



REQUIREMENT OF PARKER UNION, ADAPTER, FILTER ELEMENT, ROTARY JOINT

The Heavy Electricals Equipment Plant (HEEP) located in Haridwar, India is one of the major manufacturing plants of Bharat Heavy Electricals Ltd. The core business of HEEP includes design and manufacture of large steam and gas turbines, turbo generators, Defense Items and so on.

Details of items details as below:

Sl. NO.	MAT CODE	ITEM DISCREPTION	Quantity (Nos)	Delivery (Days)
1	W97010201099	UNION,MODEL NO 1515.01 OF RUAL OR EQUIVALENT HAVING MATERIAL :AISI PASSIVATED CRES BODY, SEAL:TEFLON,PERFORM WATERTIGHT TEST AT 35 BAR, PERMITTED MISALIGNMENT: 3 TO 4 MM N.STD:- SIZE: P/N 137618071	6	45
2	W97010201102	ADAPTER, TUBE AS PER DWG 137618809, MODEL 1519 OF RUAL OR EQUIVALENT SIZE: P/N 137618809 DIM.: -	8	45
3	W97011418024	FILTER ELEMENT WELDING/ FABRICATE AS PER DWG NO 127618166 SIZE: P/N 127618166	3	45
4	W97035701028	ROTARY JOINT, MODEL NO 254-000-110 OF DEUBLIN, MADE OF STAINLESS STEEL, SALT WATER PRESSURE 10 ATM, MAX TEMP 121 DEGREE CELCIUS, MAX SPEED 1000RPM OR EQUIVALENT SIZE: P/N 137618764	3	45

1. ALL VENDORS TO PROVIDE POINT WISE REPLY/CONFIRMATION ALONG WITH RELEVANT SUPPORTING DOCUMENTS TO EACH AND EVERY POINT OF PRE-QUALIFICATION REQUIREMENT/PQR FOR ALL ENQUIRY ITEMS. NONCOMPLIANCE OF THESE MAY LEAD TO REJECTION OF OFFER AS THESE ARE ESSENTIAL CONDITION FOR PARTICIPATING IN TENDER ENQUIRY
2. KINDLY UPLOAD/ATTACH THE SPECIFICATION DETAILS/ CATALOGUE OF OFFERED ITEMS.
3. KINDLY SUBMIT TECHNICAL PARAMETERS CHECK LIST ALONG WITH YOUR OFFER.
4. KINDLY SUBMIT TECHNO-COMMERCIAL CHECKLIST ALONG WITH YOUR OFFER.
5. VENDOR TO CONFIRM TO PROVIDE MATERIAL AND DIMENSIONAL TEST CERTIFICATES OF MATERIALS AS PER ENQUIRY DOCUMENTS ALONGWITH THE MATERIALS.

6. VENDOR TO CONFIRM TO PROVIDE TECHNICAL DATASHEET OF UNION, ADAPTER TUBE AND ROTARY JOINTS.
7. VENDOR TO CONFIRM TO PROVIDE LEAK TEST REPORT OF UNION.
8. VENDOR TO CONFIRM TO PROVIDE CERTIFICATE OF CONFORMANCE ALONG WITH MATERIAL DISPATCH.
9. VENDOR TO CONFIRM TO PROVIDE IDENTIFICATION AS PER SPEC. HW0400397 AND SUBSEQUENT REPORT ACCORDINGLY.
10. EARLY DELIVERY IS ACCEPTABLE.

QUALIFYING CONDITIONS for UNION, ADAPTER TUBE AND ROTARY JOINTS

Following can quote:

- a. Manufacturers
- b. Authorized dealer/distributor
- c. Stockiest
- d. Suppliers

Sl.	PQR Requirement	Vendor Response	Vendor Response (Yes / No / Enclosed)
1.	who can manufacture or supply UNIONS, ROTARY JOINTS, ADAPTER TUBE ETC as per International make or their equivalent indigenous make.	Vendor to confirm	
2.	Vendor to submit Authorization Certificate from OEM in case of authorized dealer/distributor.	Vendor to submit	
3.	who can provide Technical Datasheet along with supplies	Vendor to confirm	
4.	who can provide Certificate of Conformance (COC) (<i>also known as Certificate of Conformity or Certificate of Compliance</i>)	Vendor to confirm	
5.	<i>Point numbers 1 to 4 are the Mandatory Qualification Requirements. Offers of vendors not meeting these requirements will NOT be considered.</i>	Vendor to accept	

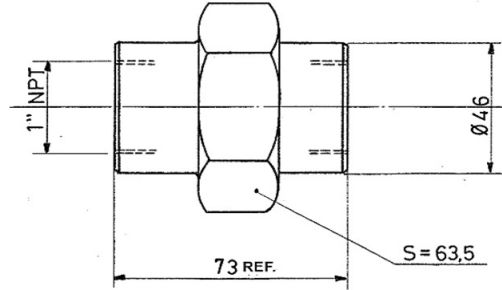
QUALIFYING CONDITIONS for FILTER ELEMENT

Sl.	PQR Requirement	Vendor Response	Vendor Response (Yes / No / Enclosed)
1.	who are capable to manufacture or supply FILTER ELEMENT WELDING/ FABRICATE AS PER DWG	Vendor to confirm	
2.	who can provide Certificate of Conformance (COC) (<i>also known as Certificate of Conformity or Certificate of Compliance</i>)	Vendor to confirm	
3.	who can provide Material Test Certificate from NABL/ any government approved lab/OEM certified lab	Vendor to confirm	

AGM/DPE

TECHNICAL PARAMETERS CHECK LIST
DATA VALUES TO BE FILLED AND CONFIRMED BY VENDOR

ITEM CODE W97010201099
DESCRIPTION UNION
ITEM PART NUMBER P/N 137618071



OBTAINED FROM RUAL DRAWING 1515.01

* All dimension are in MM

SN.	DESCRIPTION	TECHNICAL PARAMETERS	RESPONSE TYPE	VENDOR RESPONSE (Parameters of offered item to be filled by vendor)
1	MATERIAL	STEEL AISI 316	Input Value →	
2	SEAL MATERIAL	TEFLON	Input Value →	
3	DIMENSIONS	AS PER DRAWING	To confirm →	
4	LENGTH	73 MM	Input Value →	
5	END DIAMETERS	46 MM	Input Value →	
6	END-1 THREAD	1 "NPT	Input Value →	
7	END-2 THREAD	1 "NPT	Input Value →	
8	WRENCH KEY	63.5 MM	Input Value →	
9	LEAK TEST	TO PERFORM AT 35 BAR FOR 2 MIN	To confirm →	
10	OVERALL FINISH	PASSIVATED	To confirm →	
11	CERTIFICATION	LEAK TEST REPORT	Confirm to supply →	
12	CERTIFICATION	Certificate of Conformance / Compliance (COC)	Confirm to supply →	
13	VENDOR REMARKS: Vendor to give here details of quoted item and deviations, if any. Specify the Make >> and Model quoted. >> Deviation, if any >>			

NOTE::

VENDOR ARE REQUESTED TO KINLDY FILL THE VALUES AGAINST "INPUT VALUE"
AND CONFIRM AS YES OR NO AGAINST "TO CONFIRM"

