

SET OF STEEL FITTINGS FOR DESL

SL NO.	DESCRIPTION	DRG No.	ITEM NO.	QTY/LOCO
1	Nipple TxT (BSP) (15-21) - 1/2"	2 719 65 01 017	NA	10
2	Nipple TxT (BSP) (21-27) - 3/4"	2 719 65 01 017	NA	10
3	Taper & Parallel Nipple (15-21) - 1/2"	2 719 65 01 017	NA	4
4	Taper & Parallel Nipple (21-27) - 3/4"	2 719 65 01 017	NA	4
5	Taper & Parallel Nipple (26-34) - 1"	2 719 65 01 017	NA	8
6	Taper & Parallel Nipple (33-42) - 1-1/4"	2 719 65 01 017	NA	12
7	Parallel Nipple (21-27) - 3/4"	2 719 65 01 017	NA	0
8	Socket (P) (15-21) - 1/2"	2 719 65 01 022	NA	4
9	Socket (P) (21-27) - 3/4"	2 719 65 01 022	NA	4
10	Reducing nipple (T) 1-1/4" x 3/4"R (42 X 27R)	2 719 65 01 018	NA	2
11	Threaded end piece (T) (15-21) - 1/2"	2 719 65 01 021	NA	10
12	Threaded end piece (T) (21-27) - 3/4"	2 719 65 01 021	NA	15
13	Threaded end piece (T) (26-34) - 1"	2 719 65 01 021	NA	5
14	Threaded end piece (T) (33-42) - 1-1/4"	2 719 65 01 021	NA	6
15	1" Spiral end piece	4 719 20 01 017	NA	8
16	Special Reducing nipple 3/4" x 1/2" (27P x 21T)	2 719 65 01 006	#001	5
17	Special Reducing nipple 1/2" x 3/8" (21T x 17P)	2 719 65 01 006	#002	2
18	Special Reducing nipple 3/8" x 1/4" (17P x 13T)	2 719 65 01 006	#004	2
19	Special Reducing nipple 1-1/4" x 1" (42P X 34T)	2 719 65 01 006	#009	4
20	Special Reducing nipple 1" x 3/4" (34P x 27T)	2 719 65 01 006	#010	2
21	Special Reducing nipple 1/2" x 1/4" (21T x 13P)	2 719 65 01 006	#012	2
22	Nipple 1/2" BSP(T) X 1/2" NPT (15-21)	2 719 65 01 009	#004	4
23	Nipple 3/4" BSP(T) X 3/4" NPT (21-27)	2 719 65 01 009	#005	0
24	Weldolet 3/8" (15 NB) dia 24 BRT Steel Rod	3 719 65 01 011	#001	6
25	Weldolet 3/8" (20 NB) dia 24 BRT Steel Rod	3 719 65 01 011	#002	6
26	Weldolet 3/4" (15 NB) dia 30 BRT Steel Rod	3 719 65 01 011	#003	6
27	Weldolet 3/8" (50 NB) dia 24 BRT Steel Rod	3 719 65 01 011	#004	6
28	Reducing nipple (P) 1/2" BSP x 1/4" BSP	4 719 52 01 043	#001	0
29	Serew type plug 1/4" BSP	4 719 11 01 005	#001	4
30	Reducing Adaptor 1" BSP X 3/4" BSP	3 719 37 01 042	#001	8

SL NO.	DESCRIPTION	DRG No.	ITEM NO.	QTY/LOCO
31	Male & Female Connector (1/4" NPT Male X 1" BSP Female)	3 718 65 01 000	#001	2
32	Male & Female Connector (3/4" NPT Male X 1" BSP Female)	3 718 65 01 000	#002	2
33	Reducing Socket (3/8" X 3/4") BSP(P)	4 718 88 01 042	#001	2
34	Reducing Socket (3/8" X 1") BSP(P)	4 718 88 01 043	#001	3
35	Socket (1") BSP(P)	4 718 88 01 044	#001	2
36	Male Connector Assembly 6 mm od x 1/4" NPT	3 718 88 01 017	#001, Var 00	20
37	Male Connector Assembly 10 mm od x 3/8" NPT	3 718 88 01 017	#002, Var 00	90
38	Male Connector Assembly 6 mm od x 1/4" BSP	3 718 88 01 017	#001, Var 01	30
39	Male Connector Assembly 10 mm od x 3/8" BSP	3 718 88 01 017	#002, Var 01	55
40	Male Connector Assembly 6 mm od x 3/8" NPT	3 718 88 01 053	#001	4
41	Male Connector Assembly 6 mm od x 3/8" BSP	3 718 88 01 053	#002	6
42	Male Connector Assembly 6 mm OD x 1/2" BSP	3 718 88 01 053	#003	4
43	Male Connector Assembly 10 mm od x 1/4" NPT	3 718 88 01 053	#004	6
44	Male Connector Assembly 10 mm od x 1/4" BSP	3 718 88 01 053	#005	10
45	Male Connector Assembly 10 mm od x 1/2" NPT	3 718 88 01 053	#006	10
46	Male Connector Assembly 10 mm od x 1/2" BSP	3 718 88 01 053	#007	15
47	Male Connector Assembly 10 mm od x 1/8" NPT	3 718 88 01 053	#008	4
48	Straight Union Assembly 6 mm od tube	3 718 88 01 018	Var 00	15
49	Straight Union Assembly 10 mm od tube	3 718 88 01 018	Var 01	30
50	Equal Tee Assembly 6 mm od tube	3 718 88 01 019	Var 00	10
51	Equal Tee Assembly 10 mm od tube	3 718 88 01 019	Var 01	10
52	Union Equal Cross Assembly 10 mm od tube	3 718 88 01 020	Var 01	4
53	Line Plug Assembly 6 mm od tube	3 718 88 01 057	#001	2
54	Line Plug Assembly 10 mm od tube	3 718 88 01 057	#002	2
55	Gauge Coupling Assembly 10 mm od x 1/4" BSP	2 719 99 01 004	NA	4
56	Gauge Coupling Assembly 10 mm od x 3/8" BSP	2 719 99 01 004	NA	4
57	Gauge Coupling Assembly 6 mm od x 3/8" BSP	2 719 99 01 004	NA	4
58	Male Stud Elbow Assembly 1/4" BSP X 10 mm od	3 718 88 01 055	#001	0
59	Male Stud Elbow Assembly 3/8" BSP X mm 10 od	3 718 88 01 055	#002	0
60	Bulk head Coupling Assembly 6 mm od tube	2 719 99 01 003	Var 01	2
61	Bulk head Coupling Assembly 10 mm od tube	2 719 99 01 003	Var 02	6
62	Equal Elbow Assembly 6 mm od tube	3 718 88 01 054	#001	2

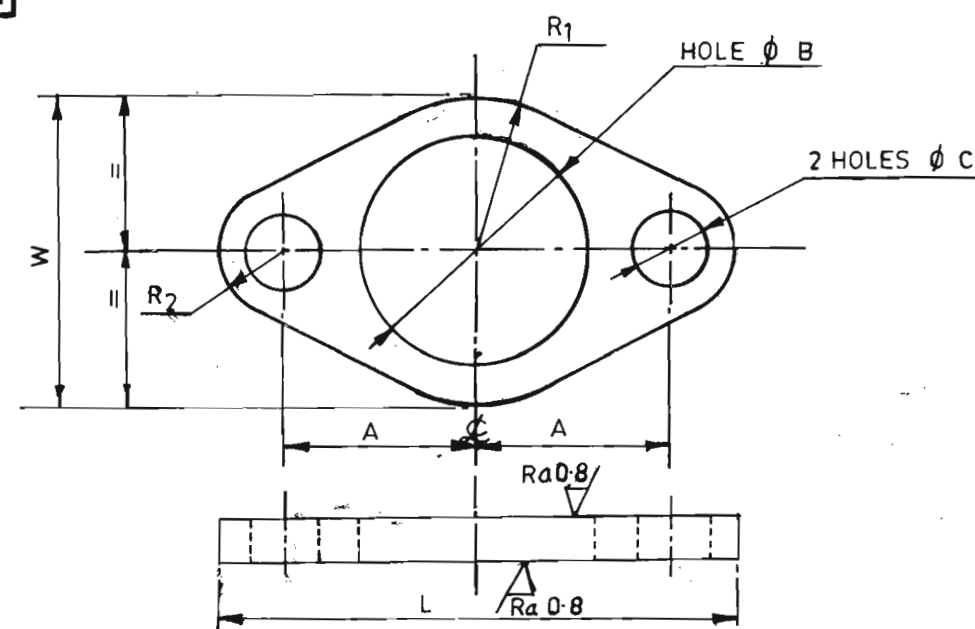
SL NO.	DESCRIPTION	DRG No.	ITEM NO.	QTY/LOCO
63	Equal Elbow Assembly 10 mm od tube	3 718 88 01 054	#002	10
64	Reducing Straight Union Assembly 10 mm od x 6 mm od	3 718 88 01 056	NA	5
65	Welding Connector Assembly 10 mm od tube	3 718 88 01 016	Var 01	6
66	Steel ferrule 10 mm	2 719 65 01 033	#010	30
67	Steel ferrule 6 mm	2 719 65 01 033	#011	30
68	Screw type plug 3/8" NPT	3 719 65 01 005	#001	10
69	Weldable sleeve 1/2" (For 15 NB Pipe)	3 718 34 01 055	#001	6
70	Weldable sleeve 3/4" (For 20 NB Pipe)	3 718 34 01 055	#002	6
71	Weldable sleeve 1" (For 25 NB Pipe)	3 718 34 01 055	#003	6
72	Weldable sleeve 1-1/4" (For 32 NB Pipe)	3 718 34 01 055	#004	6
73	Pipe Flange (Elliptical)	2 719 34 01 005	#005	4
74	Bulk Head Elbow for 10 mm od tube	2 719 65 01 025	NA	2
75	Elbow Weldable 90 deg (15-21) - 1/2"	3 719 65 01 008	#003	0
76	Reducing Nipple 1-1/4" NPT x 1" BSPT	2 719 65 01 005	#001	5

645

SIZE A2

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN-mm)

90010 4E 6122
DRG No.

DIMENS TOL:-

1. AS PER CORP. STD. AA 0230208 MEDIUM GRADE UNLESS SPECIFIED
OTHER WISE.

NOTE:-

1. ALL SHARP EDGES CORNERS TO BE ROUNDED OFF.
2. FINISH—GIVE TWO COATS OF RED OXIDE PRIMER AFTER APPROPRIATE PRETREATMENT.
3. 3 NO. EACH PER LOCO OF IT. 006 & 007 SHALL BE USED FOR AC LOCO PIPE LAYOUT IN WHICH M/S SCL MAKE UNLOADER VALVES ARE MOUNTED.

CLW REF	ASSY REF	STYLE NO.	A	R ₁	R ₂	Ø B	Ø C	VAR	ITEM	DESCRIPTION	STD.	DRAWING No.	MATL. CODE	UNIT WT.	QTY.	ZONE
			51	41	17	62	18		008	ST. PLATE 18 THK X 22		AA1011808129	AA10108	136		
	FOR AFTER COOL LER PIPE LAY OUT	713116	24.5	20	10	15	11	SEE NOTE-3	007	ST. PLATE 8TK. X 40		AA 1011808056	AA 10108	69		
	FOR AFTER COOL ER PIPE LAY OUT	713115	47.5	33.5	14	39	17	SEE NOTE-3	006	ST. PLATE 8TK. X 67		AA 1011808056	AA 10108	123		
01/4/20/2	01/1/20/1	713041	35	27	15	28	13		005	ST. PLATE 8THKX54		AA1011808056	AA 10108	100		
02/4/49/88	0719 2001 000	711733	51	41	17	62	TAP M 16		004	ST. PLATE 18 THK X 82		AA1011808129	AA10108	136		
05/4/49/16	0719 49 01001 IT-010	711388	38	31	15	42	12		003	ST. PLATE 10THK. X62		AA1011808072	AA 10108	106		
05/4/49/59	0719 49 01000 ITEM - 007	711420	35	25	14	35	12		002	ST. PLATE 8THK. X 50		AA1011808056	AA 10108	98		
05/4/34/47 05/4/55/285 05/4/49/118	0719 34 01007 ITEM - 001	711392	51	41	17	62	17		001	ST. PLATE 12 THK. X 82		AA1011808099	AA 10108	136		
CLW REF	ASSY REF	STYLE NO.	A	R ₁	R ₂	Ø B	Ø C	VAR	ITEM	DESCRIPTION	STD.	DRAWING No.	MATL. CODE	UNIT WT.	QTY.	ZONE

TABLE OF DIMENSIONS

ADDITIONAL INFORMATION

STATUS OF DRAWING

STD

DISTRIBUTION OF PRINTS

OC	1	QAX	1
IE	1	PPC	2
ASSY	2	BAY1&2	2

REV.	DATE	ALTERED	ZONE
01	22-6-89	CHECKED	ZONE
02	4-7-90	CHECKED	ZONE

ITEM 005 ADDED

TYPE OF PRODUCT 25 KV. A.C. LOCO. WAG-5A

OR
NAME OF CUSTOMER/PROJECT RAILWAY BOARD NEW DELHI BHARAT HEAVY ELECTRICALS LIMITED
JHANSI

DRN.	NAME	SIGN.	DATE	73	74
CHD.	VINAY		2-1-87	No. OF	VAR.
APPD.	P.G.K.				

DEPT.	GRADE OF	SCALE	WEIGHT (Kg.)	REF. TO ASSY. DRG.	ITEM	75	77
LOCO	UN. TOL.	NTS			No.	No. OF	ITEM
CODE	DIM. C/M/F						

TITLE
PIPE FLANGE
ELEPTICALDRAWING No.
2719 34 01005

SHEET No. No. OF SHEETS

SIZE A2

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SIGN. & DATE REF. DRG. No.

INVENTORY No.

REV.	DATE	ALTERED	ZONE
04	25/6/89	CHD. APPD.	ZONE
03	06/5/09	CHECKED APPD.	ZONE

IN ITEM-004 STYLE NO. 711733 ADDED.

IT. 008 ADDED.

IT. 006 & 007 ADDED.
NOTE 3 ADDED.

2 719 65 01 005

DRG. No.

DIMNL. TOL. AS PER CORP. STD. AA 023 02 08 MEDIUM
GRADE UNLESS OTHERWISE STATED.

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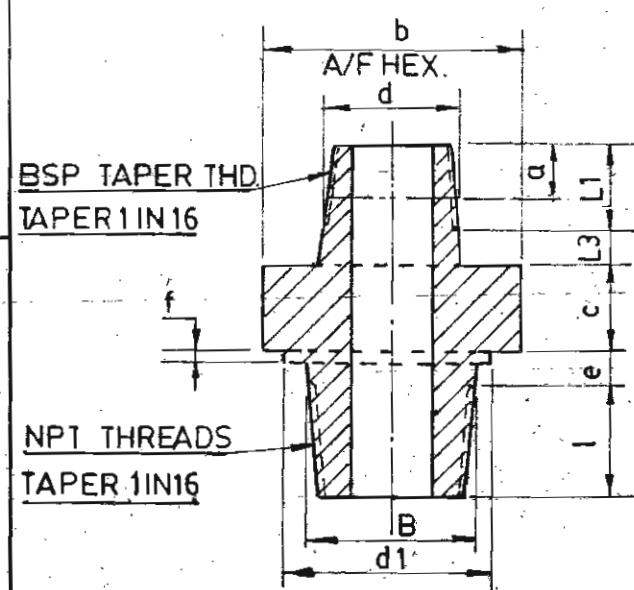


FIG. X

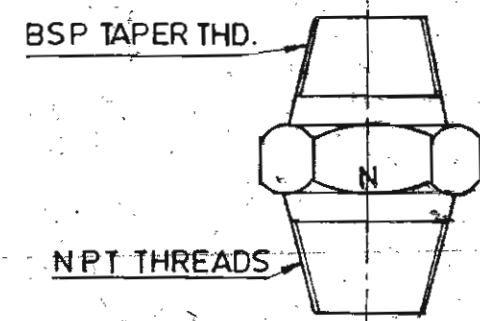
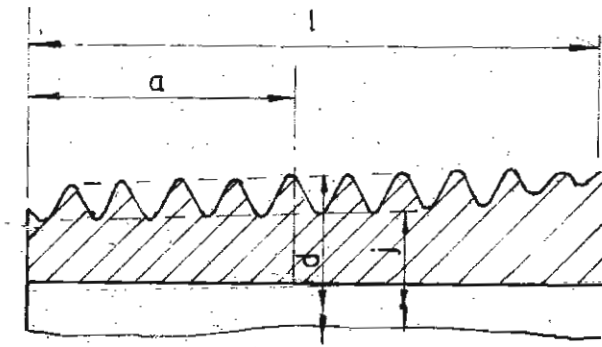
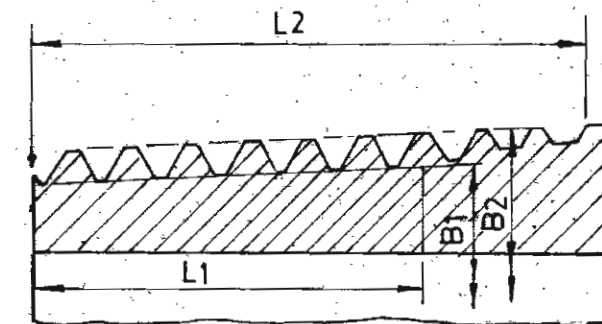


FIG-A.



BSP TAPER THREADS



NPT THREADS

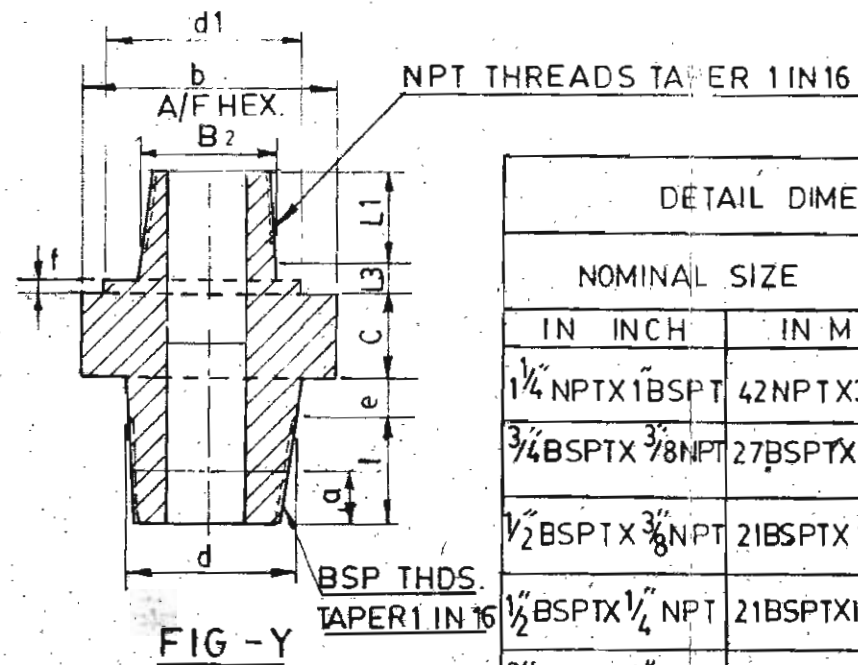


FIG - Y

DETAIL DIMENSIONS OF BSP TAPER THREADS TO IS. 554										DETAIL DIMENSIONS OF AMERICAN PIPE THDS. (NPT) TO ASA-B-2-1-1945				
NOMINAL SIZE		FIG. REF.	MAJOR DIA. d		EFFECTIVE DIA. d ₁		MINOR DIA. J		TPI	MINOR DIA 'B' AT LARGE END IN INCH		MAJOR DIA 'B ₂ ' AT LARGE END IN INCH		TPI
IN INCH	IN MM		MAX.	MIN.	MAX.	MIN.	MAX.	MIN.		MAX.	MIN.	MAX.	MIN.	
1 1/4 NPTX 1 BSPT	42 NPT X 34 BSPT	X	33.249	33.064	31.770	31.661	30.291	30.083	11	1.53869	1.53073	1.67087	1.66391	11 1/2
3/4 BSPT X 7/8 NPT	27 BSPT X 17 NPT	Y	26.441	26.271	25.279	25.178	24.117	23.927	14	0.59917	0.59306	0.68194	0.67583	18
1/2 BSPT X 3/8 NPT	21 BSPT X 17 NPT	Y	20.955	20.793	19.793	19.700	18.631	18.449	14	0.59917	0.59306	0.68194	0.67583	18
1/2 BSPT X 1/4 NPT	21 BSPT X 13 NPT	Y	20.955	20.793	19.793	19.700	18.631	18.449	14	0.47417	0.45806	0.54694	0.54083	18
3/8 BSPT X 1/4 NPT	17 BSPT X 13 NPT	Y	16.662	16.520	15.806	15.722	15.110	14.950	19	0.47417	0.45806	0.54694	0.54083	18

[illegible]

NOTES:-

1. THE MATERIAL TO BE CLEANED PROPERLY AND TO BE PHOSPHATED AFTER MACHINING TO RESIST CORROSION.
2. N TO BE PUNCHED ON ANY ONE FLAT TO MARK NPT THDS. FOR IDENTIFICATION AS SHOWN AT FIG-A ON FITTINGS SUPPLIED WITHOUT COLLAR-F
3. HENCE FORTH A COLLAR-F SHALL BE PROVIDED TOWARDS NPT THDS. FOR IDENTIFICATION OF NPT THDS.

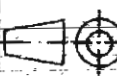
ADDITIONAL INFORMATION

STATUS OF DRAWING STD.

DISTRIBUTION OF PRINTS

0 / C - 1, IE - 1, QAX - 1, PPC - 2

ASSY - 2, BAY1&2 - 2, BAY3 - 2

TYPE OF PRODUCT		25 K.V. A.C. LOCO WAG -5A		कोमलिय प्रत	
OR				एलएनआई-इंज. कार्ड	
NAME OF CUSTOMER/PROJECT		INDIAN RAILWAY BOARD NEW DELHI		निमांक... 10811	
 BHARAT HEAVY ELECTRICALS LIMITED JHANSI		DRN.	NAME SUDHEER	SIGN. <i>[Signature]</i>	DATE 3-5-00
		CHD.	A. SAXENA	<i>[Signature]</i>	3-5-00
		APPD.	G.S. JALY	<i>[Signature]</i>	3-5-00
DEPT. LCE	GRADE OF UN. TOL.		SCALE	WEIGHT (Kg.)	REF. TO ASSY. DRG.
CODE 404	DIMC/M/F		NTS		
TITLE		1	3	7	ITEM No.
REDUCING NIPPLE		DRAWING No.			75 77
B.S.P.T. & N.P.T.		CARD CODE			No. OF
		2 79 65 01 005			ITEMS
		SHEET No. 01			005
		No. OF SHEETS			01

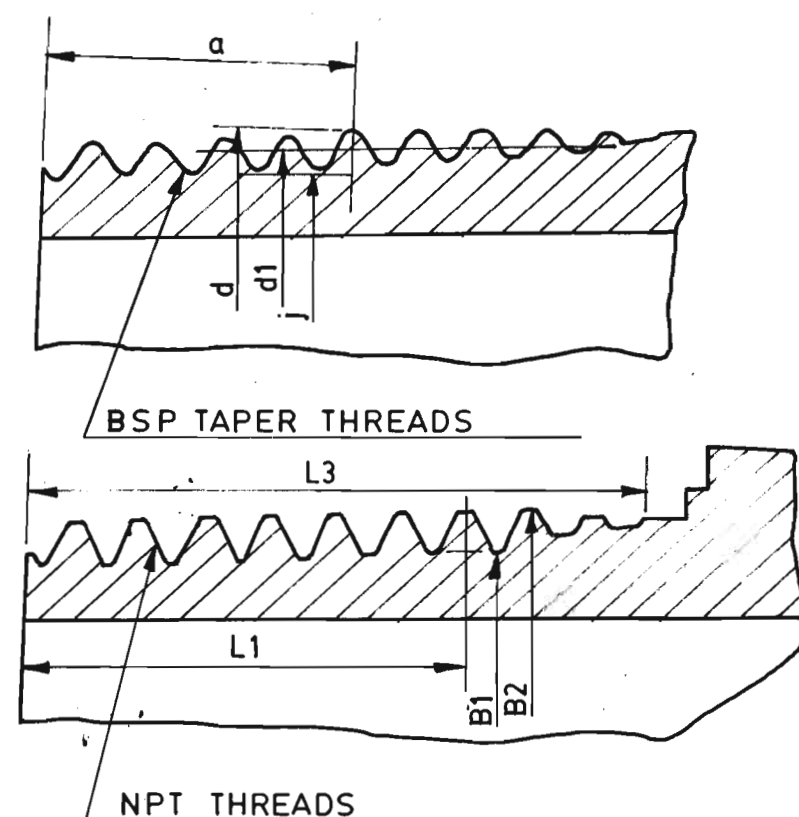
REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED
		CHECKED			CHECKED	01	11-5-8	CHECKED
ZONE			ZONE			ZONE		STYLE NO-ADDED FOR WAG-7 LOCO.

