

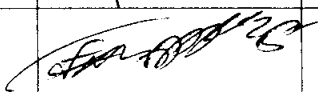


TITLE : TECHNICAL SPECIFICATION FOR BOUGHT ITEMS FOR ESP				
ITEM : GALVANISED CONTROL JUNCTION BOX				
PROJECT : BHEL STANDARD				
NAME		DESIGNATION	SIGNATURE	DATE
PREPARED	PVD MURTHY	SAE		18.05.2011
CHECKED	M.JEYAMURUGANAND	SM		18.05.2011
APPROVED	S.JAYAPRAKASAM	AGM		18.05.2011
ISSUED BY				
EDC - ECI				
REVISION NO :00		INITIAL RELEASE		18.05.2011

1.0 SCOPE OF SUPPLY:

The scope of supply of Junction box includes manufacturing, inspection, testing, packing and delivery of junction Boxes (galvanized) as per this specification and attached drawings.

2.0 APPLICATION:

The Junction boxes are used in Power station to interconnect various field-mounted electrical equipments pertaining to boiler auxiliaries.

3.0 APPLICABLE STANDARDS:

The Junction boxes shall be manufactured and tested as per the following standards.

- IS 13947 - Low voltage Switchgear and Control Gear specification.
- IS 6005 - Code for Practice for Phosphate Coatings of Iron & Steel.
- IS 694 - PVC insulated Cables for working voltages up to and including 1100V specification.

4.0 SITE CONDITIONS:

- 4.1 Ambient temperature : 1 Deg.C to 50 Deg.C
- 4.2 Relative humidity : 100% RH
- 4.3 Atmospheric condition : Highly dusty, abrasive and polluted, conducive to fungus growth, climate is tropical. Environment is as prevalent in a coal fired thermal power station
- 4.4 Design temperature : 50 Deg.C
- 4.5 Location : Out door

5.0 GENERAL REQUIREMENTS:

- 5.1 Enclosure material : 2 mm Cold rolled sheet steel
- 5.2 Material of removable gland plate : 3mm Hot rolled sheet steel
- 5.3 Material of continuous hinge pin, rider clamp, rider spring, washers & rider bolt : SS 316
- 5.4 Pre treatment of sheet steel : Seven tank process as per IS 6005.
- 5.5 General construction : As per drawings forming part of this specification.
- 5.6 Enclosure protection : IP 55 as per IS 13947

-
- | | | | |
|------|--|---|--|
| 5.7 | Terminal block type & arrangement | : | ELMEX CST 2.5 or equivalent type of BHEL approved make mounted on DIN rail. |
| 5.8 | Terminal block insulating material | : | Melamine |
| 5.9 | Terminal block voltage grade | : | 650 V (Minimum) |
| 5.10 | Door Gasketing | : | Neoprene gasket 6 mm thick of shore hardness 20 to 30 & density 0.4 gm/cc shall be provided on all mating surfaces. |
| 5.11 | Gland plate Gasketing | : | Neoprene gasket 3 mm thick of shore hardness 30 to 40 & density 0.4 gm/cc shall be provided on all mating surfaces. |
| 5.12 | Door Opening | : | Suitable for 180 ° opening. |
| 5.13 | Lug type | : | Crimping type insulated ATC lugs shall be provided for all the terminals on both sides. Lug type shall be Dowell's CPI-17 pin type (insulated) or equivalent type of BHEL approved make. |
| 5.14 | Cable Gland type | : | Nickel chromium plated Brass Double Compression type cable glands fixed on the gland plate, with dummy plugs. |
| 5.15 | Cable Gland size & quantity | : | As per attached drawing |
| 5.16 | Number of earthing terminals | : | Two as per attached drawing. |
| 5.17 | Size & location of earthing terminals | : | As per attached drawing |
| 5.18 | Location of earthing symbol | : | Just above the earthing terminal symbol to be black lines on yellow background. |
| 5.19 | Rated voltage grade of junction box | : | 415V. |
| 5.20 | Mounting fasteners | : | 4 sets of chromium plated bolts, nuts and spring washers for mounting the JB shall be supplied. |
| 5.21 | All seams are to be continuously welded. There shall be no holes or sockets on top and sides. | | |
| 5.22 | Suitable DIN rails along with clamps and screws shall be provided for terminal block mounting. All terminals are to be numbered serially by suitable identification label of PVC material in white background with black numbers. Terminal blocks shall be fixed to T.B supporting DIN rail by means of suitable end plates with screws. | | |
| 5.23 | Stickers have to be fixed over the cable glands to indicate the cable size. | | |

- 5.24 Rolled lip shall be provided around three sides of door and around all sides of enclosure opening. This lip is to increase the strength and to keep dirt and liquid from dropping into the enclosure when the door is opened.
- 5.25 Non rusting name plate of 2 ply lamicoid in white colour with the following inscription in black letters shall be fixed to the name plate mounting bracket on top of the junction box with plated screws.

EP JUNCTIONBOX (CONTROL) VAR *
BHEL/BAP/RANIPET

* - As applicable

The name plate shall be provided on the door. It shall contain details like name of the supplier, year of manufacture, weight of the job, BHEL PO number and date.

- 5.26 The different variants of JB shall have dimensions & cable glands as per the following table.

VARIANT	NO. OF WAYS	NO OF ROWS X TB/ROW	DIMENSION IN MM				GLANDS FOR ARMOURED, COPPER CABLES					
							INCOMING			OUTGOING		
			A	B	C	D	CABLE SIZE	GLAND SIZE	QTY	CABLE SIZE	GLAND SIZE	QTY
C1	24	2X12	300	340	50	330	7C-2.5 12C-2.5	CBW 03 CBW 04	2 2	4C-2.5	CBW02	8
C2	48	3X16	360	485	75	470	14C-2.5	CBW 04	5	4C-2.5	CBW 02	13

- 5.27 Number of bolts along the breadth of gland plate is fixed for all sizes as shown. Number of bolts along D direction (length of gland plate) is shown typical for 24 ways. For other sizes, number of bolts to be distributed keeping equal distance between them.
- 5.28 The un-toleranced dimensions shall be as per IS 2102.
- 5.29 For cable glands, the type reference indicated in above table is that of a particular manufacturer. Equivalent type of cable glands of other BHEL approved makes given in this specification can also be used.
- 5.30 Alternate arrangement of fixing the gland plate to the bottom of the Junction box by suitable steel, zinc plated rivet nuts is also acceptable in which case the make of rivet nut and fixing arrangement is subject to BHEL approval. Make shall be BOLLHOFF, Germany or equivalent.
- 5.31 Terminal blocks to be supplied and mounted by vendor.

- 5.32 All terminal blocks are to be mounted vertically properly stacked. Suitable DIN rails along with clamps and screws shall be provided. All terminals are to be numbered 1 through 48, by suitable identification label and fixing it on to the terminal block. Terminal block identification label shall be PVC white background with black numbers.
- 5.33 Bolts and nuts required for mounting the junction boxes are to be electro galvanised and supplied by vendor. Necessary spring washers shall also be supplied.
- 5.34 Earth tag (black lines on yellow background) of dia 20 mm shall be provided near each earth terminal with co-ordinates as 30 mm from rear of the box and 25 mm above center-line of earth terminal.
- 5.35 The terminal block shall be clip on type (CSLT-1) with melamine housing mounted in standard channel with end plate and end clamps
- 5.36 Earthing bolts and nuts with rose courtney lug shall be provided at opposite points on outside of the junction box body with earth symbol.

6.0 MAKE OF COMPONENTS

- 6.1 Terminal block : ELMEX / TOSHA / CONNECTWELL / CONTROLS & SWITCHGEAR / WAGO / ESSEN .
- 6.2 Crimping type lug : DOWELLS / JAINSON / LOTUS .
- 6.3 Cable glands : COMET / BRACCO / ARUP ENGG. / QPIE / SUNIL & Co / SEIMENS / CONTROLS & SWITCH GEAR / SCHNEIDER.
- 6.4 PVC wires : ISI (BIS) APPROVED/CERTIFIED MAKES

7.0 GALVANIZING

- Galvanising of all sheet steel : As per IS 2629 & IS 4759.
- Amount of zinc coating : (i) 610gm/sq.m.
(ii) Min coating thickness on junction box. Shall not be less than 86 microns.