TECHNICAL PARAMETERS CHECK LIST
DATA VALUES TO BE FILLED AND CONFIRMED BY VENDOR

ITEM CODE W97010201102
DESCRIPTION ADAPTER, TUBE AS PER DWG
 47821813809 (137618809)
ITEM PART NUMBER 137618809

SN.	DESCRIPTION	TECHNICAL PARAMETERS	RESPONSE TYPE	VENDOR RESPONSE <i>(Parameters of offered item to be filled by vendor)</i>
1	MATERIAL	STEEL AISI 316	Input Value →	
2	DIMENSIONS	AS PER DRAWING 47821813809 (137618809)	To confirm →	
3	OVERALL FINISH	PASSIVATED	To confirm →	
4	CERTIFICATION	Certificate of Conformance / Compliance (COC)	Confirm to supply →	
5	<p>VENDOR REMARKS: Vendor to give here details of quoted item and deviations, if any.</p> <p><i>Specify the Make >> and Model quoted. >> Deviation, if any >></i></p>			

NOTE::

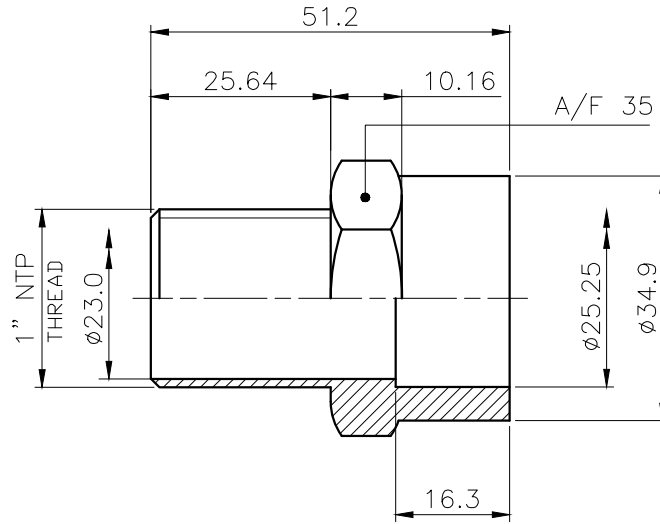
VENDOR ARE REQUESTED TO KINLDY FILL THE VALUES AGAINST "INPUT VALUE"
AND CONFIRM AS YES OR NO AGAINST "TO CONFIRM"

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED	REV	DATE	ALTERED	CBOM 17821818002/00		STATUS OF DRG U	
		CHECKED			CHECKED				
ZONE			ZONE			AGREED DEPT	NAME	SIGN	DATE
						DABG-	SUMIT	Sd/	****

GRADE OF UNTOL.DIM M/CG. ϕ /M/R -AA0230208 WELDING χ /B/ ϕ /D AA0621104 GAS CUTTING-T3 AA0621101

1.6/ ALL OVER EXCEPT OTHERWISE STATED



TECH. REQUIREMENT

1. IDENTIFICATION OF ITEM SHALL BE DONE AS PER HW0400397.
2. FINAL PROTECTIVE FINISH AS PER SPEC HW0986098 (RS-6).

GENERAL TOLERANCES LINEAR DIMENSIONS UP TO 18 ±0.15 > 18 TO 80 ±0.25 > 80 ±0.4 ANGLES ±30'	CASTING TOLERANCES LINEAR DIMENSIONS ±(0.5%+1MM) THICKNESS ±8% (MIN. ±0.5mm) ANGLES ±2'	FORGING TOLERANCES LINEAR DIMENSIONS UP TO 18 +0.5-0.3 > 18 TO 80 +1 -0.5 > 80 +2 -0.8 ANGLES ±1'	UNLESS OTHERWISE SPECIFIED ROUND EDGES 0.3 AND CHAMFER 0.3x45' SURFACE MARKED --- REQUIRE STOCK MATERIAL TO BE REMOVED AT ASSEMBLY
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BHARAT HEAVY ELECTRICALS LTD.
RANIPUR, HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	SANDEEP	Sd/-	13.06.2023	
CHD	RAHUL	Sd/-	13.06.2023	
APPD	SK SINGH	Sd/-	13.06.2023	


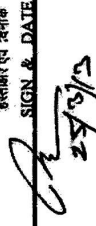
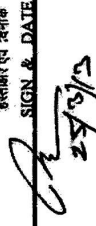
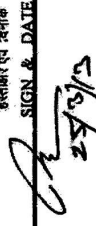

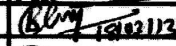


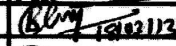


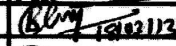



Inventory No.	DEPT DPE		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM No.	NO. OF ITEMS
	CODE 4260		NTS	0.1	37821813805/00	2	-
	TITLE : ADAPTER			CARD CODE	DRAWING NO. 47821813809		REV
	SRGM 76/62				-		
	SHEET No. 01		No. OF SHEETS 01				

A4 SIZE





PROPRIETARY DATA OF DTD MELARA SPA
 LIMITED RIGHTS OF TECHNICAL DATA
 THE TECHNICAL DATA SET FORTH HEREIN IS SUBJECT TO THE TERMS AND CONDITIONS OF THE LICENSE
 AGREEMENT BETWEEN DTD MELARA SPA AND BHARAT HEAVY ELECTRICALS LTD.
 THE TECHNICAL DATA CONTAINED HEREIN IS RESTRICTED AS TO USE, DUPLICATION OR DISCLOSURE
 AS PER TERMS AND CONDITIONS OF THE LICENSE AGREEMENT

Ref. Drawing No>
137618809-00


Sign & Date

दिनांक एवं हस्ताक्षर SIGN & DATE		संस्थान मानक (डीप - हार्डवार) PLANT STANDARD (HEEP - HARDWAR)	HW 0400397 पृष्ठ 6 का 1 Page 1 of 6																														
सारणी सूची संख्या को SUPERSEDES INVENT NO.	Based upon KUN 107.01																																
स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत हेतु हस्तक्षेपणकारी कानूनों के अन्तर्गत सुरक्षा एवं प्रसारण के लिए कानूनी रूप से सुरक्षित है। This information is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	<u>IDENTIFICATION OF WORK PIECES</u>																																
स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत हेतु हस्तक्षेपणकारी कानूनों के अन्तर्गत सुरक्षा एवं प्रसारण के लिए कानूनी रूप से सुरक्षित है। This information is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company.	1.0 PURPOSE OF STANDARD :																																
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दिनांक एवं हस्ताक्षर SIGN & DATE 	2.0 IDENTIFICATION:																																
दिनांक एवं हस्ताक्षर SIGN & DATE 	2.1 Extent of identification Work order No. Drawing No. Q No. IR No. Heat No. in case of castings/ forgings																																
दिनांक एवं हस्ताक्षर SIGN & DATE 	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;"></td> <td style="width:15%;"></td> <td style="width:15%;"></td> <td style="width:15%;"></td> <td style="width:15%; text-align: center;"> नाम NAME </td> <td style="width:20%; text-align: center;"> दिनांक एवं हस्ताक्षर SIGNATURE & DATE </td> </tr> <tr> <td></td> <td></td> <td></td> <td>अनुवादक TRANSLATED BY</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>निर्माणाकर्ता WORKED BY</td> <td>Lalit Kumar</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>जांचकर्ता CHECKED BY</td> <td>B. Choudhary</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td>पर्यवेक्षणकर्ता SUPERVISED BY</td> <td>Rajiv Verma</td> <td></td> </tr> </table>							नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE				अनुवादक TRANSLATED BY						निर्माणाकर्ता WORKED BY	Lalit Kumar					जांचकर्ता CHECKED BY	B. Choudhary					पर्यवेक्षणकर्ता SUPERVISED BY	Rajiv Verma	
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सारणी सूची संख्या INVENTORY NO. P-1709	सहमत विभाग AGREED DEPTT.	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	स्वीकृति : संस्थान मानक समिति APPROVED : PLANT STANDARDS COMMITTEE																													
(Supersedes)			GR.No. 1.10																														
दिनांक एवं हस्ताक्षर SIGN & DATE DE: 25.09.21	कार्यकर्ता WORK BY 	जांचकर्ता CHECK BY 	तैयार किया : PREPARED : TSX	जारी : मानक विभाग ISSUED : TSX	दिनांक : DATE : 03.08.1984																												