INVENTORY NO.	SIGN & DATE	REF. DRG. NO.
		0/3/65/256

SIGN & DATE REF DRG No
0/3/65/256

(ALL DIMENSIONS ARE IN mm)

DIMNL. TOL.—AS PER CORP. STD. AA 023 02 08 MEDIUM
GRADE UNLESS OTHERWISE STATED.



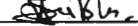
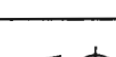
NOM. SIZES		MAJOR DIA d'		EFFECTIVE DIA d_1'		MINOR DIA j'		T. P.
INCH	ID-OD	MAX	MIN	MAX	MIN	MAX	MIN	
1/8"	5 - 10	9.728	9.609	9.147	9.075	8.566	8.431	28
1/4"	8 - 13	13.157	13.017	12.301	12.219	11.443	11.287	19
3/8"	12 - 17	16.682	16.520	15.806	15.722	15.110	14.950	19
1/2"	15 - 21	20.955	20.793	19.793	19.700	18.631	18.449	14
3/4"	21 - 27	26.441	26.271	25.279	25.178	24.117	23.927	14
1"	26 - 34	33.249	33.064	31.770	31.661	30.291	30.083	11
1 1/4"	33 - 42	41.910	41.717	40.431	40.315	38.952	38.737	11
1 1/2"	40 - 49	47.803	47.605	46.324	46.203	44.845	44.625	11
2"	50 - 60	59.614	—	58.135	—	56.656	—	11
2 1/2"	66 - 76	75.184	—	73.705	—	72.226	—	11
3"	80 - 90	87.884	—	86.405	—	84.926	—	11

DETAIL DIMENSIONS OF AMERICAN NATIONAL TAPER PIPE THDS. NPT TO AS A-B-2-1 - 1945				
B1 MINOR DIA AT LARGE END IN INCH		B2 MAJOR DIA AT LARGE END IN INCH		T.P.I.
MAX	MIN	MAX	MIN	
0-35504	0-35037	0-40963	0-40496	27
0-47417	0-45806	0-54694	0-54083	18
0-59917	0-59306	0-68194	0-67583	18
0-74108	0-73465	0-84893	0-84250	14
0-95108	0-94465	1-05893	1-05250	14
1-19369	1-18673	1-32587	1-31891	11 1/2
1-53869	1-53073	1-67087	1-66391	11 1/2
1-87869	1-77073	1-91087	1-90391	11 1/2
2-25369	2-24673	2-38587	2-37891	11 1/2
2-69787	2-69062	2-89062	2-88337	8
3-32287	3-31562	3-31562	3-50937	8

[illegible]

1. THE CASTING TO BE CLEANED AND TO BE PHOSPHATED AFTER MACHINING TO RESIST CORROSION.
2. N TO BE PUNCHED ON ANY ONE FLAT OF HEXAGON TOWARD NPTTHDS FOR IDENTIFICATION AS SHOWN AT FIG-A ON FITTINGS SUPPLIED WITHOUT COLLAR 'f'.
3. WENCEFORTH A COLLAR 'f' SHALL BE PROVIDED TOWARDS NPTTHDS. FOR IDENTIFICATION OF NPTTHDS.

REV.	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED
ZONE			ZONE		

▶ CARD TYPE-3			28	▶ CARD TYPE-1			28	▶ CARD TYPE-2					
ADDITIONAL INFORMATION				TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT						25 K.V. A.C. LOCO WAG-5A INDIAN RAILWAY BOARD NEW DELHI.			
STATUS OF DRAWING U				 BHARAT HEAVY ELECTRICALS LIMITED JHANSI				DRN.	NAME SUDHEER	SIGN. 	DATE 4.5.00	73	
DISTRIBUTION OF PRINTS O/C - 1, QAX - 1, IE - 1,								CHD.	A. SAXENA		4.5.00	No.	
PPC - 2, ASSY - 2,								APPD	G. S. JALY		4.5.00	VAR	
BAY3 - 2, BAY1&2 - 2.													
REV.	DATE	ALTERED	FORM	DEPT.	GRADE OF	SCALE	WEIGHT (Kg.)	REF. TO ASSY. DRG.			ITEM	75	
01	17-5-8	CHECKED	 APPD. 	LCE	UN. TOL.		—				No.	No.	
ZONE	STYLE NO ADDED FOR WAG-7 LOCO.			404	DIMC/M/F						ITEM	01	
				TITLE				CARD CODE		DRAWING No.			
				NIPPLE						2 719 65 01 009			
				BSP T. & NPT.						SHEET No. 01 No. OF SHEETS 01			

SIZE A2

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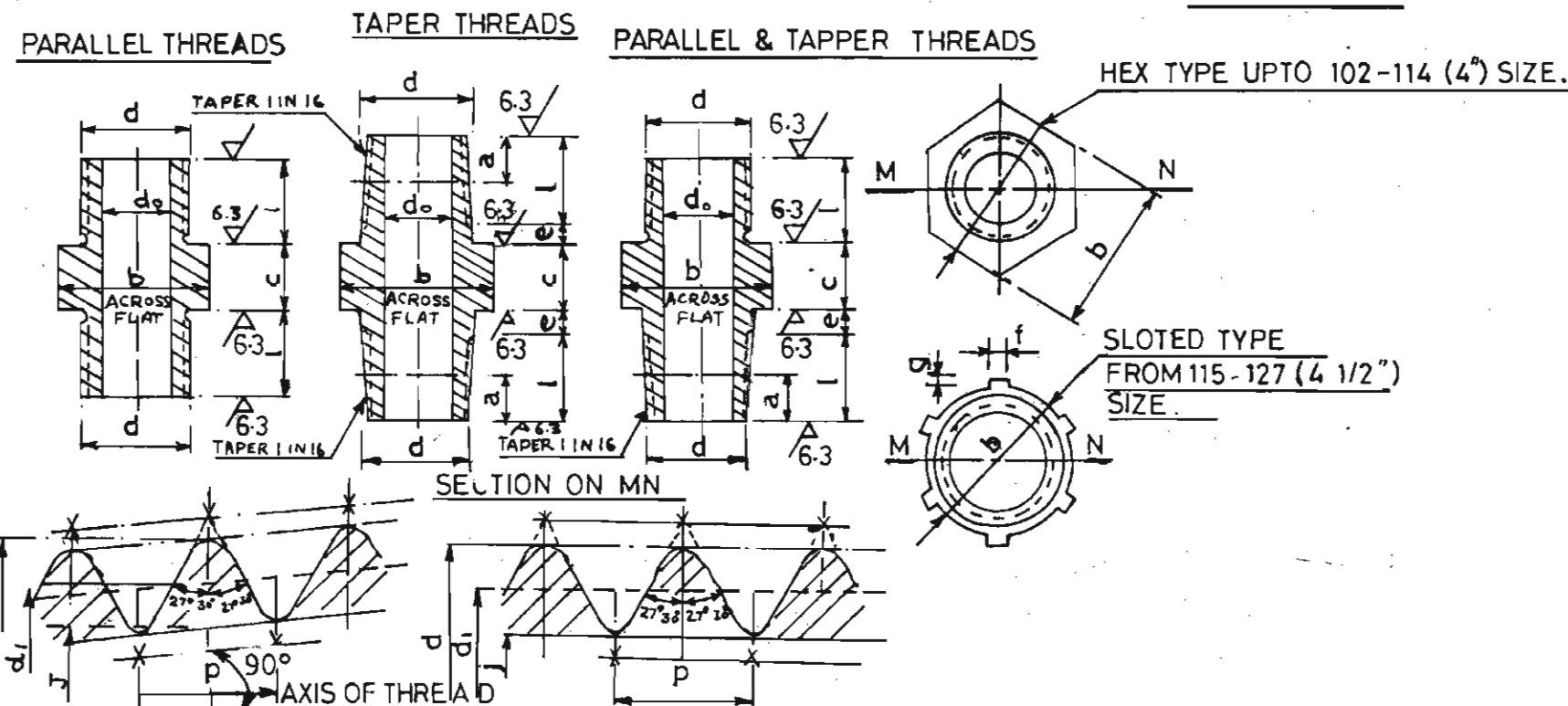
CLW0/3/65/251

INVENTORY No.

110 10 59 61 Z

DRAWING NO.

DIMNL. TOL.:- AS PER CORPT STD. AA 023 02 08 COARSE GRADE UNLESS OTHERWISE STATED.



NOTES:-

1. ASSEMBLE THESE NIPPLES WITH CORRESPONDING SIZES OF SOCKETS TO DRG. NO. 2719 65 01 022, SO THAT THE MATING OF THE THREADS, WITHOUT APPLYING PAINTS, SHELL AC OR ANY SIMILAR MATERIAL CAN RESIST AN INTERNAL HYDROLYC PRESSURE OF 49Kg/Cm² & AN INTERNAL AIR PRESSURE OF 8.5 Kg/Cm², WHEN IMMERSED IN WATER, WITHOUT SHOWING ANY SIGN OF LEAKAGE.
2. PLASTIC CAPS TO BE PROVIDED AT THE PIPE CONNECTIONS AFTER INSPECTION & TESTING. THE CAPS SHOULD BEAR THE SIZE OF BSP/NPT THREADS MARKED ON THEM.
3. THE MATERIAL TO BE CLEANED PROPERLY & TO BE PHOSPHATED (IS:3618-91) AFTER MACHINING TO RESIST CORROSION.
4. MATERIAL TO BE STEEL IS: 226 GR. A.
5. ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.

DETAIL DIMENSIONS OF PARALLEL & TAPER THREAD CLOSE FIT

ST. NO (T.P.) FOR WDG-7 LOCO	STYLE NO. FOR TAPER & PARALLEL	NOM SIZE		d ₀	d	d		l	e	c	b		f	g	T.P. I	MAJOR DIA-"d" IN mm			EFFECTIVE DIA-"d" IN mm			MINOR DIA-J IN mm			STYLE NO. FOR TAPER	STYLE NO. FOR PARALLEL	STYLE NO FOR PARALLEL FORWARD -7LOCO	STYLE NO FOR TAPER FOR WDG-7LOCO
		IN INCH	IN mm ID-OD			MIN.	MAX.				HEX.	SLOTTED				MAX	TOL	MIN	MAX	TOL	MIN	MAX	TOL	MIN				
		1/8"	5-10	5	9.729	4	5.5	10	3	7	17			28	9.728	0.119	9.609	9.147	0.071	9.075	8.566	0.135						
D	642030	706273	1/4"	8-13	7	13.158	5	7	11	3	8	21			19	13.157	0.139	13.017	12.301	0.081	12.219	11.443	0.157	11.287	706061	706209	642036	
	642031	706062	3/8"	12-17	10	16.663	6	8	13	3	10	23			19	16.662	0.142	16.520	15.806	0.084	15.722	15.110	0.160	14.950		706201	642039	642026
	642032	706063	1/2"	15-21	14	20.956	6	9	16	4	11	29			14	20.955	0.162	20.793	19.793	0.094	19.700	18.631	0.183	18.449	706059	706073	642040	642027
	642033	706064	3/4"	21-27	19	26.442	10	13	19	4	13	35			14	26.441	0.170	26.271	25.279	0.102	25.178	24.117	0.190	23.927	706060	706074		642028
	642034	706065 755149	1"	26-34	25	33.250	10	14	22	4	15	46			11	33.249	0.185	33.064	31.770	0.109	31.661	30.291	0.208	30.083	706060 755156	706210 755160		
642035	706066	1 1/4"	33-42	34	41.912	13	17	25	5	18	54			11	41.910	0.193	41.717	40.431	0.117	40.315	38.952	0.214	38.737	706060 755153 706200 755167	706210 755161		642029	
		1 1/2"	40-49	39	47.805	13	17	25	5	20	63			11	47.803	0.198	47.605	46.324	0.122	46.203	44.845	0.221	44.625					
C	706067	2"	50-60	51	59.616	16	20	28	5	24	77			11	59.614			58.135			56.656			706213	706075			
		2 1/2"	66-76	66	75.187	18	23	32	6	29	94			11	75.184			73.705			72.226							
		3"	80-90	78	87.887	21	26	35	6	34	105			11	87.884			86.405			84.926							
		3 1/2"	90-102	90	100.334	22	28	38	7	37	116			11	100.330			98.851			97.372							
		4"	102-114	103	113.034	25	32	41	7	42	123			11	113.030			111.551			110.072							
B		4 1/2"	115-127	115	125.735	25	32	41	7	46	-	147	10	4.5	11													
		5"	127-140	128	138.435	28	35	44	8	50	-	161	11	5	11	138.430			136.951			135.472						
		6"	152-165	153	163.836	35	42	51	8	53	-	188	11	5	11	163.830			162.351			160.872						

ADDITIONAL INFORMATION

STATUS OF DRAWING U

DISTRIBUTION OF PRINTS
 LME (DV) - 1 BAY 1 & 2 DV-
 LMP (DV) - 1 BAY 3 DV-
 LMM (DV) - 3

TYPE OF PRODUCT 25 KV AC LOCOMOTIVE

NAME OF CUSTOMER/PROJECT INDIAN RAILWAY BOARD



BHARAT HEAVY ELECTRICALS LTD.
 JHANSI

DRN	NAME	SIGN	DATE	NO. OF VAR
CHD	M. LAKRA	<i>[Signature]</i>	07.10.96	-
APPD	M. DUTTA	<i>[Signature]</i>	19.10.96	-

DEPT LME
 CODE 404
 GRADE OF UN.TOL. DM. C/W/F
 SCALE N.T.S.
 WEIGHT (KG) -

TITLE
**STEEL NIPPLE
 TAPER & PARALLEL THREAD**

DRAWING NO.
2 719 65 01 017

SHEET NO. 01 NO. OF SHEETS 01

SIZE A2

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REF. DRG. NO. CLW/AC/132

SIGN & DATE

INVENTORY NO.

REV	DATE	ALTERED	REASON	REV	DATE	ALTERED	REASON
04	16.5.98	CHECKED	APPD	03	3.11.05	CHECKED	APPD

STYLE NO. ADDED FOR WAG-7 LOCO.

STYLE NO. 706062, 706061, 706074 & 706075 UPDATED.

STYLE NO. UPDATED.

DIMNL. TOL.:- AS PER CORP. STD. AA 023 02 08 COARSE GRADE UNLESS OTHERWISE STATED.

NOTES:-

1. TEST THESE FITTINGS AT AN INTERNAL HYDRAULIC PRESSURE OF 49Kg/Cm² AND AT AN INTERNAL AIR PRESSURE OF 8.5 Kg/Cm². WHEN IMMERSED IN WATER. TO PROVE THAT THE CLOSE FIT JOINTS OF THREADED CAN RESIST IT, WITHOUT SHOWING ANY LEAKAGE.
2. PLASTIC CAPS TO BE PROVIDED AT THE PIPE CONNECTIONS AFTER INSPECTION & TESTING. THE CAPS SHOULD BEAR THE SIZE OF BSP/NPT THREADS MARKED ON THEM.
3. THE MATERIAL TO BE CLEANED PROPERLY & TO BE PHOSPHATED (IS:3618-91) AFTER MACHINING TO RESIST CORROSION.
4. ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.

DETAILED DIMENSION OF PARALLEL & TAPER THREAD CLOSE FIT

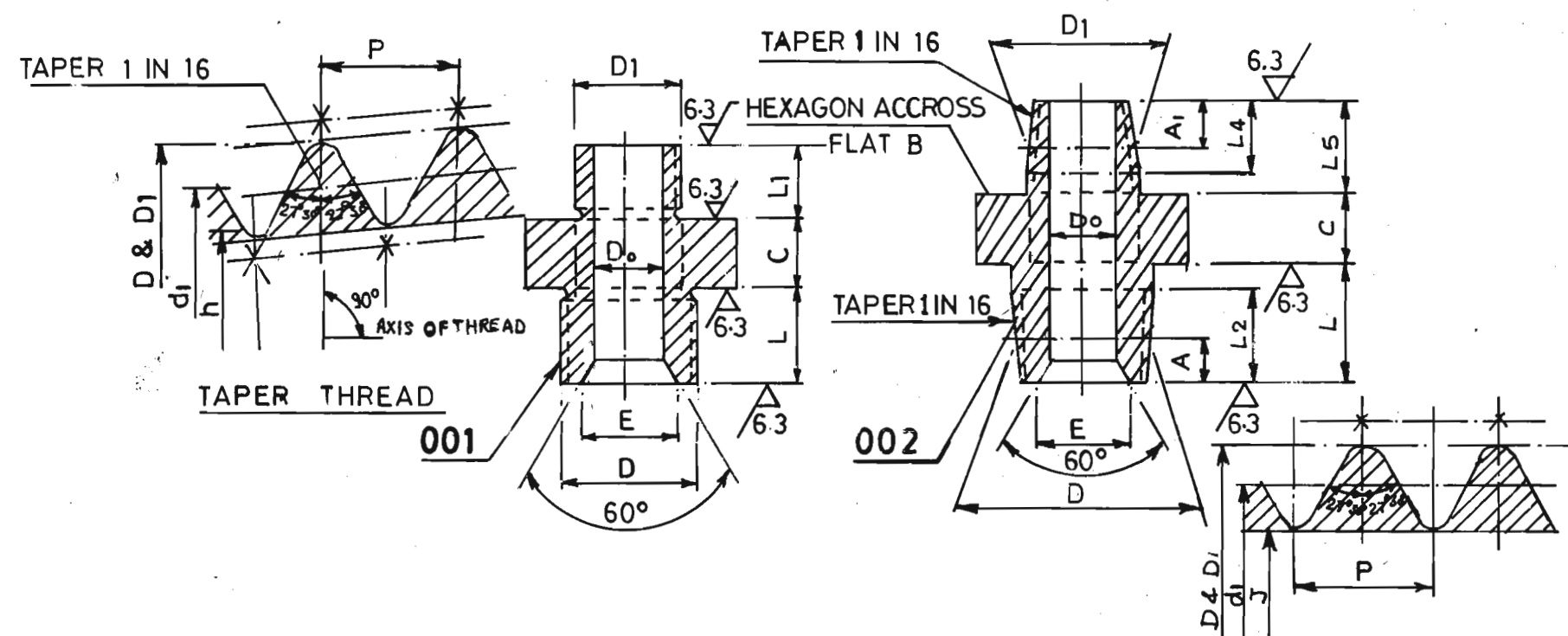
NOM. SIZE	IN	IN mm	T.P.I.	MAJOR DIA-"D" IN mm			EFFECTIVE DIA-"d _e " IN mm			MINOR DIA-"J" IN mm		
				MAX.	TOL.	MIN.	MAX.	TOL.	MIN.	MAX.	TOL.	MIN.
1/8"	5-10	28	9.728	0.119	9.609	9.147	0.071	9.075	8.566	0.135	8.431	
1/4"	8-13	19	13.157	0.140	13.017	12.301	0.081	12.219	11.445	0.157	11.287	
3/8"	12-17	19	16.622	0.142	16.520	15.806	0.084	15.722	14.950	0.160	15.110	
1/2"	15-21	14	20.955	0.162	20.793	19.793	0.094	19.700	18.631	0.183	18.449	
3/4"	21-27	14	26.441	0.170	26.271	25.279	0.102	25.178	24.117	0.190	23.927	
1"	26-34	11	33.249	0.185	33.064	31.770	0.109	31.661	30.291	0.208	30.083	
1 1/4"	33-42	11	41.910	0.194	41.717	40.431	0.117	40.315	38.952	0.216	37.737	
1 1/2"	40-49	11	47.803	0.198	47.605	46.324	0.122	46.203	44.845	0.221	44.625	
2"	50-60	11	59.614			58.135			56.658			
2 1/2"	66-76	11	75.184			73.705			72.226			
3 1/2"	80-90	11	87.884			86.405			84.926			
4"	90-102	11	100.330			98.851			97.372			
4 1/2"	102-114	11	113.030			111.551			110.072			
5"	115-127	11										
5 1/2"	127-140	11	138.430			136.951			135.472			
6"	152-165	11	163.830			162.351			160.872			

001	STEEL	002	NIPPLE HEX. TAPER THREAD			IS: 226						
001	STEEL	001	NIPPLE HEX. PARALLEL THREAD			IS: 226						
VAR-00	REMARKS	VAR NO.	ITEM NO.	DESCRIPTION	STD.	DRAWING NO.	ITNO.	MATL. CODE	A	UNIT	UNIT WT.	ZONE
							VAR	MATL. SPECN.	C		QTY	GS

28 → CARD TYPE-3		28 → CARD TYPE-1		28 → CARD TYPE-2			
ADDITIONAL INFORMATION				TYPE OF PRODUCT 25 KV AC LOCOMOTIVE			
STATUS OF DRAWING U				NAME OF CUSTOMER/PROJECT INDIAN RAILWAY BOARD			
DISTRIBUTION OF PRINTS LME (DV) - 1 LMP (DV) - 1 LMM (DV) - 3				 BHARAT HEAVY ELECTRICALS LTD. JHANSI			
REV 01 12/5/00 CHECKED APPD. <i>[Signature]</i> STYLE NO ADDED				DRN OMDATT <i>[Signature]</i> 08.10.96 NO. OF VAR 00 CHD M.LAKRA <i>[Signature]</i> 15.10.96 APPD M.DUTTA <i>[Signature]</i> 19.10			
REV 02 1.6.00 CHECKED APPD. <i>[Signature]</i> STYLE NO. UPDATED.				DEPT LME GRADE OF UN.TOL. DIM. C/M/F SCALE N.T.S. WEIGHT (KG) REF. TO ASSY. NO. ITEM NO. NO. OF ITEM 03			
REV 03 16.5.98 CHECKED APPD. <i>[Signature]</i> STYLE NO ADDED FOR WAG-7 LOCO.				TITLE REDUCING NIPPLE (TAPER/PARALLEL THREAD) CARD CODE SHEET NO. 01 NO. OF SHEETS 01			

810 10 99 6 12 2

DRAWING NO.



