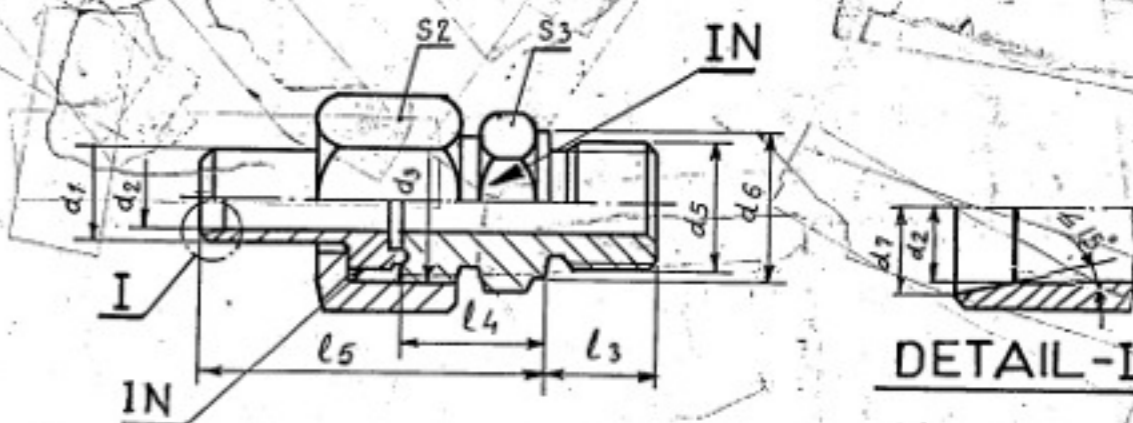


20060 - 90821 - Z
DRAWING NUMBER

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN

TECHNICAL REQUIREMENT:-

- PIPE UNION SHALL BE OF M/S DILO GESELLSCHAFT DREXLER & CO. FRUNDSBERG STRASSE 36-38 POST BOX-1120, 8943 BAßENHAUSEN FEDERAL REPUBLIC OF GERMANY AS PER THEIR IDENTIFICATION NO. AS GIVEN IN THE VARIANT TABLE OR EQUIVALENT.
- MATERIAL:-**
MATERIAL FOR PIPE UNION SHALL BE C22-8 AS PER Vd TÜV MATERIAL SHT.350 OR STEEL FORGING CL-2:IS:2004 OR BRIGHT STEEL ROUND BARS COLD DRAWN C20 AS PER IS 4855-68.
- DESIGN REQUIREMENTS:-**
 - MAJOR DIMENSIONS FOR THE PIPE UNION SHALL BE ACC. TO THE VARIANT TABLE.
 - METRIC FINE THREADS SHALL BE ACC. TO DIN 13 SHEET 6 & 7.
 - WHITWORTH PIPE THREADS SHALL BE ACC. TO DIN/ISO 228
 - THREAD RUN OUT SHALL BE ACC. TO DIN 76.
 - THREADED PLUG DESIGN SHALL BE ACC. TO DIN 3852 FORM B.
 - WELD EDGE PREPARATION SHALL BE ACC. TO DIN 2559; FOR $S \leq 2$ mm TYPE 1 AND FOR $S > 2$ mm. TYPE 21 WITH OPENING ANGLE $\alpha = 60^\circ$.
- OPERATING REQUIREMENTS:-**
 - NOMINAL PRESSURE = 100 BAR
 - OPERATING PRESSURE = 32 BAR (MAX. 64 BAR FOR SHORT DURATION ONLY)
 - OPERATING MEDIUM: - TURBINE OIL/FIR RESISTANT FLUID.
 - OPERATING TEMPERATURE = 65°C.
- TESTING REQUIREMENTS:-**
PIPE UNION AFTER MANUFACTURE SHALL BE HYDRAULICALLY TESTED WITH HYDRAULIC TEST PRESSURE AT 96 BAR TO ENSURE LEAKPROOF JOINTS. IN SUPPORT OF THE ABOVE A TEST CERTIFICATE SPECIFYING DESCRIPTION OF PIPE UNION, TEST NO., HYDRAULIC TEST PRESSURE APPLIED AND DURATION OF TEST SHALL BE FURNISHED BY SUPPLIER ALONG WITH THE SUPPLY.
- SURFACE TREATMENT:-**
PIPE UNION SHALL BE BURNISHED AND OILED RESPECTIVELY OR BRIGHT PLATED AGAINST CORROSION.
- DELIVERY REQUIREMENTS:-**
 - EACH PIPE UNION SHALL BE IDENTIFIED WITH IDENTIFICATION NO. ACC. TO HW0400397 AT THE PLACE MARKED WITH IN.
 - PACKING AND CONSERVATION:- PIPE UNION SHALL BE SUITABLY PACKED AND CONSERVED TO AVOID DAMAGE DURING TRANSIT AND PROLONGED STORAGE.