C/A NO: TSX (DPE)-21-311

दिनांक एवं हस्ताक्षर SIGN & DATE			<p style="text-align: center;">संस्थान मानक (हीप - हार्द्वार)</p> <p style="text-align: center;">PLANT STANDARD (HEEP - HARDWAR)</p>	<p style="text-align: right;">HW 0400397</p> <p style="text-align: right;">पृष्ठ 6 का 2 Page 2 of 6</p>			
सुपरसेड इन्वेंटरी SUPERSEDES INVENTORY	शपथी सूची सूचना को	<p>Material colour codes for ferrous materials as per corporate standard number AA0400305.</p> <p>Material colour codes or its abbreviation for aluminium & aluminium alloys as per corporate standard no. AA0400310.</p> <p>Material colour codes or its abbreviation for copper and copper alloys as per corporate standard no. AA0400310.</p> <p>Material test stamp as per quality assurance system no. SMI 301 (Material procurement control system)</p> <p>Supplier's number/ manufacture's symbol (if specified in order documents).</p> <p>Acceptance stamp of customer's representative (if agreed upon with customer).</p> <p>"All rough machined casting and forgings received at our works must be identified by the casting/ forging nos. stamped by the supplier based on numbers giving by BHEL on the indent. These identification number must be retransferred suitably at works on the casting/ forging in case they are removed due to further machining"</p>					
COPYRIGHT AND CONFIDENTIAL. The information on this documents is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company		<p>Material test stamp as per quality assurance system no. SMI 301 (Material procurement control system)</p> <p>Supplier's number/ manufacture's symbol (if specified in order documents).</p> <p>Acceptance stamp of customer's representative (if agreed upon with customer).</p> <p>"All rough machined casting and forgings received at our works must be identified by the casting/ forging nos. stamped by the supplier based on numbers giving by BHEL on the indent. These identification number must be retransferred suitably at works on the casting/ forging in case they are removed due to further machining"</p>					
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में की गई सूचना भारत हीवी इलेक्ट्रिकल्स की संपत्ति है। इसका प्रयोग केवल आन्तरिक रूप से किया जा सकता है। किसी भी तरह का प्रयोग, जो कि कंपनी के हित में हानिकारक हो, न किया जाए।		<p>2.2 Means of identification</p> <p>The identification is stamped on the part with a marking punch, except for the following:</p> <p>Sheet metal parts of $\leq 3\text{mm}$ thickness should be marked by electric engraver. Also wherever punching is not possible, admissible electric engraver can be used (see figure - 3)</p> <p>Not yet machined castings and forgings are to be marked with oil paint on the surface which will remain unmachined even after final machining as far as possible. After machining this identification must be replaced by punch marking.</p> <p>For identification marking example see pages 5.</p> <p>Smaller items such as fasteners M16 and below, machined parts of nipple connectors/ nut nipple set where punching/ engraving of identification details is not possible, the following procedure to be adopted:</p>					
दिनांक एवं हस्ताक्षर SIGN & DATE	 25/3/13						
शपथी सूची संख्या INVENTORY	P-1709	Rev.No.04		निर्माणकर्ता WORKED BY	Lalit Kumar		18.3.13
				जांचकर्ता CHECKED BY	B. Choudhary		18.3.13

दिनांक एवं हस्ताक्षर SIGN & DATE			संस्थान मानक (डीप - हरिद्वार) PLANT STANDARD (HEEP - HARDWAR)	HW 0400397 पृष्ठ 6 का 3 Page 3 of 6	
SUPERSEDES INVENTORY शान्ती सूची संख्या को		(i) For smaller items total weight less than 2Kg., these items may be put in plastic/ gunny bag suitably tied and bags may be tagged giving full details per clause 2.1. (ii) If the number of parts is large i.e. weighting more than 2 kg., these are to be packed in a wooden box and identification detail to be clearly written on the box by paint. (The requirements listed above to be mentioned in purchase order) (iii) After the receipt of the boxes in store, the items are to be verified , steeloscope testing for chemistry of the components is to be done by quality control. The boxes are to be closed and sealed after satisfactory verification by quality control. (iv) Shop planning/ shop store must be keep such boxes separately to avoid mixing with other similar items. (v) Production to maintain and keep the records of these items plant order wise and Q. No. also to be mentioned in the records.			
COPYRIGHT AND CONFIDENTIAL The information on this documents is the property of Bharat Heavy Electricals Limited. It must not be used directly or indirectly in any way detrimental to the interest of the company	2.3 Process of identification Ferrous material and its alloys should be marked with the material colour code as per corporate standard no. AA0400305. Aluminium and copper material and its alloys should be marked with the material colour code as per corporate standard AA0400310. If the colour code during manufacturing is removed than the work piece must be marked with abbreviation equivalent to colour code of the material as per AA0400310. It must be shown on the accompanying documents and compared with the work piece prior to the start of the first operation. Remaining identification should be affixed after the part is checked.				
स्वत्वाधिकार एवं गोपनीय इस प्रलेख में दी गई सूचना भारत हीवी इलेक्ट्रिकल्स की संपत्ति है। इसका प्रसारण एवं आरक्षण बिना उसे लिखी शर्त प्रदान, जो कि कंपनी के हित में अधिकारक ही न किया जाए।	2.4 Identification of sub-contracted material The identification of sub-contracted material/ semifinished parts, issued from stores shall be as per SMI- 623 (A) subcontracting				
दिनांक एवं हस्ताक्षर SIGN & DATE	25/3/13				
शान्ती सूची संख्या INVENTORY	P-1709	Rev.No. 04	निर्माणकर्ता WORKED BY	Lalit Kumar	18.3.13
			जांचकर्ता CHECKED BY	B. Choudhary	18.03.13

	<p>संस्थान मानक (हीप-हरिद्वार)</p> <p>PLANT STANDARD (HEEP-HARDWAR)</p>	<p>HW 0400397</p> <p>पृष्ठ 6 का 4</p> <p>PAGE 4 OF 6</p>
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SYSTEMS WHICH READS AS UNDER:-

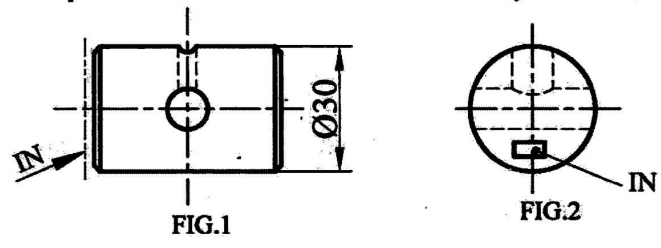
- 2.4.1 In case of issue of materials direct from stores, sub-contracting store will ensure that 'Q' mark and inspection seal are punched/ painted on total lengths/areas of plates by QCX before despatch of material to such contractor and these will be recorded on all the copies of SMIV by sub contracting store. (Ref. clause 9.6 of SMI 623-A)
- 2.4.2 In case of partly process materials shop planning will ensure that semifinished items are inspected and clear identification marks are punched/ painted by shop QCX before handing over to sub contracting store. (Ref. clause 10.5 of SMI 623 -A)

