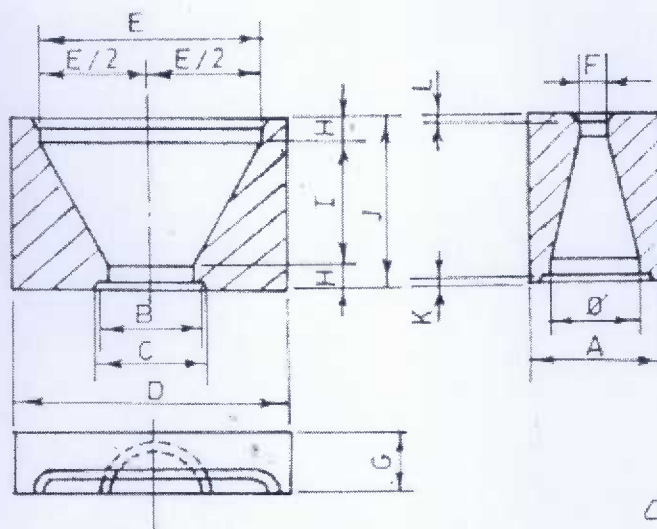


(ALL DIMENSIONS ARE IN mm)



RD	ϕ	A	B	C	D	E	F	G	H	I	J	K	L	AREA cm ²	VOLUME cm ³	WT kg	TO BE USED BY
1	30	50	40	42	125	90	9	25	15	55	85	5	3	7.9	0.461	0.876	STEEL FDY.
2	40	60	50	52	140	115	13	30	15	65	95	5	4	14.5	0.661	1.256	"
3	50	75	62	64	160	130	18	37.5	18	69	105	5	5	22.7	1.024	1.946	"
4	60	85	72	74	190	160	21	42.5	18	89	125	5	6	32.7	1.616	3.068	"
5	70	100	85	87	215	175	26	50	20	105	145	5	8	43.9	2.487	4.725	"
6	80	110	95	97	245	200	30	55	20	120	160	5	10	58.1	3.298	6.266	"
7	90	125	107	110	260	210	36	62.5	22	131	175	7	12	73.0	4.413	9.385	"
8	100	140	120	123	270	220	43	70	22	136	180	7	15	90.6	5.174	9.830	"
9	120	165	142	145	300	240	56	82.5	25	150	200	7	18	128	7.867	15.137	"
10	150	200	175	178	350	270	78	100	30	175	225	7	20	198	11.734	22.280	"

TOLERANCE $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER
ALL DIMENSIONS ARE IN MM

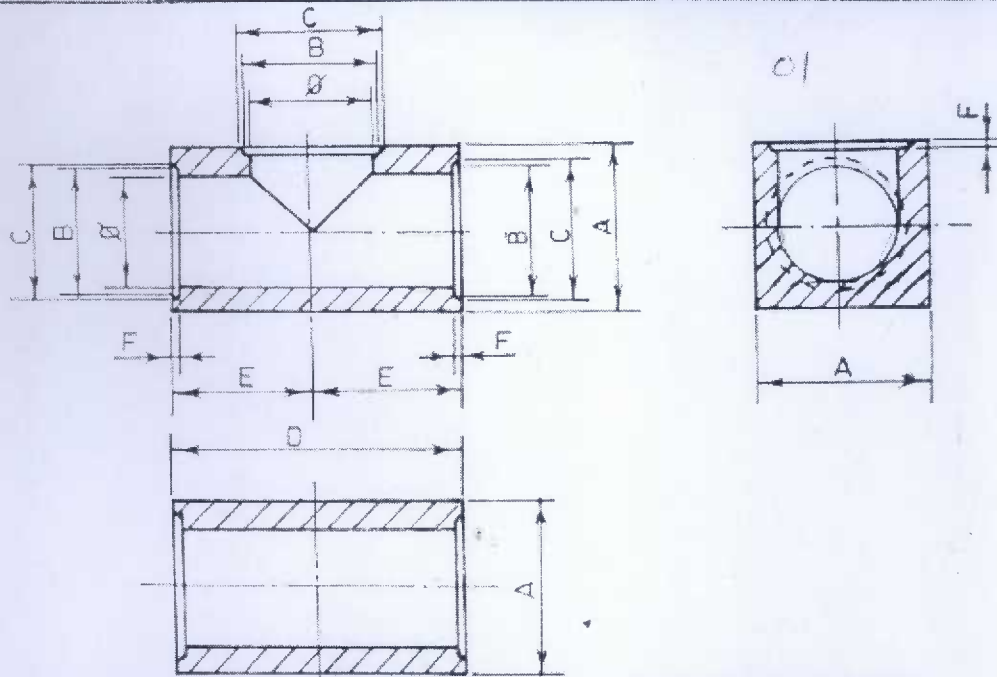
REV	DATE	ALTD	REV	DATE	ALTD	REV	DATE	ALTD
03	10-4-62	CHD	02	6-3-01	CHD	01	30-5-96	CHD
MATERIAL REVISED			MATERIAL CHANGED			(i) MATERIAL GRADE ADDED. (ii) NOTE-SUPERSEDED WITH SAME DRG NO-ELIMINATED		