| VAR. | NOMINAL SIZE DN | d1 | d7 | d2 | d3 | d5 | d6 | l3 | l4 | l5 | S2 | S3 | PIPE CONNECTION | WT (KG) | M/S DILO ORDER NO. |
|------|-----------------|------|------|-----|-----------|----------|----|----|----|----|----|----|-----------------|---------|--------------------|
| 00 | 10 | 17 | 13.6 | 12 | M24 X 1.5 | G1/2 A | 26 | 14 | 27 | 58 | 30 | 27 | 17.2 X 1.8 | 0.20 | J1 B 12GN d28=13.6 |
| 01 | 10 | 17 | 13.2 | 12 | M24 X 1.5 | G1/2 A | 26 | 14 | 27 | 58 | 30 | 27 | 17.2 X 2 | 0.20 | J1 B 12GN d28=13.2 |
| 02 | 15 | 21 | 17.3 | 16 | M30 X 2 | G3/4 A | 32 | 16 | 31 | 67 | 36 | 32 | 21.3 X 2 | 0.25 | J1 B 16GN d28=17.3 |
| 03 | 20 | 27 | 22.9 | 21 | M36 X 2 | G1 A | 39 | 18 | 36 | 73 | 41 | 41 | 26.9 X 2 | 0.30 | J1 B 20GN d28=22.9 |
| 04 | 20 | 27 | 22.3 | 21 | M36 X 2 | G1 A | 39 | 18 | 36 | 73 | 41 | 41 | 26.9 X 2.3 | 0.30 | J1 B 20GN d28=22.3 |
| 05 | 25 | 34 | 29.7 | 27 | M45 X 2 | G1 1/4 A | 49 | 20 | 36 | 76 | 50 | 50 | 33.7 X 2 | 0.20 | J1 B 25GN d28=29.7 |
| 06 | 25 | 34 | 28.5 | 27 | M45 X 2 | G1 1/4 A | 49 | 20 | 36 | 76 | 50 | 50 | 33.7 X 2.6 | 0.40 | J1 B 25GN d28=28.5 |
| 07 | 8 | 13.5 | 8.3 | 8.3 | M22 X 1.5 | G1/2 A | 26 | 14 | 27 | 58 | 27 | 27 | 13.5 X 1.5 | 0.15 | J2 B10GS d2= 8.3 |
| 08 | 6 | 8 | 5 | 5 | M16 X 1.5 | G1/4 A | 18 | 12 | 17 | 40 | 19 | 19 | 8 X 1.5 | 0.10 | |
| 09 | 8 | 10 | - | 7 | M18 X 1.5 | G3/4 A | 18 | 12 | 21 | 46 | 22 | 19 | 10 X 1.5 | 0.08 | JTB8G |