3 Drawing Notation:

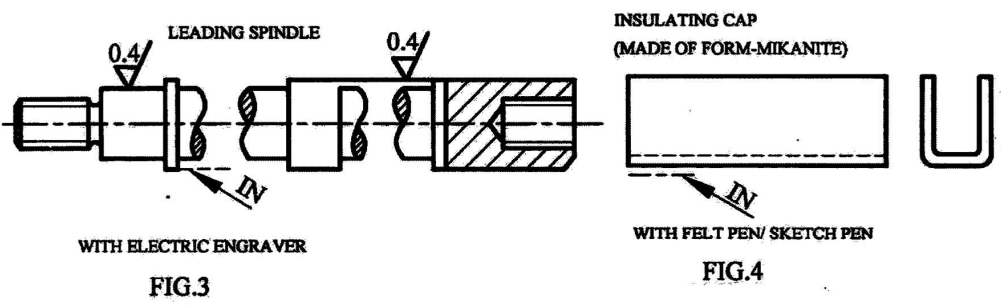
The following shall be written in the vicinity of the title block of the blank drawing sheet:

Identification according to HW0400397
 At the place indicated with IN →



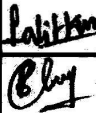
The place of identification has to be indicated by an arrow and the letters in (IN) →



If it is not possible to allow to stamp the identification mark with a marking punch, one of the following remarks should be entered on the drawing.



संचयन क्र. संख्या INVENTORY NO. P-1709	संशोधन एवं तारीख SIGN & DATE 18/3/13	संशोधन एवं तारीख SIGN & DATE 18/3/13	Rev.No. 04	निर्माणकर्ता WORKED BY Lalit Kumar	जांचकर्ता CHECKED BY B.Chodhary	Lalit Kumar 18.3.13	B.Chodhary 18.3.13
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दिनांक एवं प्रमाणिकरण SIGN & DATE			संस्थान मानक (हीप - हार्डवयर) PLANT STANDARD (HEEP - HARDWAR)	HW 0400397 पृष्ठ 6 का 5 Page 5 of 6																
सुपरसेड्स INVENTORY सामग्री सूची संख्या को		<p>In case of the mass produced parts eg. cores, spacers, conductors (hollow conductors and solid strands) and cooling pipes (generator construction) respectively condenser cooling pipes, the identification spot does not need to be indicated on the drawing, identification according to HW0400397 is sufficient.</p> <p>Guidelines for the selection of the place of identification is contained in plant standard no. HW0400398.</p> <p>4.0 SPACE REQUIREMENT:</p> <p>The size of the letter used for marking of casting and forgings with oil paint, as well as other parts with a marking punch is left to the individual operator .It should be chosen according to the space available for marking purposes as well as size of the part.</p> <p>The standardized letter and number of punch sizes at corporate level are 3, 5, 8 & 10 millimeter.</p> <p>See section 2.2 for means of identification if sufficient space is not available for stamping all the required information on the part.</p> <p>5.0 EXAMPLES OF IDENTIFICATION MARKINGS:</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">TURBINE. L.P. SHAFT</td> <td style="width:50%;">IDENTIFICATION</td> </tr> <tr> <td>WORK ORDER NUMBER</td> <td>10049-A-107-01</td> </tr> <tr> <td>DRAWING NUMBER</td> <td>9 103 01 01000</td> </tr> <tr> <td>IDENTIFICATION NUMBER FOR ATTESTED/ CONTROLLED MATERIAL</td> <td>XX-X-X-XXXXXX-XX (As per AA4915)</td> </tr> <tr> <td>MOVING BLADE</td> <td>IDENTIFICATION</td> </tr> <tr> <td>WORK ORDER NUMBER</td> <td>10049-A-107-01</td> </tr> <tr> <td>DRAWING NUMBER</td> <td>21 0 1 02010 01</td> </tr> <tr> <td>MATERIAL CODE COLOUR</td> <td>ORANGE-VOILET-ORANGE</td> </tr> </table>			TURBINE. L.P. SHAFT	IDENTIFICATION	WORK ORDER NUMBER	10049-A-107-01	DRAWING NUMBER	9 103 01 01000	IDENTIFICATION NUMBER FOR ATTESTED/ CONTROLLED MATERIAL	XX-X-X-XXXXXX-XX (As per AA4915)	MOVING BLADE	IDENTIFICATION	WORK ORDER NUMBER	10049-A-107-01	DRAWING NUMBER	21 0 1 02010 01	MATERIAL CODE COLOUR	ORANGE-VOILET-ORANGE
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DRAWING NUMBER	21 0 1 02010 01																			
MATERIAL CODE COLOUR	ORANGE-VOILET-ORANGE																			
स्वत्वाधिकार एवं गोपनीय इस दस्तावेज में दी गई सूचना भारत की संप्रभुता और सुरक्षा को बनाए रखने के लिए आवश्यक है। इसका प्रकाश एवं प्रसारण बिना अनुमति के कठिनाई होगी।																				
दिनांक एवं प्रमाणिकरण SIGN & DATE 																				
सामग्री सूची संख्या INVENTORY R-1709	Rev.No 04		निर्माणकर्ता WORKED BY जांचकर्ता CHECKED BY	Lalit Kumar B. Choudhary 	18.3.13 18.3.13															



उत्पाद मानक

HW 0986098

पृष्ठ का

Page 1 of 1

PRODUCT STANDARD

PASSIVATION TREATMENT FOR CORROSION RESISTANT STEEL

1.0 GENERAL:

This specification describes the procedure for a thin protective coating (passivation) against corrosion on stainless type steels.

2.0 COMPLIANCE WITH NATIONAL/INTERNATIONAL STANDARD:

This standard is based on OTO Specification - RS -6.

3.0 FACILITIES AND EQUIPMENT: As per OTO Specification - RS -6 (Clause 4).

4.0 WORK CYCLE: As per OTO Specification - RS -6 (Clause 5).

5.0 PROCESS: As per OTO Specification - RS -6 (Clause 6).

6.0 PROCESS CONTROL: As per OTO Specification - RS -6 (Clause 7)

7.0 INSPECTION: As per OTO Specification - RS -6 (Clause 7).

8.0 SAFETY RULES: As per OTO Specification - RS -6 (Clause 8).

9.0 CROSS REFERRED STANDARD: OTO Specification - RS -6.

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गोपनीय
 स्वत्वाधिकार
 इस प्रलेख में दी गई सूचना भारत भारती इलेक्ट्रिकल्स की सम्पत्ति है इसका प्रयोग एवं अप्रत्यक्ष रूप से किसी भी तरह प्रयोग, जो कि कंपनी के हित में प्रतिकारक हो न किया जाए।

दिनांक एवं हस्ताक्षर
 SIGN & DATE
 11/12/03

सामग्री सूची संख्या
 INVENTORY NO.
 P-3911

TSX	D. L. OBEROI	10-2-2003	नाम NAME	दिनांक एवं हस्ताक्षर SIGNATURE & DATE
QAX	N.K. Manwani	11/12/03		
ME	AKGUDIN	11/12/03	अनुवादक TRANSLATED BY	
GTE	A.K. Saxena	11/12/03	निर्माणकर्ता WORKED BY	ASHISH RANJAN 26/12/03
PED	S.K. Sharma	11/12/03	जांचकर्ता CHECKED BY	P.K. SRIVASTAVA 27/12/03
सहमता विभाग AGREED DEPTT.	नाम NAME	दिनांक एवं हस्ताक्षर DATE & SIGNATURE	पर्यवेक्षणकर्ता SUPERVISED BY	V.B. ARORA 11/12/03
			स्वीकृति APPROVED :	LAGM/MTE 11/12/03
REV. NO. 01	(REAFFIRMED)		निर्माण PREPARED :	MTE
DL: 14.01.2019			जारी ISSUED :	MTE
			दिनांक DATE :	10.2.03



OTO MELARA

SURFACE TREATMENTS

Pag. 1 di 5

Amend.: A

QUALITY CONTROL DEPT.