BHARAT HEAVY ELECTRICALS LTD.
UNIT: CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPT: FDY-TECHY.	SCALE: NTS	WEIGHT (KGS):	MATERIAL - AS PER FF 06010 REV-01			
TITLE REFRACTORY INGATE			DRAWN	NAME	SIGN.	DATE
			WORKED	AMIT SINGH.	<i>Asgh</i>	20.3.81
			CHECKED	AK CHAKRABORTY.	<i>AK</i>	27.3.81
			APPROVED	N. K. KIANI.	<i>NK</i>	31.4.81
			DRAWING NO 03/009/4 REV-03			
			SHEET NO 01	NO OF SHEETS 01		

(ALL DIMENSIONS ARE IN mm)



S NO	Ø	A	B	C	D	E	F	$\frac{A-\Phi}{2}$	SECTION Cm ²	VOLUME Dm ³
1	30	60	40	42	90	45	5	15	7.1	0.247
2	40	70	50	52	110	55	5	15	12.6	0.381
3	50	80	62	64	140	70	5	15	18.7	0.530
4	60	90	72	74	150	75	5	15	28.3	0.748
5	70	100	85	87	170	85	5	15	38.5	1.026
6	80	110	95	97	180	90	5	15	50.3	1.170
7	90	125	107	110	200	100	7	17.5	63.6	1.672
8	100	140	120	123	210	105	7	20	78.5	2.211
9	120	165	142	145	240	120	7	22.5	113.1	3.430
10	150	200	175	178	300	150	7	25	176.7	5.588

TOLERANCE $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER.
ALL DIMENSIONS ARE IN MM.

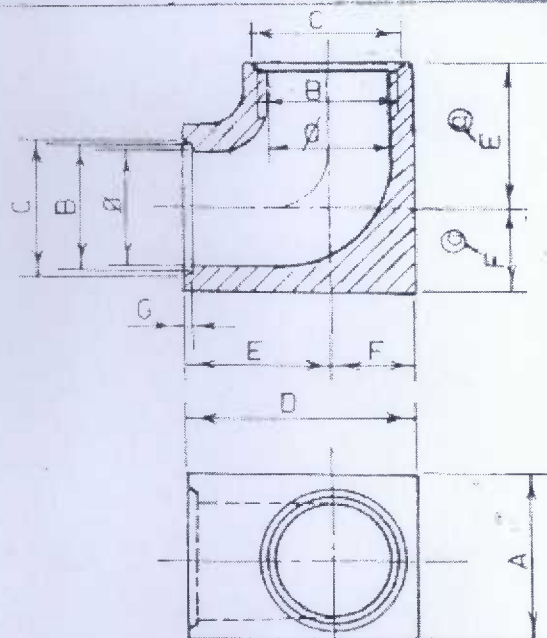
REV 03	DATE 10-4-02	REV 02	DATE 6-3-01	ALTD. CHD	REV 01	DATE 30-5-96	ALTD. CHD
MATERIAL REVISED		MATERIAL CHANGED		MATERIAL GRADE ADDED NOTE SUPPLIED WITH SAME DRS NO ELIMINATED			



