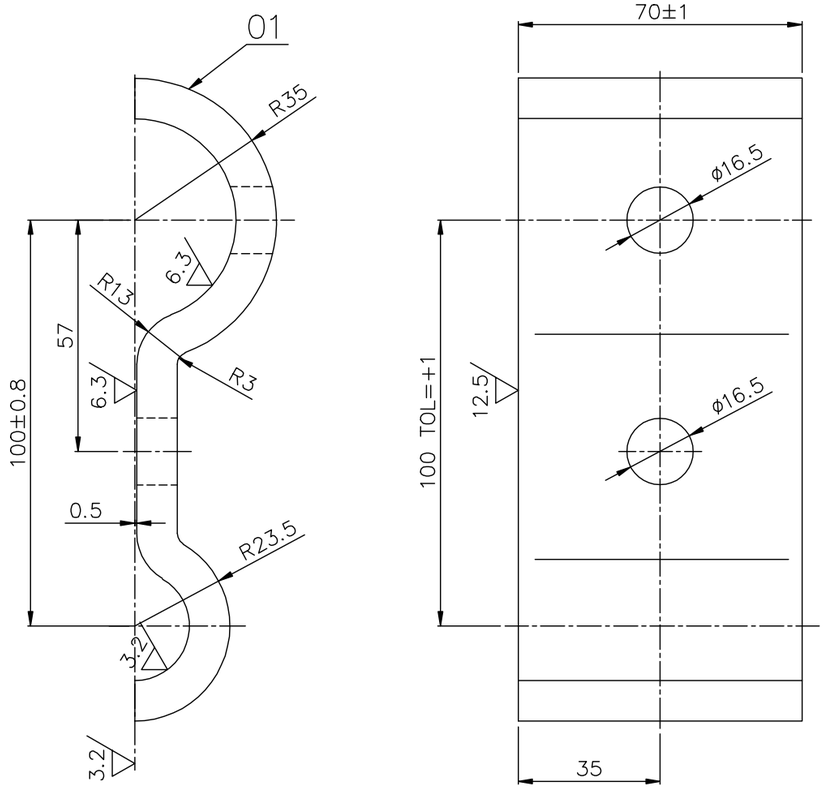
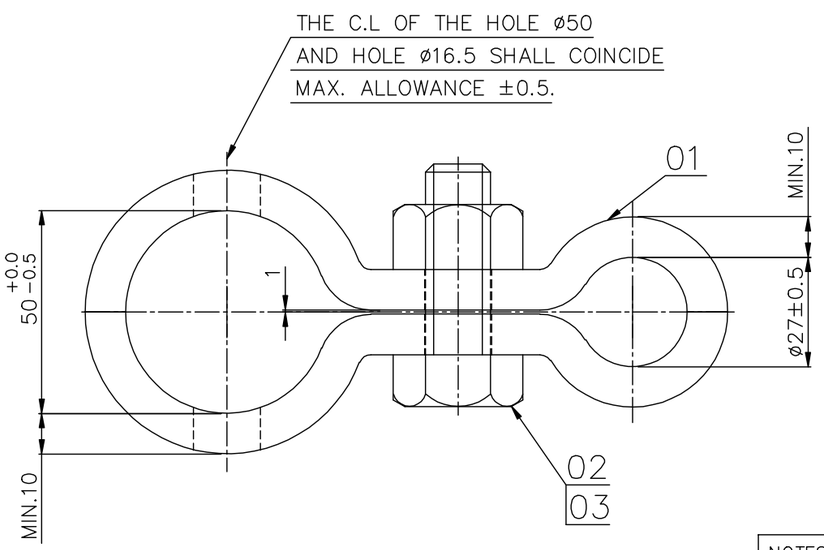
DRAWING NO.