8.0 PACKING

Each JB shall be fully wrapped in a polythene cover to avoid water entry and then packed separately in cardboard box. Finally all such boxes shall be packed in a wooden crate.

9.0 DRAWING

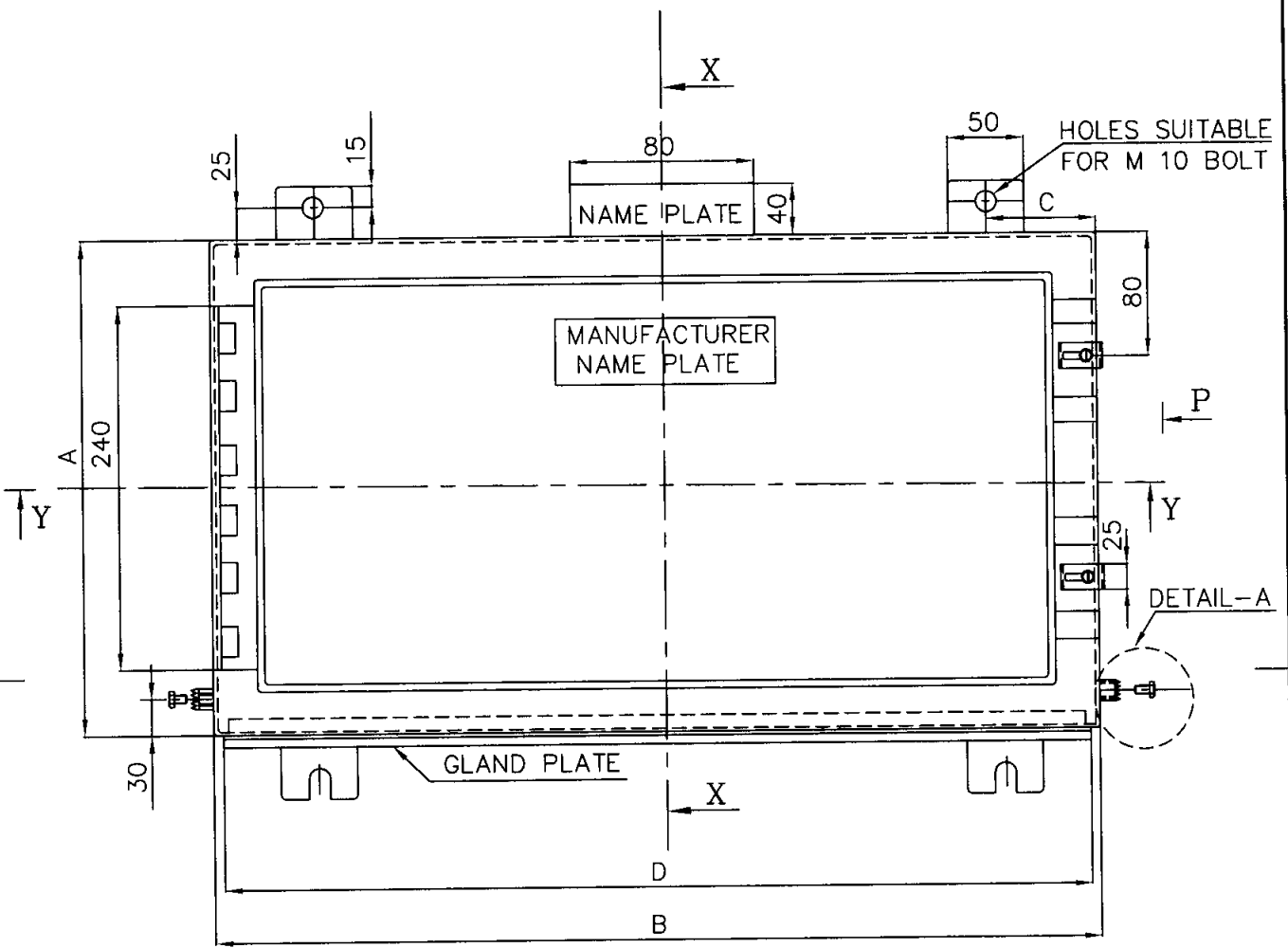
Manufacturing drawings prepared in AUTO CAD shall be submitted in SOFT MEDIA in addition to **4 sets of** hard copies for approval by BHEL, (prior to start of manufacture) within 10 days from the date of purchase order.

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REV	DATE	ALTERED
		CHECKED

ALL DIMENSIONS ARE IN MILLIMETRES

TECI: GCJB: 007: REV 00
PAGE 06 OF 10



NOTE:

- 01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS 4-00-114-23350 TO 4-00-114-23353.

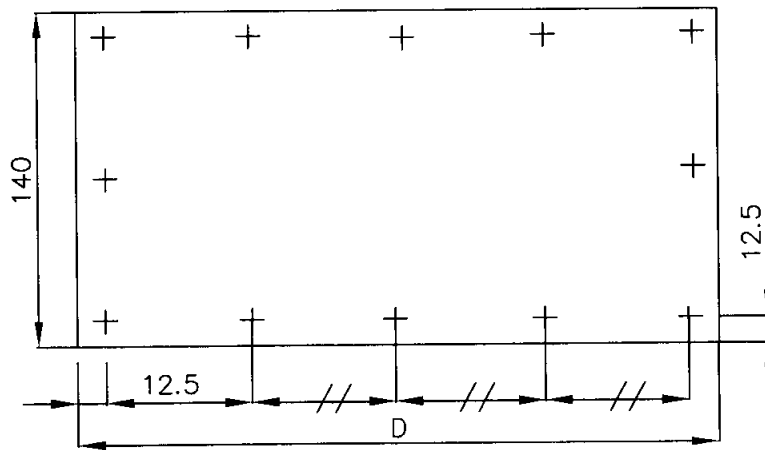
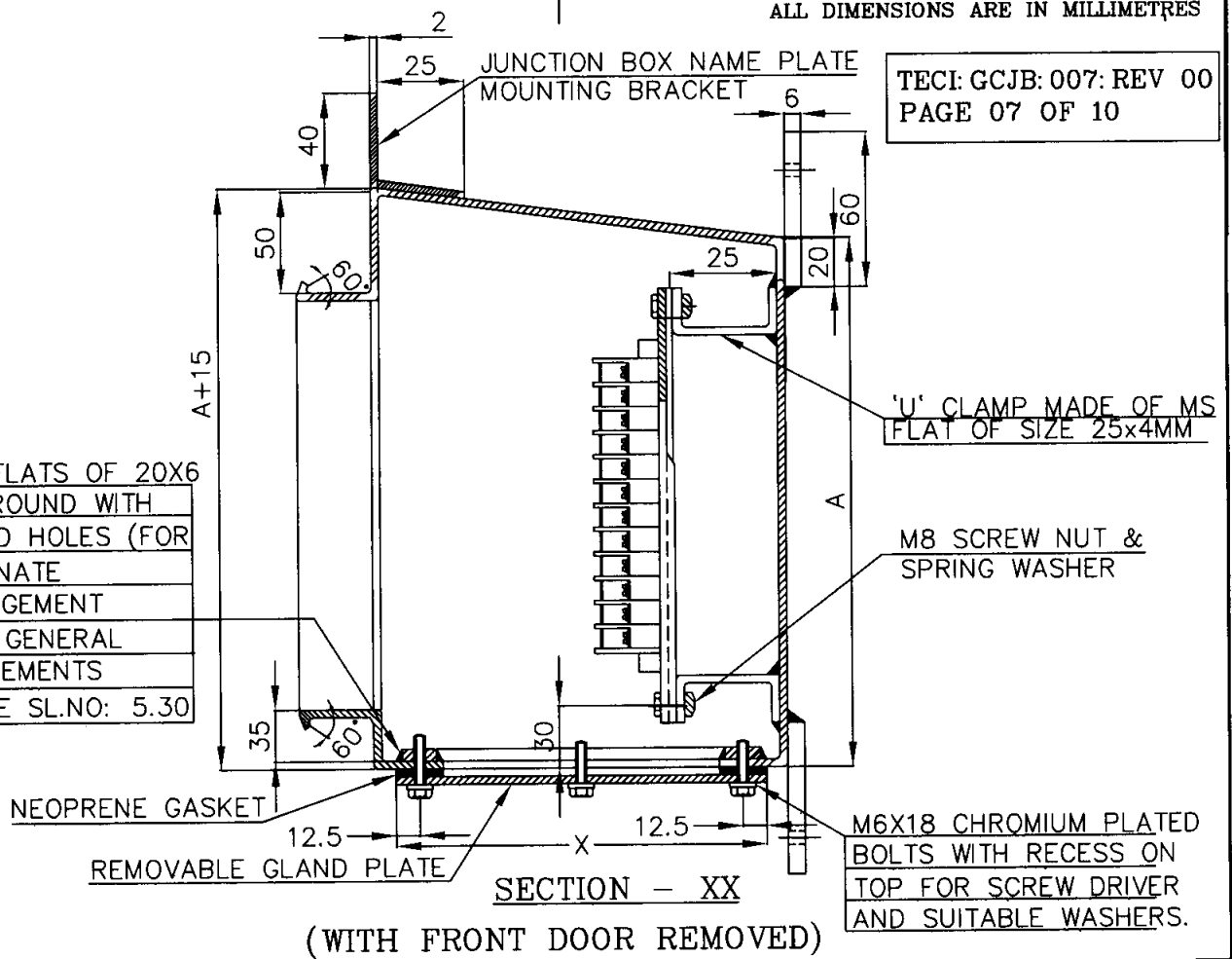
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			CHD	P.V.D	<i>[Signature]</i>	18.05.11	
			APPD	MJM	<i>[Signature]</i>	18.05.11	
DEPT ECI	GRADE OF UNTOL DIM		SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	ITEM NO.	NO. OF ITEMS
CODE			NTS	-	-		
TITLE				CARD CODE	DRAWING NO.		REV
GENERAL ARRANGEMENT OF GALVANIZED CONTROL JUNCTION BOX				U 01	4-00-114-23349		00

