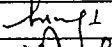
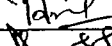
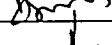
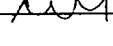
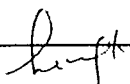



| | | |
|----------|---|----------------------------------|
| SCHEDULE | SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR FOOT PLATE ARRGT. (FOR UIC VESTIBULE) TO DRG. NO. CC25235 | MDST: 38 Rev: NIL PAGE 1 OF 4 |
| | | Dated 12.12.2005 |

SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR FOOT PLATE ARRANGEMENT (UIC VESTIBULE)

| NAME | DESIGNATION | SIGNATURE | DATE | LEVEL |
|----------------|-------------|---|----------|----------|
| Harish Kumar | SSE/VD |  | 12.12.05 | Prepared |
| Joginder Singh | ADE/VD |  | 12.12.05 | Agreed |
| Amitabh Sinha | Dy CME/TOT |  | 14.12.05 | Reviewed |
| S K Aggarwal | CDE |  | 27.12.05 | Approved |

| Issue/Rev | Details of Changes | Date |
|-----------|--------------------|------|
| | | |



 Agreed By

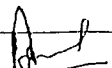
| | | |
|----------|--|---------------------------------|
| SCHEDULE | SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR FOOT PLATE ARRGT. (FOR UIC VESTIBULE) TO DRG. NO. CC25235 | MDST: 38 Rev: NIL PAGE 2OF 4 |
| | | Dated 12.12.2005 |

1.0 REQUIREMENTS

- 1.1 This schedule is applicable for foot plate arrangement (for UIC vestibule) to drawing no. CC25235. The vendors seeking approval shall comply with all the requirements mentioned below :

2.0 GENERAL & MANUFACTURING FACILITIES

- 2.1 Covered area with adequate space underneath for storage of raw materials e.g. billets, round corner squares, rounds etc. The covered area should have display board showing different colour shades nominated to different grades of steel to avoid mix up of materials. Arrangement of painting the billets, RCS rounds etc with particular paint shade previously nominated according to the grade of steel should be available.
- 2.2 Minimum 1 No. of band saw /power hacksaw machine should be available.
- 2.3 Adequate machining facilities comprising of universal milling machine, radial drilling machine , centre lathe, etc. of suitable capacities and standard makes should be available.
- 2.4 At least one no. of profile cutting machine or oxy-acetylene gas with suitable facilities shall be available.
- 2.5 Atleast two number of MIG/MAG welding machine of suitable capacity and standard make shall be available.
- 2.6 Adequate Nos. of hand grinders for removal of fins & burrs shall be available.
- 2.7 The firm shall have atleast one power press and one press-brake of suitable capacities along-with punch and dies for component forming & bending.
- 2.8 The firm shall have adequate facility of edge preparation for welding.
- 2.9 The raw material should be procured from authorized distributor of original manufacturer of steel and firm should procure material with test certificate from primary manufacturer.
- 2.10 The firm shall comply with IS:822 regarding selection of weld wire, storage of consumables, calibration of welding equipment , training of welder, testing of welding and remedies for welding defects.
- 2.11 The welder shall have a minimum of 2 years experience of the same type of welding.
- 2.12 The fabricator shall have adequate fabrication and process capability to obtain all the tolerances and geometrical tolerances and shall have arrangement of jig/fixture/clamping device for main assembly & sub-assembly work.
- 2.13 The firm shall have suitable facility of grit/shot blasting as per MDT5141.
- 2.14 The firm shall have separate painting booth with exhaust facility for painting the components


Agreed By

| | | |
|----------|--|----------------------------------|
| SCHEDULE | SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR FOOT PLATE ARRGT. (FOR UIC VESTIBULE) TO DRG. NO. CC25235 | MDST: 38 Rev: NIL PAGE 3 OF 4 |
| | | Dated 12.12.2005 |

as per MDTS141.

3.0 TESTING FACILITIES

3.1 Chemical Lab: The firm should have permanent arrangement with NABL certified Lab or a reputed steel making company for arranging the spectro analysis of the material.