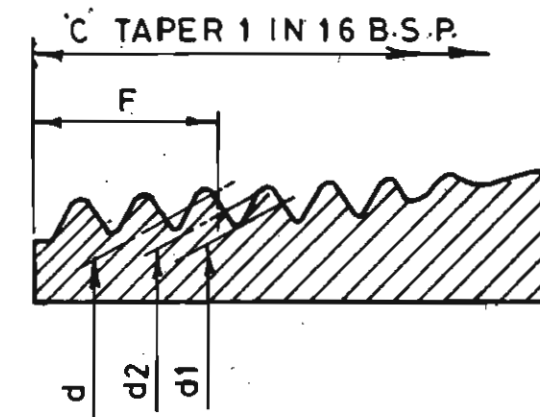
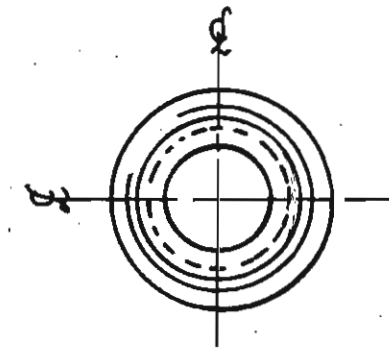
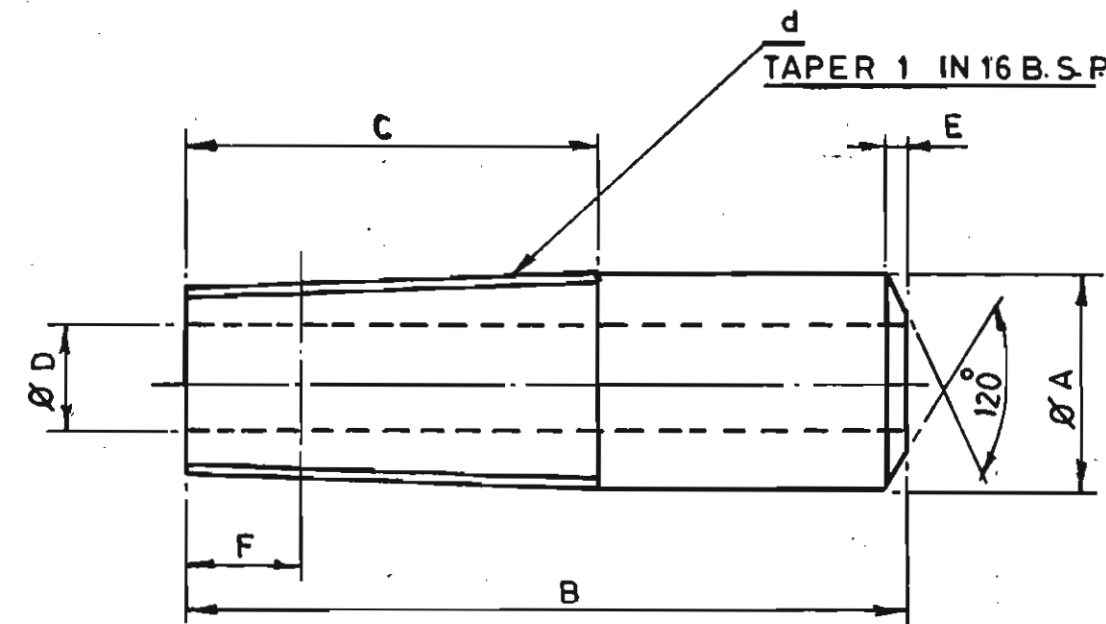
STYLE NO. FOR WAG-7 LOCO PARALLEL	STYLE NO. FOR WAG-7 LOCO TAPER	STYLE NO.	BSP SIZE IN INCH	NOM. DIM IN mm ON OD	NOM. DIA IN mm ON ID	DO	D	L -0.0 -0.4	D1	L1 -0.0 -0.4	A MIN. MAX.	L2	L3	A1 MIN. MAX.	L4	L5	B	C	E
			1/4" x 1/8"R	13x10R	8-6	5	13.157	8	9.728	6	4.7 7.3	8.4	14	3.1 4.9	5.6	10	21	8	8
			3/8" x 1/8"R	17x10R	10-6	5	16.662	9	9.728	6	5.1 7.7	8.8	14	3.1 4.9	5.6	10	23	10	12
			3/8" x 1/4"R	17x13R	10-8	7	16.662	9	13.157	8	5.1 7.7	8.8	14	4.7 7.3	8.4	14	23	10	12
			1/2" x 1/8"R	21x10R	15-6	5	20.955	11	9.728	6	6.4 10.0	11.4	19	3.1 4.9	5.6	10	29	11	15
642041	706208		1/2" x 1/4"R	21x13R	15-8	7	20.955	11	13.157	8	6.4 10.0	11.4	19	4.7 7.3	8.4	14	29	11	15
642046	706068		1/2" x 3/8"R	21x17R	15-10	10	20.955	11	16.662	9	6.4 10.0	11.4	19	5.1 7.7	8.8	14	29	11	15
			3/4" x 1/4"R	27x13R	20-8	7	26.441	13	13.157	8	7.7 11.3	12.7	20	4.7 7.3	8.4	14	35	13	21
	706306		3/4" x 3/8"R	27x17R	20-10	10	26.441	13	16.662	9	7.7 11.3	12.7	20	5.1 7.7	8.8	14	35	13	21
642042	955162		3/4" x 1/2"R	27x21R	20-15	14	26.441	13	20.955	11	7.7 11.3	12.7	20	6.4 10.0	11.4	19	35	13	21
			1" x 3/8"R	34x17R	25-10	10	33.249	15	16.662	9	8.1 12.7	14.5	23	5.1 7.7	8.8	14	46	15	26
	955163		1" x 1/2"R	34x21R	25-15	14	33.249	15	20.955	11	8.1 12.7	14.5	23	6.4 10.0	11.4	19	46	15	26
	955164		1" x 3/4"R	34x27R	25-20	19	33.249	15	26.441	13	8.1 12.7	14.5	23	7.7 11.3	12.7	20	46	15	26
			1 1/4" x 1/2"R	42x21R	32-15	14	41.910	17	20.955	11	10.4 15.0	16.8	26	6.4 10.0	11.4	19	54	18	33
642043	706202		1 1/4" x 3/4"R	42x27R	32-20	19	41.910	17	26.441	13	10.4 15.0	16.8	26	7.7 11.3	12.7	20	54	18	33
	955165		1 1/4" x 1"R	42x34R	32-25	25	41.910	17	33.249	15	10.4 15.0	16.8	26	8.1 12.7	14.5	23	54	18	33
			1 1/2" x 3/4"R	49x27R	40-20	19	47.803	17	26.441	13	10.4 15.0	16.8	26	7.7 11.3	12.7	20	63	20	40
			1 1/2" x 1"R	49x34R	40-25	25	47.803	17	33.249	15	10.4 15.0	16.8	26	8.1 12.7	14.5	23	63	20	40
			1 1/2" x 1 1/4"R	49x42R	40-32	34	47.803	17	41.910	17	10.4 15.0	16.8	26	10.4 15.0	16.8	26	63	20	40
	955166		2" x 1"R	60x34R	50-25	25	59.614	21	33.249	15	13.6 18.2	21.1	31	8.1 12.7	14.5	23	77	24	50
			2" x 1 1/4"R	60x42R	50-32	34	59.614	21	41.910	17	13.6 18.2	21.1	31	10.4 15.0	16.8	26	77	24	50
			2" x 1 1/2"R	60x49R	50-40	39	59.614	21	47.803	17	13.6 18.2	21.1	31	10.4 15.0	16.8	26	77	24	50

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DIMNL.TOL:-

AS PER CORPT. STD. AA 0230208 COARSE GRADE
UNLESS OTHERWISE STATED.

NOTES:-

- ALL SHARP EDGES AND CORNERS TO BE ROUNDED OFF.
- THREADED END PIECES SHALL BE TESTED AT AN INTERNAL HYDRAULIC PRESSURE OF 21 Kg/cm² & AT AN INTERNAL AIR PRESSURE OF 8.5 Kg/cm².
- THE MANUFACTURES SHALL ENGRAVE / EMBOSS / IMPRINT / STENCIL PERMANENT IDENTIFICATION MARK INDICATING THEIR NAME / MONOGRAM BRAND NAME. ALSO THE MONTH AND YEAR OF MANUFACTURE AT A CONSPICUOUS PLACE.
- THE CASTING TO BE CLEANED PROPERLY & TO BE PHOSPHATED (IS:3618-90) AFTER MACHING TO RESIST COROSSION.
- PLASTIC CAP TO BE PROVIDED AFTER INSPECTION AND TESTING. CAP SHOULD BEAR THE SIZE OF BSP / NPT THREADS. MARKED ON THEM.

STYLE NO.	NOM SIZE IN MM ID-O.D	IN INCH B.S.P SIZE	A		B	C	D		E	d	d2	d1	n)TPI	F	STYLE No FOR WAG-7
			MAX.	MIN.			MAX.	MIN.							
706036	8-13	1/4"	14	13.2	31	11	8.2	7.4	1.5	13.157	12.301	11.445	19	6.01	642001
706037	12-17	3/8"	17.5	16.7	32	12	11.7	10.9	1.5	16.662	15.806	14.950	19	6.35	642002
706038	15-21	1/2"	21.8	21	35	15	15.3	14.5	1.5	20.958	19.793	18.631	14	8.16	642003
706039	21-27	3/4"	27.3	26.5	37	17	20.9	20.1	2	26.441	25.279	24.117	14	9.53	642004
706040	26-34	1"	34.2	33.3	39	19	26.2	25.3	2	33.249	31.770	30.291	11	10.39	642005
706041	33-42	1 1/4"	42.9	42	42	22	34.8	33.9	2	41.910	40.431	38.952	11	12.70	642006
706042	40-49	1 1/2"	48.8	47.9	42	22	40.7	39.8	2	47.803	40.324	44.815	11	12.70	
706043	50-60	2"	60.8	59.7	46	26	51.8	50.7	2.5	59.614	58.135	56.686	11	15.88	642007
	80-90	3"	89.5	88	54	34	79.87	78.3	2.5	87.884	86.405	84.928	11	20.64	

001	001	THREADED END PIECE	IS: 1239 HEAVY
VAR. OO	REMARKS	ITEM NO.	DRAWING NO.
28	CARD TYPE-3	28	CARD TYPE-1
ADDITIONAL INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	
STATUS OF DRAWING U		25K.V.A.C. / WCAM-2 / WCAM-3 LOCOMOTIVE M/S - INDIAN RAILWAY	
DISTRIBUTION OF PRINTS		Bharat Heavy Electricals Limited JHANSI	
LME	LMP	LMM	
1	1	3	
REV. 01	DATE 12/5/00	ALTERED P.K.Khatw	DEPT. LME
CHECKED APPD.			GRADE OF UN TOC
REV. 02	DATE 1.6.00	ALTERED Sushant	SCALE NTS.
CHECKED APPD.			WEIGHT (Kg)
REV. 03	DATE 3.11.09	ALTERED P.K.Khatw	REF. TO ASSY. DRG.
CHECKED APPD.			ITEM NO.
REV. 04	DATE 16-5-08	ALTERED P.K.Khatw	REV. 04
CHECKED APPD.			NO. OF ITEMS
ST NO. ADDED FOR WAG-7 Loco	ZONE	ST. NO. 706036 UPDATED	ZONE
ST. NO. 706036 UPDATED	ZONE	STYLE NO. UPDATED	ZONE
TITLE		DRAWING NO. 2 719 65 01 021	
THREADED END PIECE (TAPER)		SHEET NO. 01 NO. OF SHEETS 01	

R.E.S.JHS.

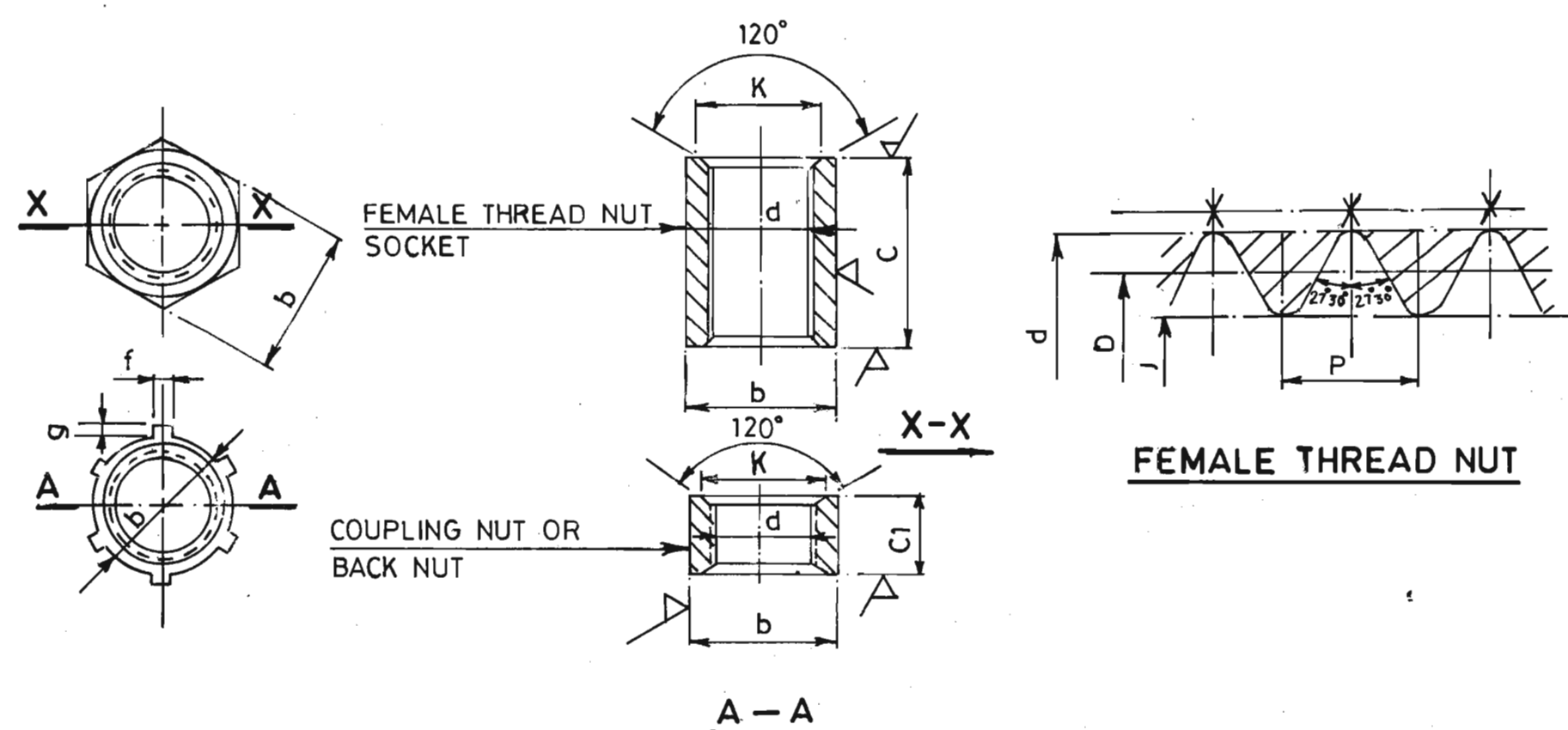
SIZE A 2

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CLW-0/3/65/15
REF. DRG. NO. ALT. NO. 3
SIGN & DATE
INVENTORY NO.

NOTES:-

1. ALL SHARP EDGES & CORNERS TO BE ROUNDED OFF.
2. HEX. TYPE UPTO 102-114 (4") SIZE & SLOTTED TYPE FROM 115-127 (4 1/2") SIZE.
3. ASSEMBLE THESE SOCKETS WITH THREADED END PIECE OF SPECIFIC SIZE TO DRG NO. 2 719 65 01 023 & BACK NUT TO DRG. NO. 2 719 65 01 022 SO THAT THIS JOINT CAN WORK SATISFACTORILY AT AN INTERNAL HYDRAULIC PRESSURE OF 49Kg/Cm² & AT AN INTERNAL AIR PRESSURE OF 8.5Kg/Cm² WHEN IMMERSED IN WATER OR LIGHT OIL, WITHOUT SHOWING ANY SIGN OF LEAKAGE.
4. THE MATERIAL TO BE CLEANED PROPERLY & TO BE PHOSPHATED (IS:3618-91) AFTER MACHINING TO RESIST CORROSION.
5. PLASTIC CAPS TO BE PROVIDED AT THE PIPE CONNECTIONS AFTER INSPECTION & TESTING THE CAPS SHOULD BEAR THE SIZE OF BSP/NPT THREADS MARKED ON THEM.



STYLE NO. BACK NUT FOR WAG-7 Locs	STYLE No BACK NUT	NOM. SIZE		CORRESPONDING NOMINAL SIA NO.	D	K	C	C1	b		f	g	T.P. I	STYLE NO. SOCKET FOR WAG-7 Locs
		IN INCHES	IN mm ID-OD						HEX	SLOTTED				
		1/8"	5-10	6	9.729	12	25	7	17	-	-	-	28	
642017		1/4"	8-13	8	13.158	16	25	8	21	-	-	-	19	
642018	706051	3/8"	12-17	10	16.663	19.5	30	10	23	-	-	-	19	
642019	706052 706057	1/2"	15-21	15	20.956	24	35	11	29	-	-	-	14	642023
642020	706053 706058	3/4"	21-27	20	26.442	29.5	40	13	35	-	-	-	14	642024
642021	706054	1"	26-34	25	33.250	36.5	45	15	46	-	-	-	11	
642022	706055	1 1/4"	33-42	32	41.912	45	55	18	54	-	-	-	11	
		1 1/2"	40-49	40	47.803	51	55	20	63	-	-	-	11	
	706056	2"	50-60	50	59.616	63	60	24	77	-	-	-	11	
		2 1/2"	66-76	65	75.187	79	70	29	94	-	-	-	11	
		3"	80-90	80	87.887	92	75	34	105	-	-	-	11	
		3 1/2"	90-102	90	100.334	104	85	37	116	-	-	-	11	
		4"	102-114	100	113.034	117	95	42	123	-	-	-	11	
		4 1/2"	115-127	110	125.735	130	100	46	-	147	10	4.5	11	
		5"	127-140	125	138.435	143	110	50	-	161	11	5	11	
		6"	152-165	150	163.836	168	125	58	-	188	11	5	11	
		2 1/4"	60-66	60	65.710	71	65	27	85	-	-	-	11	

DETAIL DIMENSION OF PARALLEL PIPE THREAD REF. DIMENSION-d CLOSE FIT							
NOM SIZE IN mm	BSP SIZE IN INCH	MAJOR DIA IN mm		EFFECTIVE DIA IN mm		TOP DIA IN mm	
		MIM-d	MAX-D	MIM-D	MAX-J	MIM-J	
5-10	1/8"	9.728	9.217	9.146	8.847	8.564	
8-13	1/4"	13.157	12.382	12.301	11.890	11.445	
12-17	3/8"	16.662	15.890	15.806	15.395	14.950	
15-21	1/2"	20.955	19.888	19.794	19.174	18.633	
21-27	3/4"	26.441	25.382	25.280	24.661	24.120	
26-34	1"	33.249	31.879	31.770	30.932	30.292	
33-42	1 1/4"	41.910	40.548	40.432	39.593	38.953	
40-49	1 1/2"	47.803	46.446	46.324	45.486	44.846	
50-60	2"	59.616					
80-90	3"	87.884					
60-66	2 1/4"	65.710					

[illegible]

CARD TYPE - 3			CARD TYPE - 1			CARD TYPE - 2			CARD TYPE - 2		
ADDITIONAL INFORMATION W.O. No. 00378A30001			TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT			25 KV AC LOCOMOTIVE/WCAM-2/WCAM-3 INDIAN RAILWAY BOARD					
STATUS OF DRAWING U			 BHARAT HEAVY ELECTRICALS LTD. JHANSI			DRN	NAME OMDATT	SIGN Omdatt Sharma	DATE 15.10.96	NO. YA	
DISTRIBUTION OF PRINTS LME (DV) - 1 BAY 1&2 (DV) - LMP (DV) - 1 BAY 3 (DV) - LMM (DV) - 3						CHD	M.LAKRA	<i>Amish</i>	17-10-96	00	
REV 01			DEPT LME			APPD	M.DUTTA	<i>Amish</i>	19-10-96	00	
DATE 1.6.00			GRADE OF UN.TOL. DIM. C/M/F					SCALE N.T.S.	WEIGHT (KG) -	REF. TO ASSY. NO. -	
ALTERED <i>Om Datt Sharma</i> CHECKED LAPPD STYLE NO. UPDATED.			CODE 404					ITEM NO -		NO. ITE 00	
TITLE STANDARD PIPE SOCKET & COUPLING NUTS (METRIC SIZE)			CARD CODE			DRAWING NO. 2 719 65 01 022			RE 03		
4			SHEET NO. 01			NO. OF SHEETS 01			01		

(ALL DIMENSIONS ARE IN mm)

DIMNL. TOL :- AS PER COARP STD AA 023 02 08 COARSE GRADE UNLESS OTHERWISE STATED.

2. ALL PIPE ENDS FOR CONNECTION SHOULD BE DRESSED UP BEFORE ASSY AND THE QUALITY SHOULD NOT EXCEED ($D-d=0.3\text{mm}$) 0.3mm ON OUTER DIA.

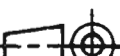
4. PLASTIC CAPS TO BE PROVIDED AT THE PIPE CONNECTIONS AFTER INSPECTION & TESTING
THE CAPS SHOULD BEAR THE SIZE OF B.S.P./NPT THREADS MARKED ON THEM.

6. MATL. SPECN. OF REFERENCE MARKED * SHOULD BE IS 320-1991 GR II FULLY ANNEALED TO GIVE A UTS OF 47 Kg/mm² (MIN) AND ELONGATION OF 20% (MIN) IN LIEU OF IRS-N2

BACK NUT (002)						
W	m2	n	p3	b	D	T.P.I.
22 (002)	33	5.5	3	11	18	19

	BODY (001)																LOCK NUT(005)				BACK NUT (003)								FERRULE (CONE) (004)					
STYLE NO.	a	b2	c	D	e	e1	f	g	h	l	l1	R	R1	t	w1	TPI	w	m	D	TPI	w	m1	n	p	b3	D	T.P.I	j	k	d1	d2	D1	b2	
955 406	8	10.25 ±.25	7	18	13	25	3	26	3	355	47	8.5	3	5	19	19	22	6	18	19	(003) 22	21	5.5	3	11	18	19	8	5.5	12.025 ± 0.025	11	15	10.25 ± 0.05	

[illegible]

ADDITIONAL INFORMATION STATUS OF DRAWING <u>U</u>		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT <u>M/S INDIAN RAILWAY BOARD NEW DELHI</u>		25 K.V. A.C. LOCO WAG 5H.B.		73 74 NO. OF VAR.	
DISTRIBUTION OF PRINTS LME (DV) 1 BAY 1&2 - LMP (DV) 2 BAY 3 - LMM (DV) 3 -		 BHARAT HEAVY ELECTRICALS LIMITED JHANSI		DRN. <u>NAME</u> <u>DKAHRWAR</u> <u>SIGN</u> <u>24.12.96</u> CHD. <u>M.L AKRA</u> <u>26.12.96</u> APPD. <u>M. DUTTA</u> <u>10.2.97</u>		NO. OF VAR.	
REV. DATE ALTERED CHECKED		DEPT. <u>LME</u> GRADE <u>TOL.</u> CODE <u>404</u> DIM. C/M/F		 SCALE <u>N.T.S.</u> WEIGHT (Kg)		REF. TO ASSY. DRG. ITEM NO.	
ZONE		TITLE <u>BULK HEAD ELBOW</u>		1 CARD CODE 37		22 23 24 REV. <u>00</u> SHEET NO. <u>01</u> NO. OF SHEETS <u>01</u>	

SIZE A2

THE INFORMATION ON THIS DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

CLW/AC/138/134
REF. DRG. NO.

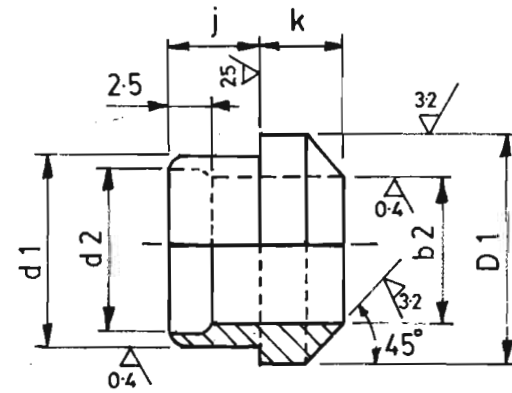
SIGN. & DATE

INVENTORY NO. _____

(ALL DIMENSION ARE IN mm.)

DIMNL TOL.:-

AS PER CORP. STD. AA 023 02 08 MEDIUM GRADE UNLESS OTHERWISE STATED.



- 1 STEEL CONE TO BE PROTECTED FROM CORROSION BY CADMIUM PLATING OR PARKERISING.
- 2 ALL STL. CONES ARE TO BE CASE HARDENED ALL OVER.
- 3 MATL. SPECN. OF REFERENCE MARKED * SHOULD BE IS: 320-1962 GR 1 FULLY ANNEALED TO GIVE A.U.T.S. OF 47 Kgs/mm² (MIN) AND ELONGATION OF 20 % (MIN) IN LIEU OF IRS N2.