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PAGE 07 OF 10

WELD FLATS OF 20X6
ALL AROUND WITH
TAPPED HOLES (FOR
ALTERNATE
ARRANGEMENT
REFER GENERAL
REQUIREMENTS
CLAUSE SL.NO: 5.30



NOTE: GLAND PLATE(TYP)

01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS
4-00-114-23349 , 4-00-114-23351 TO 4-00-114-23353.

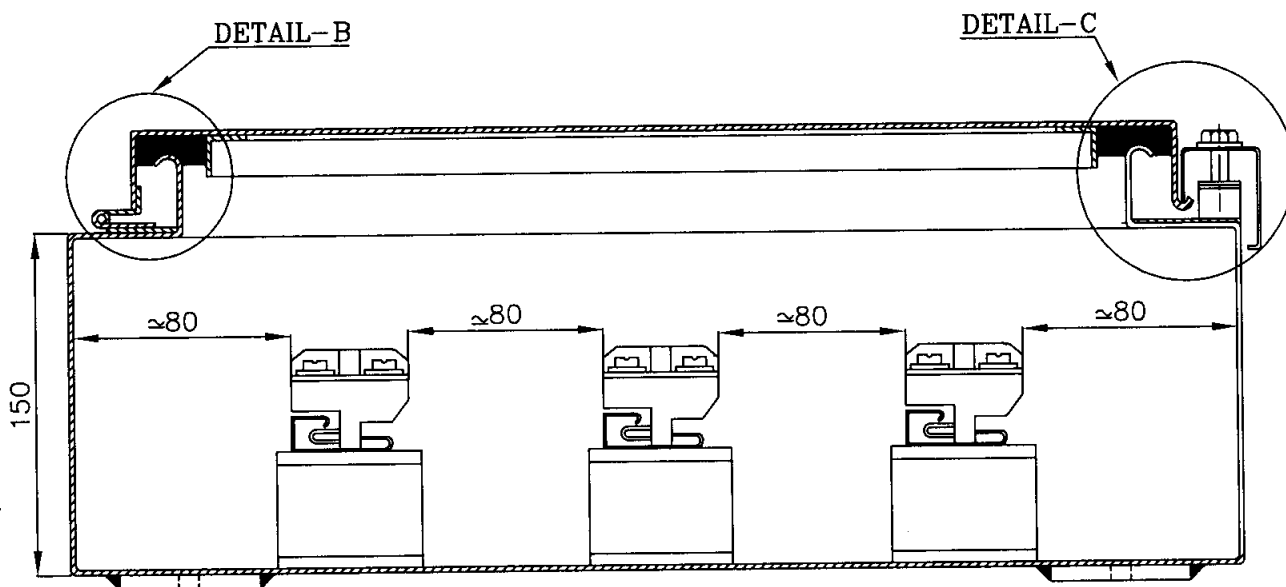
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		CHD	PUSHPALATHA	<i>[Signature]</i>	18.05.11	VAR	
		APPD	MJM	<i>[Signature]</i>	18.05.11		
DEPT	GRADE OF	 SCALE NTS	WEIGHT (KG).	REF. TO ASSY./OLD DRG.		ITEM NO.	NO. OF
CODE	UNTOL DIM		-	-		ITEMS	
TITLE			CARD CODE	DRAWING NO.		REV	
GENERAL ARRANGEMENT OF GALVANIZED CONTROL JUNCTION BOX			U 01	4-00-114-23350		00	

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PAGE 08 OF 10



SECTION-YY
(SHOWN FOR VARIANT-C2)

NOTE:

01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS
4-00-114-23349, 4-00-114-23350, 4-00-114-23352 & 4-00-114-23353.

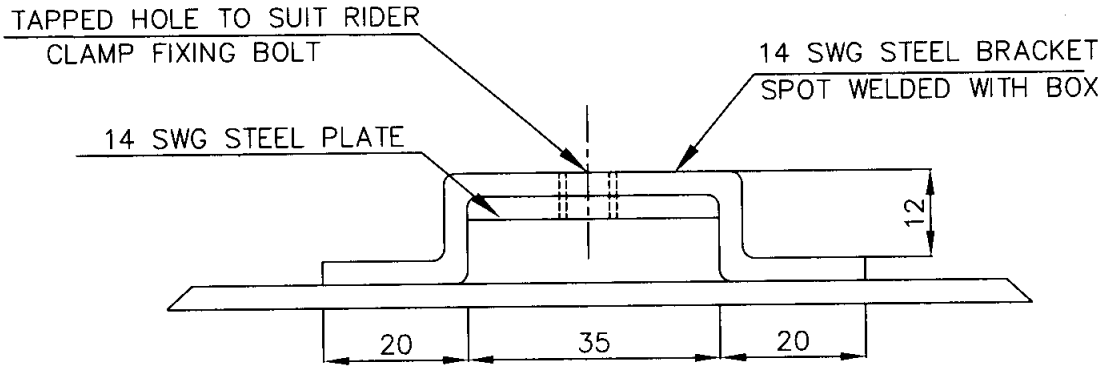
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			CHD	P.V.D	<i>P.V.D</i>	18.05.11	VAR
			APPD	MJM	<i>MJM</i>	18.05.11	
DEPT CODE	ECI	GRADE OF UNTOL.DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	ITEM NO.	NO. OF ITEMS
			NTS	-	-		
TITLE				CARD CODE	DRAWING NO.		REV
GENERAL ARRANGEMENT OF GALVANIZED CONTROL JUNCTION BOX				U 01	4-00-114-23351		00