ALL DIMENSIONS ARE IN MILLIMETRES

3.2 6.3 12.5





NOTES :–
01. FOR FABRICATION REFER RELEVANT QWI
02. FOR UN TOLERENCED DIMENSIONS REFER RELEVANT QWI

NOTE: –

01. MATCH MARKS TO BE PUNCHED ON BOTH HALVES OF INNER ARM ASSEMBLY.
02. INTERCHANGE OF ITEM NO.1 BETWEEN DIFFERENT INNER ARM ASSEMBLY 1:5 IS NOT PERMITTED.
03. THE INNER ARM IS TO BE PRESSED.
04. FACE AND BORE TO BE SQUARE WITHIN 1/2.

PAINTING: – 05

05. MANUAL OR MECHANICAL RUST REMOVAL METHOD SHALL BE FOLLOWED BEFORE PAINTING.
06. ONE COAT OF RED OXIDE ZINC PHOSPHATE PRIMER TO IS:12744 (VARNISH MEDIUM ALKYD) MIN DFT=30 AND TWO COATS OF SYNTHETIC ENAMEL PAINT TO IS:2932 MIN DFT=40. TOTAL DFT=70.

REV	DATE	ALTERED : A.PARASU
01	05.7.10	CHECKED : C.GANESH

NOTE 06 ADDED.

VAR NO.	ITEM NO.	DESCRIPTION	STD	DRAWING NO.	ITEM NO. / VAR NO.	MATL CODE / MATL SPECN	A/C	UNIT / DI	UNIT WT. / QTY.	G.S
	03	NUT HEX P M16				41320 00016 / IS 1364			0.033 / 2	
	02	SCREW HEX P M16X45				41238 16045 / IS 1364			0.100 / 2	
	01	FLAT 75X12–220 LONG				150081840000 / IS 2062			1.263 / 2	

TYPE OF PRODUCT
OR NAME OF
CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD.,
UNIT: BOILER AUXILIARIES PLANT.
RANIPET – 632 406.

	NAME	SIGN	DATE	NO.OF VAR.
DRN	K.A.PARASU	K.A. Parasu	03.07.2010	
CHD	C.GANESH			
APPD	C.GANESH			

DEPT	GRADE OF UNTOL.DIM	SCALE	WEIGHT (KG).	REF. TO ASSY/OLD DRG.	ITEM NO.	NO. OF ITEMS
AQCS	℄ / M / ✗		2.792	2–74–316–00146 3–79–016–00048		
CODE 862						

TITLE	CARD CODE	DRAWING NO.	REV
INNER ARM	U 01	6172–0030	01

Size A3

MASTER COPY

QUALITY DEPARTMENT

AMENDMENT TO QUALITY WORK INSTRUCTIONS (SQP)

QWI NO: QP:ESP:287 REV 00 DATE : 20 06 98
AMENDMENT NO. A 1 DATE : 18.09.00

DESCRIPTION: INNER ARM & OUTER ARM, SHOCK BARS, VERTICAL STAY, VERTICAL BEAM, SUPPORT BEAM AND HAND RAILS, RIDGES AND SHOCK BEAM.

DETAILS

CLAUSE NO	AMENDED AS	BASIS FOR AMENDMENT/ REMARKS
Note 3.4	This clause note3.4 is Added for Transver ridges: Transverse ridges (7X - X43) - only one joint in each member of the ridges is allowed after obtaining prior approval from engg.	Feed back from engg. (CTQ mom dt:29-4-200)

Prepared by	Reviewed by		Approved by
	Engg/AQCS		
	QC/OLI		
	QA		

MASTER COPY

QUALITY DEPARTMENT		
Amendment to Quality Work Instructions (SQP)		
QWI NO: SQP:ESP:287	REV:00	DT. 20/06/98
Amendment no: A 2		DT. 25/01/2001
Description: Inner arm & Outer arm, Shock Bars, Vertical Stay, Vertical Beam, Support Beam, Hand Rails, Ridges and Shock Beam.		