BHARAT HEAVY ELECTRICALS LTD.
UNIT: CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPT. FOY-TECHY.	SCALE NTS	WEIGHT KGS	MATERIAL AS PER FF06010	REV 01
TITLE REFRACTORY TEES			DRAWN AJIT SINGH	SIGN Ajit Singh
			WORKED A.K. CHAKRABORTY	DATE 20-3-96
			CHECKED N. KHAN	DATE 11/4/96
			APPROVED N. KHAN	
			DRAWING NO 03/009/3	REV 0.3
			SHEET NO. 01	NO OF SHEETS 01

SIZE-A4



REV	DATE	ALTD
©	10.4.02	CHD
MATERIAL REVISED		
REV	DATE	ALTD
⑥	15.9.01	CHD
MATERIAL GRADE MODIFIED		

SNO	Ø	A	B	C	D	E	F	G	$A - \frac{\text{Ø}}{2}$	SECTION Cm ²	VOLUME Cm ³
1	30	60	40	42	70	45	25	5	15	7.1	0.200
2	40	70	50	52	85	55	30	5	15	12.6	0.309
3	50	80	62	64	108	70	38	5	15	19.7	0.479
4	60	90	72	74	118	75	43	5	15	28.3	0.622
5	70	100	85	87	135	85	50	5	15	38.5	0.810
6	80	110	95	97	145	90	55	5	15	50.3	1.003
7	90	125	107	110	163	100	63	7	17.5	63.6	1.466
8	100	140	120	123	175	105	70	7	20	78.5	2.005
9	120	165	142	145	203	120	83	7	22.5	113.1	3.165
10	150	200	175	178	250	150	100	7	25	176.7	5.489

TOLERANCE $\pm 2\%$ OR ± 2 mm WHICHEVER IS GREATER.
ALL DIMENSIONS ARE IN MM.

RE-DATE ALTERED
⑥ 9.12.99 CHECKED
MISSING DIMENSIONS
PROVIDED



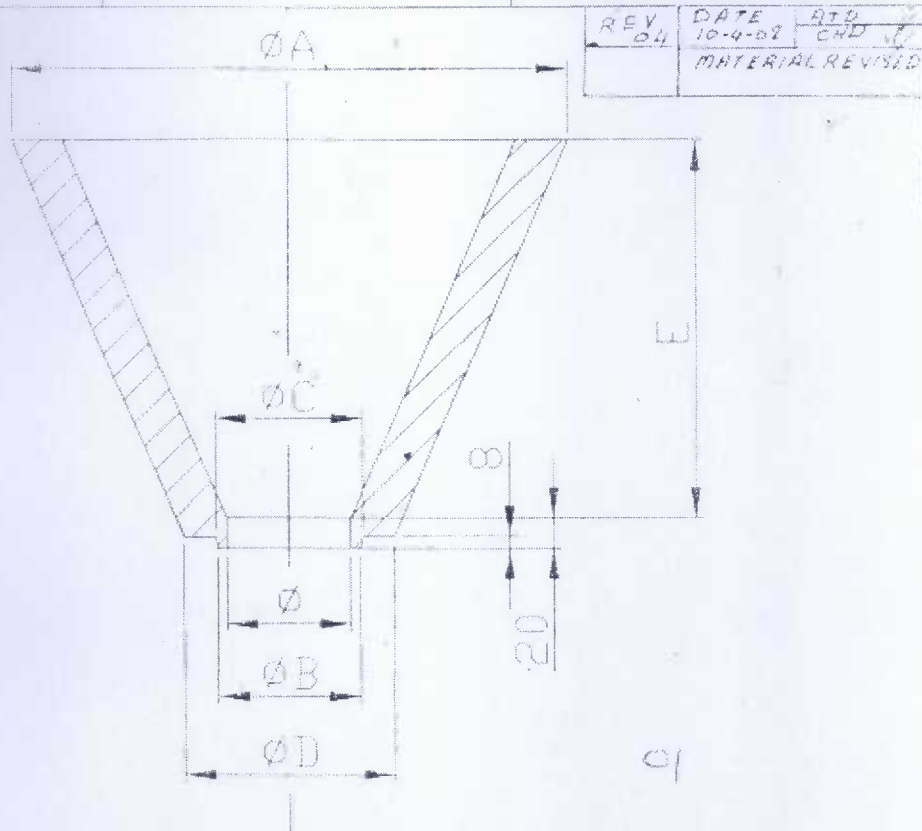
BHARAT HEAVY ELECTRICALS LTD.
UNIT : CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPT	FDY TECHY	SCALE	NTS	WEIGHT KGS	MATERIAL GRADE - FF06010, REV 01				
TITLE REFRACTORY KNEES					DRAWN	NAME	SIGN	DATE	
					WORKED	ANIL SINGH	Asghar	18.3.97	
					CHECKED	Y. N. V. RAO	Y.N.V.	18.3.97	
					APPROVED	N. K. JAIN	N. K. JAIN	18.3.97	
					DRAWING NO		03/009/2		REV. - C
					SHEET NO		01	NO OF SHEETS	