3.2 Physical Testing Lab: The firm must possess a well-equipped physical lab with following facilities:

- Universal Testing machine of 40t capacity with load/ deflection plotting arrangement to conduct UTS, Yield strength .
- The firm shall have arrangement for conducting non- destructive test for welding as per requirement of the purchaser.

3.3 Other Testing Facilities: The firm shall possess the following:

- The firm shall have adequate facilities for preparation of test sample. Facilities like machining, grinding, polishing etc. should be available in house.
- Adequate number of fine punches for stamping marking particulars on finished components.
- Adequate numbers of measuring instruments such as:
 - Digital Vernier Calipers - 0 mm to 300 mm
 - Measuring scales – 3 meter
 - Inside & outside Micrometers - Ranging from 0 to 150 mm
 - GO & NO-GO gauges.
 - Profile gauges
 - Surface table
 - Depth gauge

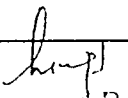
4.0. QUALITY CONTROL REQUIREMENTS

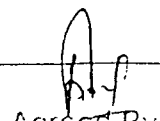
4.1 There should be a system to ensure the traceability of the product from raw material stage to finished product stage. This system should also facilitate to identify the raw material composition from the finish product stage.

4.2 Ensure that there is a QAP for the product detailing various aspects: -

- QA Organisational Chart
- Flow Process Chart
- Stage inspection details
- Various parameters and to ensure control over them