Details of Amendment

CLAUSE NO	AMENDED AS	BASIS FOR AMENDMENT
Note 4.1.1	E 6013 electrode shall be dried in baking oven at 120-130°C until they are used, if the packing were found to be damaged or the electrodes were kept exposed to atmosphere for prolonged period.	Feed back of CTQ MOM dt:12/10/2000

Prepared by	Reviewd by		Approved by
	Engg/AQCS		
	QC/OLI		
	QA	B. Srinivasan	

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BHEL RANIPET	STANDARD QUALITY PLAN FOR ESP(MECHANICAL)	
REF.NO.	REVISION NO.	EFFECTIVE DATE
QP:ESP:287	00	20 06 . 98

TITLE : INNER ARM & OUTER ARM,SHOCK BARS,VERTICAL STAY, VERTICAL BEAM,SUPPORT BEAM AND HAND RAILS,RIDGES AND SHOCK BEAM.

		SIGNATURE
PREPARED BY	:A ELANGOVAN/QA	
REVIEWED BY	:K NITHIANANDAM/QA	
	:P RAJASEKARAN/QC-OLI	
	:T. GNANAPRAKASAM/AQCS	
APPROVED BY	:H ANANTHANAYANAN/QA	

ISSUED & CONTROLLED BY :QUALITY ASSURANCE,BHEL,RANIPET-632406

DOCUMENT STATUS
ISSUED TO:
Mr

DEPARTMENT:

☐ INFORMATION COPY

☐ CONTROLLED COPY NO

MASTER COPY

NOTE:IT IS A CONTROLLED COPY ONLY IF THE MARKING AGAINST THE CONTROL COPY IS IN OTHER THAN BLACK COLOUR.OTHERWISE IT WILL BE AN UNCONTROLLED COPY.CHECK FOR CURRENT REVISION ALWAYS.

BHEL RANIPET	STANDARD QUALITY PLAN FOR ESP(MECHANICAL)	
REF.NO.	REVISION NO.	EFFECTIVE DATE
QP:ESP:287	00	20 06 98

TITLE : INNER ARM & OUTER ARM,SHOCK BARS,VERTICAL STAY, VERTICAL BEAM,SUPPORT BEAM AND HAND RAILS,RIDGES & SHOCK BEAM

RECORD OF REVISION

REF	DETAILS OF REVISION	DATE AMENDED/ REVISED
REVISION 00	TOTALLY REVIEWED. MERGED SQP:ESP 264, 267,268,270 & 275 ISSUED AS SQP:ESP:287	20 06 98

	MANUFACTURER'S NAME & ADDRESS	MANUFACTURING QUALITY PLAN	QP:ESP:287			STANDARD QUALITY PLAN
	BHARAT HEAVY ELECTRICALS LTD BOILER AUXILIARIES PLANT RANIPET - 632 406. (INDIA) QUALITY ASSURANCE DEPARTMENT	ITEM : INNER ARM & OUTER ARM SHOCK BARS, VERTICAL STAY, VERTICAL BEAM, SUPPORT BEAM, HAND RAILS, RIDGES & SHOCKBEAM	REV : 00 DATE: 20 06 98 PAGE: 03 OF 11			

S.No.	COMPONENT & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY *			REMARKS
									M **	C	E	
1	2	3	4	5	6	7	8	9	D*	10		11
1.0	RAWMATERIALS PLATES/ANGLES SQ,HALLOWS/ TUBES/CHANNEL BEAMS.ETC	CHEMICAL AND MECHANICAL PROPERTIES	MAJOR	REVIEW OF TC/RANDOM TESTING	EACH HEAT /LOT AS PER SPECI FICATION	RESPECTIVE MATERIAL SPECIFICATION AS PER THE DRAWING.		TC		V		RAW MATERIALS ARE TAKEN TO STOCK ON VERIFICATION OF TCs/RANDOM TESTING NOTE:$$(1)IN THE CASE OF SHOCK BARS HOLLOWS OF VERTIC AL BEAM NO JOINT IS PERMITTED FOR LENGTH BUILT UP OF ANGLE/FLAT. (2)VERTICALITY OF VERTICAL BEAMS SHALL BE VERIF IED AND CONTRO LLED WITHIN THE LIMITS.
2.0	INPROCESS CONTROL											
2.1	FLAME CUTTING END TRIMMING& FACING	LAMINATION, CRACKS, DIS-CONTINITIES& ENT SQUARENE SS ON CUT EDGES OF RAW MATERIALS	MAJOR	VISUAL	100%	AS PER AWS D1.1, DRAWING NO CRACKS & LAMINATIONS ARE PERMITTED		R		P	V	
2.2	PRESSING/ MARKING/DRILL ING/MACHINING	LENGTH, PROFI LE, RADIUS, HO LES LOCATION, SIZE, ORIENTA ION, PITCHES	MAJOR	MEASURE MENT/VERI FICATION IN FIXTURE VERIFICATI ON OF CHARACTERI CS (HAND RAILS)	100%	DRAWING		R		P	V	

