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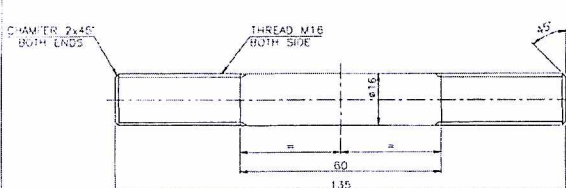
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

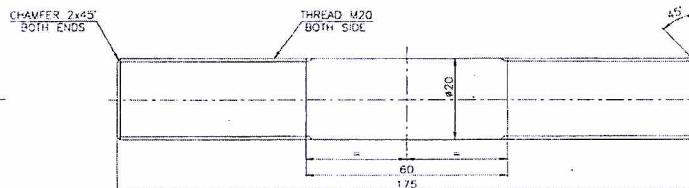
20190 03 892 3 'ON 'DRG

TECHNICAL REQUIREMENTS:-

1. THREAD TO IS: 4218-1967, COARSE PITCH TOLERANCE QUALITY- MEDIUM, TOLERANCE CLASS-6g.
2. ITEM 001 & 002 TO BE ZINC PLATED TO A40574603 & PASSIVATED TO A40573604 THICKNESS OF COATING SHALL BE 12 TO 15 MICRONS.
3. REMOVE BURRS & SHARP CORNERS.



① ✓ ALL OVER



② ✓ ALL OVER

VAR00	REMARKS	ITEM NO.	DESCRIPTION	DRAWING NO.	ITEM NO.	MATL. CODE	UNIT WT.
		002	STUD M20, 165x189 LG. STR. STEEL ROUND BAR.		AA1010208128		0.432
		001	STUD M16, 115x140 LG. STR. STEEL ROUND BAR.		AA10108		
					AA1010208080		0.213
					AA10108		

28 - CARD TYPE-3		28 - CARD TYPE-1		28 - CARD TYPE-2	
ADDITIONAL INFORMATION W.O.-36221 TO 26-A-231-63 STATUS OF DRAWING 'U' DISTRIBUTION OF PRINTS HGE - 2 TEX - 1 HGM - 2					
REVISIONS REV. DATE ALTERED BY 1. 01/01/01 01/01/01 01/01/01			APPROVALS DESIGNED BY: HGE CHECKED BY: HGE DRAWN BY: HGE SCALE: NTS WEIGHT: 403 32500001404		
PROJECT INFORMATION PROJECT NO: 32500001404 PROJECT NAME: STUD (FOR BUTTERFLY VALVE OF ARRGT. OF AIR & OIL COOLER CW PIPING)			MANUFACTURING INFORMATION MANUFACTURER: BHARAT HEAVY ELECTRICALS LTD. BHOPLAL HAK/ gsch bysHIV&dYI tyleVsk HAK/sky BHARAT HEAVY ELECTRICALS LTD. BHOPLAL		
CONTROL CONTROL NO: 3 263 03 05707 CONTROL DATE: 01/01/01			REVISIONS REV. NO. REV. DATE 1. 01/01/01 01/01/01 01/01/01		

GES. NO.-

A3 SIZE



QGX-9

Q A PLAN FOR- PIPES, FLANGES, PIPE ASSY. P.I. No. - SHEET 1 OF 1
 Q A PLAN NO. - QAX/HG/107 DT. 13/10/93 REV. 00 Dt. 13/10/93

SL NO	COMPONENT/ASSY. / OPERATION	CHARACTERISTICS	CLASS TYPE	QUANTUM OF CHECK	REF. DOC.	RECORD FORMAT	AGENCY	REMARKS
1.0	Raw material components as per dsg.	Material identification Chem. & Mech. properties Surface defects	Maj	Sample	dig	Supp. QC	Supp/BHT U	
		Dimensional	"	100%	"	TC	"	No pitting rust etc
			"	"	"	Supp QC record	"	
2.0	Welding	WPS/Procedure/performance Qualification	"	Review 100%	ASME-IX	Record	"	
3.0	Fit up	Edge preparation/Gap	"	UFI	"	dig	"	
4.0	Assy	Root & final run PT Dimensions on layout Visual check up	Cri maj	U U	" "	" "	" "	Straightness verticality
5.0	Final Inspection	Hydraulic Test	"	Test	"	Inspection report	Supp./BHEL	
		Pickling - Inside outside cleaning Pickling	"	U	BP-0690096	"	"	
		Uniforming of colour/shade Protection of ends.	"	"	"	dig	"	
Supplier to submit no. of copies of test certificates as mentioned in PO duly countersigned by QC or its authorised representative incorporating the following: a) Results of chemical, Mechanical properties. b) Hydraulic Test report. c) Dimensional record d) NDT reports e) Concession/deviation if any								
Abbreviation: U=Visual V=Dimensional, TC=Test Certificate, Maj=Majqr, Critical								

PREPARED BY

CHECKED BY

APPROVED

ANNEXURE – I
PI-340380555

Instruction for Supplier

1. Supplier have to confirm meeting all the technical requirement of drawings, and QAX/HG/107 clause by clause.
2. Guarantee of 48 months from the date of supply or 24 months after commissioning whichever is later to be given by the supplier.
3. Soft copy of the T.C, G.C. and packing list to be given on C.D. compliable with latest P.C. version along with 10 hard copies of presentable form.
4. Minor changes in layout during manufacturing of piping will have to be done by supplier free of cost.