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		CHECKED

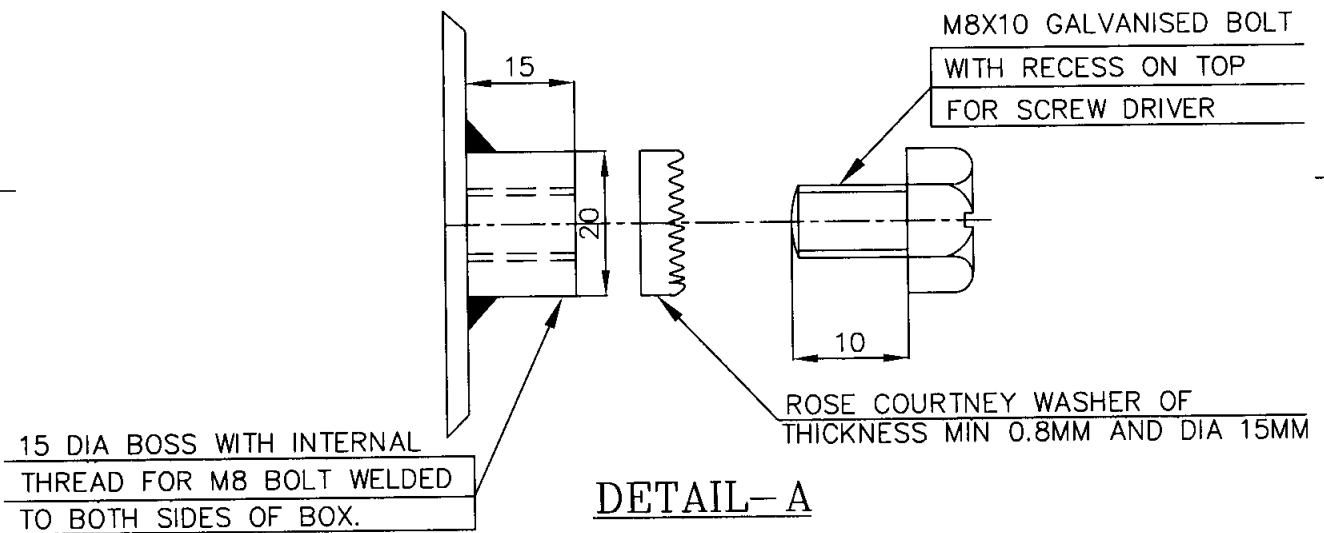
ALL DIMENSIONS ARE IN MILLIMETRES

TECI: GCJB: 007: REV 00
PAGE 09 OF 10



VIEW-P

(WITH RIDER CLAMP AND BOLT REMOVED)



DETAIL-A

EARTHING ARRANGEMENT

(TO BE LOCATED 30 MM FROM REAR OF BOX)

NOTE:

- 01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS 4-00-114-23349 TO 4-00-114-23351 & 4-00-114-23353 .

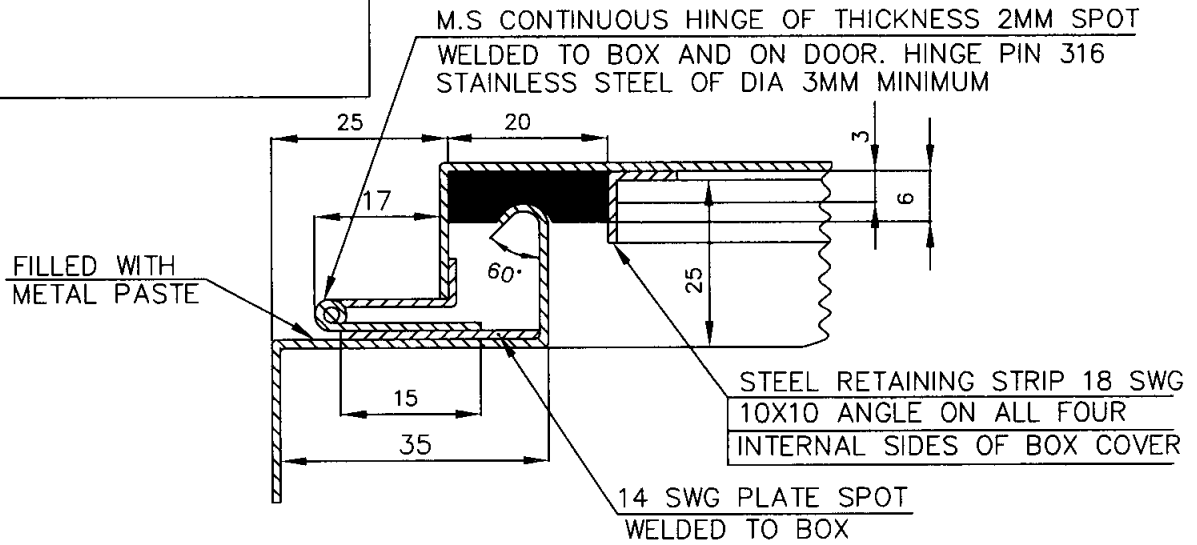
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			APPD	MJM	<i>MJM</i>	18.05.11	
DEPT ECI	GRADE OF UNTOL DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.		ITEM NO.	NO. OF ITEMS
CODE		NTS	-	-			
TITLE			CARD CODE	DRAWING NO.			REV
GENERAL ARRANGEMENT OF GALVANIZED CONTROL JUNCTION BOX			U 01	4-00-114-23352			00

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REV	DATE	ALTERED
		CHECKED

ALL DIMENSIONS ARE IN MILLIMETRES

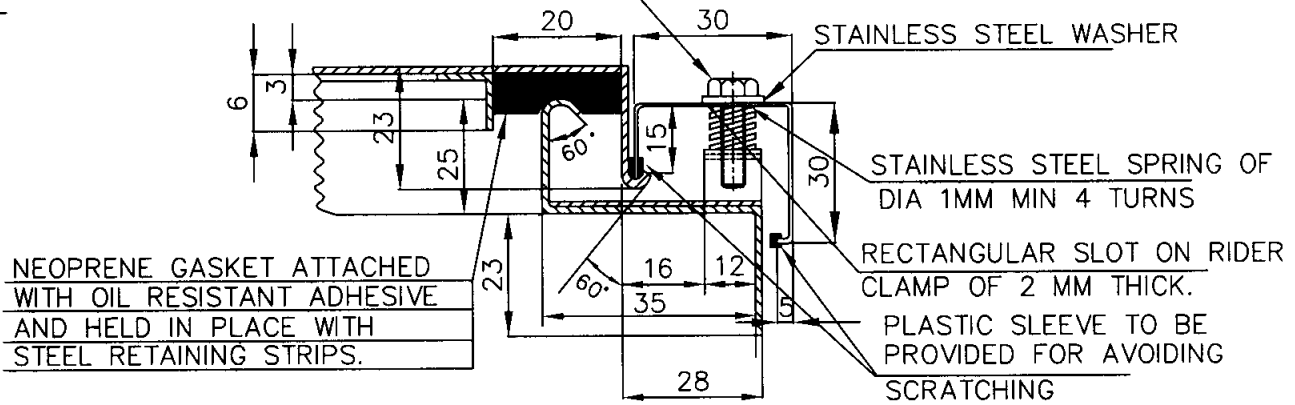
TECI: GCJB: 007: REV 00
PAGE 10 OF 10



DETAIL - B

DOOR HINGE ARRANGEMENT

STAINLESS STEEL M6X20 BOLT WITH RECESS ON TOP FOR SCREW DRIVER AND WITH RETAINER WASHER TO PREVENT THE BOLT COMING OUT OF THE RIDER BRACKET



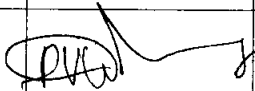
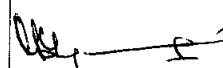
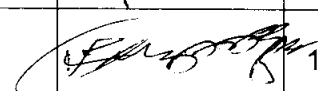
DETAIL - C

RIDER CLAMP ARRANGEMENT

NOTE:

- 01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS 4-00-114-23349 TO 4-00-114-23352 .

	BHARAT HEAVY ELECTRICALS LTD., UNIT: BOILER AUXILIARIES PLANT. RANIPET - 632 406.		DRN	NAME	SIGN	DATE	NO. OF VAR
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			APPD	MJM	<i>MJM</i>	18.05.11	
DEPT	ECI	GRADE OF UNTOL DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	ITEM NO.	NO. OF ITEMS
CODE			NTS	-	-		
TITLE				CARD CODE	DRAWING NO.	REV	
GENERAL ARRANGEMENT OF GALVANIZED CONTROL JUNCTION BOX				U 01	4-00-114-23353	00	

TITLE : TECHNICAL SPECIFICATION FOR BOUGHT ITEMS FOR ESP				
ITEM : GALVANIZED POWER JUNCTION BOX				
PROJECT : BHEL STANDARD				
NAME		DESIGNATION	SIGNATURE	DATE
PREPARED	PVD MURTHY	SAE		18.05.2011
CHECKED	M.JEYAMURUGANAND	SM		18.05.2011
APPROVED	S.JAYAPRAKASAM	AGM		18.05.2011
ISSUED BY				
EDC – ECI				
REVISION NO :00	INITIAL RELEASE			18.05.2011

1.0 SCOPE OF SUPPLY:

The scope of supply of Junction box includes manufacturing, inspection, testing, packing and delivery of junction Boxes (galvanized) as per this specification and attached drawings.