SIZE-A4

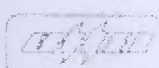
FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm)

REV	DATE	ALTERED	REV	DATE	ALTERED	REV	DATE	ALTERED
01	30.5.96	CHECKED	02	14.6.00	CHECKED	03	06.3.01	CHECKED
MATERIAL GRADE ADDED			DIA 150 CUP ADDED IN TABLE			NOTE FOR MATERIAL GRADE AMENDED		
NOTE - SUPERSEDED WITH SAME			DRAWING RETRACED IN CAD					
DRG NO ELIMINATED								

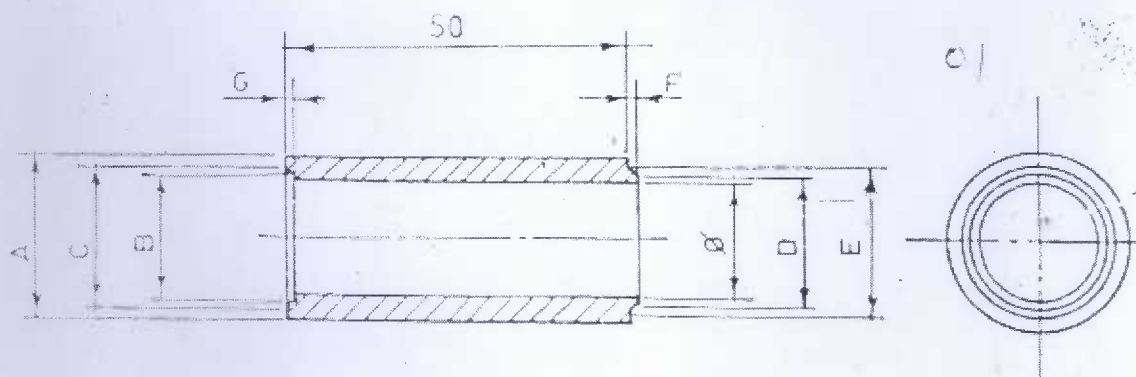


SL.	Ø	ØA	ØB	ØC	ØD	E
1	80	360	92	95	136	230
2	100	430	116	120	158	300
3	120	430	138	142	175	300
4	150	460	172	175	200	300

TOLERANCE: $\pm 2\%$ OR ± 2 MM WHICHEVER IS GREATER.
MATERIAL AS PER FF06010 REV-07.

		BHARAT HEAVY ELECTRICALS. LTD. CENTRAL FOUNDRY FORGE PLANT RANIPUR HARDWAR					
		DEPT	FDY. TECH.	SCALE	N.T.S.	WEIGHT IN Kgs	NAME
TITLE REFRACTORY POURING CUP					DRN	/REF POURING CUP	 13.3.07  12.3.07  11.3.07
					WKD	T DAVE	
					CHD	AKC	
					APPD	NGS	
PROJECT AND CUSTOMER NAME			TECHNOLOGY NO		DRAWING NO. -		
					FT-11-19 REV 04		
			SHEET NO. - 1		NO. OF SHEETS - 1		

(ALL DIMENSIONS ARE IN mm)

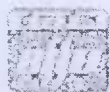


DIMENSIONS IN mm

S.NO.	Ø	A	B	C	D	E	F	G	VOLUME DM ³
1	30	55	40	42	38	40	6	5	0.09
2	40	65	50	52	48	50	6	5	0.11
3	50	75	62	64	60	62	6	5	0.13
4	60	85	72	74	70	72	6	5	0.15
5	70	100	85	87	83	85	6	5	0.20
6	80	110	95	97	93	95	6	5	0.22
7	90	125	107	110	104	107	8	7	0.30
8	100	140	120	123	117	120	8	7	0.38
9	120	165	142	145	139	142	8	7	0.50
10	150	200	175	178	172	175	8	7	0.86