[illegible]

		CLW / AC/134, 135, 137, REF. DRG. NO.138.
--	--	--

REV.	DATE	ALTERED	REV	DATE	ALTERED	REV.	DATE	ALTERED
		CHECKED	02	11/5/07	CHECKED <i>APPD.</i>	01	6.6.00	CHECKED <i>APPD.</i>
ZONE			ZONE	ITEM 010 MODIFIED.		ZONE		STYLE NO. UPDATED. ITEM 011 ADDED.

28 CARD TYPE-3 ADDITIONAL INFORMATION STATUS OF DRAWING U DISTRIBUTION OF PRINTS LME (DV) - 1 LMP (DV) - 1 LMM (DV) - 3	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT 25 K.V.A.C. LOCO WAG-5A INDIAN RAILWAY BOARD NEW DELHI.																																												
REV. 01 DATE 6.6.00 ALTERED <i>Amended</i> CHECKED <i>Amended</i> APPD. <i>Amended</i> ZONE <i>Amended</i> STYLE NO. UPDATED. ITEM 011 ADDED.	BHARAT HEAVY ELECTRICALS LIMITED JHANSI <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">DRN.</td> <td style="width:35%;">सुधीर सुता</td> <td style="width:15%;">SIGN.</td> <td style="width:15%;">11/5/00</td> <td style="width:10%;">73 74</td> </tr> <tr> <td>CHD.</td> <td>अ. सक्सेना</td> <td></td> <td>11/5/00</td> <td>NO. OF VAR.</td> </tr> <tr> <td>APPD.</td> <td>जी. वसंत जाजी</td> <td></td> <td>11/5/00</td> <td></td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">DEPT</td> <td style="width:15%;">GRADE</td> <td style="width:15%;">SCALE</td> <td style="width:15%;">WEIGHT (kg.)</td> <td style="width:15%;">REF. TO ASSY. DRG.</td> <td style="width:10%;">ITEM NO.</td> <td style="width:10%;">75 77</td> </tr> <tr> <td>LME</td> <td>OF TOL DIM</td> <td rowspan="2" style="text-align: center;"> </td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CODE</td> <td>C/M/F</td> <td></td> <td></td> <td></td> <td></td> <td>NO. OF ITEMS 010</td> </tr> </table> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;">TITLE</td> <td style="width:10%;">CARD CODE</td> <td style="width:10%;">DRAWING NO.</td> <td style="width:10%;">23 24</td> </tr> <tr> <td style="text-align: center; font-size: 1.5em;">CONE</td> <td></td> <td style="font-size: 1.5em;">2 719 65 01 033</td> <td style="text-align: center;">REV. 02</td> </tr> </table>	DRN.	सुधीर सुता	SIGN.	11/5/00	73 74	CHD.	अ. सक्सेना		11/5/00	NO. OF VAR.	APPD.	जी. वसंत जाजी		11/5/00		DEPT	GRADE	SCALE	WEIGHT (kg.)	REF. TO ASSY. DRG.	ITEM NO.	75 77	LME	OF TOL DIM						CODE	C/M/F					NO. OF ITEMS 010	TITLE	CARD CODE	DRAWING NO.	23 24	CONE		2 719 65 01 033	REV. 02
DRN.	सुधीर सुता	SIGN.	11/5/00	73 74																																									
CHD.	अ. सक्सेना		11/5/00	NO. OF VAR.																																									
APPD.	जी. वसंत जाजी		11/5/00																																										
DEPT	GRADE	SCALE	WEIGHT (kg.)	REF. TO ASSY. DRG.	ITEM NO.	75 77																																							
LME	OF TOL DIM																																												
CODE	C/M/F						NO. OF ITEMS 010																																						
TITLE	CARD CODE	DRAWING NO.	23 24																																										
CONE		2 719 65 01 033	REV. 02																																										

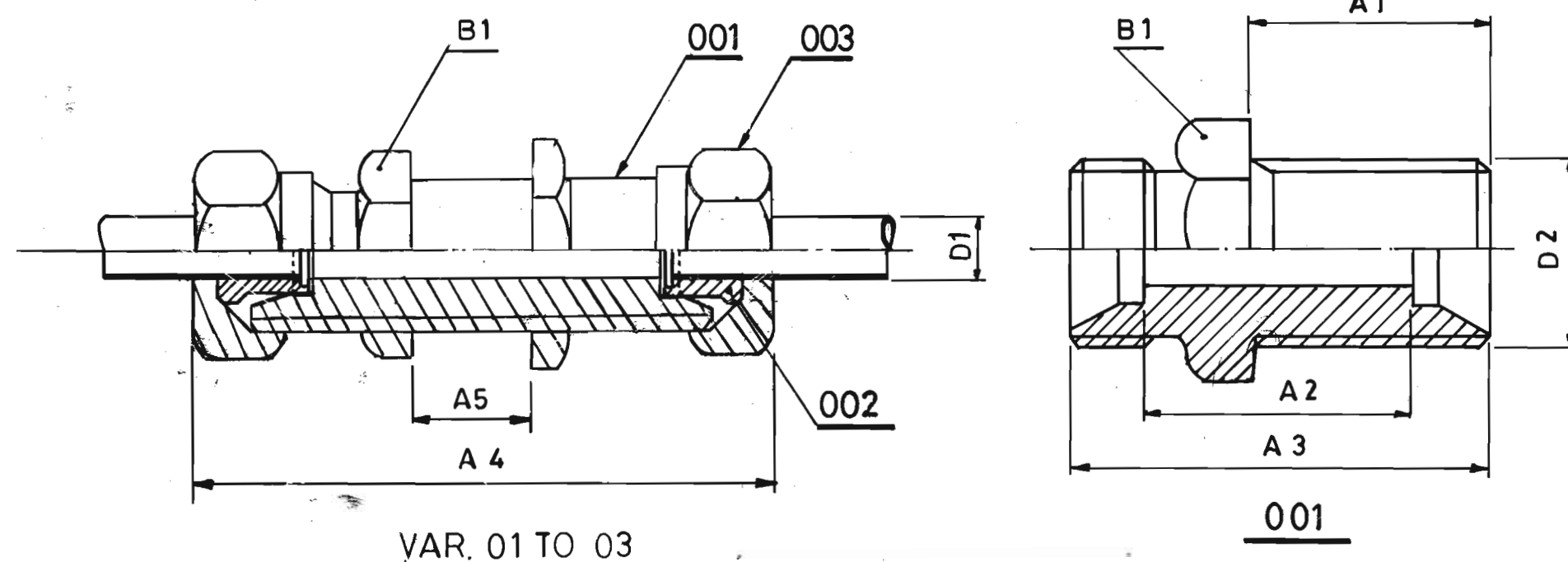
SIZE--A

INVENTORY NO.	SIGN. & DATE	REF. DRG. NO.
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(ALL DIMENSIONS ARE IN mm.)

DIMNLTOL:

AS PER CORP. STD. AA 023 02 08 COARSE GRADE UNLESS OTHERWISE STATED.



DIMENSION TABLE OF ITEM 001

VAR. NO.	D1	D2	A1	A2	A3	A4	A5	B1 A/F			STYLE NO.
01	6	M 14 X15	36	41	55	71	16	19			706310 955109
02	10	M 18 X15	37	44	59	77	16	24			706311 955110
03	12	M 20 X15	38	45	60	78	16	27			955111

NOTE÷

1. DIAMETERS N,O,P, & Q MUST BE CONCENTRIC WITHIN 0.127 (0.005)
2. THE MALE CONNECTOR ASSY. SHALL WITH--STAND A TEST PRESSURE OF 35 Kg./Cm²
3. CONNECTOR BODY SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM

[illegible]

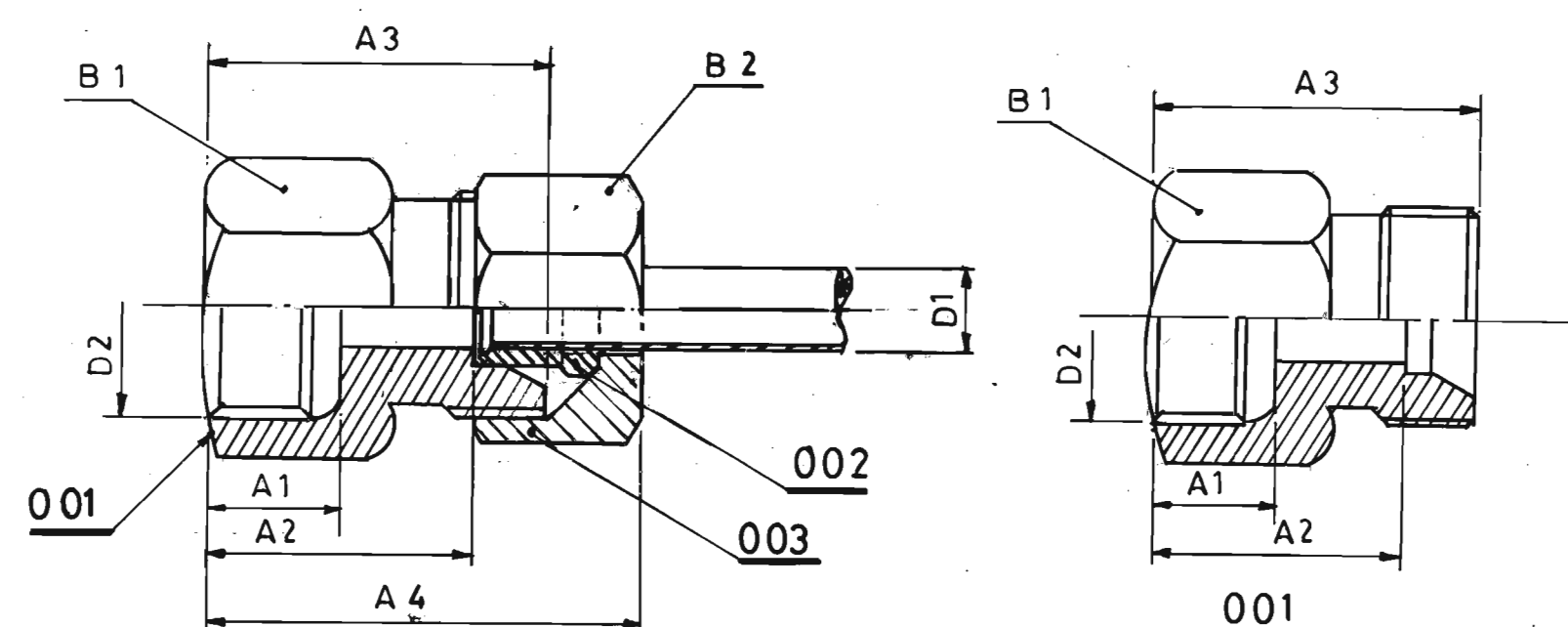
28		CARD TYPE-3		CARD TYPE-1		28		CARD TYPE-2	
ADDITIONAL INFORMATION				TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT					
STATUS OF DRAWING U				700 H.P. DESL.					
DISTRIBUTION OF PRINTS LME (DV) - 1 LMP (DV) - 1 LMM (DV) - 3				 BHARAT HEAVY ELECTRICALS LIMITED JHANSI		DRN. NAME SIGN. DATE M/S SARYU 20/04/12 12/11/90		73 NO. VA	
REV. DATE ALTERED 01 6.6.00 CHECKED APPD.				DEPT. LCE CODE 404		GRADE OF UN. TOL DIM/C/M/F		 SCALE N.I.S.	
ZONE STYLE NO. UPDATED.				WEIGHT (kg.)		REF. TO ASSY. DRG.		ITEM NO. 00	
TITLE BULKHEAD COUPLINGS ASSY.				CARD CODE		DRAWING NO. 2 719 99 01 003		73 NO. RE	

SF IHS. SIZE A2

(ALL DIMENSIONS ARE IN mm)

DIMNL. TOL:

AS PER CORP. STD. AA023 02 08
COARSE GRADE UNLESS OTHERWISE
STATED.



VAR.01 TO 09

VAR.NO	D1	D2 (BSP. THRD)	A1	A2	A3	A4~	B1 (A/F)		STYLE NO.
01	6	1/4"	12	19	26	33.5	19		
02	10	1/4"	12	20	27	34.5	19		955 389
03	12	1/4"	12	20	27	34.5	19		
04	6	3/8"	13	24	32	39	24		706313
05	10	3/8"	13	24	32	40	24		706312,
06	12	3/8"	13	24	32	40	24		
07	6	1/2"	14	26	33	40.5	27		
08	10	1/2"	14	25.5	33	41.5	27		
09	12	1/2"	14	25.5	33	41.5	27		

NOTES:-

1. ALL DIMENSIONS ARE IN m.m. EXCEPT OTHERWISE MENTIONED.
2. DIAMETERS N,O,P,Q MUST BE CONCENTRIC WITHIN 0.127(0.005)
3. THE MALE CONNECTOR ASSY SHALL WITH-STAND A TEST PRESSURE OF 35 Kg/Cm²
4. CONNECTOR BODY SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.

[illegible]

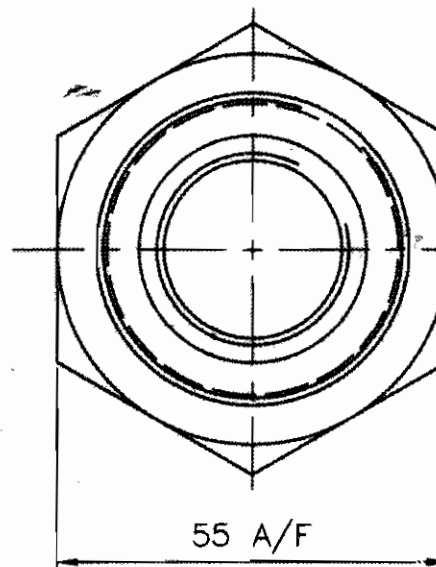
CARD TYPE-3						CARD TYPE-1						CARD TYPE-2													
ADDITIONAL INFORMATION STD						TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT						PIPE FITTINGS													
STATUS OF DRAWING U						 BHARAT HEAVY ELECTRICALS LIMITED JHANSI						DRN. NAME		SIGN.		DATE		73							
DISTRIBUTION OF PRINTS												CHD.		M/S SRAVU				11.11.90		No.					
O/C		PPC		ASSY IE QCL		1		5		2		1		2		12.11.90									
1		5		2		1		2		APPD ML/PSR/GS7		ML H. Sym		12.11.90		73									
REV. 01		DATE 3.11.05		ALTERED <i>Relw</i> CHECKED <i>X APPD. Dink</i>		DEPT. LCE CODE 404		GRADE OF UN. TOL. DIMC/M/F				SCALE NTS		WEIGHT (Kg.)		REF. TO ASSY. DRG.		ITEM No.		75					
ZONE		STYLE NO. UPDATED.																		No.					
						TITLE GAUGE COUPLING ASSY.						CARD CODE		DRAWING No. 2 719 99 01 004						22 23		RE			
														SHEET No. 01						No. OF SHEETS 01					

SE JHS

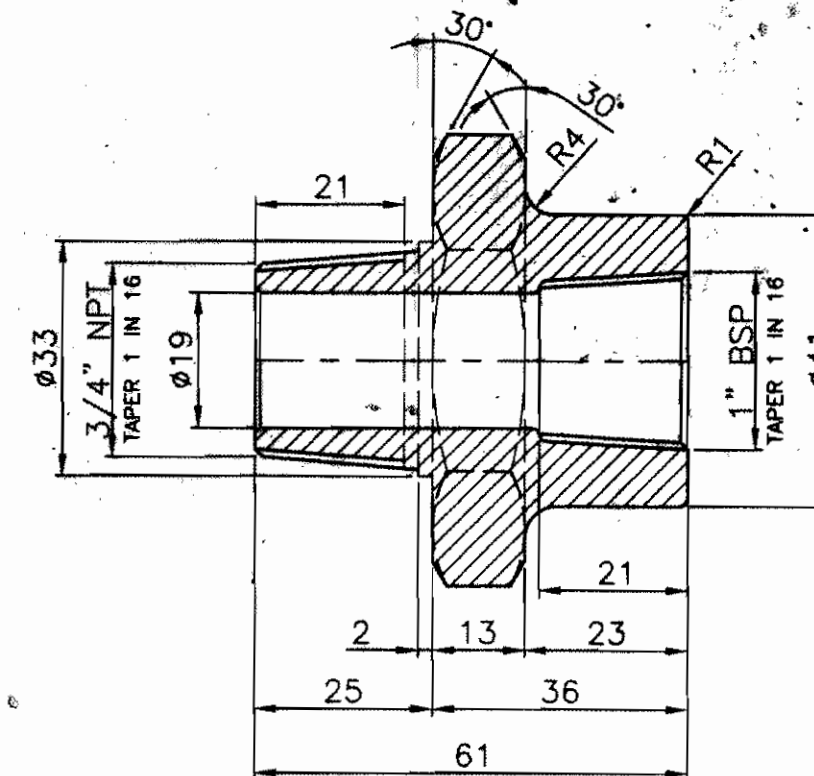
SIZE A2

(ALL DIMENSIONS ARE IN mm)

DIMNL. TOL. - AS PER CORP. STD. AA 023 02 08 MEDIUM
GRADE UNLESS OTHERWISE STATED.



001



002

SL.	ITEM	STYLE
01	001	957000
02	002	957001

TABLE

001	TO DETAIL		002	HEX. STEEL BAR 55 A/F			AA1010112210			0.472		
							AA10112			61		
001	TO DETAIL		001	HEX. STEEL BAR 55 A/F			AA1010112210			0.467		
							AA10112			63		
VAR. 00	REMARKS	VAR. NO.	ITEM NO.	DESCRIPTION	STD.	DRAWING NO.	IT. NO.	MATL. CODE	A. C.	UNIT	UNIT WT.	QTY.
							VAR.	MATL. SPECN				

CARD TYPE - 3

CARD TYPE - 1

CARD TYPE - 2

ADDITIONAL INFORMATION			TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT											
STATUS OF DRAWING U			DESL = LOCO											
DISTRIBUTION OF PRINTS						BHARAT HEAVY ELECTRICALS LTD.			DRN	NAME T.R.DHADSE	SIGN 	DATE 02.09.11	NOL OF VAR	
LNE (DV) - 1						JHANSI			CHD	RAHUL		02.09.11		
LMP (DV) - 1									APPD	A.J.		02.09.11	01	
LMN (DV) - 3														
REV	DATE	ALTERED	DEPT	GRADE OF		SCALE 1:1	WEIGHT (KG)	REF. TO ASSY. NO.	ITEM NO	NOL OF ITEM				
		CHECKED	LNE CODE	UN. TEL. DIM. C/M/F										
			404											
TITLE							CARD CODE	DRAWING NO.			REV.			
MALE AND FEMALE CONNECTOR FOR IR MAKE COMPRESSOR								3 718 65 01 000			00			
							SHEET NO. 01		NOL OF SHEETS 01					

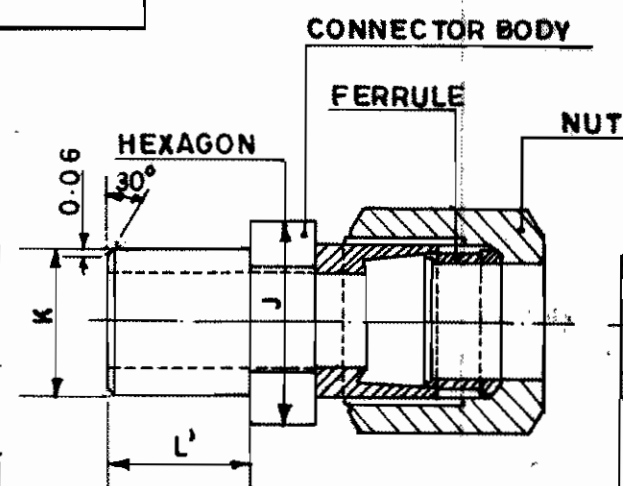
SIZE A3

FIRST ANGLE PROJECTION

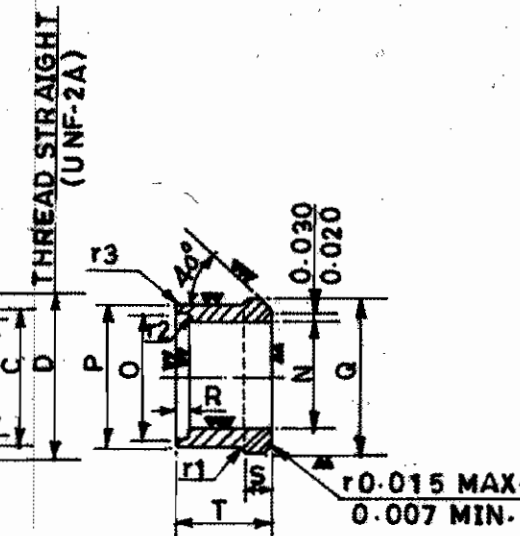
(ALL DIMENSIONS ARE IN mm)

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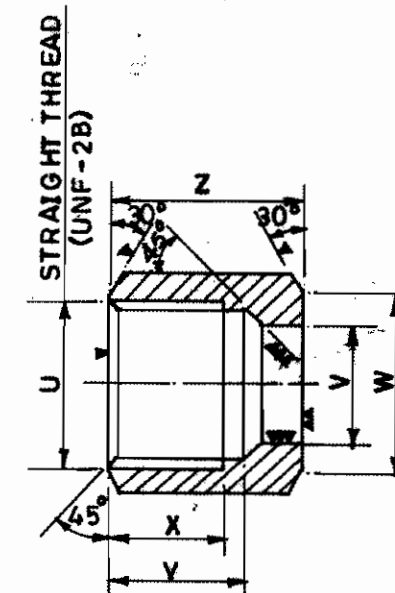
STYLE LIST				
STYLE NO.	IT. NO.	DESCRIPTION	VERIFIED SIGN.	DATE
957003	00	WELDING CONNECTOR ASSY.		3/8/95
957004	01	WELDING CONNECTOR ASSY.		3/8/95



CONNECTOR BODY

MAT: STEEL, IS. 1875
CLASS-2

FERRULE

MAT: STEEL, IS. 1875
CLASS-1

NUT

MAT: STEEL, IS. 1875
CLASS-2

		CONNECTOR BODY												FERRULE										NUT (HEX.)							
VAR NO.	TUBE O/DIA	'A' DIA	'B' DIA +0.004 -0.000	'C' DIA +0.004 -0.000	'D'	'E' +0.015 -0.000	'F' +0.015	'G'	'H'	'J' HEX A/F	'K' DIA	'L'	'M' +0.015 -0.005	'N' DIA +0.003 -0.000	'O' DIA +0.006 -0.000	'P' DIA +0.004 -0.000	'Q' DIA	'R' +0.008 -0.000	'S' +0.006 -0.000	'T' +0.006 -0.000	r1	r2 MAX MIN.	r3	NO./ CONNT.	'U' NOM. SIZE TR1	'V' DIA +0.003 -0.000	'W' DIA +0.015 -0.000	'X' +0.015 -0.000	'Y' +0.015 -0.000	'Z'	NO./ CONNT.
00	6 MM.	0.189	0.247	0.305	$\frac{7}{16} \times 20$ UNF-2A	0.378	0.453	$\frac{13}{64}$	$\frac{7}{32}$	$\frac{5}{8}$	0.433	$\frac{9}{16}$	0.234	0.241	0.272	0.295	$\frac{23}{64}$	0.024	0.096	0.333	0.020	0.006 0.003	0.007	1	$\frac{7}{16} \times 20$	0.241	$\frac{9}{16}$	0.469	0.537	$\frac{45}{64}$	1
01	10MM.	0.300	0.405	0.460	$\frac{9}{16} \times 18$ UNF-2A	0.386	0.469	$\frac{1}{4}$	$\frac{9}{32}$	$\frac{13}{16}$	0.591	$\frac{9}{16}$	0.250	0.399	0.427	0.450	$\frac{31}{64}$	0.024	0.116	0.372	0.020	0.006 0.003	0.007	1	$\frac{9}{16} \times 18$	0.399	$\frac{11}{16}$	0.500	0.568	$\frac{3}{4}$	1
02	12 MM.	0.394	0.486	0.573	$\frac{3}{4} \times 16$ UNF-2A	0.469	0.563	$\frac{9}{16}$	$1\frac{1}{2}$	$\frac{15}{16}$	0.670	$\frac{3}{4}$	0.305	0.478	0.528	0.557	$\frac{5}{8}$	0.024	0.116	0.372	0.020	0.014 0.008	0.010	1	$\frac{3}{4} \times 16$	0.478	$\frac{7}{8}$	0.516	0.599	$\frac{27}{32}$	1

NOTES:-

- CONNECTOR BODY, NUT AND FERRULE SHALL BE CYANIDE HARDENED TO A DEPTH OF 25 TO 30 MICRONS, AND SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.
- ALL DIMENSIONS ARE IN INCHES EXCEPT OTHERWISE MENTIONED.
- DIAMETER N, O, P, Q MUST BE CONCENTRIC WITHIN 0.005".
- THE WELDING CONNECTOR ASSY. SHALL WITHSTAND A TEST PRESSURE OF 35 Kg./Cm².