OTO SPECIFICATION-RS-6

Date September '94

PASSIVATION TREATMENT FOR
CORROSION - RESISTANT STEEL

-INDEX-

1. SCOPE
2. OTO DESIGNATIONS
3. REFERENCES
4. WORKCYCLE
5. FACILITIES AND EQUIPMENT
6. PROCESS
7. PROCESS CONTROL
 - 7.1 SAMPLING
 - 7.2 PASSIVATION SOLUTION
 - 7.3 VISUAL EXAMINATION
 - 7.4 SALT SPRAY TEST
 - 7.5 PALLADIUM CLORIDE TEST
 - 7.6 PASSIVITY TEST
 - 7.7 OTHER INSPECTIONS
8. SAFETY RULES

ARCHIVE Code:.....
DEFENCE PROJECT, HEEP, BHEL

PREPARED BY:

CONTROLLED BY:

APPROVED BY:



PASSIVATION TREATMENT FOR CORROSION - RESISTANT STEEL

1. SCOPE

This specification describes the procedure for a thin protective coating (passivation) against corrosion on stainless type steels.

2. OTO DESIGNATIONS

No particular OTO designations are foreseen for this coating.

3. REFERENCES

- QQ-P-35 PASSIVATION TREATMENT FOR CORROSION RESISTANT STEEL
- MIL-C-490 CLEANING AND PREPARATION OF FERROUS AND ZINC COATED SURFACES FOR ORGANIC PROTECTIVE COATINGS (GRADE II, TYPE 1-2-3).
- MIL-STD-171 FINISHING OF METAL AND WOOD SURFACES.

4. FACILITIES AND EQUIPMENT.

The necessary facilities and equipment must be very particular, since they shall be used for bath pickling and passivation employing highly oxidizing solutions.

The materials used for containing, for fume extraction and the equipment for handling must be made of high density graphite, teflon, polyethylene or 18/10 stainless steel. Thermostatic control of the baths and safety controls of the fumes are indispensable.

5. WORK CYCLE

5.1 SOLVENT OR ALKALINE DEGREASING

5.2 WASHING IN RUNNING WATER

5.3 PICKLING (indicative solutions)

- a) Ferritic and martensitic stainless steels:
10% solution of HNO_3 + 1% HF
Temperature: 20° C

Note: Increase HF to 4% for heavy descaling.

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**PASSIVATION TREATMENT FOR
CORROSION - RESISTANT STEEL**

- b) Austenitic stainless steels:
20% solution of HNO_3 + 6% HCL + 2% HF.
Temperature: 20°C

5.4 WATER RINSE

Note: Immediate rinsing by spraying and subsequent immersion are necessary to prevent formation of the typical yellowbrown spots.

5.5 PASSIVATION (indicative solutions)

- a) 25% solution of HNO_3
Temperature: 49°C
Time: 20'
- b) 50% solution of HNO_3
Temperature: 20°C
Time 1~2 h

Note: For high carbon stainless steels, add 15~30 g/l of sodium bichromate to the previous solutions.

5.6 WATER RINSE**5.7 CHROMATE TREATMENT (solution)**

5% solution of sodium bichromate
Temperature: 60°C

5.8 WATER RINSE**5.9 HOT RINSE****5.10 COMPRESSED AIR DRYING**

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CONTROLLED BY:

APPROVED BY:

**PASSIVATION TREATMENT FOR
CORROSION - RESISTANT STEEL****6. PROCESS**

All stainless steel parts subjected to pickling and/or passivation must be arranged in the special equipment and previously cleaned according to PS1-PS2 and PS3. The accuracy of this cleaning will determine the quality of the treatment. Pickling and passivation of stainless steels require different chemical solutions depending on the type of steel to treat. For this information refer to the relevant points of the work cycle, bearing in mind that for ferritic and martenaitic steels, the solutions are generally less concentrated and at lower temperatures to those of austenitic steels. For these treatments, it is mandatory to have efficient wash tanks in order to avoid different colorings caused by the effects of nitric acid.

7. PROCESS CONTROL**7.1 SAMPLING**

Samples of the solution employed for the passivation treatment must be taken weekly and sent to the chemical laboratory for analyzing. The result must be recorded and eventual additions made in order to optimize the treatment.

7.2 PASSIVATION SOLUTION

Control must be made to certify that the passivation solution is employed at the specified temperatures and concentration levels.

7.3 VISUAL EXAMINATION

Passivated surfaces must not have colored stains of water. The presence of pitting, which indicates a chemical aggression on the base metal, is cause for rejection.

7.4 SALT SPRAY TEST

After being subjected for a minimum of 2 hours to salt spray (5% NaCl) in accordance with ASTM-B-117, the treated surfaces must not present corrosion. Furthermore, to ensure that the passivation treatment has been performed correctly, the following three methods can be used:

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**PASSIVATION TREATMENT FOR
CORROSION - RESISTANT STEEL****7.5 PALLADIUM CHLORIDE TEST**

- Accurately degrease the passivated surface.
- Apply one drop of the following solution on the degreased surface:
PdCl₂ 0.5 gr
HCl (concentrated) 2 cc
H₂O (distilled) 98 cc
- Wait approximately 3 minutes and rinse with running water. The surface previously covered by the drop must not show signs of darkening.

7.6 PASSIVITY TEST: KIT N. 1626

(NDT Italiana- Milano)

Test kit N.1626 performs this check easily and accurately with the following procedure:

- Using a rag, remove eventual dirt or grease from the surface.
- Apply a drop of reagent A and allow to react for at least one minute.
- Absorb the drop with a strip of treated paper.
- Add 1 to 3 drops of reagent B to the wet paper strip. If the paper turns to a rose color, the surface is not passivated. If the paper remains white, it is proof that the surface has been adequately passivated. The intensity of the coloring after a fixed time gives indication of the grade of passivation. Kit 1626 is effective with steels AISI 300 and 400

7.7 OTHER INSPECTIONS

A practical test for the surface passivation consists in applying a slightly acidified solution of copper sulphate. No deposit of copper must deposit on the passivated surfaces.

8. SAFETY RULES

Special care must be taken when handling pickling and passivating solution. These contain a high percentage of strong oxidizers and corrosives. Personnel involved shall be conveniently informed and equipped with suitable protective means. The fumes developed are highly toxic and corrosive, therefore fume extraction facilities must be perfect. For handling of chemical products used in the treatment abide by the general safety rules for strong acid and basis.