2.0 APPLICATION:

The junction boxes are used in power station to interconnect various field-mounted electrical equipments pertaining to boiler auxiliaries.

3.0 APPLICABLE STANDARDS:

The Junction boxes shall be manufactured and tested as per the following standards.

- IS 13947 - Low voltage Switchgear and Control Gear specification.
- IS 6005 - Code for Practice for Phosphate Coatings of Iron & Steel.
- IS 694 - PVC insulated Cables for working voltages upto and including 1100 specification

4.0 SITE CONDITIONS:

- 4.1 Ambient temperature : 1 Deg.C to 50 Deg.C
- 4.2 Relative humidity : 100% RH
- 4.3 Atmospheric condition : Highly dusty, abrasive and polluted, conducive to fungus growth, climate is tropical. Environment is as prevalent in a coal fired thermal power station.
- 4.4 Design temperature : 50 Deg.C
- 4.5 Location : Out door

5.0 GENERAL REQUIREMENTS:

- 5.1 Enclosure material : 2 mm Cold rolled sheet steel
- 5.2 Material of Removable gland plate : 3mm Hot rolled sheet steel
- 5.3 Material of continuous hinge pin, rider clamp, rider spring, washers & rider bolt. : SS 316
- 5.4 Pre Treatment of sheet steel : Seven tank process as per IS 6005.
- 5.5 General construction : As per drawings forming part of this specification.
- 5.6 Enclosure protection : IP 55 as per IS 13947

-
- | | | | |
|------|--|---|--|
| 5.7 | Terminal block type & arrangement | : | ELMEX or equivalent type of BHEL approved make mounted on DIN rail. |
| 5.8 | Terminal block insulating material | : | Melamine |
| 5.9 | Terminal block voltage grade | : | 650 V (Minimum) |
| 5.10 | Door Gasketing | : | Neoprene gasket 6 mm thick of shore hardness 20 to 30 & density 0.4 gm/cc shall be provided on all mating surfaces. |
| 5.11 | Gland plate Gasketing | : | Neoprene gasket 3 mm thick of shore hardness 30 to 40 & density 0.4 gm/cc shall be provided on all mating surfaces. |
| 5.12 | Door Opening | : | Suitable for 180 ° opening. |
| 5.13 | Lug type | : | Annealed tinned solder less crimping type copper lugs shall be provided for all the terminals on both sides. Lug type shall be as mentioned in attached drawing. |
| 5.14 | Cable Gland type | : | Nickel chromium plated Brass Double Compression type cable glands fixed on the gland plate, with dummy plugs. |
| 5.15 | Cable Gland size & quantity | : | As per attached drawing |
| 5.16 | Number of earthing terminals | : | Two as per attached drawing. |
| 5.17 | Size & location of earthing terminals | : | As per attached drawing |
| 5.18 | Location of earthing symbol | : | Just above the earthing terminal. Symbol to be black lines on yellow background. |
| 5.19 | Rated voltage grade of junction box | : | 415V |
| 5.20 | Mounting fasteners | : | 4 sets of chromium plated bolts, nuts and spring washers for mounting the JB shall be supplied. |
| 5.21 | All seams are to be continuously welded. There shall be no holes or sockets on top and sides. The enclosure box shall meet hose proof and weather proof requirement. | | |
| 5.22 | Suitable DIN rails along with clamps and screws shall be provided for terminal block mounting. All terminals are to be numbered serially by suitable identification label of PVC material in white background with black numbers. Terminal blocks shall be fixed to T.B supporting DIN rail by means of suitable end plates with screws. | | |
| 5.23 | Stickers have to be fixed over the cable glands to indicate the cable size. | | |

- 5.24 Rolled lip shall be provided around three sides of door and around all sides of enclosure opening. This lip is to increase the strength and to keep dirt and liquid from dropping into the enclosure when the door is opened.
- 5.25 Non rusting name plate of 2 ply lamicoid in white colour with the following inscription in black letters shall be fixed to the name plate mounting bracket on top of the junction box with plated screws.

EP JUNCTIONBOX (POWER) VAR *
BHEL/BAP/RANIPET

* - As applicable

The name plate indicating the name of the supplier shall be provided on the door. Name plate shall contain vendor details like year of manufacture, weight of the job, BHEL PO number, & date.

- 5.26 The different variants of JB shall have dimensions & cable glands as per the following table.

VARIANT	INCOMING					OUTGOING				
	CABLE SIZE (AL)	CABLE GLAND		T.B. TYPE	LUG TYPE	CABLE SIZE (CU)	CABLE GLAND		T.B. TYPE	LUG TYPE
		SIZE	QTY				SIZE	QTY		
P1	3C-16 SQMM	CBW 03 CBW 04	02 02	CST-16	CP8	2C-2.5 SQMM	CBW 01	10	CST-10	CPI 19
P2	3C-35 SQMM	CBW 05	02	CBT-110	CUS12	2C-2.5 SQMM	CBW 01	12	CST-10	CPI 19
P3	3C-70 SQMM	CBW 07	02	CBT-170	CUS18	2C-2.5 SQMM	CBW 01	12	CST-10	CPI 19

- 5.27 The un-toleranced dimensions shall be as per IS 2102.
- 5.28 For cable glands, lugs & TBs, the type reference indicated in above table is that of a particular manufacturer. Equivalent type of cable glands, lugs & TBs of other BHEL approved makes given in this specification can also be used.
- 5.29 Alternate arrangement of fixing the gland plate to the bottom of the Junction box by suitable steel, zinc plated rivet nuts is also acceptable in which case the make of rivet nut and fixing arrangement is subject to BHEL approval. Make shall be BOLLHOFF, Germany or equivalent.
- 5.30 Terminal block to supplied and mounted by vendor. Terminal blocks are to be mounted horizontally. Suitable din rail/base for mounting terminal shall be provided. All terminals are to be identified by suitable identification label the strip shall be of PVC white background with black letters.

- 5.31 Bolts and nuts required for mounting the junction boxes and fittings are to be electro galvanised and supplied by the vendor.
- 5.32 Internal looping shall be made with 1100v grade PVC insulated stranded copper conductor cable and termination with crimping type annealed tinned copper lugs of Dowells make.
- 5.33 Earthing bolts and nuts with rose courtney washer shall be provided at opposite points on outside of the junction box body with earth symbol made of aluminium.
- 5.34 The lugs shall be flat pin crimping type for CST-10 outgoing terminals & tube terminal for CBT-110 & CBT-170 incoming terminals.
- 5.35 For external cable termination, two numbers lugs shall be fitted and supplied inn each terminal. The TB shall be suitable for terminating two lugs in a single block for both incoming and outgoing cables.

6.0 MAKE OF COMPONENTS

- 6.1 Terminal block : ELMEX / CONNECTWELL / TOSHA / CONTROLS & SWITCHGEAR / WAGO / ESSEN.
- 6.2 Crimping type lug : DOWELLS / JAINSON / LOTUS .
- 6.3 Cable glands : COMET / BRACCO / ARUP ENGG. / QPIE / SUNIL & Co / SIEMENS / CONTROLS & SWITCHGEAR / SCHNEIDER.
- 6.4 PVC wires : ISI (BIS) APPROVED/CERTIFIED MAKES

7.0 GALVANIZING

- Galvanising of all sheet steel : As per IS 2629 & IS 4759.
- Amount of zinc coating : (i) 610gm/sq.m.
(ii) Min coating thickness on junction box shall not be less than 86 microns.

8.0 PACKING

Each JB shall be fully wrapped in a polythene cover to avoid water entry and then packed separately in cardboard box. Finally all such boxes shall be packed in a wooden crate.