VAR NO.	REMARKS	VAR NO.	ITEM No.	DESCRIPTION	STD.	DRAWING No.	IT. No.	MATL. CODE	UNIT WT.
00									

CARD TYPE-3

CARD TYPE-1

CARD TYPE-2

ADDITIONAL INFORMATION

STATUS OF DRAWING

DISTRIBUTION OF PRINTS

LME LMP LMM

1 2 3

TYPE OF PRODUCT 350/700 H.P. DES L.
OR
NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LIMITED

JHANSI

DRN. NAME SIGN. DATE

CHD. DR. 4-8-80

APPD. GSC/STOM. 12-8-80

REF. TO ASSY. DRG. ITEM No. 75 77

CODE 404 GRADE OF UN. TOL. DIM. C/M/F

SCALE N.T.S. WEIGHT (Kg.)

TITLE

WELDING CONNECTOR ASSY.

CARD CODE

DRAWING No. 3.718.88.01.016

SHEET No. 01 No. OF SHEETS 01

TECHNICAL SERVICES SIZE A3

REV.	DATE	ALTERED	REV.	DATE	ALTERED
		CHECKED	02	12.5.00	CHECKED

ROUGH MACHINED FINISH MACHINED FINE FINISH MACHINED

VAR UPDATED IN STYLE LIST.

VAR NO. 00, 01 & 02 WERE

ITEM NO. 01, 02 & 03

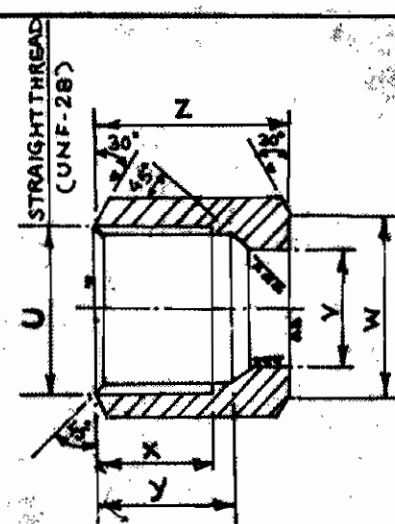
REPLY.

STYLE LIST ADDED

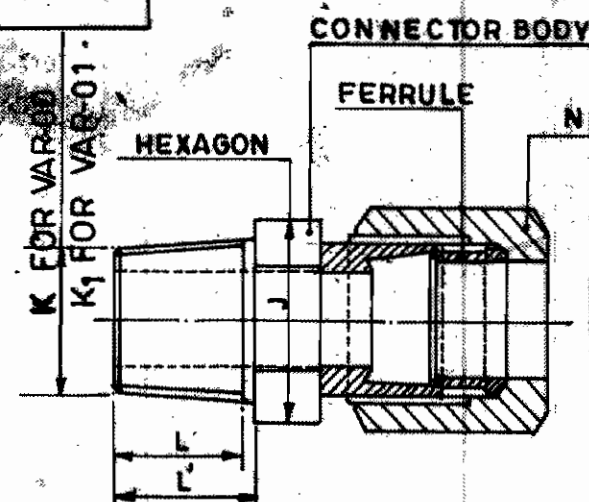
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

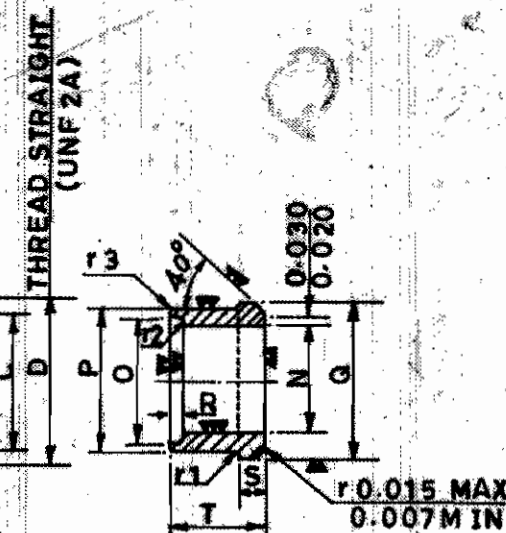
DRG No. 3.718.88.01.017



NUT
MAT: STEEL, IS: 1875
CLASS-2



CONNECTOR BODY
MAT: STEEL, IS: 1875
CLASS-2



FERRULE
MAT: STEEL, IS: 1875
CLASS-1

STYLE LIST

STYLE NO. OF VAR-00	STYLE NO. OF VAR-01	ITEM VAR	DESCRIPTION	VERIFIED SIGN	DATE
955101	955130	001	MALE CONNECTOR ASSY 6mm O/D		
955102	955131	002	MALE CONNECTOR ASSY 10mm O/D		

		CONNECTOR BODY												FERRULE										NUT (HEX-)									
II. NO.	TUBE O/DIA	'A' DIA	'B' DIA +0.004 -0.000	'C' DIA +0.004 -0.000	'D' +0.015 -0.000	'E' +0.015 -0.000	'F' +0.015 -0.000	'G'	'H'	'J' (HEX) A/F	'K' TAPER THD NPTF	'L'	'L'	'M' DIA +0.015 -0.005	'N' DIA +0.003 -0.000	'O' DIA +0.006 -0.000	'P' DIA +0.004 -0.000	'Q' DIA	'R' +0.008 -0.000	'S' +0.006 -0.000	'T' +0.006 -0.000	r1	r2 MAX. MIN	r3	NO./ CONNT.	'U' NOM. SIZE * TPI	'V' DIA +0.003 -0.000	'W' DIA +0.003 -0.000	'X' DIA +0.015 -0.000	'Y' DIA +0.015 -0.000	'Z'	NO./ CONNT.	'K' B.S.P.
001	6 mm.	0.189	0.247	0.305	$\frac{7}{16} \times 20$ UNF-2A	0.378	0.453	$\frac{13}{64}$	$\frac{7}{32}$	$\frac{5}{8}$	$\frac{1}{4}$	$\frac{7}{16}$	$\frac{9}{16}$	0.234	0.241	0.272	0.295	$\frac{23}{64}$	0.024	0.096	0.333	0.020	0.006 0.003	0.007	1	$\frac{7}{16} \times 20$	0.241	$\frac{9}{16}$	0.469	0.537	$\frac{45}{64}$	1	$\frac{1}{4}$
002	10 mm.	0.300	0.405	0.460	$\frac{5}{8} \times 18$ UNF-2A	0.386	0.469	$\frac{1}{4}$	$\frac{9}{32}$	$\frac{13}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{9}{16}$	0.250	0.399	0.427	0.450	$\frac{31}{64}$	0.024	0.116	0.372	0.020	0.006 0.003	0.007	1	$\frac{5}{8} \times 18$	0.399	$\frac{3}{4}$	0.500	0.568	$\frac{3}{4}$	1	$\frac{3}{8}$
003	12 mm.	0.394	0.486	0.573	$\frac{3}{4} \times 16$ UNF-2A	0.469	0.563	$\frac{9}{32}$	$\frac{13}{32}$	$\frac{13}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{9}{16}$	0.305	0.478	0.528	0.557	$\frac{5}{8}$	0.024	0.116	0.372	0.020	0.014 0.008	0.010	1	$\frac{3}{4} \times 16$	0.478	$\frac{7}{8}$	0.516	0.595	$\frac{27}{32}$	1	$\frac{3}{8}$
004	12 mm.	0.394	0.486	0.573	$\frac{3}{4} \times 16$ UNF-2A	0.469	0.563	$\frac{3}{16}$	$\frac{1}{2}$	$\frac{15}{16}$	$\frac{1}{2}$	$\frac{5}{8}$	$\frac{3}{4}$	0.305	0.478	0.528	0.557	$\frac{5}{8}$	0.024	0.116	0.372	0.020	0.014 0.008	0.010	1	$\frac{3}{4} \times 16$	0.478	$\frac{7}{8}$	0.516	0.599	$\frac{27}{32}$	1	$\frac{1}{4}$

NOTES:-

- 1 CONNECTOR BODY, NUT AND FERRULE SHALL BE CYANIDE HARDENED TO A DEPTH OF 25 TO 30 MICRONS, AND SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.
- 2 ALL DIMENSIONS ARE IN INCHES EXCEPT OTHERWISE MENTIONED.
- 3 DIAMETERS N, O, P, Q MUST BE CONCENTRIC WITHIN 0.005".
- 4 THE MALE CONNECTOR ASSY. SHALL WITH STAND A TEST PRESSURE OF 25 kg./cm².
- 5 VAR-00 WITH K NPTF
- 6 VAR-01 WITH K1 B.S.P

VAR-00	REMARKS	VAR-01	ITEM No.	DESCRIPTION	DRAWING No.	VAR-02	ITEM No.	DESCRIPTION	DRAWING No.

CARD TYPE-3

CARD TYPE-1

CARD TYPE-2

ADDITIONAL INFORMATION

STATUS OF DRAWING

DISTRIBUTION OF PRINTS

LME LMP LMM

1 1 3

TYPE OF PRODUCT 350/700H.P. DE S.L.
OR
NAME OF CUSTOMER/PROJECT

DRN.	NAME	SIGN.	DATE	73 74
CHD.	D.R.		1.3.88	NO. OF VAR.
APPD.	G.S.J./M.		1.3.88	

DEPT.	GRADE OF UN. TOL.	SCALE	WEIGHT (Kg.)	REF. TO ASSY. DRG.	ITEM No.	75 77
1000	40%	N.T.S.				NO. OF ITEMS

TITLE	CARD CODE	DRAWING No.	22 23 24
MALE CONNECTOR ASSY.		3.718.88.01.017	REV. 03

SHEET No. 01 No. OF SHEETS 01

TECHNICAL SERVICES SIZE A3

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REF. DRG. No.

SIGN. & DATE

INVENTORY No.

ROUGH	MACHINED	FINE FINISH MACHINED

REV.	DATE	ALTERED	REV.	DATE	ALTERED
03	20.5.00	CHECKED	02	27.12.88	CHECKED

STYLE LIST ADDED.	DIMN. 'D', 'U' & 'W' FOR IT. 002 WERE 9/16 X 18, 9/16 X 18, 11/16 RESPLY.
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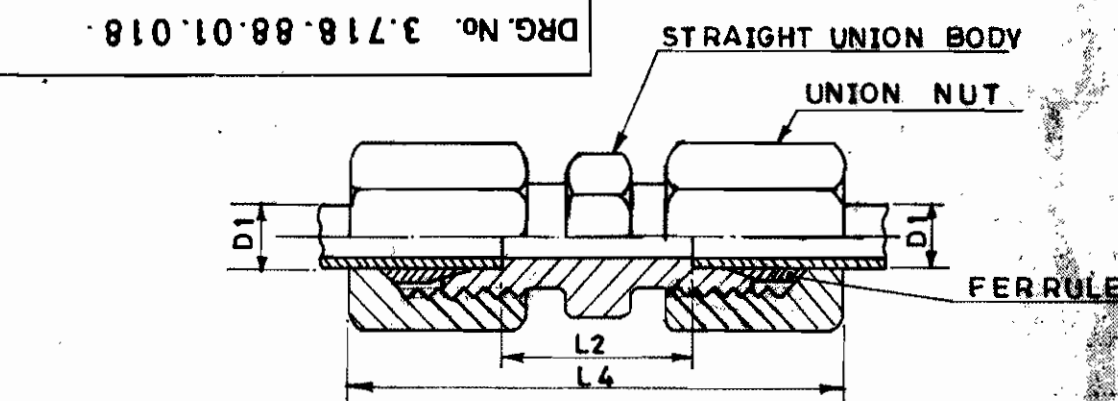
COL. FOR K1 B.S.P. & NOTE 5.16 ADDED.

FIRST ANGLE PROJECTION

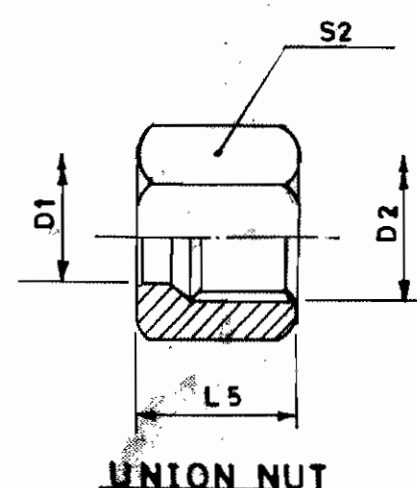
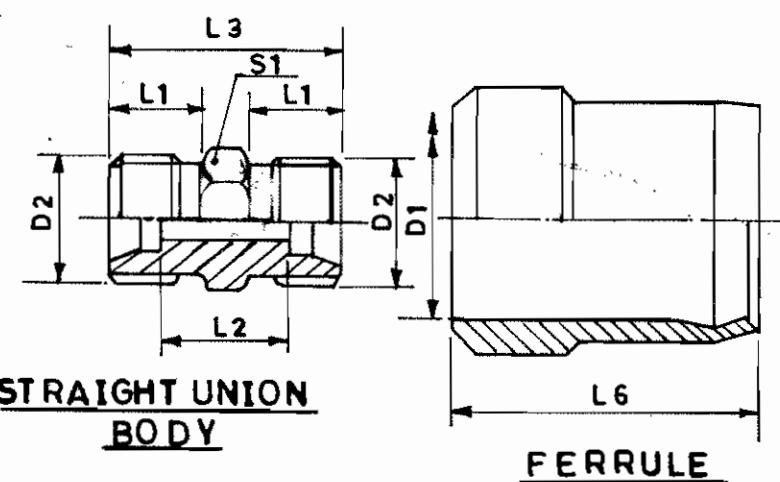
(ALL DIMENSIONS ARE IN mm)

DRG. No. 3.718.88.01.018

TABLE OF DIMENSIONS



STYLE NO.	VAR	TUBE O.D. D1	D2	L1	L2	L3	L4	L5	L6	S1	S2
955106	00	6	M12x1.5	10	10	24	39	15.0	9.5	12	14
955107	01	10	M16x1.5	11	13	27	42	15.5	10	17	19
955108	02	12	M18x1.5	11	14	28	43	16.0	10	19	22
	03	15	M22x1.5	12	16	30	46	17.0	10	24	27



NOTES :-

- DIMENSION L4 IS APPROXIMATE AND IS IN TIGHTENED CONDITION.
- (a) STRAIGHT UNION BODY SHALL BE MANUFACTURED TO IS:9390-1980 AND ITS MATERIAL TO IS: 1875 CLASS II.
- (b) UNION NUT SHALL BE MANUFACTURED TO IS 8803-1978 AND ITS MATERIAL TO IS: 1875 CLASS II.
- (c) FERRULE SHALL BE MANUFACTURED TO IS:8802-1978 AND ITS MATERIAL TO IS:1875 CLASS I.
- THE ASSEMBLY SHALL BE MADE AS PER TYPE C OF IS:9391-1980 AND SHALL WITHSTAND A TEST PRESSURE OF 35 Kg./Cm².
- STRAIGHT UNION BODY, NUT AND FERRULE SHALL BE CYANIDE HARDENED TO A DEPTH OF 25 TO 30 MICRONS AND SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.

58	64	65	75	78	79	25	27	29	58	59	60	77	28	31	34	45	55	56	57	58	65	72																																					
VAR 00			REMARKS			VAR No.			ITEM No.			DESCRIPTION			STD.			DRAWING No.			MATL. CODE			UNIT WT.																																			
28			CARD TYPE-3			28			CARD TYPE-1			28			CARD TYPE-2			MATL. SPECN.			QTY.																																						
ADDITIONAL INFORMATION STD STATUS OF DRAWING												TYPE OF PRODUCT 350/700 H.P. DESL. OR NAME OF CUSTOMER/PROJECT																																															
DISTRIBUTION OF PRINTS LME (DV) - 1 LMP (DV) - 1 LMM (DV) - 3												 BHARAT HEAVY ELECTRICALS LIMITED JHANSI																																															
<table border="1"> <tr> <td>DRN.</td><td>NAME</td><td>SIGN.</td><td>DATE</td></tr> <tr> <td>CHD.</td><td>T.T.</td><td>TA</td><td>1.3.88</td></tr> <tr> <td>APPD.</td><td>D.R.</td><td></td><td>1.3.88</td></tr> <tr> <td></td><td>GSC</td><td></td><td>2.3.88</td></tr> </table>												DRN.	NAME	SIGN.	DATE	CHD.	T.T.	TA	1.3.88	APPD.	D.R.		1.3.88		GSC		2.3.88	<table border="1"> <tr> <td>73</td><td>74</td></tr> <tr> <td>No.</td><td>OF</td></tr> <tr> <td>VAR.</td><td></td></tr> </table>												73	74	No.	OF	VAR.															
DRN.	NAME	SIGN.	DATE																																																								
CHD.	T.T.	TA	1.3.88																																																								
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73	74																																																										
No.	OF																																																										
VAR.																																																											
<table border="1"> <tr> <td>REV.</td><td>DATE</td><td>ALTERED</td><td>REV.</td><td>DATE</td><td>ALTERED</td></tr> <tr> <td>02</td><td>1.6.00</td><td>CHECKED</td><td>01</td><td>12.5.00</td><td>CHECKED</td></tr> </table>												REV.	DATE	ALTERED	REV.	DATE	ALTERED	02	1.6.00	CHECKED	01	12.5.00	CHECKED	<table border="1"> <tr> <td>DEPT.</td><td>GRADE OF</td><td>SCALE</td><td>WEIGHT (Kg.)</td><td>REF. TO ASSY. DRG.</td><td>ITEM</td></tr> <tr> <td>Loco</td><td>UN. TOL.</td><td>N.T.S.</td><td></td><td></td><td>No.</td></tr> <tr> <td>CODE</td><td>DIM.C/M/F</td><td></td><td></td><td></td><td>No. OF</td></tr> <tr> <td>202</td><td></td><td></td><td></td><td></td><td>ITEMS</td></tr> </table>												DEPT.	GRADE OF	SCALE	WEIGHT (Kg.)	REF. TO ASSY. DRG.	ITEM	Loco	UN. TOL.	N.T.S.			No.	CODE	DIM.C/M/F				No. OF	202					ITEMS
REV.	DATE	ALTERED	REV.	DATE	ALTERED																																																						
02	1.6.00	CHECKED	01	12.5.00	CHECKED																																																						
DEPT.	GRADE OF	SCALE	WEIGHT (Kg.)	REF. TO ASSY. DRG.	ITEM																																																						
Loco	UN. TOL.	N.T.S.			No.																																																						
CODE	DIM.C/M/F				No. OF																																																						
202					ITEMS																																																						
<table border="1"> <tr> <td>1</td><td>3</td><td>7</td><td>22</td><td>23</td><td>24</td></tr> <tr> <td>CARD</td><td>CARD</td><td>DRAWING No.</td><td>REV.</td><td></td><td></td></tr> <tr> <td>CODE</td><td>CODE</td><td>3.718.88.01.018</td><td>02</td><td></td><td></td></tr> </table>												1	3	7	22	23	24	CARD	CARD	DRAWING No.	REV.			CODE	CODE	3.718.88.01.018	02			<table border="1"> <tr> <td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr> <tr> <td>SHEET No. 01</td><td>No. OF SHEETS</td><td>01</td><td></td><td></td><td></td></tr> </table>												1	2	3	4	5	6	SHEET No. 01	No. OF SHEETS	01									
1	3	7	22	23	24																																																						
CARD	CARD	DRAWING No.	REV.																																																								
CODE	CODE	3.718.88.01.018	02																																																								
1	2	3	4	5	6																																																						
SHEET No. 01	No. OF SHEETS	01																																																									
TECHNICAL SERVICES												SIZE A3																																															

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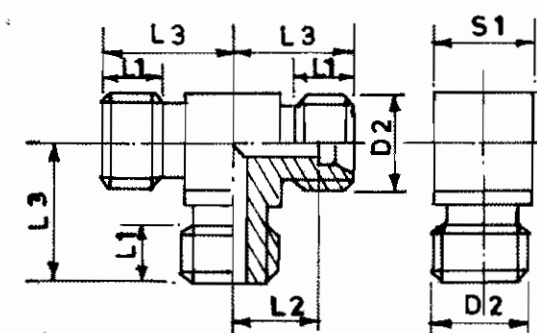
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SIGN. & DATE

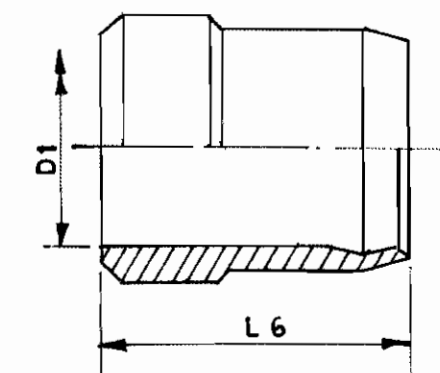
INVENTORY No.

(ALL DIMENSIONS ARE IN mm)

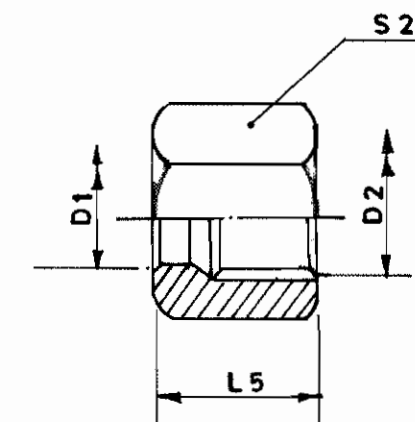
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EQUAL TEE BODY



FERRULE



COUPLING NUT

NOTES:-

VAR.	TUBE O.D. D1	D2	L1	L2	L3	L4~	L5	L6	S1	S2	STYLE NO
00	6	M12 x 1.5	7	12	19	27	15.0	9.5	12	14	955116
01	10	M16 x 1.5	8	15	22	30	15.5	10	17	19	955117
02	12	M18 x 1.5	9	17	24	32	16.0	10	19	22	955118
03	15	M22 x 1.5	10	21	28	36	17.0	10	22	27	

- 1.-DIMENSION L4 IS APPROXIMATE AND IS IN TIGHTENED
CONDITION.
- 2(a).EQUAL TEE BODY SHALL BE MANUFACTURED TO IS:9389(PART II)-
1979 AND ITS MATERIAL TO IS: 1875 CLASS II.
- (b). UNION NUT SHALL BE MANUFACTURED TO IS:8803-1978 AND
ITS MATERIAL TO IS: 1875 CLASS II.
- (C). FERRULE SHALL BE MANUFACTURED TO IS:8802-1978 AND
ITS MATERIAL TO IS:1875 CLASS I.
- 3.-THE ASSY. SHALL BE MADE AS PER TYPE-C OF IS:9767-
1981 AND SHALL WITHSTAND A TEST PRESSURE OF 35 kg./cm²
- 4.- EQUAL TEE BODY, NUT AND FERRULE SHALL BE CYANIDE
HARDENED TO A DEPTH OF 25 TO 30 MICRONS, AND SHALL
BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.