LEGEND: * RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.
** M:MANUFACTURER/SUB-CONTRACTOR, C:CONTRACTOR/NOMINATED INSPECTION AGENCY, E:CUSTOMER.
R:REPORT, IR:INSPECTION REPORT "P" PERFORM "V" WITNESS AND HOLD VERIFICATION AS APPROPRIATE

MANUFACTURER'S NAME & ADDRESS	MANUFACTURING QUALITY PLAN	QP:ESP:287	STANDARD QUALITY PLAN
BHARAT HEAVY ELECTRICALS LTD BOILER AUXIALIARIES PLANT RANIPET - 632 406. (INDIA) QUALITY ASSURANCE DEPARTMENT	ITEM :INNER ARM & OUTER ARM SHOCK BARS,VERTICAL STAY, VERTICAL BEAM,SUPPORT BEAM, HAND RAILS,RIDGES&SHOCKBEAM	REV : 00 DATE: 20 06 95 PAGE: 04 OF 11	

S.No.	COMPONENT & OPERATION	CHARACTE-RISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY			REMARKS
										M **	C	E	
1.	2	3	4	5	6	7	8	9	D*	10			11
2.3	WELDING	a)PROCEDURE QUALIFICATION	MAJOR	REVIEW OF DOCUMENTS	100%	PRE QUALIFIED WELDING PROCEDURE AS PER AWS D1.1		R	P	V	V		
		b)PERSONNEL QUALIFICATION	DO	DO	100%	AWS D1.1		R		P	V	V	
2.4	NDT	[I]i)BUTT WELDS ON STRUCTURES SUPPORT BEAM	DO	LPI	#20%RANDOM	AWS D1.1		R		P	V	V	#:IN CASE OF DEFECTS %AGE SHALL BE INCREASED
		@ &ii)FILLET WELDS BETWEEN TUBES IN CASE OF PLAIN HAND RAILS	DO	LPI	#10%RANDOM	AWS D1.1		R		P	V	V	
		[II]i)FILLET WELDS ON STRUCTURES	DO	LPI	#10%RANDOM	AWS D1.1		R		P	V	V	NOTE:@ BUTT JOINTS ON TUBES TO BE DONE WITH &SHOP AND WELDED & THEN TO BE FLUSH GROUND
		& II)BUTT WELDS ON @ PLAIN HAND RAILS	DO	LPI	100%	AWS D1.1		R		P	V	V	

LEGEND: * RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.
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R:REPORT,IR:INSPECTION REPORT,"P" PERFORM,"W" WITNESS AND "V" VERIFICATION OF DOCUMENTS.
TC:TEST CERTIFICATES,"CHP"(CUSTOMER HOLD POINT):CUSTOMER SHALL IDENTIFY IN COLUMN "E"

MANUFACTURER'S NAME & ADDRESS	MANUFACTURING QUALITY PLAN	QP:ESP:237	STANDARD QUALITY PLAN
BHARAT HEAVY ELECTRICALS LTD BOILER AUXILIARIES PLANT RANIPET - 632 406. (INDIA) QUALITY ASSURANCE DEPARTMENT	ITEM :INNER ARM & OUTER ARM SHOCK BARS,VERTICAL STAY, VERTICAL BEAM,SUPPORT BEAM, HAND RAILS,RIDGES&SHOCKBEAM	REV : 00 DATE: 20 06 98 PAGE: 05 OF 11	