TOLERANCE: $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER
ALL DIMENSIONS ARE IN MM

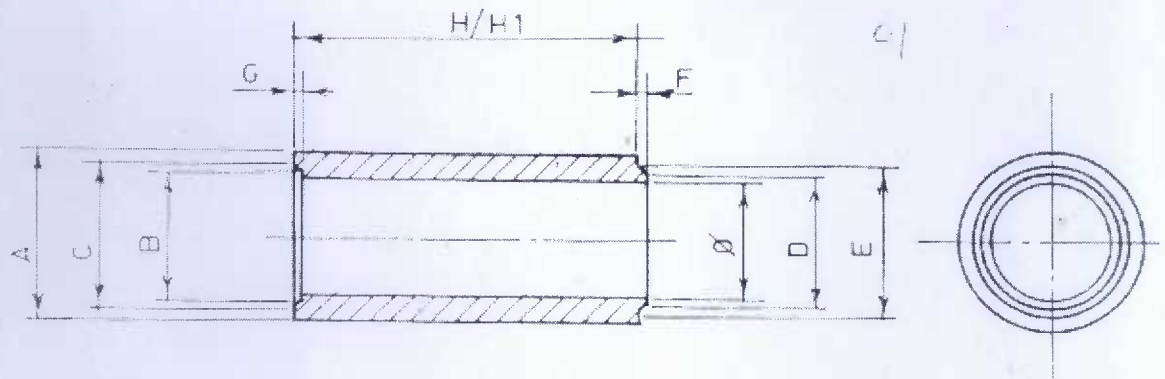
REV	DATE	ALTD
①	10-4-02	CHD
MATERIAL REVISED		



BHARAT HEAVY ELECTRICALS LTD.
UNIT: CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPTT. FDY-TECHY	SCALE NTS	WEIGHT (GSS)	MATERIAL AS PER FF08010 REV01																
TITLE REFRACTORY SLEEVES			<table> <tr> <th>DRAWN</th><th>NAME</th><th>SIGN.</th><th>DATE</th></tr> <tr> <td>WORKED</td><td></td><td></td><td>12/8/01</td></tr> <tr> <td>CHECKED</td><td>AKC</td><td></td><td></td></tr> <tr> <td>APPROVED</td><td>N.KHAN</td><td></td><td>19/11</td></tr> </table>	DRAWN	NAME	SIGN.	DATE	WORKED			12/8/01	CHECKED	AKC			APPROVED	N.KHAN		19/11
DRAWN	NAME	SIGN.	DATE																
WORKED			12/8/01																
CHECKED	AKC																		
APPROVED	N.KHAN		19/11																
DRAWING NO. 03/009/1/1			REV. 01																
SHEET NO. 01		NO OF SHEETS 01																	

(ALL DIMENSIONS ARE IN mm)



DIMENSIONS IN mm											SECTION cm ²	VOLUME Dm ³	H1	VOL1
S.NO	Ø	A	B	C	D	E	F	G	H	$\frac{A-\Ø}{2}$				
1	30	55	40	42	38	40	6	5	200	12.5	7.1	0.333	100	0.17
2	40	65	50	52	48	50	6	5	200	12.5	12.6	0.412	100	0.21
3	50	75	62	64	60	62	6	5	200	12.5	19.7	0.491	100	0.25
4	60	85	72	74	70	72	6	5	200	12.5	28.3	0.570	100	0.285
5	70	100	85	87	83	85	6	5	200	15	38.5	0.802	100	0.40
6	80	110	95	97	93	95	6	5	200	15	50.3	0.896	100	0.45
7	90	125	107	110	104	107	8	7	300	17.5	63.6	1.774	100	0.59
8	100	140	120	123	117	120	8	7	300	20	78.5	2.262	100	0.754
9	120	165	142	145	139	142	8	7	300	22.5	113.1	3.023	100	1.01
10	150	200	175	178	172	175	8	7	300	25	176.7	4.126	100	1.71

TOLERANCE: $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER
ALL DIMENSIONS ARE IN MM