BK Singh

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ANNEXURE-II
(P.I. NO.: 340380555)

A. INSTRUCTIONS FOR VENDOR

THE SET OF PIPING WILL BE INSPECTED AT THE VENDOR'S WORKS BY BHEL/CUSTOMER/CONSULTANT.

ALL PIPES, FLANGES, HARDWARE, SUPPORTS, ETC. SHALL BE BRAND NEW AND AS PER THE SPECIFICATIONS AND DRAWING. PIPES FABRICATED FROM SCRAP ARE NOT ACCEPTABLE.

ALL PIPING SHALL BE MANUFACTURED, TESTED, PACKED & SUPPLIED AS PER DRAWING & SPECIFICATIONS.

VENDOR SHALL SUBMIT A PACKING LIST OF EACH BOX INDICATING THE LIST OF ITEMS PACKED, WEIGHT OF BOX, SIZE OF BOX, ETC. TO HGE FOR APPROVAL BEFORE DISPATCH.

BOXES SHALL BE DESIGNED SUITABLY FOR THE WEIGHT AND SIZE OF THEIR CONTENTS.

FABRICATED BENDS, ELBOWS, ETC. ARE ACCEPTABLE IF STANDARD FITTINGS ARE NOT AVAILABLE.

ALL HARDWARE SHALL BE STANDARD QUALITY AND SHALL BE ZINC/NICKEL/CADMIUM PLATED. THE PLATING THICKNESS SHALL BE 13 TO 15 MICRONS.

B. PACKING

1.0 GENERAL

THIS SPECIFICATION COVERS THE PACKING OF C.W. PIPING FOR HYDRO GENERATOR. THE PIPING WILL BE PACKED IN WOODEN BOXES AND SENT BY ROAD TO THE POWER HOUSE.

2.0 TIMBER

THE TIMBER USED FOR PACKING SHALL BE OF A GOOD QUALITY SUITABLE FOR LONG TERM STORAGE (OF 5 YEARS).

3.0 LINING OF PACKING CASES

3.1 THE FOUR SIDES, THE BASE & THE TOP WILL BE LINED ON THE INSIDE WITH A SILPAULIN OR POLYTHENE (AT LEAST 100 MICRONS THICK) SHEET TACKED AT SUITABLE PLACES.

3.2 IN ADDITION TO THE ABOVE THE TOP COVER OF THE BOX WILL HAVE A LAYER OF POLYTHENE ADDED OVER THE COVER WHICH WILL PROJECT ABOUT 150 MM ON ALL SIDES.

4.0 METHOD OF PACKING

4.1 THE PIPES INSIDE THE BOX SHALL BE SECURED IN SUCH A WAY THAT THERE IS NO RELATIVE MOVEMENT AMONG THE PIPES AND BETWEEN THE PIPES AND THE BOX.

BK sirsh

4.2 THE PIPES, FLANGES, HARDWARE, GASKETS, ETC. SHALL BE PACKED IN SEPARATE BOXES.

4.3 PIPE-ENDS SHALL BE PLUGGED WITH WOODEN BLANKS TO PREVENT ENTRY OF DIRT & WATER.

5.0 PACKING LIST

5.1 INSIDE THE CASE, THE PACKING LIST SHALL BE PUT IN A POLYTHENE BAG NAILED TO THE TOP OF THE SIDE WALL. THE LIST SHOULD BE EASILY VISIBLE & ACCESSIBLE.

5.2 OUTSIDE THE CASE, THE PACKING LIST SHALL BE PUT IN A POLYTHENE BAG COVERED WITH A SHEET METAL COVER AND NAILED TO THE TOP OF THE SIDE WALL.

6.0 CLOSING THE TOP COVER

PLACE THE TOP COVER IN SUCH A WAY THAT, SILPUALINE PROJECTS OUTSIDE THE CASE. NAIL THE TOP COVER & SILPUALIN SECURELY AROUND THE CASE.

7.0 STRAPPING OF THE CASE

7.1 STEEL STRAP 20/25 MM WIDE TO IS:5872-1990 SHOULD BE STRAPPED AROUND THE CASE, TENSIONED & CRIMPED. THERE SHOULD BE AT LEAST TWO STRAPS PER CASE. THESE STRAPS SHOULD BE ACROSS THE TOP COVER.

7.2 USE 20/25 MM, WIDE/CORNER STRAPS TO IS:5872-1990 WHEREVER NECESSARY.

8.0 MARKING

THE CASE SHALL HAVE THE FOLLOWING INFORMATION MARKED ON IT.

- (a) SLINGING POSITION INDICATOR, IF WEIGHT EXCEEDS 2 TONNES.
- (b) UPRIGHT POSITION INDICATOR
- (c) ADDRESS OF CONSIGNEE
- (d) CASE IDENTIFICATION NUMBER
- (e) DIMENSIONS OF CASE (INSIDE) L.....B.....H.....
- (f) WEIGHT: NET.....GROSS.....

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