S.No.	COMPONENT OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY M **	C	E	REMARKS
1	2	3	4	5	6	7	8	9	D*	10		11
2.4	CONTD..	(1) FINISH AND SIZE	MAJOR	VISUAL & MEASUREMENT	100%	DRAWING		R		P	V	V	
2.5	HEAT TREATMENT & HARDNESS IN THE CASE OF OUTER ARM												
	HAMMER AND PLATE	HARDNESS	MAJOR	MEASUREMENT	AS PER IS 2500 PART I TL -III,AQL -4%	DRAWING		R		P	V	V	
3.0	DIMENSIONAL CONTROL												
		TUBE@ & THICKNESS,OVERALL DIMENSIONS OF ASSY,HOLES LOCATION, SIZE, ORIENTATION AS PER DRG. TWIST,BEND, STARIGHTNESS ##	CRITICAL	MEASURMENT. VERIFICATION IN FIXURE/ LAYOUT DEPENDING UPON THE CASE	100%	DRAWING		R		P	V	V	##:VERIFY FRAME ANGLE (@)(W.R.T FIXING PLATE) IN THE CASE OF HAND RAILS DURING FITUP ASSY

LEGEND: * RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.
** M:MANUFACTURER/SUB-CONTRACTOR,C:CONTRACTOR/NOMINATED INSPECTION AGENCY,E:CUSTOMER.
R:REPORT,IR:INSPECTION REPORT,"P" PERFORM,"W" WITNESS AND "V" VERIFICATION AS APPROPRIATE.
TC:TEST CERTIFICATES,"CHP"(CUSTOMER HOLD POINT):CUSTOMER SHALL IDENTIFY IN COLUMN "E"

MANUFACTURER'S NAME & ADDRESS	MANUFACTURING QUALITY PLAN	QP:ESP:287	STANDARD QUALITY PLAN
BHARAT HEAVY ELECTRICALS LTD BOILER AUXILIARIES PLANT RANIPET - 632 406. (INDIA) QUALITY ASSURANCE DEPARTMENT	ITEM :INNER ARM & OUTER ARM SHOCK BARS,VERTICAL STAY, VERTICAL BEAM,SUPPORT BEAM, HAND RAILS,RIDGES&SHOCKBEAM	REV : 00 DATE: 20 06 98 PAGE: 06 OF 11	

S.No.	COMPONENT / OPERATION	CHARACTE-RISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS	AGENCY M	C	E	REMARKS
									D*	10		
1	2	3	4	5	6	7	8	9				11
3.0	CONTD..	STRESS RELIEF GAP BET PLATES	MAJOR	TEMPERATURE CONTROL	100%	DRAWING		R	P	V		IN THE CASE OF SHOCK BARS OF FLAT TYPE $:WITH TEMP PLATE $$:SMALLER 6 BIG HOLES SHALL BE MACHINED KEEPING TWO HALVES TOGETH HAND DRILLING SHALL BE DONE IN FIXTURE
	IN THE CASE OF INNER ARM:											
	MACHINING/ DRILLING	DIMENSIONS/ FINISH $$	MAJOR	MEASURE MENT	100%	DRAWING		R	P	V	V	
	DIMENSION	OVERALL DIMN OF ASSY	MAJOR	DO	AS PER IS 2500 PART I IL-III,AQL 4%	DRAWING		R	P	V	V	
4.0	FINAL INSPECTION,SURFACE CLEANING AND PAINTING	MARKING AND PRESERVATION	MAJOR	VISUAL	100%	DRAWING,PAINTING SCHEDULE RP0674J99 LATEST,PBQA:590		R	P	V	V	
5.0	PACKING	STURDINESS OF PACKING, GROSS WRIGHT,NO OF PIECES INDICATION	MAJOR	VISUAL	100%	AS PER PACKING DRAWING		R	P	V	V	