REV 04 DATE 10-4-02
MATERIAL REVISED

REV	DATE	ALTD	REV	DATE	ALTD	REV	DATE	ALTD
03	5-3-01	CHD	02	18-9-98	CHD	01	30-5-96	CHD
MATERIAL CHANGED			H1 AND VOL 1 ADDED			(i) MATERIAL GRADE ADDED. (ii) NOTE-SUPERSEDED WITH SAME DRG NO-ELIMINATED		



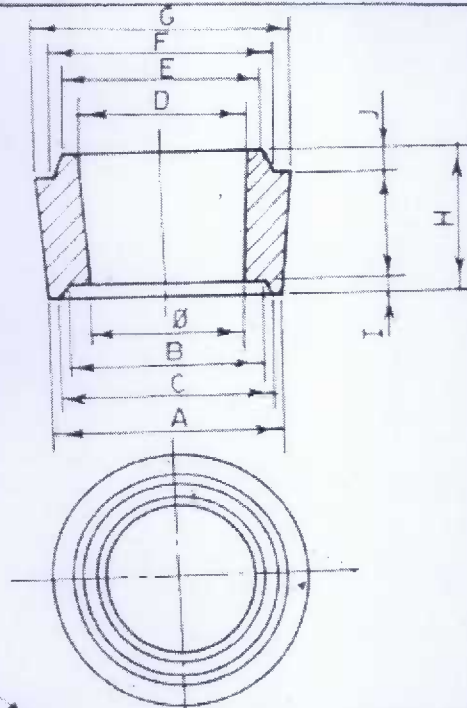
BHARAT HEAVY ELECTRICALS LTD.
UNIT : CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPT: FOUNDRY TECH	SCALE: NTS	WEIGHT (KGS):	MATERIAL-AS PER FF 06010 REV 01			
TITLE REFRACTORY SLEEVES			DRAWN	NAME	SIGN.	DATE
			WORKED	ANIL SINGH		20-3-96
			CHECKED	ATK. CHAKRABORTY		
			APPROVED	N. KHAN		
			DRAWING NO 03/009/1 REV. 0/0			
			SHEET NO 01		NO OF SHEETS 01	

SIZE-A4

(ALL DIMENSIONS ARE IN mm)

01



S NO	Ø	A	B	C	D	E	F	G	H	I	J	$\frac{A-B}{2}$	$\frac{G-D}{2}$	VOLUME DM ³
1	30	55	40	42	40	48	50	65	50	5	6	12.5	12.5	0.081
2	40	65	50	52	50	60	62	75	50	5	6	12.5	12.5	0.113
3	50	75	62	64	60	70	72	85	50	5	6	12.5	12.5	0.132
4	60	85	72	74	70	83	85	100	50	5	6	12.5	15	0.170
5	70	100	85	87	80	93	95	110	50	5	6	15	15	0.212
6	80	110	95	97	90	104	107	125	50	5	6	15	17.5	0.258
7	90	125	107	110	100	117	120	140	50	7	8	17.5	20	0.334
8	100	140	120	123	120	139	142	165	50	7	8	20	22.5	0.440
9	120	165	142	145	150	172	175	200	80	7	8	22.5	25	0.950
10	150	200	175	178	200	222	225	250	130	7	8	25	25	2.042

TOLERANCE: $\pm 2\%$ OR $\pm 2\text{mm}$ WHICHEVER IS GREATER
ALL DIMENSIONS ARE IN MM

REV 03	DATE 10-4-02	BY SSB	REV 02	DATE 03-01-02	BY JCHD	REV 01	DATE 03-03-01	BY SSB	CHECKED
MATERIAL REVISI			MATERIAL CHANGED			MATERIAL GRADE ADDED			NOTE SUPERSEDED WITH SAME DRC NO ELIMINATED



BHARAT HEAVY ELECTRICALS LTD.
UNIT : CENTRAL FOUNDRY FORGE PLANT.
HARDWAR.

DEPT	FDY. TECHY.	SCALE	NTS	WEIGHT (KGS)	MATERIAL - AS PER FF06010 REV 01			
TITLE REFRACTORY REDUCERS					DRAWN	NAME	SIGN.	DATE
					WORKED	AJIT SINGH.	AS-14	20-2-96
					CHECKED	A.K. CHAKRABORTY	AS-14	27-3-96
					APPROVED	H. K. JAIN.	AS-14	11/4/96
					DRAWING NO 03/009/8 REV. 03			
					SHEET NO	01	NO OF SHEETS 01	

SIZE-A4