9.0 DRAWING

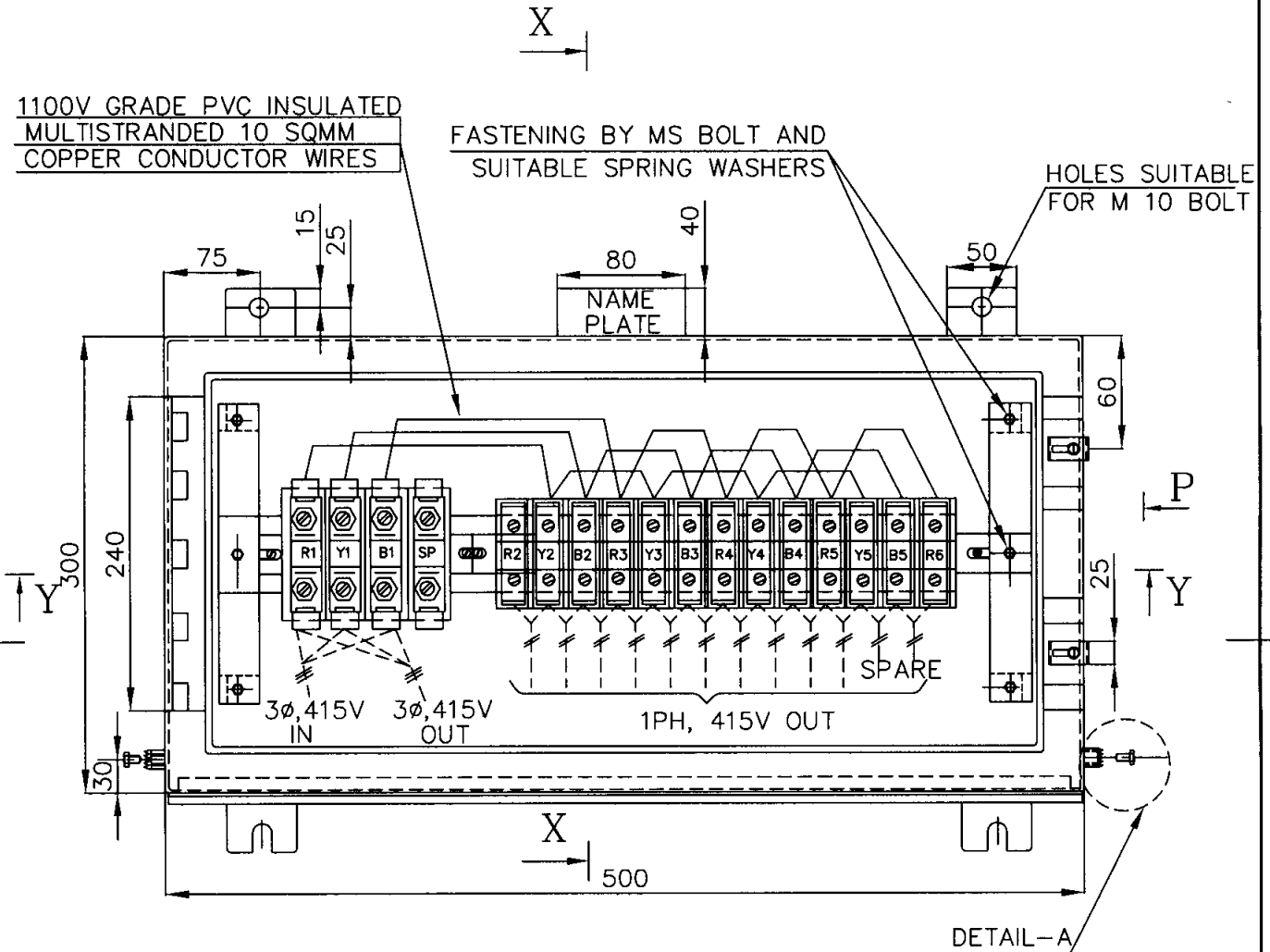
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REV	DATE	ALTERED
		CHECKED

ALL DIMENSIONS ARE IN MILLIMETRES

TECI: GPJB: 003: REV 00
PAGE 06 OF 10



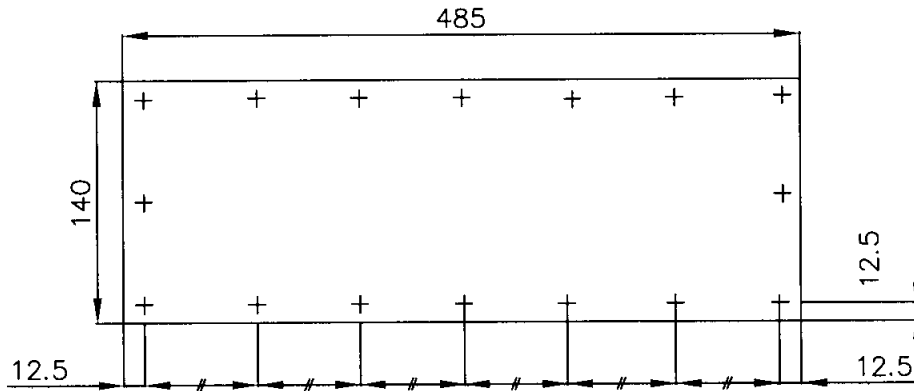
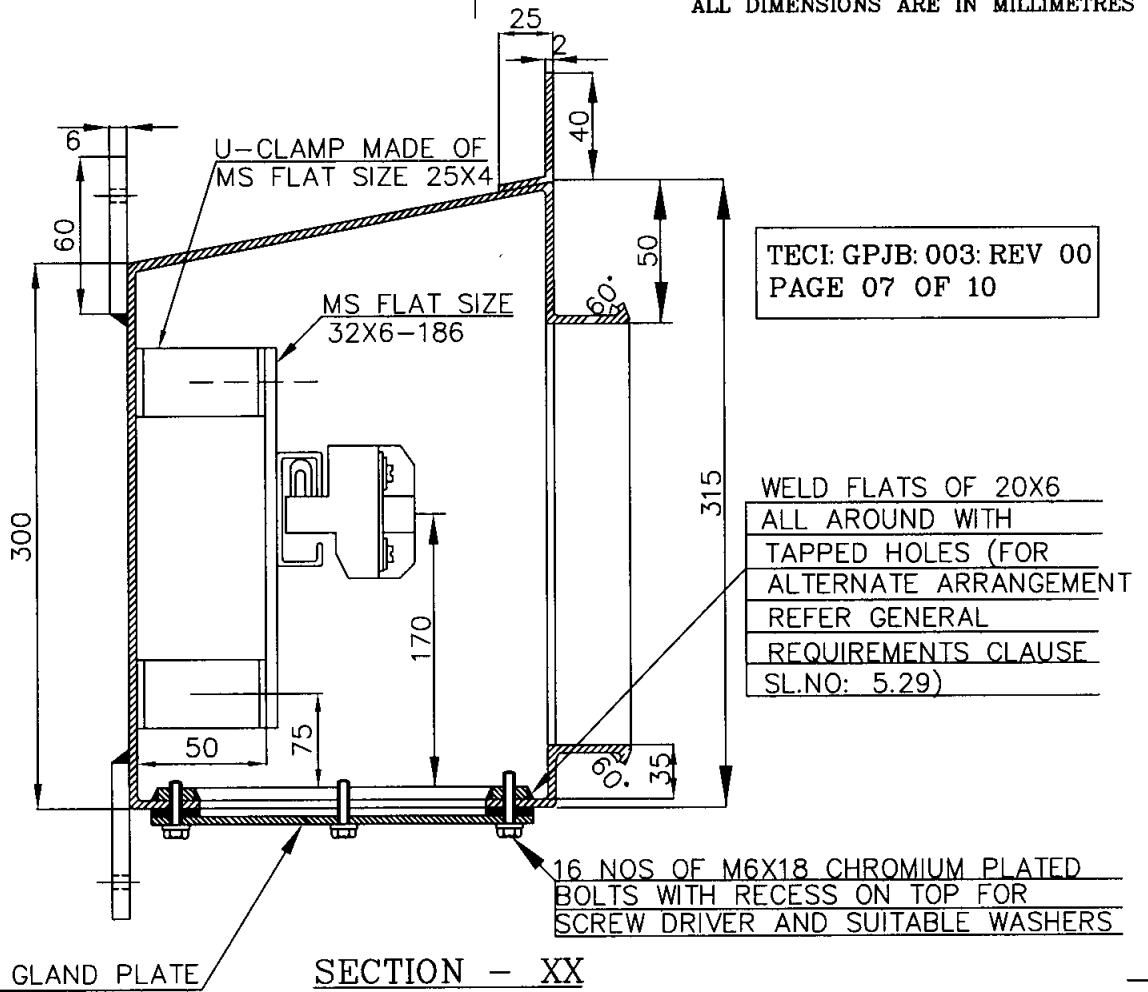
NOTE:

01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS 4-00-114-23345 TO 4-00-114-23348.