LEGEND: * RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY CONTRACTOR IN QA DOCUMENTATION.
** M:MANUFACTURER/SUB-CONTRACTOR,C:CONTRACTOR/NOMINATED INSPECTION AGENCY,E:CUSTOMER.
R:REPORT,IR:INSPECTION REPORT,"P" PERFORM,"W" WITNESS AND "V" VERIFICATION AS APPROPRIATE.
TC:TEST CERTIFICATES,"CHP"(CUSTOMER HOLD POINT):CUSTOMER SHALL IDENTIFY IN COLUMN "E"

1.0 NOTE.1.0 GENERAL REQUIREMENTS

1.1 Any additional requirement for a specific contract shall be referred separately.

1.2 Raw materials used shall conform to the grades specified in the drawing & GMS.

1.3 Raw material shall be free from harmful visual defects like cracks,seams,laps,laminations,heavy pittings etc.

1.4 Fabricators shall check all the supplied raw materials for dimensions, bend , camber etc. , Straightening wherever necessary must be carried out before assy and welding.

1.5 Substitution of materials and Joints (For Support Beam) shall be done with the prior approval of EDC/AQCS.

1.5.1 No joint is permitted on the angle or flat to make up length in the case of shock bar. No joint is permitted to make up the length in the case of vertical beam and stay also.

1.6 Fabricator to impose sufficient process control,necessary stage inspection so that the components made are consistent in quality and conforms to the drawing and specification. It is the responsibility of the fabricator to adopt sufficient measures to avoid Non conformances.

1.7 Plates having deviations like bend, out of flatness etc shall be corrected before taking up for fabrication.

NOTE 2.0INPROCESS CONTROL

2.1 The general requirements for process control during fabrication are as detailed in QCP:002 (Latest) read along with amendment 1.

NOTE 3.0 MARKING,CUTTING AND PREPARATION

3.1 Angles, tubes, sheets,hollows, Channels, Plates and sheets shall be preferably machine or gas cut. Cut edges shall be dressed smooth to remove all the undulations. Gas cut notches if any shall be filled up and dressed. The edges shall be straight and square.

3.2 SHOCK BARS:Holes on angle meant for fixing huck bolt shall be marked correctly.Orientation,location of first hole ref back mark and pitches shall be verified in advance.In the plates holes shall be located at the centre of the plate. Centre of all holes in the angle shall be in one line. Holes can either be punched or drilled.

3.3 Profiles meant for fixing hand rail tubes shall be marked correctly. The profiles of the Ends of the Railings for joints shall be edge prepared with 45o correctly.

NOTE 4.0. WELDING REQUIREMENTS & WELD INSPECTION

4.1 Electrodes : E6013 Electrodes shall be used for Welding.

4.1.1 E6013 electrodes shall be dried in backing ovens at temperature 100o C , until they are used, If the packing were found to be damaged or the electrodes were kept exposed to atmosphere for prolonged period.

4.2 Pre qualified welding procedure as per AWS D 1.1 (Latest) shall be used.

4.3. Welders employed shall be qualified as per AWS D 1.1 latest . Welders qualified to other codes may also be permitted to carryout welding at the discretion of Inspection Engineers.

4.4 Fillet and butt welds shall be done with a minimum of two layers ,and 6mm fillet or less can be done in single run ensuring complete root fusion.

4.5 Sequence of welding shall be so chosen to balance applied heat and to minimise the distortion.

4.6 NDT as required shall be carried out on splice joints before cover plate welding.

4.7 Arc strike shall not be done straight on the job. Welder shall have a separate piece for striking the arc.

4.8 Weld procedures and welder's qualification are detailed in SIP:NP:07 (Latest)

4.9 All welds shall undergo thorough visual examination to detect the weld defects like undercuts, non-uniform beading,overlaps, excessive concavity or convexity etc.

4.10 Welds shall be neither undersize nor excess than specified, shall be as per drg. Smooth contour shall be maintained.