4.3 There should be at least one full time technologist having a minimum bachelor's degree in





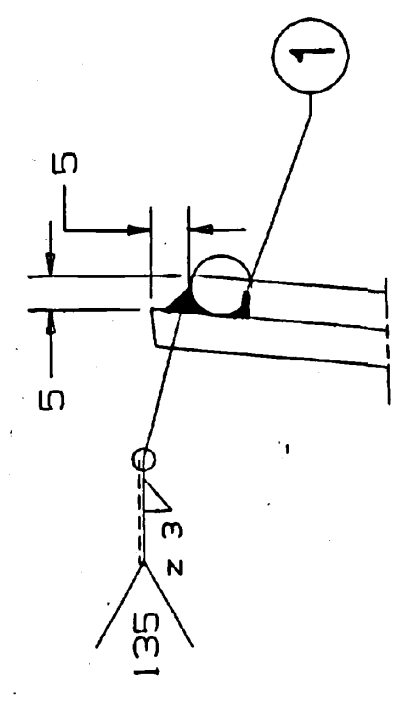
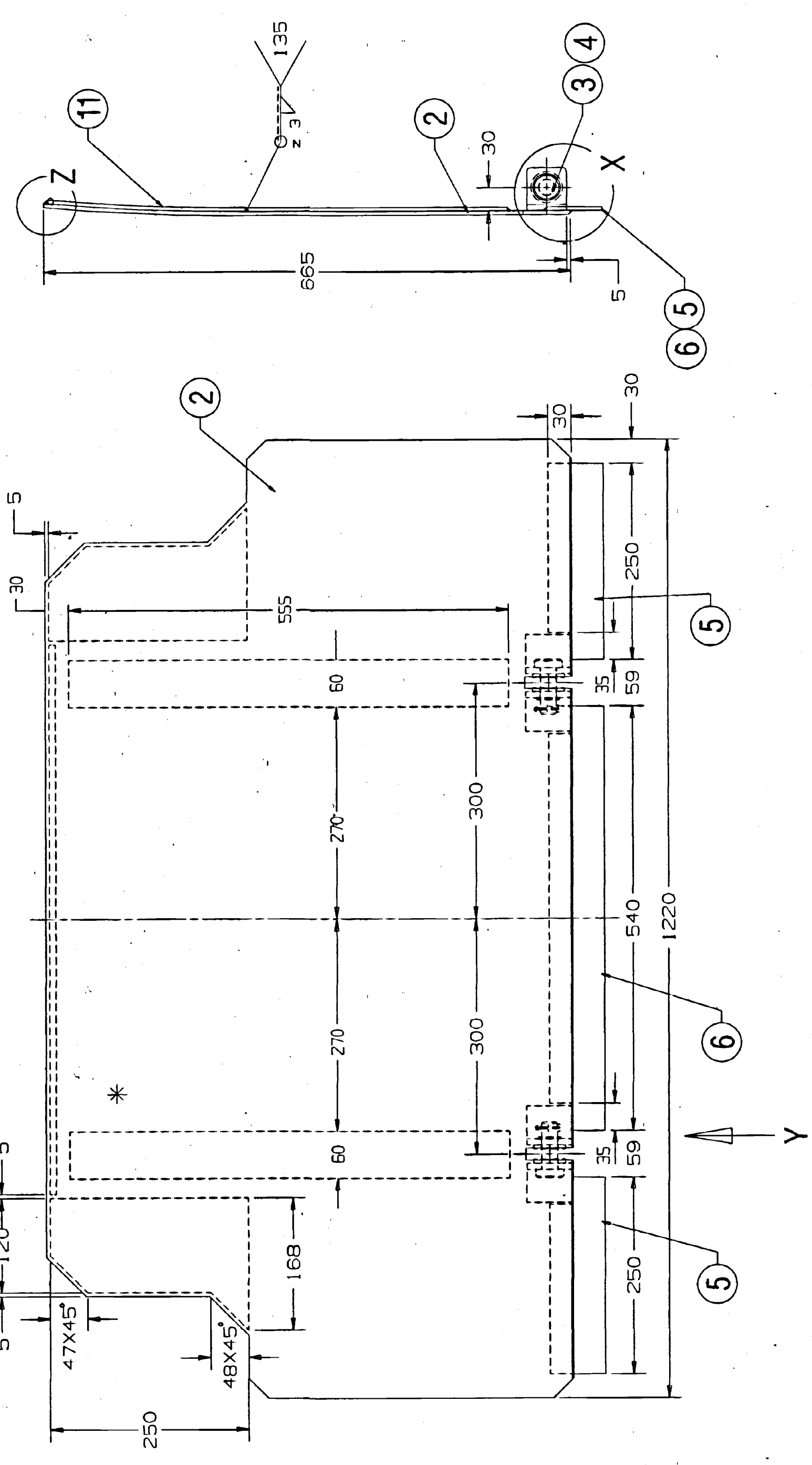
| | | |
|----------|--|----------------------------------|
| SCHEDULE | SCHEDULE OF INFRASTRUCTURAL REQUIREMENTS FOR MANUFACTURING & TESTING FOR FOOT PLATE ARRGT. (FOR UIC VESTIBULE) TO DRG. NO. CC25235 | MDST: 38 Rev: NIL PAGE 4 OF 4 |
| | | Dated 12.12.2005 |

relevant field & 5 years experience or a person with diploma in relevant field with 12 years experience.