	BHARAT HEAVY ELECTRICALS LTD., UNIT: BOILER AUXILIARIES PLANT. RANIPET - 632 408.		DRN	NAME	SIGN	DATE	NO. OF VAR
			CHD	P.V.D	<i>[Signature]</i>	18.05.11	
			APPD	MJM	<i>[Signature]</i>	18.05.11	
DEPT ECI	GRADE OF UN TOL DIM	SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.		ITEM NO.	NO. OF ITEMS
CODE		NTS	-	-			
TITLE			CARD CODE	DRAWING NO.			REV
GENERAL ARRANGEMENT OF GALVANIZED POWER JUNCTION BOX			U 01	4-00-114-23344			00

CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.

ALL DIMENSIONS ARE IN MILLIMETRES



NOTE:

01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS 4-00-114-23344, 4-00-114-23346 TO 4-00-114-23348.

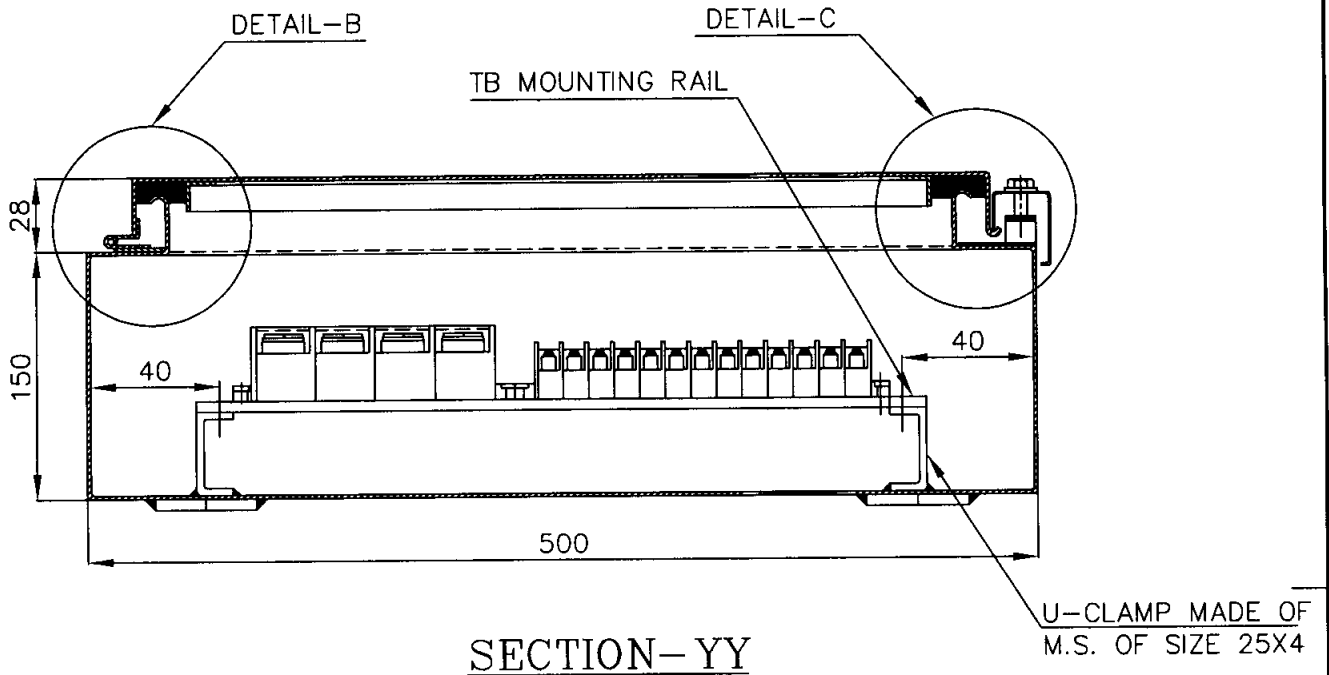
<p>BHARAT HEAVY ELECTRICALS LTD. UNIT: BOILER AUXILIARIES PLANT. RANIPET - 632 406.</p>		DRN	NAME	SIGN	DATE	NO. OF VAR
		CHD	PUSHPALATHA	<i>[Signature]</i>	18.05.11	
		APPD	P.V.D	<i>[Signature]</i>	18.05.11	
DEPT	GRADE OF	<p>SCALE</p>	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	ITEM NO.	NO. OF ITEMS
ECI	UNTOL DIM					
CODE		NTS	-	-		
TITLE			CARD CODE	DRAWING NO.		REV
GENERAL ARRANGEMENT OF GALVANIZED POWER JUNCTION BOX			U 01	4-00-114-23345		00

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REV	DATE	ALTERED
		CHECKED



ALL DIMENSIONS ARE IN MILLIMETRES

TECI: GPJB: 003: REV 00
PAGE 08 OF 10



NOTE:

01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS
4-00-114-23344 , 4-00-114-23345 , 4-00-114-23347 & 4-00-114-23348 .

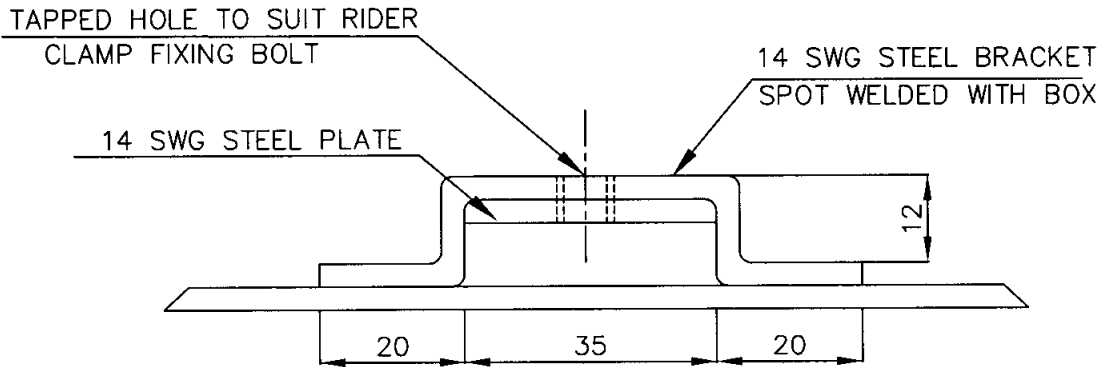
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			APPD	MJM	<i>MJM</i>	18.05.11	
DEPT ECI	GRADE OF UNTOL DIM		SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	ITEM NO.	NO. OF ITEMS
CODE		NTS		-	-		
TITLE				CARD CODE	DRAWING NO.		REV
GENERAL ARRANGEMENT OF GALVANIZED POWER JUNCTION BOX				U 01	4-00-114-23346		00