4.11 Only BHEL approved brands of electrodes shall be used.

4.12 Cleaning of the items shall be thoroughly examined before painting.

NOTE 5.0 FABRICATON AND TOLERANCES

1.) VERTICAL BEAM

5.1 The holes in the square tube shall be drilled right through in one setting.

5.2 The welding of angles with the square tube shall be done carefully maintaining perpendicularity. Welds of the angles with the square hollows shall be ground flush.

5.3 In the square hollows of 80x80 for vertical beams, the fabricator shall exercise proper care to ensure that the drilling is done on the sides where there is no weld seam.

5.4 The beam shall be straight throughout the length. Maximum out of straightness permitted 3mm,which is to be checked in the fixture.

.5 Maximum twist permitted in the vertical beam shall be 2mm.

.6 Hole pitches: within ± 1.0mm

2.) SUPPORT BEAM

.1a) All the dimensions like hole pitches and positions of lifting brackets shall be maintained with referance to the centre of the beam. Transverse centre line (Vertical axis) of the beam as well as centrelines of each bracket shall be punched.

.2b) Supporting beam shall be straight throughout the length. Camber or bow permitted 0.5mm/metre length limited to 5mm max.

.3c) The hole dia shall be within ± 0.5mm.

.4d) Position of holes on Web,with referance to flange shall not deviate more than ± 1mm from Specified.

5e) The total length of beam shall be within ± 3mm.

6f) The deviation on hole pitches must not Exceed ± 1mm.

3) SHOCK BARS

Following tolerances shall be applicable on different dimensions of the shock bar (Angle type)

a) Out of alignment of centre of the hole shall be max. 2mm
b) Shock bar angles shall be straight . Out of straightness shall be within 3mm (Max)
c) No twist is permitted.
d) Shock bar slots to be checked with templates for ensuring gap, width and length between flats(Flat type).

4) VERTICAL STAY

Following tolerances shall be applicable on different dimensions of the VERTICAL STAY
a) Length :+0.0/-2.0mm.
b) Both the ends of the vertical stay shall be in the same axis.Maximum out of alignment of the ends shall be within 2.0mm.
c) Out of straightness 1mm/metre limited to 3mm Max.
d) Both the ends shall be square to the tube axis.

pa

5) PLAIN HAND RAILS

Following tolerances shall be applicable on different dimensions of the plain hand rails.
a) Length ±3.0mm, b) Bow 2mm/metre and c) Notwist is permitted.

NOTE 6.0 CLEANING,PAINTING AND MARKING

6.1 All the finished products shall be thoroughly cleaned to remove burrs, weld slag, spatters,rust,grease and other foriegn materials.

6.2 Cleaned products except plain hand rails shall be coated with two coats of paints as indicated below.

1. A primer coat of red oxide zinc chrome primer confirmng to IS 2074 shall be applied. Minimum coating thickness of 1st coat 25 microns.

2. A finish coat of synthetic eanamel long oil alkyd confirming to IS 2932 (smoke grey shade) shall be applied. Minimum coating thickness of the 2nd coat 20 microns.

6.2.1 Cleaned plain hand rails shall be coated with two coats of paints as indicated below.

1. A primer coat of red oxide zinc chrome primer confirmng to IS 2074 shall be applied. Minimum coating thickness of 1st coat 25 microns.

2. A finish coat of black eanamel over the primer confirming to IS 2932 shall be applied. Minimum coating thickness of the 2nd coat 20 microns.

Adequate drying time is to be allowed between each coat.

6.3 MARKING

6.31 Each piece shall have the following details stenciled: Stenciling shall be covered with one coat of transperant varnish.

1. Sub-Contractors Code
2. W.O.Number
3. DU Number
4. Gross weight of the packing
5. Sl. No

NOTE 7.0 PACKING & PRESERVATION

7.1 All the products shall be packed as per the packing drawing mentioned in GMS.

7.2 Adequate support has to be provided during storage to avoid bending/sagging of vertical beams.

7.3 In each packing the following details shall be legibly stenciled at two places.
wo no: project: du no: Qty in packing:
weight of packing: Fabricator's code:

In addition to the above, sub contracter's code shall be welded/punched and bordered in white paint.

****