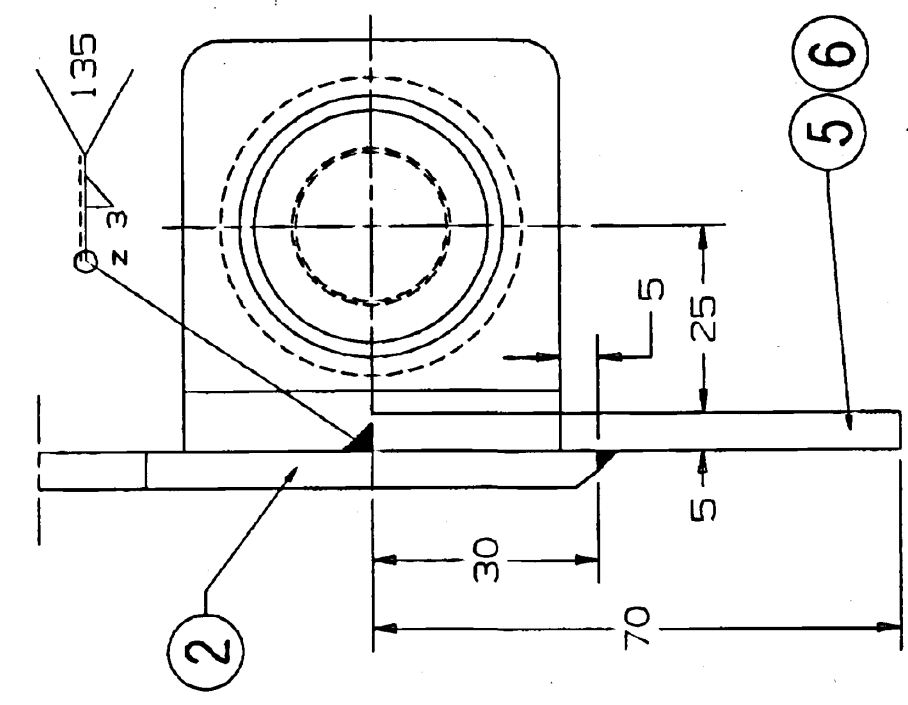
- 4.4 The firm should have acquired ISO: 9000 series certification and the product for which an approval is sought should be broadly covered in the scope of the certification for manufacture and supply.
- 4.5 The Quality manual of the firm for ISO: 9000 should clearly indicate at any stage the control over manufacturing and testing of the said railway product.
- 4.6 The firm shall ensure that proper analysis is being done on monthly basis to study the rejection at various internal stages and it is documented.
- 4.7 The firm shall ensure that all the relevant specifications, IS standards are available with them.

[Handwritten signature]

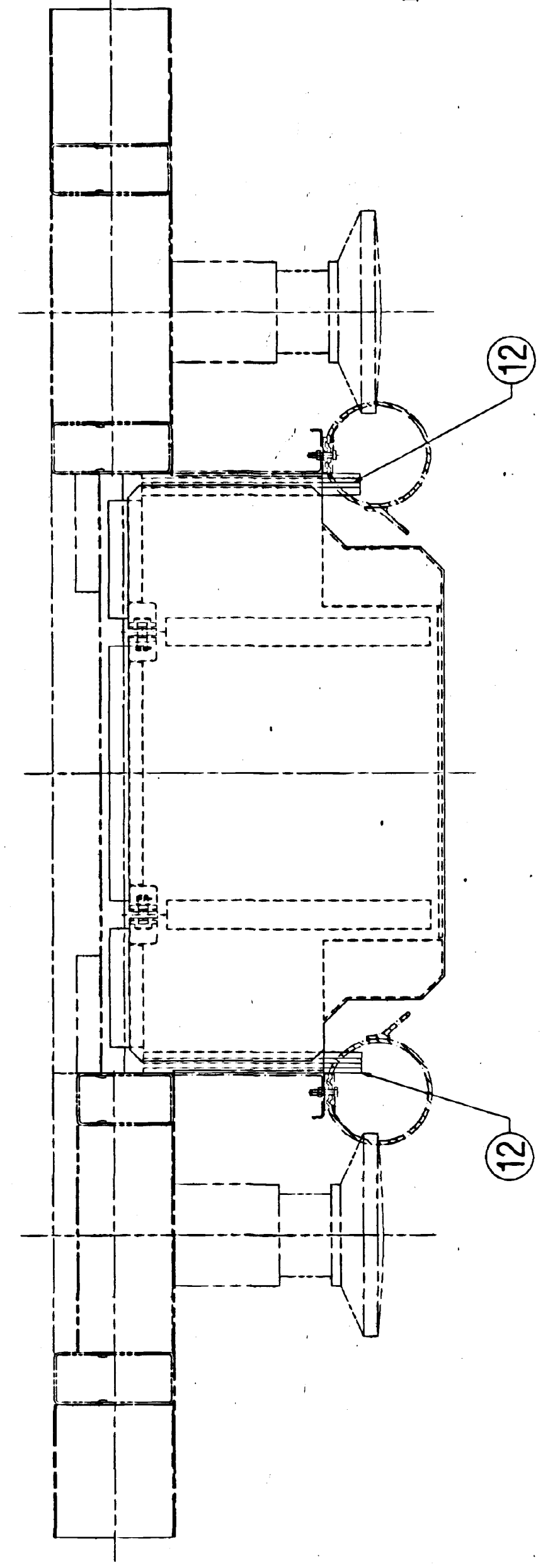
[Handwritten signature]
Accepted By:



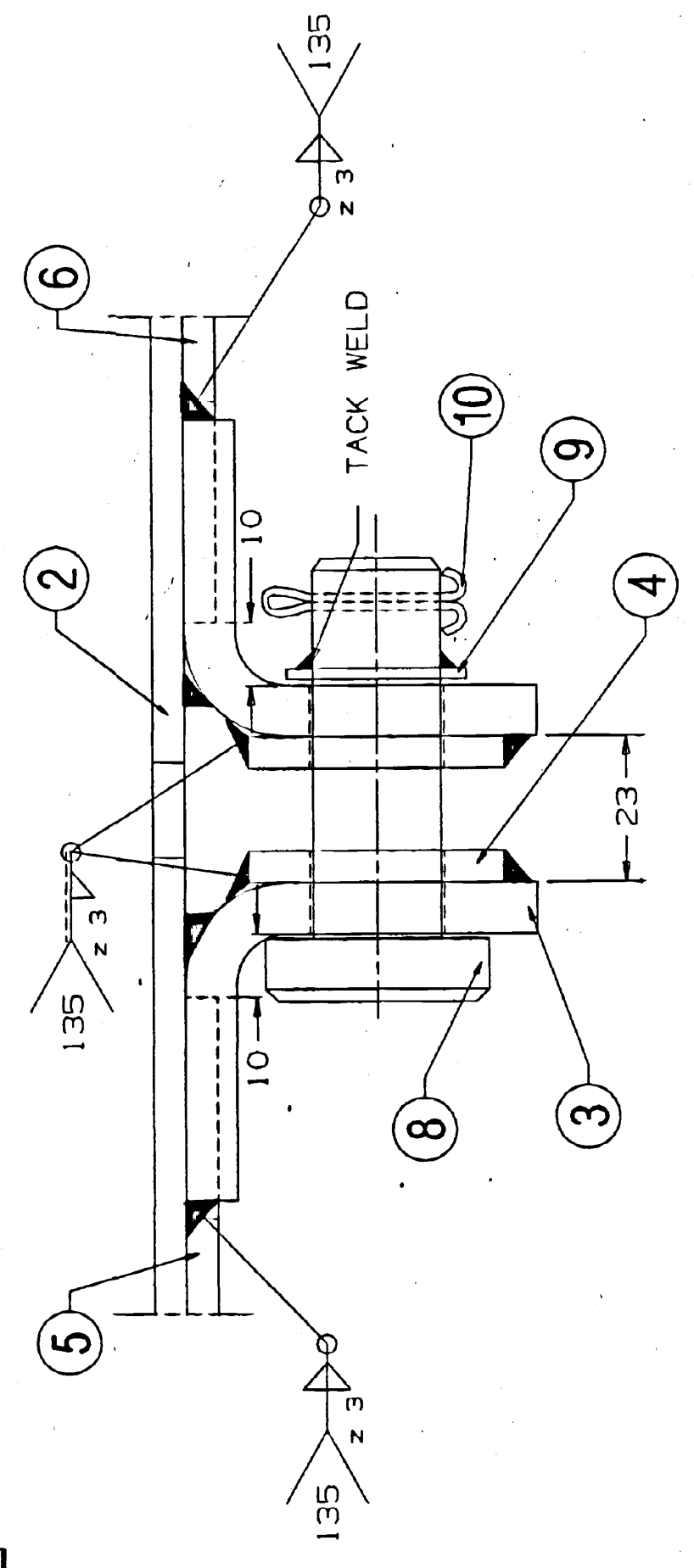
DETAIL AT-Z
SCALE 1:1



DETAIL AT-X
SCALE 1:1



MOUNTING SHOWN WITH ENDWALL & HEAD STOCK
SCALE 1:10



VIEW-Y
SCALE 1:1

NOTE:-

1. MANUFACTURERS NAME, DATE OF MANUFACTURE, DRAWING NUMBER AND ALTERATION TO BE STAMPED AT LOCATION MARKED * IN CHARACTER SIZE 5mm.
2. TACK WELD TO BE DONE TO PIN & WASHER AT SITE AFTER FITTING THE FOOT PLATE IN THE HOLDING BRACKET.
3. ITEM 8, 9 & 10 SHALL BE LOOSE SUPPLY.
4. ASSEMBLY SHOULD BE PAINTED AS PER MOTS 0141.