INVENTORY No.	REV.	DATE	ALTERED CHECKED	REV.	DATE	ALTERED CHECKED	APPD.	REV.	DATE	ALTERED CHECKED	APPD.	TITLE	DEPT. CODE	GRADE OF UN.TOL. DIM.C/M/F		SCALE N.T.S.	WEIGHT (Kg.)	REF. TO ASSY. DRG.	ITEM No.	75	77	No. OF ITEMS																				
SIGN. & DATE	REF. DRG. No.																																									
VAR. OO REMARKS VAR. No. ITEM No. DESCRIPTION STD. DRAWING No. MATL. CODE MATL. SPECN. UNIT WT. QTY. CARD TYPE-3 CARD TYPE-1 CARD TYPE-2																																										
ADDITIONAL INFORMATION STATUS OF DRAWING DISTRIBUTION OF PRINTS LME(DV)-1 LMP(DV)-1 LMM(DV)-3 TYPE OF PRODUCT <u>350/700 H.P. DES L</u> OR NAME OF CUSTOMER/PROJECT																																										
BHARAT HEAVY ELECTRICALS LIMITED JHANSI DRN. CHD. APPD. NAME SIGN. DATE 73 No. OF VAR.																																										
EQUAL TEE ASSY. DRAWING No. 3.718.88.01.019																																										
SHEET No. 01 No. OF SHEETS 01																																										
TECHNICAL SERVICES SIZE A3																																										

(ALL DIMENSIONS ARE IN mm)

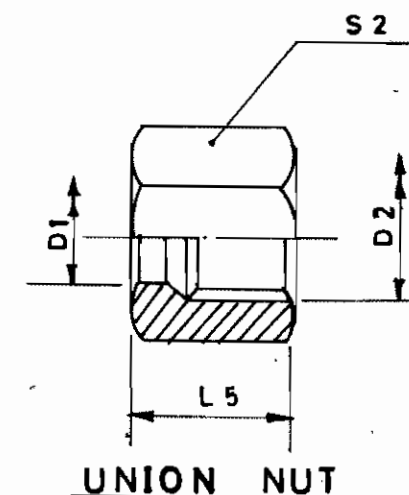
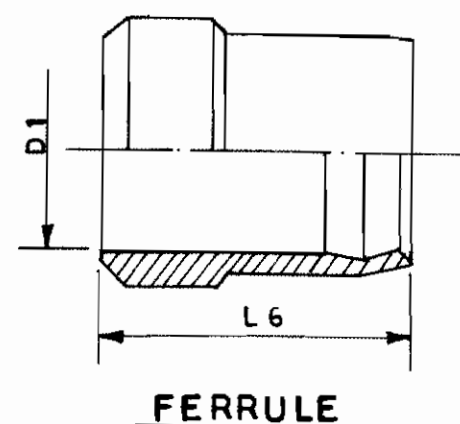
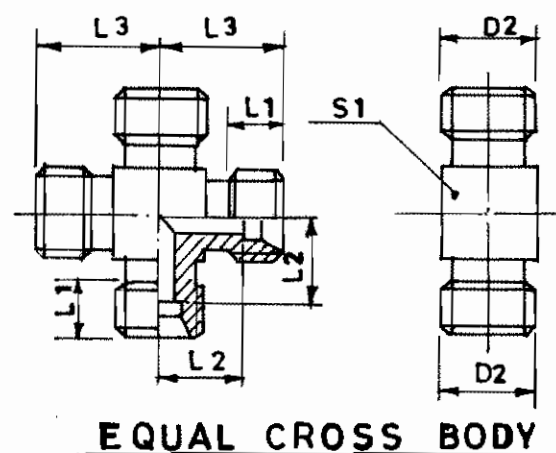
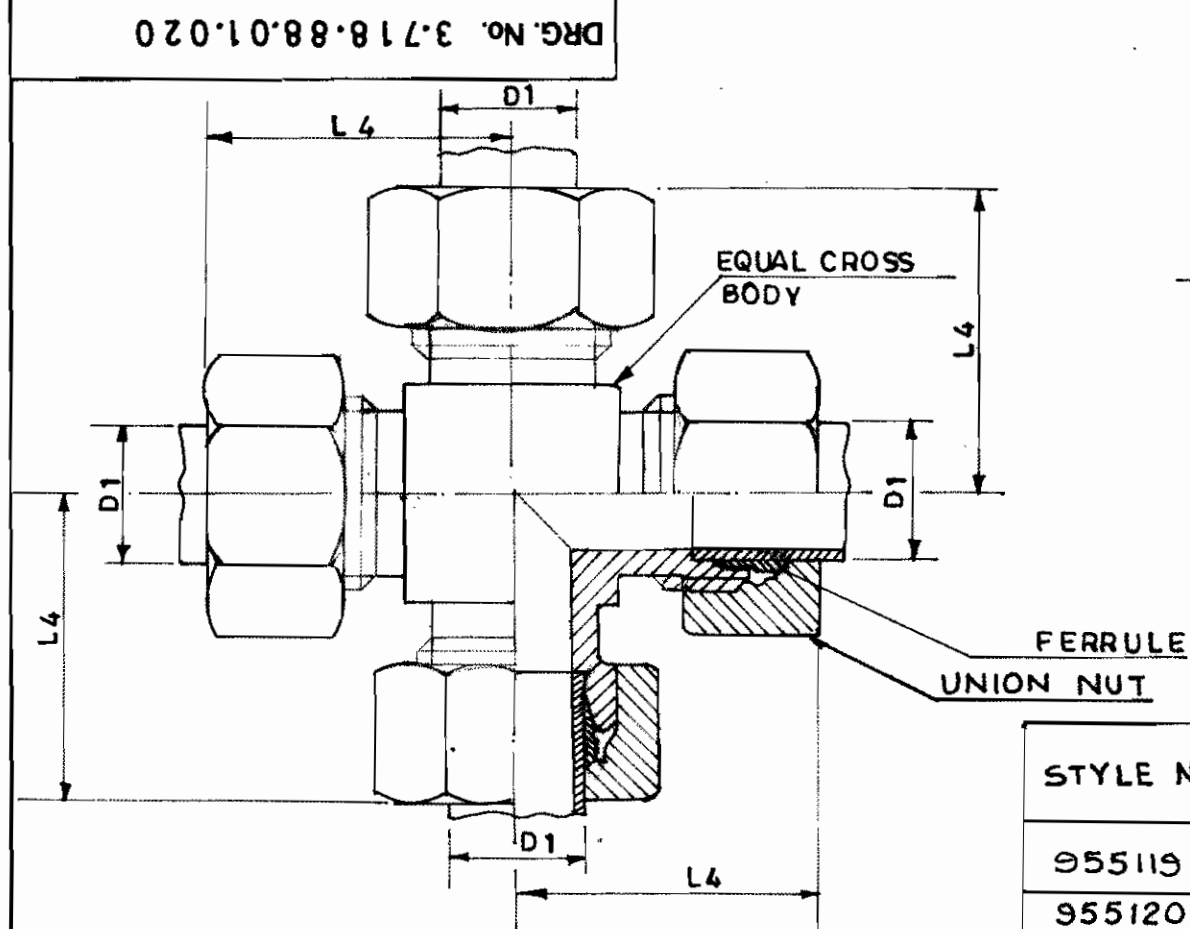


TABLE FOR DIMENSIONS

STYLE NO.	VAR	TUBE O.D. D-1	D2	L1	L2	L3	L4	L5	L6	S1	S2
955119	00	6	M12x1.5	7	12	19	27	15.0	9.5	12	14
955120 955247	01	10	M16x1.5	8	15	22	30	15.5	10	17	19
	02	12	M18x1.5	9	17	24	32	16.0	10	19	22
	03	15	M22x1.5	10	21	28	36	17.0	10	22	27

NOTES:-

1. DIMENSION L4 IS APPROXIMATE AND IS IN
TIGHTENED CONDITION.
- 2(a). EQUAL CROSS BODY SHALL BE MANUFACTURED
TO IS:9746 (PART-I) AND ITS MATERIAL TO
IS:1875 CLASS-II
- (b). UNION NUT SHALL BE MANUFACTURED TO IS:
8803-1978 AND ITS MATERIAL TO IS:1875
CLASS-II
- (c). FERRULE SHALL BE MANUFACTURED TO IS:
8802-1978 AND ITS MATERIAL TO IS:1875
CLASS-I
3. THE ASSY. SHALL BE MADE AS PER IS: 10417-
1983 AND SHALL WITHSTAND A TEST PRESSURE
OF 35 Kg./Cm²
4. EQUAL CROSS BODY, NUT AND FERRULE SHALL BE
CYANIDE HARDENED TO A DEPTH OF 25 TO 30
MICRONS; AND SHALL BE CADMIUM PLATED
TO A THICKNESS OF 5 MICRONS MINIMUM.

59 64 65			75 78 79					25 27 29		58 59 60										77		28 31 34		45		55 56 57		58 66		65 71		72 73					
VAR OO			REMARKS					VAR. No.		ITEM No.		DESCRIPTION										STD.		DRAWING No.		IT. No.		MATL. CODE		UNIT		UNIT WT.		QTY.		G	
28			28					28		28										28		28		28		28		28		28		28		28			
CARD TYPE-3			CARD TYPE-3					CARD TYPE-1		CARD TYPE-1										CARD TYPE-2		CARD TYPE-2		CARD TYPE-2		CARD TYPE-2		CARD TYPE-2		CARD TYPE-2		CARD TYPE-2		CARD TYPE-2			

ADDITIONAL INFORMATION
STD
STATUS OF DRAWING

TYPE OF PRODUCT 350/700 H.P. DES L.
OR
NAME OF CUSTOMER/PROJECT

DISTRIBUTION OF PRINTS
LME (DV) - 1
LMP (DV) - 1
LMM (DV) - 3

 BHARAT HEAVY ELECTRICALS LIMITED JHANSI	DRN.	NAME	SIGN.	DATE	73 7.
	CHD.	T.T.	TA	1.3.88	No.
	APPD	D.R.	<i>[Signature]</i>	1.3.88	OF
					VAR

REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED
		CHECKED	02	1.6.00	CHECKED	01	12.5.00	CHECKED

DEPT.	GRADE OF UN. TOL.	SCALE	WEIGHT (Kg.)	REF. TO ASSY. DRG.	ITEM No.	75 7
100					No.	

	STYLE NO. UPDATED.	STYLE NO. ADDED IN VAR.00 & 01
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CODE 4.04	DIM.C/M/F	7	N.T.S.		ITEM 1
TITLE				1 3 7	DRAWING No. 22 23 24

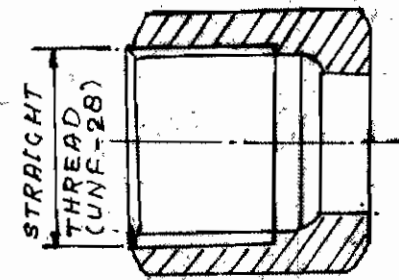
UNION EQUAL CROSS ASSY.	CARD CODE	DRAWING NO. 3.718-88.01.020	REV. 02
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SHEET No. 01 **No. OF SHEETS 01**
TECHNICAL SERVICES SIZE A3

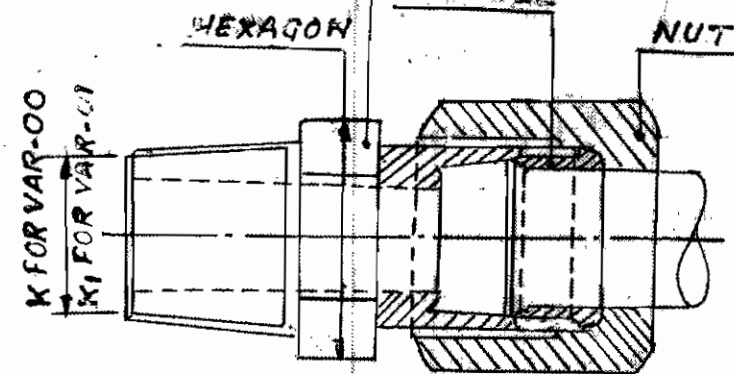
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. No. 3718 88 01053

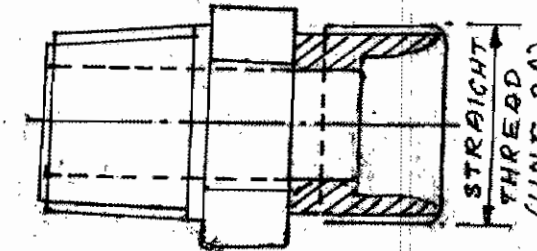


NUT
MAT: STEEL, IS: 1875
CLASS-2



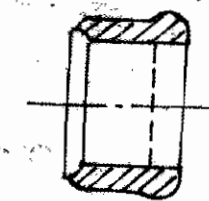
CONNECTOR BODY

MAT: STEEL, IS: 1675
CLASS-2



FERRULE

MAT: STEEL, IS: 1875
CLASS-1



VAR-00 K-(NPT)	VAR-01 K1-(BSP)	ITEM NO.	TUBE O.D.	STYLE NO.
3/8"	-	001	6mm	955236
-	3/8"	002	6mm	955246
-	1/2"	003	6mm	955416
1/4"	-	004	10mm	955103
-	1/4"	005	10mm	955132
1/2"	-	006	10mm	955387
-	1/2"	007	10mm	955245
1/8"	-	008	10mm	955424
1/8"	-	009	6mm	955031

NOTES:-

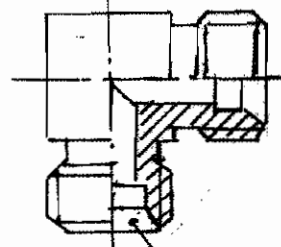
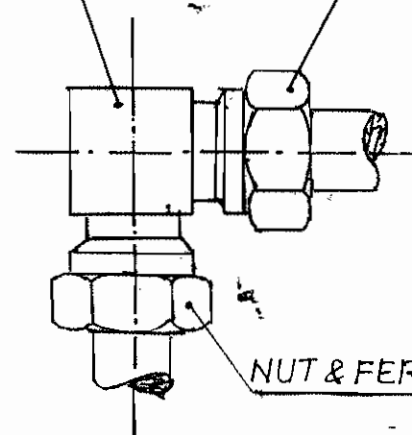
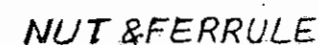
- CONNECTOR BODY NUT & FERRULE SHALL BE CYANIDE HARDENED TO DEPTH OF 25 TO 30 MICRONS, AND SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.
- THE MALE CONNECTOR ASSY. SHALL WITH STAND A TEST PRESSURE OF 35 Kg./cm².
- VAR-00 WITH K NPTF.
- VAR-01 WITH K1 B.S.P.
- SUPPLIER SHALL SUBMIT THEIR DRG FOR APPROVAL.

VAR 00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	MATL. CODE	MATL. SPECN.	UNIT WT.	QTY															
CARD TYPE-3		CARD TYPE-1		CARD TYPE-2																			
ADDITIONAL INFORMATION				TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT																			
STATUS OF DRAWING				350/700 H.P. D.E.S.L.																			
DISTRIBUTION OF PRINTS				NAME OF CUSTOMER/PROJECT																			
REV. 01 DATE 07-11-10 CHECKED [Signature]				<table border="1"> <tr> <td>DRN.</td> <td>NAME</td> <td>SIGN</td> <td>DATE</td> <td>NO. OF VAR</td> </tr> <tr> <td>CHD</td> <td>A.K.S.</td> <td>[Signature]</td> <td>10-6-05</td> <td></td> </tr> <tr> <td>APPD</td> <td>A.J.</td> <td>[Signature]</td> <td>10-6-05</td> <td></td> </tr> </table>					DRN.	NAME	SIGN	DATE	NO. OF VAR	CHD	A.K.S.	[Signature]	10-6-05		APPD	A.J.	[Signature]	10-6-05	
DRN.	NAME	SIGN	DATE	NO. OF VAR																			
CHD	A.K.S.	[Signature]	10-6-05																				
APPD	A.J.	[Signature]	10-6-05																				
ZONE				<table border="1"> <tr> <td>DEPT.</td> <td>GRADE OF UN TOL DIM. C/M/F</td> <td>SCALE</td> <td>WEIGHT (Kg)</td> <td>REF. TO ASSY. DRG.</td> <td>ITEM NO.</td> <td>NO. OF ITEMS</td> </tr> <tr> <td></td> <td></td> <td>N.T.S.</td> <td></td> <td></td> <td></td> <td></td> </tr> </table>					DEPT.	GRADE OF UN TOL DIM. C/M/F	SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS			N.T.S.					
DEPT.	GRADE OF UN TOL DIM. C/M/F	SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF ITEMS																	
		N.T.S.																					
TITLE				DRAWING NO.																			
MALE CONNECTORS ASSY.				3 718 88 01053																			
SHEET NO. 01				NO. OF SHEETS 01																			

SIZE A3

(ALL DIMENSIONS ARE IN mm)

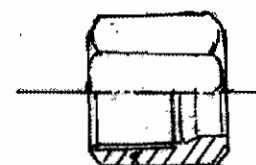
DRG. No. 37188801054



UNEQUAL ELBOW



FERRULE



UNION NUT

VAR-00 (6 0/D PIPE)
VAR-01 (10 0/D PIPE)

EQUAL ELBOW
MAT: STEEL 15: 1875
CLASS-2

FERRULE
MAT: STEEL IS: 1875
CLASS-1

UNION NUT
MAT: STEEL, IS: 1875
CLASS - 2

NOTES:-

1. EQUAL ELBOW BODY, NUT AND FERRULE SHALL BE CYANIDE HARDENED TO A DEPTH OF 25 TO 30 MICRONS, AND SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.
2. THE EQUAL ELBOW ASSY. SHALL WITH STAND A TEST PRESSURE OF 35 Kg./cm²
3. FOR MANUFACTURING REFER FOLLOWING.
 - (i) EQUAL ELBOW BODY : IS: 9746 (PART-1)
 - (ii) UNION NUT : IS: 8803 - 1978
 - (iii) FERRULE : IS: 8802 - 1978
4. SUPPLIER IS REQUIRED TO SUBMIT DETAILED DIMENSION DRAWING / STANDARD FOR APPROVAL

[illegible]

ADDITIONAL INFORMATION	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT					
STATUS OF DRAWING	<u>350 / 700 HP DESL</u>					
DISTRIBUTION OF PRINTS	<u>डी एच डी एल</u>	DRN	NAME	SIGN	DATE	73

	BHARAT HEAVY ELECTRICALS LIMITED JHANSI	NAME	SIGN	DATE	73	
		DRN.	P.K.Khatwari	P.K.Khatwari	10.9.05	NO C
		CHD	A.K.S.		10.9.05	VAR
		APPD	A.J.		10.9.05	02

REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	DEPT.	GRADE OF		SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	75 NO. C. ITEM
		CHECKED			CHECKED				CODE	UN. TOL. DIM. C/M/F						
						ZONE							TITLE	DRAWING NO.		22 23 2
													EQUAL ELBOW ASSY.	CARD CODE	3 718 88 01 054	REV. 00
													SHEET NO. 01		NO. OF SHEETS 01	

SIZE A3

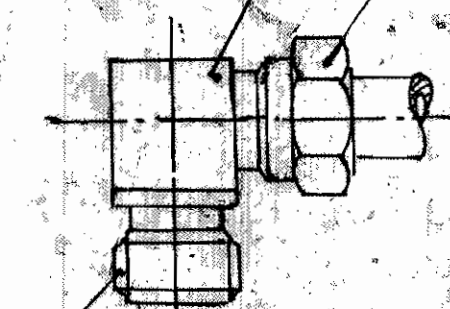
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

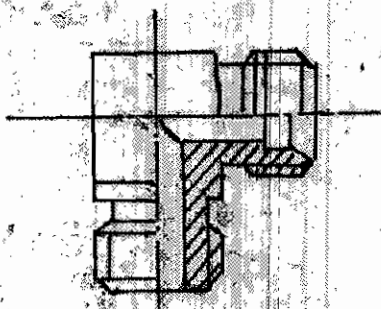
DRG. No. 37188801055

MALE STUD ELBOW BODY

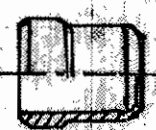
NUT & FERRULE



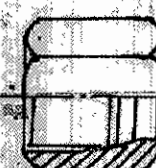
VAR-00 (1/4" BSP)
VAR-01 (3/8" BSP)



MALE STUD ELBOW BODY
MAT: STEEL IS: 1875
CLASS-2



FERRULE
MAT: STEEL IS: 1875
CLASS-1



UNION NUT
MAT: STEEL, IS: 1875
CLASS-2

NOTES:-

1. MALE STUD ELBOW, NUT AND FERRULE SHALL BE CYANIDE HARDENED TO A DEPTH OF 25 TO 30 MICRONS, AND SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.

2. THE EQUAL ELBOW ASSY SHALL WITH STAND A TEST PRESSURE OF 35 Kg./Cm².

3. FOR MANUFACTURING REFER FOLLOWING.

- (i) MALE STUD ELBOW BODY : IS : 9746 (PART)
(ii) UNION NUT : IS : 8803-1978
(iii) FERRULE : 8802-1978

4. SUPPLIER IS REQUIRED TO SUBMIT DETAIL DIMENSION DRAWING / STANDARD FOR APPROVAL.

001	-	002	MALE STUD ELBOW 3/8" BSP X 10 O/D PIPE	ST-955392																																															
-	001	001	MALE STUD ELBOW 1/4" BSP X 10 O/D PIPE	ST-955414																																															
01	00	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00																											
VAR	VAR	REMARK.	ITEM NO.	DESCRIPTION	DRAWING NO.	MATL. CODE	MATL. SPECN.	UNIT WT.	QTY																																										
28 - CARD TYPE-3				28 - CARD TYPE-1				28 - CARD TYPE-2																																											
ADDITIONAL INFORMATION				TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT 350 / 700 HP DESL																																															
STATUS OF DRAWING																																																			
DISTRIBUTION OF PRINTS				<table border="1"> <tr> <td>DRN.</td> <td>NAME</td> <td>SIGN</td> <td>DATE</td> <td>73</td> <td>74</td> </tr> <tr> <td>CHD</td> <td>A. K. Khatu</td> <td>[Signature]</td> <td>10-9-05</td> <td>NO OF</td> <td>VAR</td> </tr> <tr> <td>APPD</td> <td>A. J.</td> <td>[Signature]</td> <td>10-9-05</td> <td>02</td> <td></td> </tr> </table>																				DRN.	NAME	SIGN	DATE	73	74	CHD	A. K. Khatu	[Signature]	10-9-05	NO OF	VAR	APPD	A. J.	[Signature]	10-9-05	02											
DRN.	NAME	SIGN	DATE	73	74																																														
CHD	A. K. Khatu	[Signature]	10-9-05	NO OF	VAR																																														
APPD	A. J.	[Signature]	10-9-05	02																																															
REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED																									
ZONE				<table border="1"> <tr> <td>DEPT.</td> <td>GRADE OF</td> <td>SCALE</td> <td>WEIGHT (Kg)</td> <td>REF. TO ASSY. DRG.</td> <td>ITEM NO.</td> <td>NO. OF</td> </tr> <tr> <td>LME</td> <td>UN TOL.</td> <td>[Symbol]</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>CODE</td> <td>DIM. C/M/F</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>404</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>																				DEPT.	GRADE OF	SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF	LME	UN TOL.	[Symbol]					CODE	DIM. C/M/F						404						
DEPT.	GRADE OF	SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	NO. OF																																													
LME	UN TOL.	[Symbol]																																																	
CODE	DIM. C/M/F																																																		
404																																																			
TITLE				MALE STUD ELBOW ASSY																																															
CARD CODE				DRAWING NO. 37188801055																																															
SHEET NO. 02				NO. OF SHEETS 01																																															

SIZE A3

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REF. DRG. No.