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APPROVED BY:

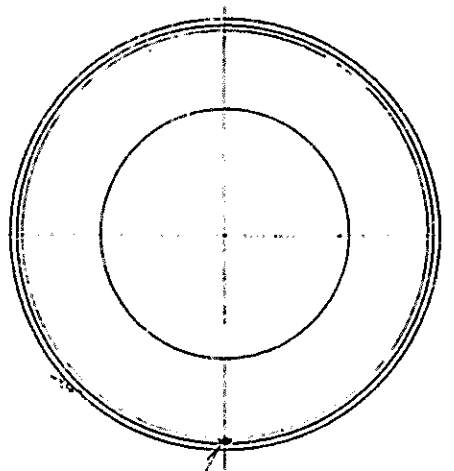
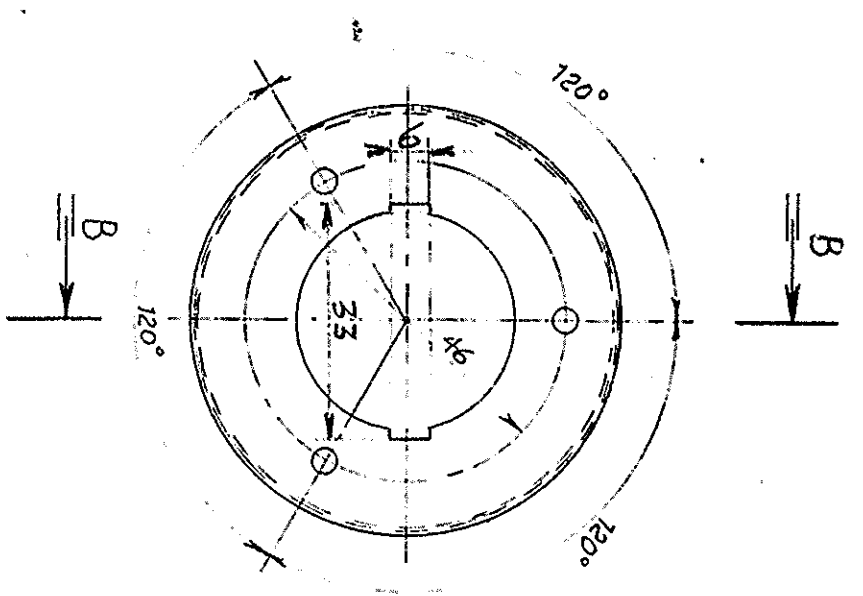
Quote lin. (Ø comp.)	± 0,15	Diametri e lungh.	± (0,5 + 1 mm.)
> 18 a 80	± 0,25	Spessori	± 0,5 (min. ± 0,5 mm.)
> 80	± 0,4	Angoli	± 2°
Angoli	± 30'		

Quote lin. (Ø comp.)	sino a 18	± 0,5
> 18 a 80	± 0,3	
> 80	± 0,5	
Angoli	± 2°	

Arrottondare o smussare gli spigoli non quotati con R=0,3 o smusso 0,3 a 45°
Le zone indicate a --- prevedono sovrametalli da asportare a struttura assemblata

COMUNANZE				
N°	TIPO	GR.	S.G.	C.T.
1				4
2				5
3				6
				7
				8

NON MISURATE IN SCALA, NEL DUBBIO CHIEDETE

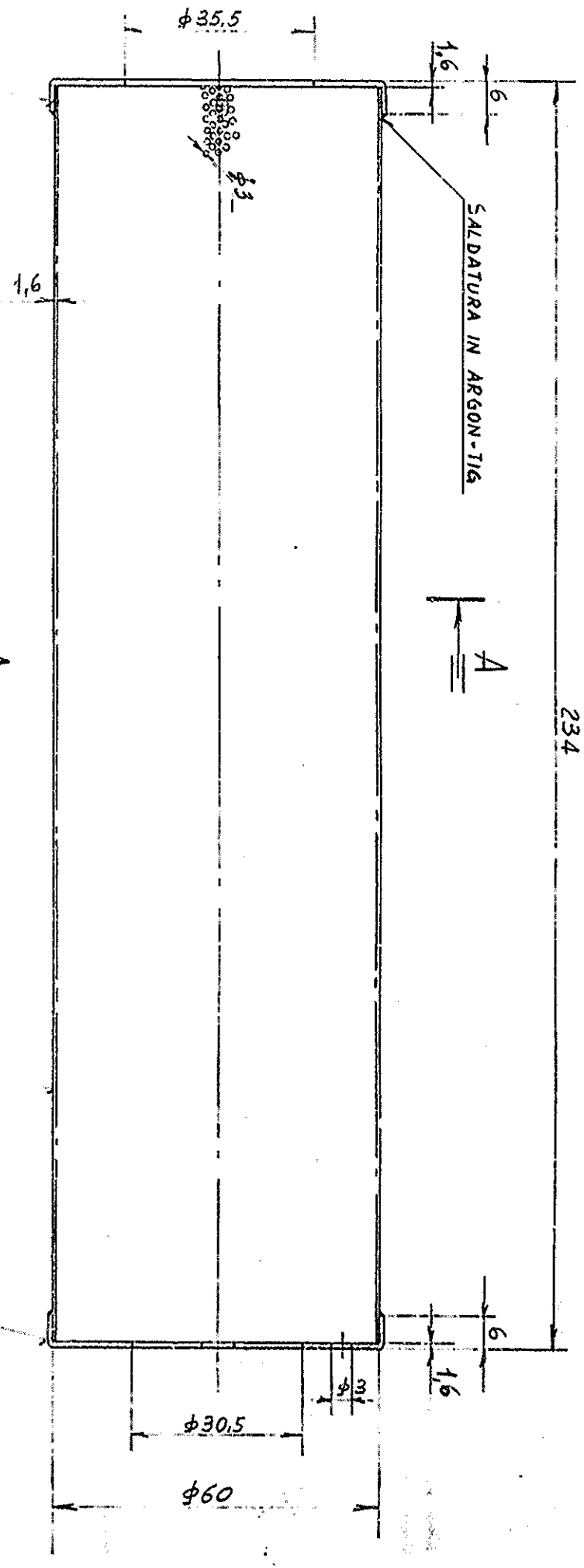


SEZIONE A-A

SALDARE PER PUNTI

FORNITO IN ALTERNATIVA DA:
TECHNICAL DEVELOPMENT
COMPANY
GLENOLDEN, PA. 19036
MF 9629

SEZIONE B-B



234

N. Particolare	Descrizione	MATERIALE	Quantità	Unità	RICAVATO DA	NOTE
169	FONDELLO	ALLUMINIO 5052 - H 32 O EQUIVALENTE	1	LAM.		INTER. A
168	FONDELLO	ALLUMINIO 5052 - H 32 O EQUIVALENTE	1	LAM.		ALODIIZZARE R-54
167	LAMIERA PERFORATA	ALLUMINIO 5052 - H 32 O EQUIVALENTE	1	LAM.		CODICE N° 199966503

AGGIUNTO FORNITORE IN ALTERNATIVA PER COPRODUTTORI U.S.A.

Disegnato	Disegnato	Disegnato	Disegnato
169	168	167	166
165	164	163	162
161	160	159	158
157	156	155	154
153	152	151	150
149	148	147	146
145	144	143	142
141	140	139	138
137	136	135	134
133	132	131	130
129	128	127	126
125	124	123	122
121	120	119	118
117	116	115	114
113	112	111	110
109	108	107	106
105	104	103	102
101	100	99	98
97	96	95	94
93	92	91	90
89	88	87	86
85	84	83	82
81	80	79	78
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73	72	71	70
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61	60	59	58
57	56	55	54
53	52	51	50
49	48	47	46
45	44	43	42
41	40	39	38
37	36	35	34
33	32	31	30
29	28	27	26
25	24	23	22
21	20	19	18
17	16	15	14
13	12	11	10
9	8	7	6
5	4	3	2
1	0		

Il presente disegno è di nostra esclusiva proprietà. Senza il nostro consenso non può essere copiato, riprodotto, trasmesso ad altre persone o utilizzato in qualsiasi modo, in tutto o in parte, senza la nostra approvazione scritta.