ANY MANUAL ALTERATION SHALL AUTOMATICALLY RENDER THIS DRAWING INVALID.

FOR UNTOLERANCED DIMENSIONS REFER MDG0008

DATE OF FIRST ISSUE 12/03/1994

DETAIL DRGS STARTING WITH "L1" ARE INTERNAL REFERENCE LISTS ONLY AND ARE NOT FOR ISSUE.

DATE OF FIRST ISSUE 12/03/1994

DATE OF FIRST ISSUE 12/03/1994

| ALT. NO. | ALT. DATE | ZONE | ALTERATIONS | AUTHORITY |
|----------|------------|------|---|------------------|
| e | 05/05/99 | ALL | 1. DRAWING PROFORMA IS REVISED. 2. ITEM-12 IS ADDED. 3. DRAWING IS REVISED AS PER DESIGN CHANGE OF ITEM-1 FROM SEMICIRCULAR CROSS SECTION TO CIRCULAR CROSS SECTION, ITEM-3 OF DESIGN PLATE TYPE TO ANGLE TYPE & ACCORDINGLY ITEM-4 ALSO AND ITEM-7 REVISED WITH OPA = 2 WITH ORIENTATION PERPENDICULAR TO ENDWALL. | MD990122 |
| f | 28/04/2004 | K2 | NOTE -4 ADDED. | DIC NO. MDO40016 |

| ITEM | DESCRIPTION & DIMENSIONS | MATERIAL & SPEC. | DETAIL DRG | REMARKS |
|------|-----------------------------|--|------------|---------|
| 12 | RUBBER PAD 10X75X60 | NIL | 2 | NIL |
| 11 | STIFFENER S168X250 | IS: 5192(PF)-11-94 Lr-150. IS: 2062-92 Fe-410NB | 2 | NIL |
| 10 | SPLIT PIN Sx25 | IS: 549-74 Fe-410NB IS: 2016-67 Fe-410NB | 2 | MOTS057 |
| 9 | PLAIN WASHER 22 | TAB. 2 & TYPE-A | 2 | MOTS057 |
| 8 | PIN | NIL | 2 | CC25237 |
| 7 | STIFFENER Sx60x55 | IS: 2062-92 Fe-410NB | 2 | NIL |
| 6 | DUST SHIELD PLATE Sx70x5-40 | IS: 2062-92 Fe-410NB | 1 | NIL |
| 5 | DUST SHIELD PLATE Sx70x250 | IS: 2062-92 Fe-410NB | 2 | NIL |
| 4 | BOSS | CC25239 | 4 | NIL |
| 3 | EYE PIECE | CC25238 | 4 | NIL |
| 2 | FOOT PLATE | CC25237 | 1 | NIL |
| 1 | WEARINGS PIECE Ø 8X700 | IS: 2062-92 Fe-410NB | 1 | NIL |

| WELD LENGTH | WELD WEIGHT | WELD S.AREA | WELD LENGTH/PIECE | WELD WIDTH/PIECE | WELD HEIGHT |
|-------------|-------------|-----------------|-------------------|------------------|-------------|
| NIL | NIL | NIL | NIL | NIL | NIL |
| 45.377 | KG | CM ² | CM | CM | CM |

| PL NO. | DRG. NO. | SCALE | DATE | BY | CHECKED | DATE | BY | CHECKED |
|----------|----------|-------|------|----|---------|------|----|---------|
| 05111961 | CC25235 | 1:5 | | | | | | |