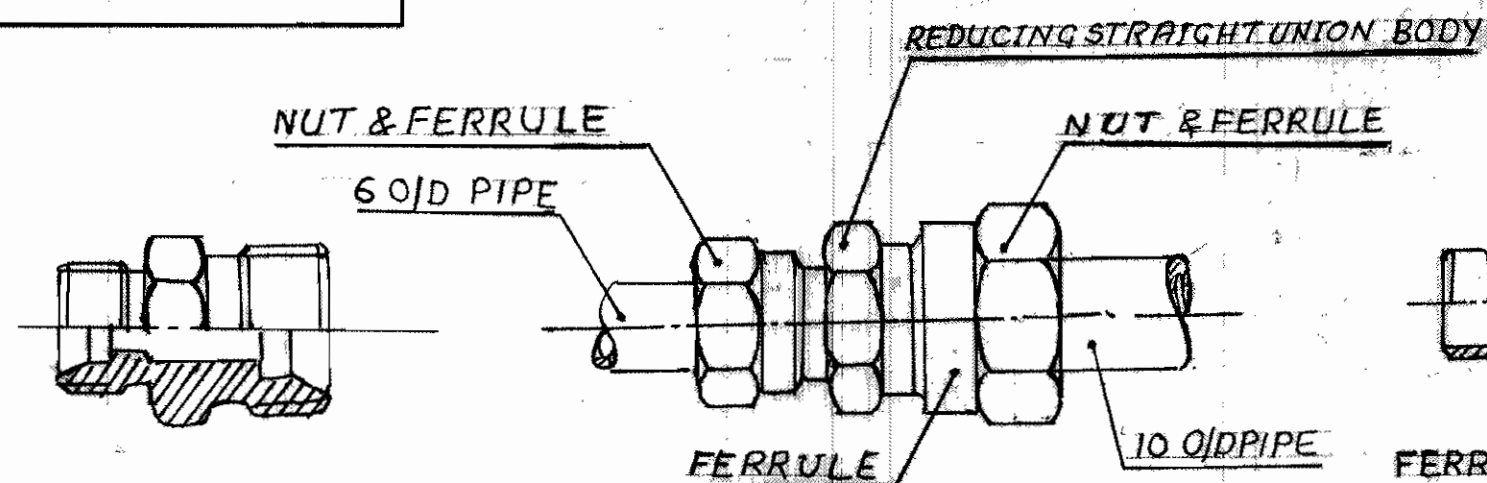
SIGN & DATE

INVENTORY No.

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. No. 3718 88 01056



REDUCING STRAIGHT UNION BODY
MATT: STEEL IS: 1875
CLASS-2

FERRULE
MATT: STEEL IS: 1875
CLASS-1

UNION NUT
MAT: STEEL, IS: 1875
CLASS-2

NOTES:-

1. REDUCING STRAIGHT UNION, NUT AND FERRULE SHALL BE CYANIDE HARDENED TO A DEPTH OF 25 TO 30 MICRONS, AND SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.
2. REDUCING STRAIGHT UNION ASSY SHALL WITH STAND A TEST PRESSURE OF 35 Kg./cm².
3. FOR MANUFACTURING REFER FOLLOWING.
(i) REDUCING STRAIGHT UNION BODY: IS: 9746 (PART-I)
(ii) UNION NUT: IS: 8803-1978
(iii) FERRULE: IS: 8802-1978
4. SUPPLIER IS REQUIRED TO SUBMIT DETAIL DIMENSION DRAWING/STANDARD FOR APPROVAL

001	001	REDUCING STRAIGHT UNION	ST-955425
VAR 00	REMARKS	DESCRIPTION	DRAWING NO.
ITEM NO.	28	28	28
CARD TYPE-3	CARD TYPE-1	CARD TYPE-2	
ADDITIONAL INFORMATION		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	
STATUS OF DRAWING		350/700 HP DESL	
DISTRIBUTION OF PRINTS		BHARAT HEAVY ELECTRICALS LIMITED JHANSI	
DRN.	NAME	SIGN	DATE
CHD	P.K. Khata	P.K. Khata	10-9-05
APPD	A.K.S.	A.K.S.	10-9-05
	A.J.	A.J.	10-9-05
DEPT.	GRADE OF UN TOL.	SCALE	WEIGHT (Kg)
CODE	404		
TITLE	REDUCING STRAIGHT UNION ASSY (60/D X 100/D)		
CARD CODE	DRAWING NO. 3718 88 01056		
	SHEET NO. 01 NO. OF SHEETS 01		

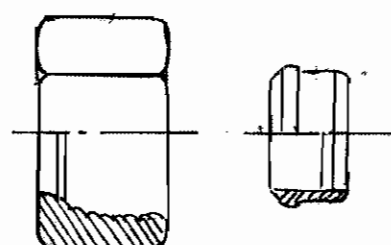
SIZE A3

FIRST ANGLE PROJECTION

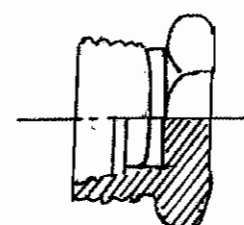
(ALL DIMENSIONS ARE IN mm)

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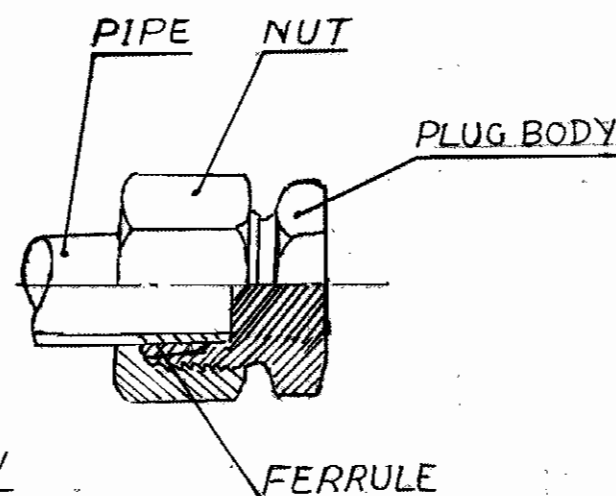
DRG. No. 37188801057



NUT
MAT: STEEL, IS: 1875
CLASS - 2



FERRULE
MAT:STEEL,IS:1875
CLASS-1



PLUG BODY
MAT: STEEL, IS: 1875
CLASS-2

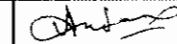
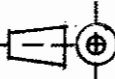
VAR-00 (6.0/D PIPE)
VAR-01 (10.0/D PIPE)

NOTES:-

1. SUPPLIER IS REQUIRED TO SUBMIT DETAIL DIMENSION DRAWING/STANDARD FOR APPROVAL.
2. NUT, FERRULE & PIPE END PIECE SHALL BE CYANIDE HARDENED TO A DEPTH OF 25 TO 30 MICRONS, AND SHALL BE CADMIUM PLATED TO A THICKNESS OF 5 MICRONS MINIMUM.

3. THE LINE PLUG ASSY SHALL
WITH STAND A TEST PRESSURE
OF 35 Kg./cm².
4. FOR MANUFACTURING REFER FOLLOWING
- (i) LINE PLUG BODY : IS : 9746 (PART-1)
 - (ii) UNION NUT : 8803-1978
 - (iii) FERRULE : 8802-1978

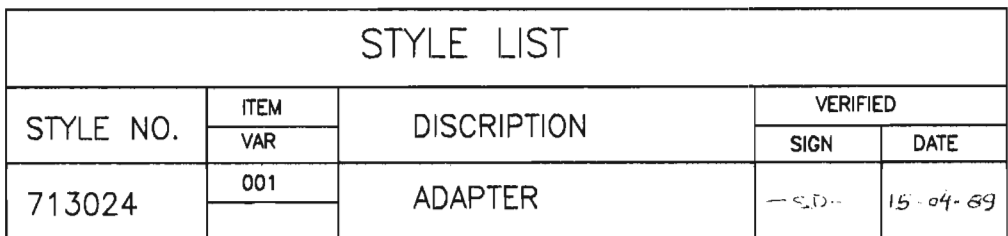
[illegible]

28 ————— CARD TYPE-3			28 ————— CARD TYPE-1			28 ————— CARD TYPE-2					
ADDITIONAL INFORMATION			TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT 350/700 HP DESL								
STATUS OF DRAWING											
DISTRIBUTION OF PRINTS											
					BHARAT HEAVY ELECTRICALS LIMITED JHANSI		DRN.	NAME	SIGN	DATE	73. 7
							CHD.	A.K.S.		10-9-05	NO. C
							APPD.	A.J.		10-9-05	VAR
REV	DATE	ALTERED	DEPT.	GRADE OF UN TOL		SCALE	WEIGHT (Kg)	REF. TO ASSY. DRG.	ITEM NO.	75. 7	
		CHECKED	CODE	DIM. C/M/F						NO. O	
ZONE			TITLE				1	3	7	22	23 24
			LINE PLUG ASSY				CARD CODE	DRAWING NO.		REV.	
								3 718 88 01 057			SHEET NO. 01

SIZE A 3

(ALL DIMENSIONS ARE IN mm)

AS PER CORP STD AA 023 02 08 MEDIUM GRADE UNLESS OTHERWISE STATED.



1. FINISH- ZINC PLATED AND PASSIVATED UP TO 0.015 THK.

001			001	ST. HEX BAR 46 A/F			AA 1010112198	mm	1.30		
							AA 10112		94		
VAR. 00	REMARKS	VAR NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	IT. NO.	MATL. CODE	A UNIT	UNIT WT.	CS
							VAR.	MATL. SPECN	C	QTY.	

CARD TYPE - 2

ADDITIONAL INFORMATION	TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		25 KV AC LOCO WAG 5 A				
STATUS OF DRAWING U			INDIAN RAILWAY BOARD NEW DELHI				
DISTRIBUTION OF PRINTS LME (DV) - 1 LMP (DV) - 1 LMM (DV) - 3		BHARAT HEAVY ELECTRICALS LTD. JHANSI		NAME	SIGN	DATE	NO. OF VAR
			DRN	SES	-SD-	15.04.89	
			CHD	VINAY	-SD-	15.04.89	
			APPD	PGK	-SD-	15.04.89	

INVENTORY NO.	REV	DATE	ALTERED	REV	DATE	ALTERED	CK	REV	DATE	ALTERED	CK	DEPT	LME	GRADE OF UN. TOL.		SCALE	WEIGHT [KG]	REF. TO ASSY. NO.	ITEM NO	NO. OF ITEM
			CHECKED	02	12. 12. 16	CHECKED	VIKAS	01	15. 04. 16	CHECKED	VIKAS	CODE	404	DIM. C/M/F		1:1	1.30	1719 37 01 002	001	001
						DRAWING UPDATED & REDRAWN .				NOTE UPDATED		TITLE ADAPTER (FOR SELF LOCKING ANGLE COCK 1')					CARD CODE	DRAWING NO. 3 719 37 01 042		REV. 02
																		SHEET NO. 01	NO. OF SHEETS 01	

SIZE A3

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

DRG. No. 3 719 65 01 005

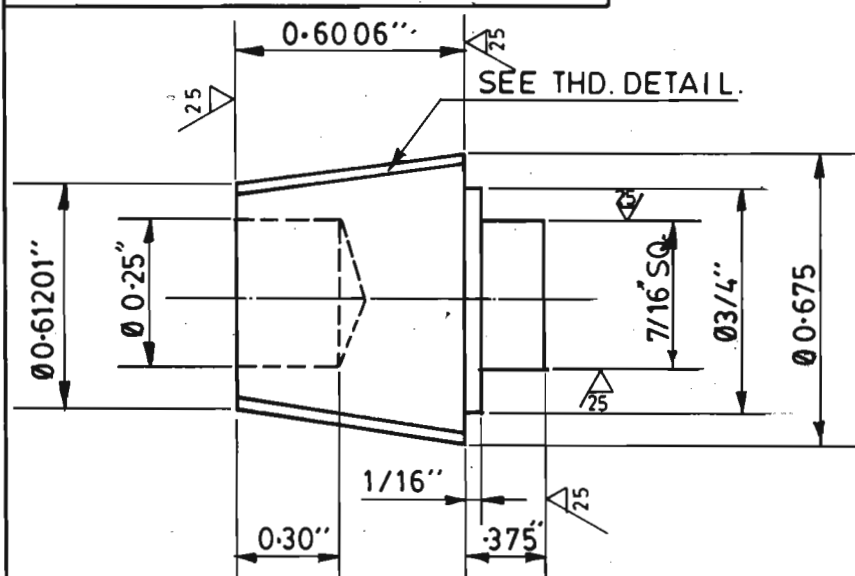


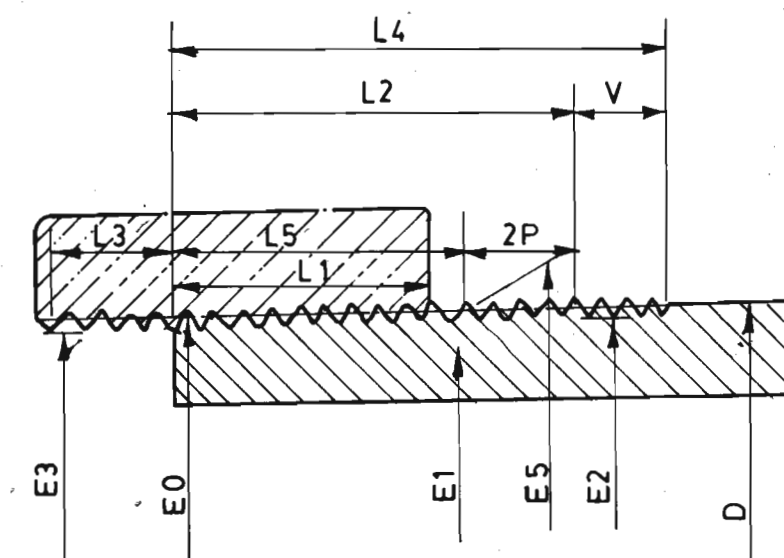
TABLE - 1

NOM. PIPE SIZE IN INCH	O/D OF PIPE IN INCH	T.P.I. n	PITCH P IN INCH	PITCH Ø AT BEGINNING OF EXTERNAL THD. E0 IN INCH	HAND TIGHT ENGAGEMENT LENGTH IN INCH L1	DIAM. IN INCH E1	EFFECTIVE THREADS LENGTH IN INCH L2	DIAM. INTERNAL IN INCH. E2
3/8"	0.675"	18	0.05556"	0.61201"	0.240"	0.62701"	0.4078"	0.63750"

TABLE - 2

NOM. PIPE SIZE	VANISH THD. IN INCH. V	WRENCH MAKE UP LEN. 6TK FOR INTER. THD. LENGTH L3	DIA E3	OVERALL LG. EXTR. THD. L4	NOM. PERFECT EXTR. THDS. LENGTH L5	DIA E5	HEIGHT OF THD. IN INCH.	BASIC MINOR DIA AT SMALL END OF PIPE THDS. IN INCH.
3/8"	0.1928"	0.1667"	0.60160"	0.6006"	0.2967"	0.63056"	0.04444"	0.5676"

DIMNL.TOL. AS PER CORP.STD.AA023 02 08 MEDIUM GRADE UNLESS OTHERWISE STATED.



THREAD DETAILS

SEE TABLE 1 & 2

ANGLE OF THREAD = 60°

ANGLE OF TAPER WITH C.L.N = 1°-47'

NOTES:-

- THE CASTING TO BE CLEANED AND TO BE PHOSPHATE-TED AFTER MACHINING TO RESIST CORROSION.
- 'N' TO BE PUNCHED ON ANY FLAT OF SQ. FACE FOR SPANNER FOR IDENTIFICATION ON NPT THDS. FITTING SUPPLIED WITHOUT COLLAR.

59	64	65	75	78	79	25	27	29	58	59	60	77	25	31	34	45	55	56	58	65	72								
VAR 00			REMARKS			ITEM No.			DESCRIPTION			STD.			STYLE NO.			MATL. CODE			UNIT WT.								
VAR.			VAR.			VAR.			VAR.			VAR.			VAR.			UNIT			QTY.								
CARD TYPE-3										CARD TYPE-1										CARD TYPE-2									
ADDITIONAL INFORMATION										TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT										25 K.V.A.C. LOCC									
STATUS OF DRAWING										Bharat Heavy Electricals Limited										JHANSI									
DISTRIBUTION OF PRINTS										DRN. NAME SIGN. DATE										73 74									
O/C - 1, IE - 1, QAX - 1,										CHD. A.K.S.										2/5/00									
PPC - 2, ASSY - 2,										APPD. G.S. Jally										2/5/00									
BAY 3 - 2, BAY 1&2 - 2.										REF. TO ASSY. DRG.										ITEM No.									
REV. DATE ALTERED										DEPT. LME										GRADE OF UN. TOL. DIM.C/M/F									
CHECKED										CODE 404										SCALE									
REV. DATE ALTERED										TITLE										DRAWING No.									
CHECKED										PLUG (N.P.T.)										3 719 65 01 005									
REV. DATE ALTERED										CARD CODE										SHEET No. 01									
CHECKED										REV. 00										No. OF SHEETS 01									

SIZE A3

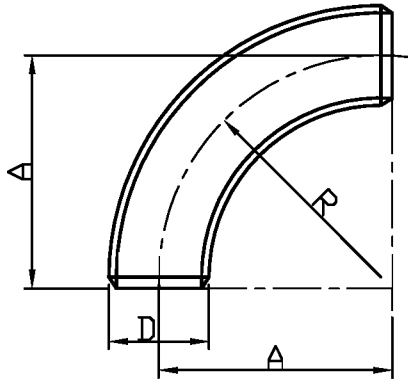
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REF. DRG. NO.
CLW/AC/201

SIGN & DATE

INVENTORY NO.

800 10 99 617 3
DRAWING NO.



90° ELBOW

NOTES:—

- 1. THESE ELBOWS ARE TO BE TESTED TO RESIST AN INTERNAL HYDRAULIC PRESSURE OF 49Kg/Cm AND ALSO AN INTERNAL AIR PRESSURE OF 8.5 Kg/Cm WHEN IN IMERSED IN WATER WITHOUT ANY SIGN OF LEAKAGE.
- 2. THE MATERIAL TO BE CLEANED PROPERLY AND TO BE PHOSPHATED AFTER MACHINING TO RESIST COROSSION.
- 3. THE ELBOW SHOULD BE MANUFACTURED CONFORMING TO BSS-1965.

642070	(80-90)-3"	88.9	114	114			009	ELBOWN STL. 80-90		706084		SEE NOTE-3				
642069	(50-60)-2"	60.32	76	76			008	ELBOWN STL. 50-60		706083		SEE NOTE-3				
	(40-49)-1½"	48.4	57	57			007	ELBOWN STL. 40-49				SEE NOTE-3				
642068	(33-42)-1¼"	42.8	47	47			006	ELBOWN STL. 33-42		706082		SEE NOTE-3				
642067	(80-90)-1"	33.8	38	38			005	ELBOWN STL. 26-34		706081		SEE NOTE-3				
642066	(33-42)-¾"	26.99	38	38			004	ELBOWN STL. 21-27		706080		SEE NOTE-3				
642065	(15-21)-½"	21.44	38	38			003	ELBOWN STL. 15-21		706079		SEE NOTE-3				
	(12-17)-⅜"	17.1	30	30			002	ELBOWN STL. 12-17		706078		SEE NOTE-3				
	(8-13)-¼"	13.5	30	30			001	ELBOWN STL. 8-13				SEE NOTE-3		mm	0.661	
												SEE NOTE-3		UNIT	174	
STYLE NO. FOR WAG-7 LOCO	NOMINAL SIZES	OUT SIDE DIA. IN MM 'D'(APPROX.)	RADIUS 'R ' IN M. M.	90° ELBOW CENTER TO END 'A' IN MM	REMARKS	VAR NO.	ITEM NO.	DESCRIPTION	CLS	DRAWING NO.	IT. NO.	MATL. CODE	A C	UNIT	UNIT WT.	3
											VAR.	MATL. SPECN			QTY.	

CARD TYPE - 3				CARD TYPE - 1				CARD TYPE - 2											
ADDITIONAL INFORMATION				TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT															
STATUS OF DRAWING U				25 KV A.C. LOCO WAG-5A M/s INDIAN RAILWAY BOARD, NEW DELHI															
DISTRIBUTION OF PRINTS LME (DV) - 1 LMP (DV) - 1 LMM (DV) - 3								BHARAT HEAVY ELECTRICALS LTD. JHANSI											
				DEPT LME		GRADE OF UN. TOL. DIM. C/M/F				SCALE ---		WEIGHT [KG]		REF. TO ASSY. NO.		ITEM NO		NO. OF ITEM	
				CODE 404										DRAWING NO. 3 719 65 01 008		REV. 02			
												CARD CODE		SHEET NO. 01		NO. OF SHEETS 01			

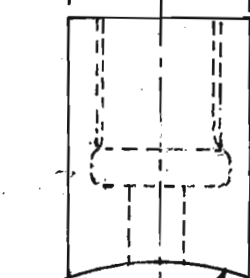
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

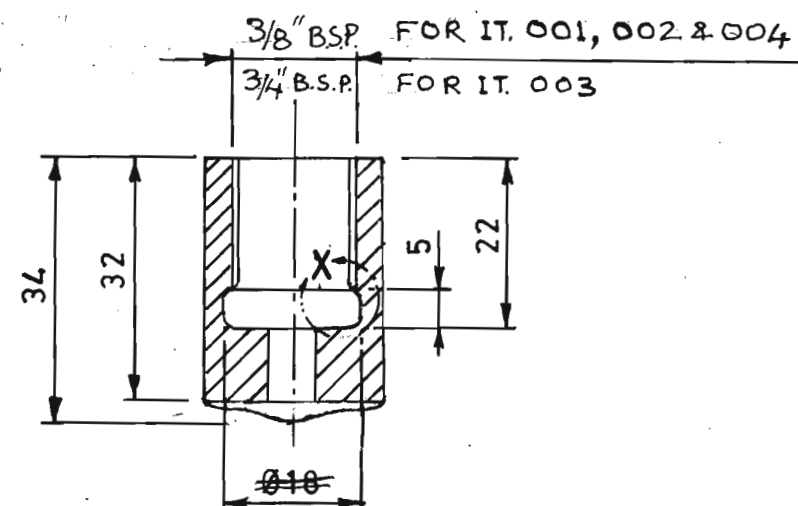
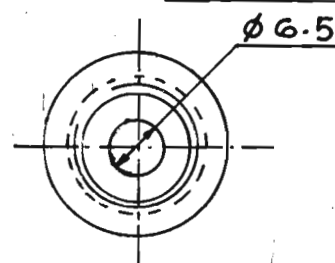
DRG. No. 3 719 65 01 011

DIMNL. TOL. — AS PER CORP. STD. AA023 02 08 COARSE GRADE
UNLESS OTHERWISE STATED.

Ø 24 FOR IT. 001, 002 & 004
Ø 30 FOR IT. 003



R 11 FOR ITEM 001, 003
R 13.5 FOR ITEM 002
R 30.2 FOR ITEM 004



— A A —

- NOTES** — 1. ALL SHARP EDGES AND CORNERS TO BE ROUNDED OFF.
2. **FINISH** — APPLY TWO COATS OF RED-OXIDE PRIMER TO AA56101 AFTER SAND/SHOT BLASTING/PICKLING.

R 0.5

—X—

001	ST-713007	004	3/8" WELDOLET 50 N.B. Ø 24 BRT STL. ROD		AA1010212117	mm	34	
001	ST-713006	003	3/4" WELDOLET 15 N.B. Ø 30 BRT STL. ROD		AA1010212150	mm	34	
001	ST-713005	002	3/8" WELD LET (20 NB) Ø 24 BRT ST. ROD	4	AA1010212117	mm	34	0.129
001	ST-713004	001	3/8" WELD LET (15 NB) Ø 24 BRT ST. ROD	4	AA1010212117	mm	34	0.129
VAR 00	REMARKS	IVAR INO.	ITEM NO	DESCRIPTION	DRAWING NO.	MATL. CODE	UNIT	UNIT WT (KG)
28	CARD TYPE-3	28	CARD TYPE-1	28	CARD TYPE-2	28	CARD TYPE-2	

ADDITIONAL INFORMATION

STATUS OF DRAWING U

DISTRIBUTION OF PRINTS
LME-1, LMP-2, LMM-3,
BAY1&2-3, BAY3-1

TYPE OF PRODUCT AC/DC LOCOMOTIVE WCAM-3
OR
NAME OF CUSTOMER/PROJECT F.S.D. BHEL SIRIFORT NEW DELHI



BHARAT HEAVY ELECTRICALS LIMITED
JHANSI

DRN.	C.B.S.K.	SIGN	-Sd-	DATE	17-4-89	73	74
CHD.	V.S.	SIGN	-Sd-	DATE	17-4-89	NO. OF	VAR
APPD.	P.G.K.	SIGN	-Sd-	DATE	17-4-89	00	

REV.	DATE	ALTERED	REV.	DATE	ALTERED	REV.	DATE	ALTERED
03	01/10/08	CHECKED <i>[Signature]</i> APPD. <i>[Signature]</i>	02	12.5.00	CHECKED <i>[Signature]</i> APPD. <i>[Signature]</i>	04	15/11/09	CHECKED <i>[Signature]</i> APPD. <i>[Signature]</i>
IT. 001 TO 004 MATE. CODE ADDED. IN IT. 003 MATE WAS Ø 24 BRT. STL. ROD.			IT. 003 & 004 ADDED. AND STYLE NO. ADDED.			ZONE Ø 24 FOR IT. 001, 002 & 004 & Ø 30 FOR IT. 003 ADDED.		