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REV	DATE	ALTERED
		CHECKED

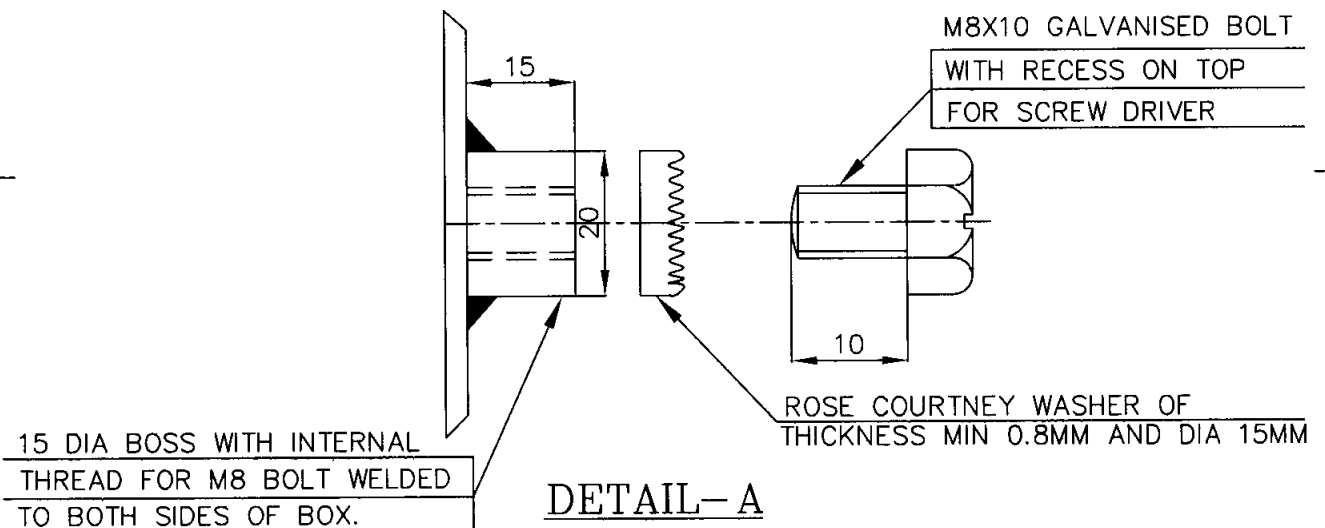
ALL DIMENSIONS ARE IN MILLIMETRES

TECI: GPJB: 003: REV 00
PAGE 09 OF 10



VIEW-P

(WITH RIDER CLAMP AND BOLT REMOVED)



DETAIL-A

EARTHING ARRANGEMENT

(TO BE LOCATED 30 MM FROM REAR OF BOX)

NOTE:

01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS
4-00-114-23344 TO 4-00-114-23346 & 4-00-114-23348.

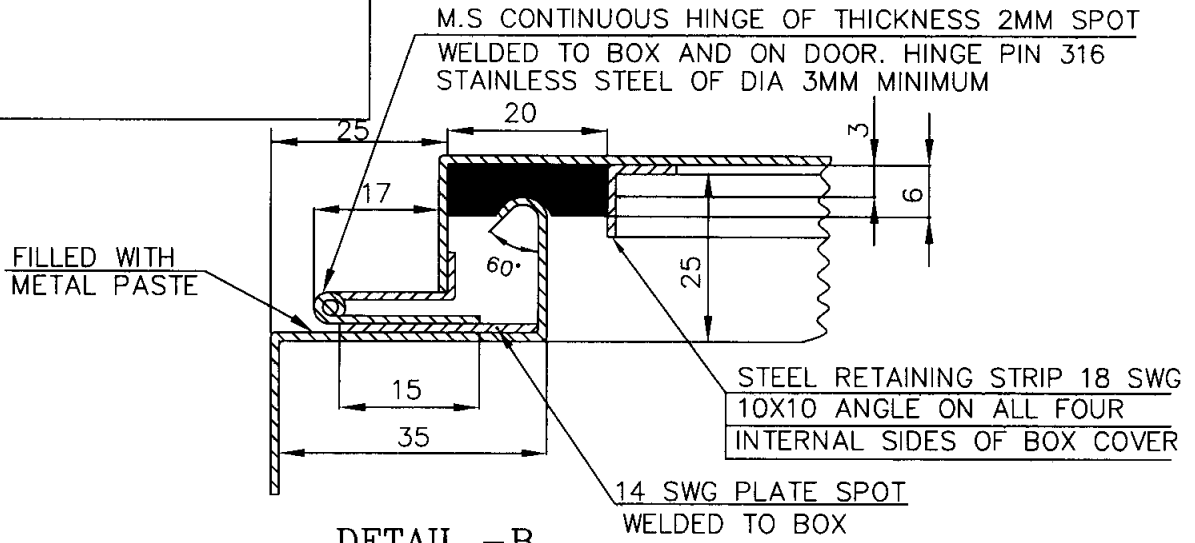
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			CHD	P.V.D	<i>[Signature]</i>	18.05.11	
			APPD	MJM	<i>[Signature]</i>	18.05.11	
DEPT ECCI CODE	GRADE OF UNTOL DIM	 SCALE NTS	WEIGHT (KG).	REF. TO ASSY./OLD DRG.		ITEM NO.	NO. OF ITEMS
TITLE GENERAL ARRANGEMENT OF GALVANIZED POWER JUNCTION BOX			CARD CODE U 01	DRAWING NO. 4-00-114-23347		REV 00	

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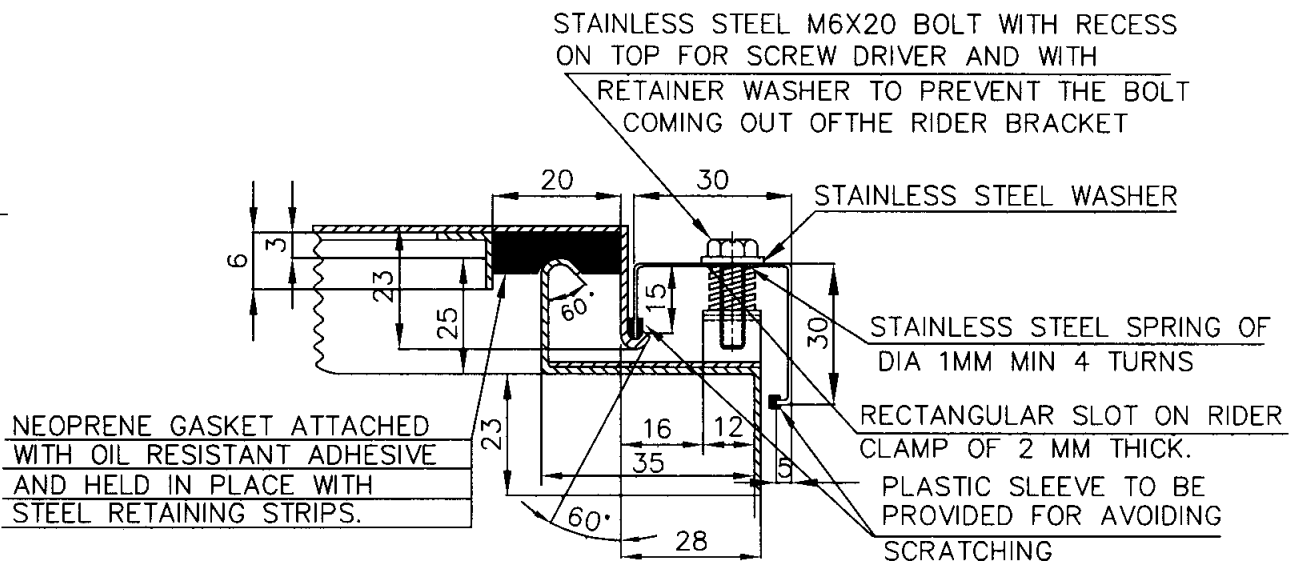
REV	DATE	ALTERED
		CHECKED

ALL DIMENSIONS ARE IN MILLIMETRES

TECI: GPJB: 003: REV 00
PAGE 10 OF 10




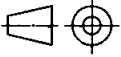
DETAIL - B
DOOR HINGE ARRANGEMENT



DETAIL - C
RIDER CLAMP ARRANGEMENT

NOTE:

01. THIS DRAWING SHALL BE READ ALONG WITH DRAWING NUMBERS 4-00-114-23344 TO 4-00-114-23347.

	BHARAT HEAVY ELECTRICALS LTD., UNIT: BOILER AUXILIARIES PLANT. RANIPET - 632 406.		DRN	NAME	SIGN	DATE	NO. OF VAR
			CHD	P.V.D	<i>P.V.D</i>	18.05.11	
			APPD	MJM	<i>MJM</i>	18.05.11	
DEPT ECI	GRADE OF UNTOL. DIM		SCALE	WEIGHT (KG).	REF. TO ASSY./OLD DRG.	ITEM NO.	NO. OF ITEMS
CODE			NTS	-	-		
TITLE			CARD CODE	DRAWING NO.		REV	
GENERAL ARRANGEMENT OF GALVANIZED POWER JUNCTION BOX			U 01	4-00-114-23348		00	