TITOLO: **76C CARTUCCIA**

UFFICIO TECNICO PROGETTI E STUDI

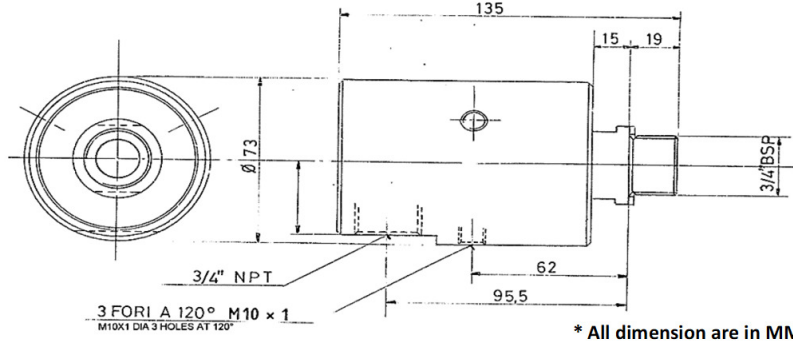
SOCIETÀ PER AZIONI **OTO-MELARA LA SPEZIA**

Scale: **1:1**

Dis. N. **1276-18-166-01-00**

TECHNICAL PARAMETERS CHECK LIST
DATA VALUES TO BE FILLED AND CONFIRMED BY VENDOR

ITEM CODE **W97035701028**
DESCRIPTION **ROTARY JOINT**
ITEM PART NUMBER **P/N 137618764**



SN.	DESCRIPTION	TECHNICAL PARAMETERS	RESPONSE TYPE	VENDOR RESPONSE (Parameters of offered item to be filled by vendor)
1	MATERIAL	STAINLESS STEEL	Input Value →	
2	MODEL NO.	254-000-110 OF DEUBLIN	To confirm →	
3	DIMENSIONS	AS PER DRAWING	To confirm →	
4	SALT WATER PRESSURE TEST	10 ATM	Input Value →	
5	TEMPERATURE	121 DEG.C	Input Value →	
6	SPEED MAX.	1000 RPM	Input Value →	
7	END THREAD	3/4 " BSP	Input Value →	
8	OVERALL FINISH	PASSIVATED	To confirm →	
9	CERTIFICATION	SALT WATER TEST REPORT	Confirm to supply →	
10	CERTIFICATION	Certificate of Conformance / Compliance (COC)	Confirm to supply →	
11	VENDOR REMARKS: Vendor to give here details of quoted item and deviations, if any. Specify the Make >> and Model quoted. >> Deviation, if any >>			

NOTE::

VENDOR ARE REQUESTED TO KINLDY FILL THE VALUES AGAINST "INPUT VALUE"
AND CONFIRM AS YES OR NO AGAINST "TO CONFIRM"

TECHNO-COMMERCIAL CHECKLIST

SL. NO.	TERMS & CONDITION	VENDOR CONFIRMATION /REMARKS / REPLY
1	BIDDER NAME	
2	GEM BID NO	
3	ITEM IS TO BE SUPPLIED AS PER TECHNICAL SPECIFICATION	
4	ALL VENDORS TO PROVIDE POINT WISE REPLY/CONFIRMATION ALONG WITH RELEVANT SUPPORTING DOCUMENTS TO EACH AND EVERY POINT OF PRE-QUALIFICATION REQUIREMENT/PQR FOR ALL ENQUIRY ITEMS. NONCOMPLIANCE OF THESE MAY LEAD TO REJECTION OF OFFER AS THESE ARE ESSENTIAL CONDITION FOR PARTICIPATING IN TENDER ENQUIRY	
5	KINDLY UPLOAD/ATTACH THE SPECIFICATION DETAILS/ CATALOGUE OF OFFERED ITEMS (IF APPLICABLE).	
6	KINDLY SUBMIT TECHNICAL PARAMETERS CHECK LIST ALONG WITH YOUR OFFER.	
7	VENDOR TO CONFIRM TO PROVIDE MATERIAL AND DIMENSIONAL TEST CERTIFICATES OF MATERIALS AS PER ENQUIRY DOCUMENTS ALONGWITH THE MATERIALS.	
8	VENDOR TO CONFIRM TO PROVIDE TECHNICAL DATASHEET OF UNION, ADAPTER TUBE AND ROTARY JOINTS	
9	VENDOR TO CONFIRM TO PROVIDE LEAK TEST REPORT OF UNION.	
10	VENDOR TO CONFIRM TO PROVIDE CERTIFICATE OF CONFORMANCE ALONG WITH MATERIAL DISPATCH	
11	VENDOR TO CONFIRM TO PROVIDE IDENTIFICATION AS PER SPEC. HW0400397 AND SUBSEQUENT REPORT ACCORDINGLY.	
12	RISK PURCHASE: IN CASE OF ABNORMAL DELAYS (BEYOND THE MAXIMUM LATE DELIVERY PERIOD AS PER LD CLAUSE) IN SUPPLIES / DEFECTIVE SUPPLIES OR NONFULFILLMENT OF ANY OTHER TERMS AND CONDITIONS GIVEN IN PURCHASE ORDER, BHEL MAY CANCEL THE PURCHASE ORDER IN FULL OR PART THEREOF, AND MAY ALSO MAKE THE PURCHASE OF SUCH MATERIAL FROM ELSEWHERE / ALTERNATIVE SOURCE AT THE RISK AND COST OF THE SUPPLIER. BHEL WILL TAKE ALL REASONABLE STEPS TO GET THE MATERIAL FROM ALTERNATE SOURCE AT OPTIMUM COST. IF BIDDER DOES NOT AGREE TO THE ABOVE RISK PURCHASE CLAUSE, BHEL RESERVES THE RIGHT TO REJECT THE OFFER. IN CASE FOR COMPELLING REASONS BHEL ACCEPTS THE OFFER WITHOUT ACCEPTANCE OF THIS CLAUSE BY THE BIDDER AND IN THE EVENTUALITY OF RISK PURCHASE, APPROPRIATE ACTION WILL BE TAKEN AS PER BHEL EXTANT RULES. THIS WILL BE WITHOUT PREJUDICE TO ANY OTHER RIGHT OF BHEL UNDER THE CONTRACT OR UNDER GENERAL LAW.	
13	ACTION AGAINST BIDDERS / VENDOR / SUPPLIER / CONTRACTOR IN CASE OF DEFAULT: IN ORDER TO PROTECT THE COMMERCIAL INTERESTS OF BHEL, BHEL SHALL TAKE ACTION AGAINST SUPPLIES / CONTRACTORS BY WAY OF SUSPENSION OF BUSINESS DEALINGS, WHO EITHER FAIL TO PERFORM OR ARE IN DEFAULT WITHOUT ANY REASONABLE CAUSE, CAUSE LOSS OF BUSINESS/ MONEY/ REPUTATION, INDULGE IN MALPRACTICES, CHEATING, BRIBERY, FRAUD OR ANY OTHER MISCONDUCT OR FORMATION OF CARTELS SO AS TO INFLUENCE THE BIDDING PROCESS OR INFLUENCE THE PRICE ETC. SUSPENSION OF BUSINESS DEALINGS COULD BE IN THE FORM OF "HOLD" OR "BANNING" A SUPPLIER/ CONTRACTOR OR A BIDDER AND SHALL BE AS PER "GUIDELINES FOR SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS/ CONTRACTORS" AVAILABLE AT BHEL'S WEBSITE " https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors "	