DEPT. LME	GRADE OF UN TOL DIM. C/M/P	SCALE 1:1	WEIGHT (Kg) 0.258	REF. TO ASSY. DRG.	ITEM NO.	75	77
CODE 2.04						NO. OF	ITEMS
TITLE WELDOLET				DRAWING NO. 3 719 65 01 011	REV. 05	23	24
				SHEET NO. 01	NO. OF SHEETS 01		

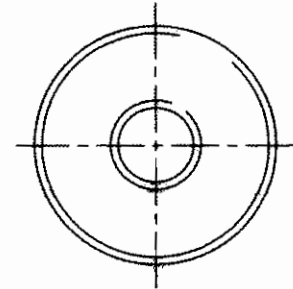
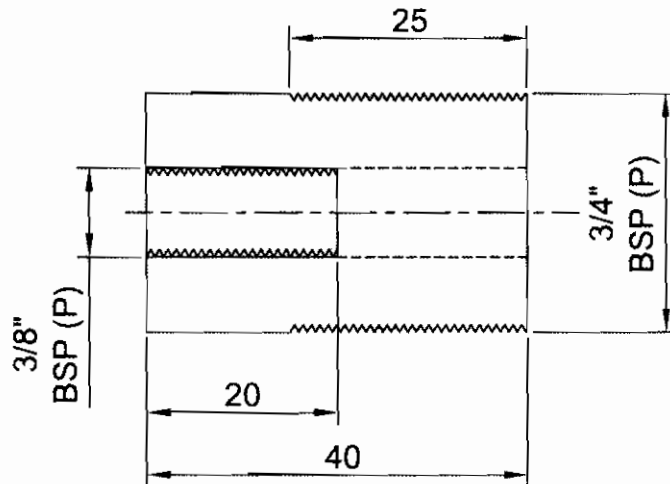
SIZE A3

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

THIS INFORMATION ON THE DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED. IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

REV	DATE	ALTERED	CK	REV	DATE	ALTERED	ADDITIONAL INFORMATION
01	04.08.17	CHECKED	VIKAS			CHECKED	
DRG UPDATED.							



001

NOTES:-

1. ALL SHARP EDGES AND CORNERS TO BE ROUNDED OFF.
2. FINISH:- NATURAL

ST. NO.- 953309

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CARD TYPE-2

CARD TYPE-1



BHARAT HEAVY ELECTRICALS LTD.

JHANSI

DEPT.	CODE	SCALE	WEIGHT (kg.)	REF. TO ASSY. DRG.
LME	404	N.T.S		
TITLE REDUCING SOCKET (3/8" x 3/4")				
DRAWN	NAME	SIGN	DATE	
CHECKED	vikas		14.07.17	
APPROVED	VIKAS		14.07.17	

DIMENSIONS TO BE CONTROLLED WITHIN AS LIMITS SHOWN.
MACHINING TOLERANCE + 0.25mm UNLESS OTHERWISE SHOWN
NON-MACHINING TOLERANCE ±

CARD
CODE

DRG. No.

4 718 88 01 042

REV

01

SHEET No 01

No. OF SHEET 01

SIZE A4

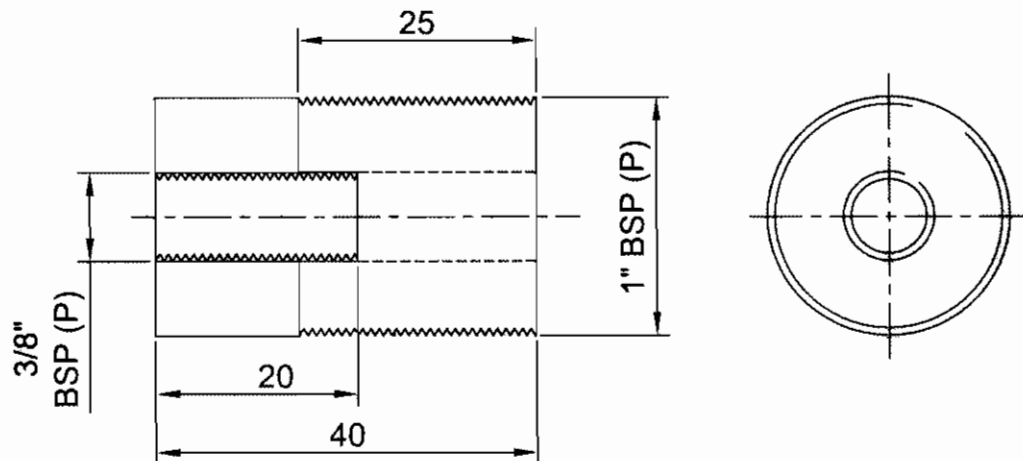
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV	DATE	ALTERED	CK	REV	DATE	ALTERED	ADDITIONAL INFORMATION
01	04.08.17	CHECKED	VIKAS			CHECKED	

DRG UPDATED.

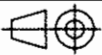


001

NOTES:-

1. ALL SHARP EDGES AND CORNERS TO BE ROUNDED OFF.
2. FINISH:- NATURAL

ST. NO.- 953310

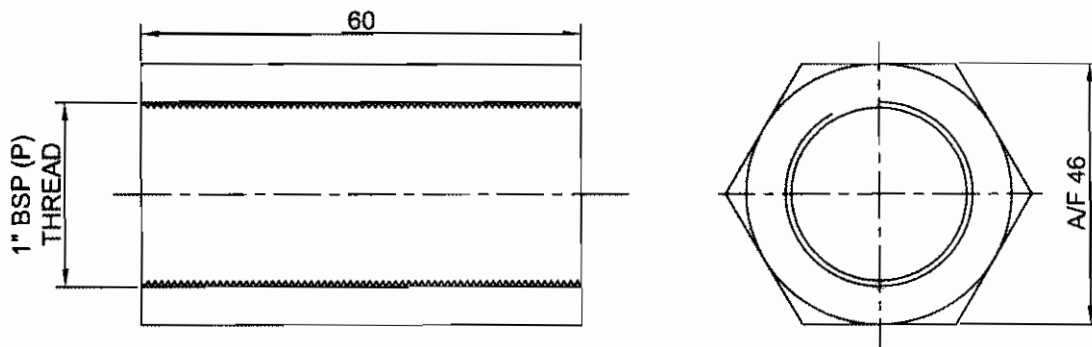
REF. DRG. No.	1	mm	BRT STL ROD	001	AA1010212184				
	40	Ø 36			AA10112				
		UNIT OF QTY.							
		R.M UNIT QTY.	DESCRIPTION	ITEM No.	DRAWING No.	ITEM No.	MATL. CODE	A	UNIT WEIGHT (kg)
							MATL. SPECN.	C	QTY.
CARD TYPE-2				CARD TYPE-1					
SIGN & DATE			BHARAT HEAVY ELECTRICALS LTD. JHANSI						
	DEPT. LME	CODE 404		SCALE N.T.S	WEIGHT (kg.)	REF. TO ASSY. DRG.			
INVENTORY No.	TITLE					DRAWN	NAME	SIGN	DATE
	REDUCING SOCKET (3/8" x 1")					CHECKED	VIKAS		14.07.17
						APPROVED	VIKAS		14.07.17
DIMENSIONS TO BE CONTROLLED WITHIN AS LIMITS SHOWN. MACHINING TOLERANCE + 0.25mm UNLESS OTHERWISE SHOWN NON-MACHINING TOLERANCE +					CARD CODE	DRG. No.			REV
						4 718 88 01 043			01
						SHEET No 01			No. OF SHEET 01

SIZE A4

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

REV	DATE	ALTERED	CHMANA	REV	DATE	ALTERED	ADDITIONAL INFORMATION
01	11.08.17	CHECKED	VIKAS			CHECKED	
DRG. UPDATED.							



001

NOTES:-

1. ALL SHARP EDGES AND CORNERS TO BE ROUNDED OFF.
2. FINISH:- NATURAL

ST. NO.- 953308

REF. DRG. No.

1	mm	STL. HEX. BAR	001	AA1010112198					
	60	A/F 46		AA10112					
	UNIT OF QTY.	DESCRIPTION	ITEM No.	DRAWING No.	ITEM No.	MATL. CODE	A	UNIT WEIGHT (kg)	
VAR-00	BASIC VARI-ANT	R.M UNIT QTY.			VARI-ANT	MATL. SPECN.	C	QTY.	

CARD TYPE-2

CARD TYPE-1

SIGN & DATE

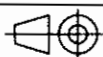


BHARAT HEAVY ELECTRICALS LTD.

JHANSI

DEPT. LME

CODE 4D4



SCALE N.T.S

WEIGHT (kg.)

REF. TO ASSY. DRG.

INVENTORY No.

TITLE

SOCKET (1")

DRAWN	NAME	SIGN	DATE
CHECKED	vikas		14.07.17
APPROVED	VIKAS		14.07.17

DIMENSIONS TO BE CONTROLLED WITHIN AS LIMITS SHOWN.
 MACHINING TOLERANCE + 0.25mm UNLESS OTHERWISE SHOWN
 NON-MACHINING TOLERANCE +

CARD CODE

DRG. NO.

4 718 88 01 044

REV

01

SHEET No 01

No. OF SHEET 01

SIZE A4

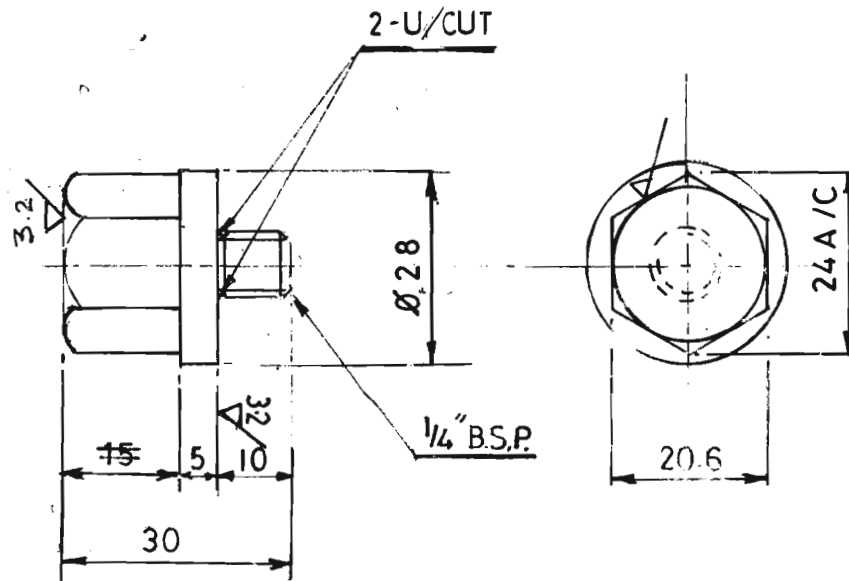
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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
02	6.8.96	CHECKED	01	13.6.89	CHECKED	STATUS OF DRAWING U
DIMN 30 & 20.6 ADDED. DIMN. 15 DELETED. MATERIAL DESCRIPTION & MATERIAL CODE CORRECTED.			MATL. WAS 30 A/F HEX. BAR TO AA10112. ST. NO. WAS 702156. DIM. 19 A/F DELETED. Ø 28 WAS Ø 25.24 A/C & CLW REF DRG NO. ADDED			DISTRIBUTION OF PRINTS 0/C1, PPC2, IE1, ASSY1, FAB2, QAX1, BAY 3,1

DIMNL TOL AS PER CORP. STD. AA 0230208 COARSE GRADE, UNLESS OTHERWISE STATED.



NOTE ALL SHARP EDGES AND CORNERS TO BE ROUNDED OFF.
FINISH TO BE CADMIUM PLATED AND PASSIVATED TO 0005 TK.

STYLE LIST	ITEM VAR.	DESCRIPTION	VARIED	
			SIGN.	DATE
706179	001	PLUG		17.5.89

001		mm		BRT. ST. ROD		001				AA1010212150				0-017									
		30		Ø 30						AA10112													
66 64 63 62		53 52		51		22		18 20 22		23		34		35 36		39		58 59 64		65 73		79 80	
		UNIT OF QTY.										ITEM No.		MATL. CODE		A		COMP GROUP		UNIT WEIGHT (KG)		71 81	
VARI-ANT 00		BASIC VARI-ANT 61 54		DESCRIPTION				ITEM No.		STD.		DRAWING NO.		37 38 VARI-ANT		61 57		C		QTY.		BM1/GRSP	

CARD TYPE-2

21

21

CARD TYPE-1



BHARAT HEAVY ELECTRICALS LIMITED
JHANSI

DEPT.	CODE	SCALE	WEIGHT (Kg.)	REF. TO ASSY. DRG.	ITEM No.
LOCO	404	1:1	0-017	1:7:1:9:1:1:0:1:0:2:0:1	0:12

TITLE

PLUG

DRAW	CHECK	APPROV.	NAME	SIGN.	DATE
			S.SONI		16.5.89
			VINAY		
			P.G.K.		

DIMENSIONS TO BE CONTROLLED WITHIN AS LIMITS SHOWN.
MACHINING TOLERANCE ± 0.25 mm UNLESS OTHERWISE SHOWN.
NON-MACHINING TOLERANCE $\pm$

CARD ODOE

DRAWING NO.

4:7:1:9:1:1:0:1:0:0:5:1

SHEET No. 01

No. OF SHEETS 01

SIZE A4

THIS INFORMATION ON THE DOCUMENT IS THE PROPERTY OF BHARAT HEAVY ELECTRICALS LIMITED.
IT MUST NOT BE USED DIRECTLY OR INDIRECTLY IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY.

01/4/11/18

REF. DRG. No. ALT-1

SIGN. & DATE

INVENTORY No.

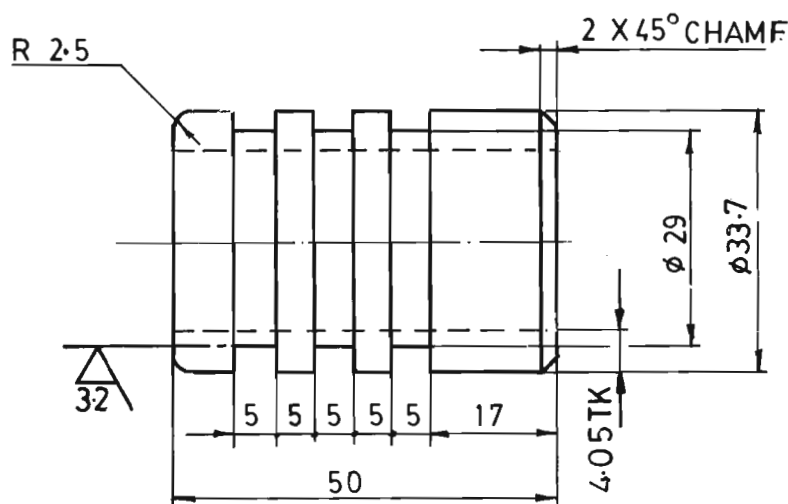
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FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

REV	DATE	ALTERED	REV	DATE	ALTERED	MSK.	ADDITIONAL INFORMATION
		CHECKED	01	2-8-97	CHECKED	APR	STATUS OF DRAWING U
			IT. 001 MATL. CODE & SPECN. WERE JS 101105 2970 & AA10152 RESPLY.			DISTRIBUTION OF PRINTS 0 C-1, IE-1, QAX-1, PPC-2, ASSY-2, BAY1&2-2, BAY3-2	

DIMNL. TOL :— AS PER CORP. STD. AA 02302 08 MEDIUM GRADE UNLESS OTHERWISE STATED.



STYLE LIST

STYLE NO.	ITEM VAR	DESCRIPTION	VARIFIED	
			SIGN	DATE
713054	001	END PIECE		

NOTES :—

- 1 ALL SHARP EDGES AND CORNERS TO BE ROUNDED OFF
- 2 FINISH :— APPLY TWO COATS OF RED OXIDE PRIMER AFTER SAND BLASTING.

CLW05/4/21/14

REF. DRG. No.

001		mm		M.S.TUBE HFS.(HEAVY)		001				JS:1011054973				0-12									
		50		25 N.B.(33.7 O.D X 4.05 T.K.)						AA10154													
66	64	63	62	53	52	51	22	18	20	22	23	34	35	36	39	50	58	59	64	65	73	79	80
				UNIT OF QTY.						ITEM No.				MATL. CODE		A		COMP GROUP		UNIT WEIGHT (KG)		79	
VARI-ANT		BASIC VARI-ANT		R M UNIT QTY.		DESCRIPTION		ITEM No.		STD.		DRAWING NO.		37 38 VARI-ANT		61		C		74		78	
00		00		61 54																QTY.		BM1/GRSP	

CARD TYPE-2

21

21

CARD TYPE-1



BHARAT HEAVY ELECTRICALS LIMITED
JHANSI

DEPT. LCE	CODE 404	SCALE 1:1	WEIGHT (Kg.) 0.12	REF. TO ASSY. DRG. 3:7:1:9:2:0:0:1:0:2:0:0:2	ITEM No. 01
TITLE END PIECE			DRAWN S.S.S.	SIGN. S.S.S.	DATE 19-4-89
BOGIE PIPING			CHECKED		
			APPROVED G.S.J.		

DIMENSIONS TO BE CONTROLLED WITHIN AS LIMITS SHOWN.
MACHINING TOLERANCE ± 0.25 mm UNLESS OTHERWISE SHOWN.
NON-MACHINING TOLERANCE $\pm$

1	4	DRAWING NO.	15	16	17
CARD ODOE		4:7:1:9:2:0:0:1:0:1:7:1	REV.	0	1
SHEET No. 01			No. OF SHEETS 01		

SES JHS

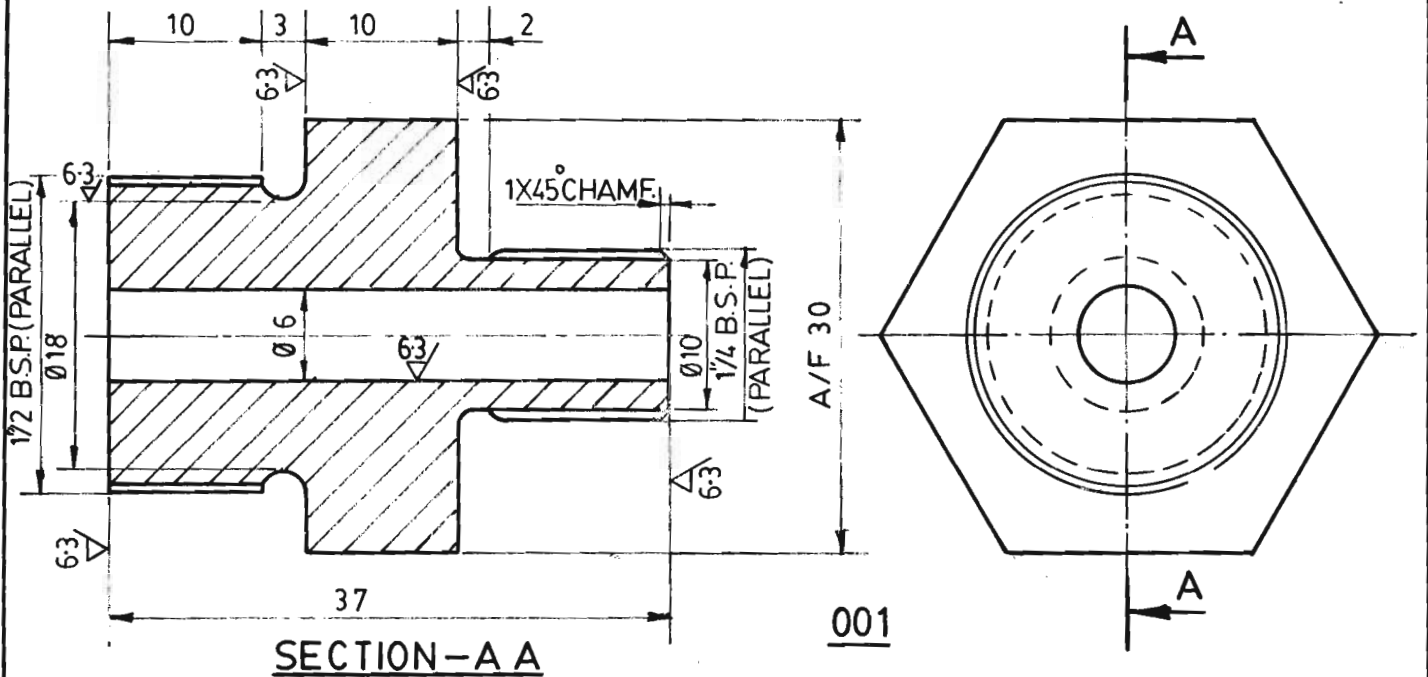
SIZE A4

FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

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REV.	DATE	ALTERED	REV.	DATE	ALTERED	ADDITIONAL INFORMATION
		CHECKED	01	14/11/88	CHECKED	STATUS OF DRAWING
			STYLE LIST WAS NOT NO REF. TO ASSY. WAS 3 719 52 01 0 ITEM 004			DISTRIBUTION OF PRINTS O.C.-1, IE-1 QAX-1, PPC-2, ASSY-2, BAY1&2-2, BAY 9-2



NOTES:-

1. ALL SHARP CORNERS & EDGES TO BE ROUNDED OFF.
2. DIMENSIONAL TOLERANCE AS PER CORP. STD. AA 023-02-08
MEDIUM GRADE UNLESS OTHERWISE STATED.
3. FINISH:- TO BE CADMIUM PLATED 0.015 TK. & PASSIVATED.

STYLE LIST			
STYLE NO.	ITEM NO.	DESCRIPTION	VERIFIED SIGN DATE
706168	001	NIPPLE 1/2 BSP 1/4 BSP	

		mm	HEX. BAR	001				AA 1010112155			0.154												
		37	30 A/F					AA 10112															
6664	83	62	53	52	51	22	18	20	22	23	34	35	36	39	50	58	59	64	65	73	79	80	
QTY			UNIT OF QTY.																				
VARI- ANT OO	BASIC VARI- ANT		R.M. UNIT QTY. 54			DESCRIPTION	ITEM No.		STD.	DRAWING No.		37	38	51	MATL. CODE	57	A C	COMP GROUP		UNIT WEIGHT (Kg.)		D1	
			81												MATL. SPECN.				74	QTY.	78		
CARD TYPE-2						← 21	21	→ CARD TYPE-1															

BHARAT HEAVY ELECTRICALS LIMITED
JHANSI

DEPT. LCE	CODE 404		SCALE 2:1	WEIGHT (Kg.) 0.154	REF. TO ASSY. DRG. 2.7.1.9.5.2.0.1.0.2.1	ITEM NO 0.3		
TITLE NIPPLE WAG-5A					DRAWN	NAME SES	SIGN. 	DATE 24.8.88
					CHECKED	VS		24.8.88
					APPROVED	PGK		

DIMENSIONS TO BE CONTROLLED WITHIN AS LIMITS SHOWN.
MACHINING TOLERANCE ± 0.25 mm UNLESS OTHERWISE SHOWN.
NON - MACHINING TOLERANCE $\pm$

CARD CODE	DRAWING No.	REV.
4 7 1 9 5 2 0 1 0 4 3	01	01
SHEET No.	No. OF SHEETS	
01	01	

S.E.S. JHANSI

SIZE A4

CLW 05/3/52/82②
REF. DRG. No. IT. 4
SIGN. & DATE
INVENTORY No.