| VAR.00 | REMARK | ITEM NO. | DESCRIPTION | STD | DRAWING NO. | MATERIAL CODE | UNIT | UNIT WT. (KG) | ZONE |
|--------|--|----------|------------------------------|-----|---------------|---------------|------|---------------|------|
| | PIPE UNION SUITING TO ANSI PIPE SIZE 26.7 X 2.87 | 12 | PIPE UNION DN 20-26.7 X 2.87 | | 2-12806-09007 | W97312806147 | C | 0.30 | |
| | PIPE UNION SUITING TO ANSI PIPE SIZE 17.1 X 2.31 | 11 | PIPE UNION DN 10-17.1 X 2.31 | | 2-12806-09007 | W97312806155 | C | 0.20 | |
| | | 010 | PIPE UNION DN 8-10 X 1.5 | | 2-12806-09007 | W97312806120 | C | 0.08 | |

| VAR.00 | REMARKS | ITEM NO. | DESCRIPTION | DRAWING NO. | MATERIAL CODE | UNIT | UNIT WT. (KG) | ZONE |
|--------|---------|----------|-----------------------------|---------------|---------------|------|---------------|------|
| | | 009 | PIPE UNION DN 6-8 X 1.5 | 2-12806-09007 | W97312806090 | C | 0.10 | |
| | | 008 | PIPE UNION DN 8-13.5 X 2.6 | 2-12806-09007 | W97312806082 | C | 0.15 | |
| | | 007 | PIPE UNION DN 25-33.7 X 2.6 | 2-12806-09007 | W97312806074 | C | 0.40 | |
| | | 006 | PIPE UNION DN 25-33.7 X 2 | 2-12806-09007 | W97312806066 | C | 0.40 | |
| | | 005 | PIPE UNION DN 20-26.9 X 2.3 | 2-12806-09007 | W97312806058 | C | 0.30 | |
| | | 004 | PIPE UNION DN 20-26.9 X 2 | 2-12806-09007 | W97312806040 | C | 0.30 | |
| | | 003 | PIPE UNION DN 15-21.3 X 2 | 2-12806-09007 | W97312806031 | C | 0.25 | |
| | | 002 | PIPE UNION DN 10-17.2 X 2 | 2-12806-09007 | W97312806023 | C | 0.20 | |
| | | 001 | PIPE UNION DN 10-17.2 X 1.8 | 2-12806-09007 | W97312806015 | C | 0.20 | |

| VAR. | ITEM NO. | REFERENCE |
|------|----------|---------------|
| | 056 | 0-12806-09000 |
| 01 | | |

| REV. | DATE | ALTERED | BY | DATE | ALTERED | BY | DATE | ALTERED | BY |
|------|---------|---------|--------|------|----------|---------|------|---------|---------|
| 05 | 15.6.11 | CHECKED | LAKHMI | | | | | | |
| 03 | 12.8.95 | CHECKED | | 02 | 27.11.92 | CHECKED | | 01 | 14.8.91 |

TYPE OF PRODUCT **STEAM TURBINE**
OR
NAME OF CUSTOMER / PROJECT

BHARAT HEAVY ELECTRICALS LTD.
RANIPUR - HARDWAR

DRN **ASHOK** SIGN. *Ashok* DATE **19.12.90** NO. OF ITEMS **07**
CH **B.S.GUPTA** SIGN. *B.S.G.* DATE **28.12.90**
APPD **B. S. S.** SIGN. *B.S.S.* DATE **16/1/91**

DEPT. **STE** GRADE OF UNFOLDING **C/M/F** SCALE **N.T.S.** WEIGHT (KG) AS PER VAR. TABLE **0-12806-09000** REF. TO ASSY. DRG. **0-12806-09000** ITEM NO. REF. TABLE **75, 77** NO. OF SHEETS **01**

TITLE **PIPE UNION** DRAWING NO. **2-12806-09007** SHEET NO. **01** NO. OF SHEETS

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 REV. DATE ALT. BY
 04 9.5.2008 HD JAL
 Changed as per C.A.No STE/00/93 dt. 2/5/2008
 INVENTORY NO. 51-2408
 SIGN. DATE 12/10/08
 KUNJ B. S. 03 FORM B
 675-01, RANIPUR