1. **MSE/MII:** THE SUPPLIER NEEDS TO SUBMIT/UPDATE MSE/MII CREDENTIALS ON GEM PORTAL DURING PROFILE UPDATION/ OFFER SUBMISSION STAGE. THE MSE DATA SUBMITTED IS CROSS VERIFIED BY GEM WITH GOVT. OF INDIA UDYAM/NSIC DATABASE THROUGH API INTEGRATION ON REAL TIME BASIS AND FOR MII, A SELF DECLARATION IS BEING GIVEN AND AUTHENTICATED BY AADHAR OTP. IF THE SELLER FAILS TO CLAIM MSE/MII PROVISION ON GEM PORTAL AT PROFILE UPDATION/BID SUBMISSION STAGE, THE SAID SELLER WILL BECOME INELIGIBLE FOR GETTING THE MSE/MII BENEFITS FOR THAT BID AUTOMATICALLY. THE VENDOR CAN ALWAYS CONTACT THE GEM HELPDESK, IN CASE OF ANY ISSUES.
2. THE PRICE QUOTE BY BIDDER SHOULD BE INCLUSIVE OF GST & SHOULD BE ON BHEL HEEP HARIDWAR STORES BASIS.
3. BIDDER'S OFFER IS LIABLE TO BE REJECTED IF THEY DON'T UPLOAD ANY OF THE CERTIFICATES / DOCUMENTS SOUGHT IN THE BID DOCUMENT, ATC AND CORRIGENDUM IF ANY.
4. **RISK PURCHASE:** IN CASE OF ABNORMAL DELAYS (BEYOND THE MAXIMUM LATE DELIVERY PERIOD AS PER LD CLAUSE) IN SUPPLIES / DEFECTIVE SUPPLIES OR NONFULFILLMENT OF ANY OTHER TERMS AND CONDITIONS GIVEN IN PURCHASE ORDER, BHEL MAY CANCEL THE PURCHASE ORDER IN FULL OR PART THEREOF, AND MAY ALSO MAKE THE PURCHASE OF SUCH MATERIAL FROM ELSEWHERE / ALTERNATIVE SOURCE AT THE RISK AND COST OF THE SUPPLIER. BHEL WILL TAKE ALL REASONABLE STEPS TO GET THE MATERIAL FROM ALTERNATE SOURCE AT OPTIMUM COST. IF BIDDER DOES NOT AGREE TO THE ABOVE RISK PURCHASE CLAUSE, BHEL RESERVES THE RIGHT TO REJECT THE OFFER. IN CASE FOR COMPELLING REASONS BHEL ACCEPTS THE OFFER WITHOUT ACCEPTANCE OF THIS CLAUSE BY THE BIDDER AND IN THE EVENTUALITY OF RISK PURCHASE, APPROPRIATE ACTION WILL BE TAKEN AS PER BHEL EXISTANT RULES. THIS WILL BE WITHOUT PREJUDICE TO ANY OTHER RIGHT OF BHEL UNDER THE CONTRACT OR UNDER GENERAL LAW.
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IN ORDER TO PROTECT THE COMMERCIAL INTERESTS OF BHEL, BHEL SHALL TAKE ACTION AGAINST SUPPLIES / CONTRACTORS BY WAY OF SUSPENSION OF BUSINESS DEALINGS, WHO EITHER FAIL TO PERFORM OR ARE IN DEFAULT WITHOUT ANY REASONABLE CAUSE, CAUSE LOSS OF BUSINESS/ MONEY/ REPUTATION, INDULGE IN MALPRACTICES, CHEATING, BRIBERY, FRAUD OR ANY OTHER MISCONDUCT OR FORMATION OF CARTELS SO AS TO INFLUENCE THE BIDDING PROCESS OR INFLUENCE THE PRICE ETC.
SUSPENSION OF BUSINESS DEALINGS COULD BE IN THE FORM OF "HOLD" OR "BANNING" A SUPPLIER/ CONTRACTOR OR A BIDDER AND SHALL BE AS PER "GUIDELINES FOR SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS/ CONTRACTORS" AVAILABLE AT BHEL'S WEBSITE <https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors>
6. BIDDERS ARE ADVISED TO CHECK APPLICABLE GST ON THEIR OWN BEFORE QUOTING. BUYER WILL NOT TAKE ANY RESPONSIBILITY IN THIS REGARDS. GST REIMBURSEMENT WILL BE AS PER ACTUALS OR AS PER APPLICABLE RATES (WHICHEVER IS LOWER), SUBJECT TO THE MAXIMUM OF QUOTED GST %.
7. BIDDER SHALL SUBMIT THE FOLLOWING DOCUMENTS ALONG WITH THEIR BID FOR VENDOR CODE CREATION:
A. COPY OF PAN CARD B. COPY OF GSTIN C. COPY OF MSE CERTIFICATE
8. DEDICATED/TOLL FREE TELEPHONE NO. FOR SERVICE SUPPORT: BIDDER/OEM MUST HAVE DEDICATED/TOLL FREE TELEPHONE NO. FOR SERVICE SUPPORT.
9. DATA SHEET OF THE PRODUCT(S) OFFERED IN THE BID, ARE TO BE UPLOADED ALONG WITH THE BID DOCUMENTS. BUYERS CAN MATCH AND VERIFY THE DATA SHEET WITH THE PRODUCT SPECIFICATIONS OFFERED. IN CASE OF ANY UNEXPLAINED MISMATCH OF TECHNICAL PARAMETERS, THE BID IS LIABLE FOR REJECTION.
10. SCOPE OF SUPPLY (BID PRICE TO INCLUDE ALL COST COMPONENTS): ONLY SUPPLY OF GOODS.
11. PRODUCTS SUPPLIED SHALL BE NONTOXIC AND HARMLESS TO HEALTH. IN THE CASE OF TOXIC MATERIALS, MATERIAL SAFETY DATA SHEET MAY BE FURNISHED ALONG WITH THE MATERIAL.
12. WHILE GENERATING INVOICE IN GEM PORTAL, THE SELLER MUST UPLOAD SCANNED COPY OF GST INVOICE AND THE SCREENSHOT OF GST PORTAL CONFIRMING PAYMENT OF GST.
13. **PAYMENT TERMS SHALL BE AS PER FOLLOWINGS:**

- a) **For Non-MSME bidders:** 100% payment along with taxes, freight & insurance will be made after receipt and acceptance of material and within 90 days from the date of invoice subject to submission of non-discrepant documents within 15 days of supply as per terms and conditions of Purchase Order. (MSME means Micro, Small & Medium Enterprises) (THIS IS IN SUPERSESSION OF 10 DAYS' TIME AS PROVIDED IN CLAUSE 12 OF GEM GTC).
- b) **FOR MSE BIDDER:** For MSEs (covered under MSME Act) which are registered and periodically renewed with BHEL, the payment will be made within 45 days or as prescribed in the relevant act. Benefits of MSE (such as EMD Waiver, Tender fee exemption, Price preference, Payment preference etc.) will be given only to those MSE Vendors who are manufacturers of offered items against the NIT. No MSE benefits shall be provided to Agents / Stockists /Dealers / Traders etc. for the items offered but not manufactured by themselves.”
- c) **FOR MEDIUM ENTERPRISES:** 100% payment along with taxes, freight & insurance will be made after receipt and acceptance of material and within 60 days from the date of invoice subject to submission of non-discrepant documents within 15 days of supply as per terms and conditions of Purchase Order.
- d) Please note that vendor to adhere to the payment terms as per above. No deviation in payment terms shall be accepted. Vendor to submit their offer accordingly.