

**BHEL**
Tenders**Government eProcurement System****Tender Details**

Date : 23-Feb-2026 02:59 PM

Print

Basic Details

Organisation Chain	Bharat Heavy Electricals Limited HERP - Varanasi Purchase		
Tender Reference Number	E-301-25-0007-92-1 (Turbine fasteners - Hex Nut, Studs etc.)		
Tender ID	2026_BHEL_58646_1	Withdrawal Allowed	Yes
Tender Type	Open Tender	Form of contract	Buy
Tender Category	Goods	No. of Covers	2
General Technical Evaluation Allowed	No	ItemWise Technical Evaluation Allowed	No
Payment Mode	Not Applicable	Is Multi Currency Allowed For BOQ	No
Is Multi Currency Allowed For Fee	No	Allow Two Stage Bidding	No

Cover Details, No. Of Covers - 2

Cover No	Cover	Document Type	Description
1	Fee/PreQual/Technical	.pdf	Drawing, GTC, NIT, MII, PQR etc.
2	Finance	.xls	Price bid

Tender Fee Details, [Total Fee in ₹ * - 0.00]

Tender Fee in ₹	0.00		
Fee Payable To	Nil	Fee Payable At	Nil
Tender Fee Exemption Allowed	No		

EMD Fee Details

EMD Amount in ₹	0.00	EMD Exemption Allowed	No
EMD Fee Type	fixed	EMD Percentage	NA
EMD Payable To	Nil	EMD Payable At	Nil

[Click to view modification history](#)**Work / Item(s)**

Title	E-301-25-0007-92-1 (Turbine Fasteners - Hex Nut, Stud etc.)				
Work Description	E-301-25-0007-92-1 (Turbine Fasteners - Hex Nut, Stud etc.)				
Pre Qualification Details	Please refer Tender documents.				
Independent External Monitor/Remarks	NA				
Show Tender Value in Public Domain	No				
Tender Value in ₹	2,00,000	Product Category	Electrical Work/ Equipment	Sub category	NA
Contract Type	Tender	Bid Validity(Days)	90	Period Of Work(Days)	90
Location	BHEL, HERP, VARANASI	Pincode	221003	Pre Bid Meeting Place	NA
Pre Bid Meeting Address	NA	Pre Bid Meeting Date	NA	Bid Opening Place	BHEL, HERP, VARANASI
Should Allow NDA Tender	No	Allow Preferential Bidder	No		

Critical Dates

Publish Date	23-Feb-2026 03:30 PM	Bid Opening Date	05-Mar-2026 04:00 PM
Document Download / Sale Start Date	23-Feb-2026 03:30 PM	Document Download / Sale End Date	05-Mar-2026 02:00 PM
Clarification Start Date	NA	Clarification End Date	NA
Bid Submission Start Date	23-Feb-2026 03:30 PM	Bid Submission End Date	05-Mar-2026 02:00 PM

Tender Documents

NIT Document	S.No	Document Name	Description	Document Size (in KB)	
	1	Tendernotice_1.pdf	Drawing, GTC, NIT, PQR, MII etc.	5207.95	
Work Item Documents	S.No	Document Type	Document Name	Description	Document Size (in KB)
	1	Tender Documents	NIT0004F.pdf	Drawing, GTC, MII, NIT, PQR etc.	5192.51
	2	Tender Documents	PART1.rar	Part1	8.14
	3	BOQ	BOQ_63392.xls	Price bid	298.00

Bid Openers List

S.No	Bid Opener Login Id	Bid Opener Name	Certificate Name
1.	sushilku@bhel.in	Sushil Kumar	Sushil Kumar
2.	skaryan@bhel.in	SUNIL KUMAR ARYAN	SUNIL KUMAR ARYAN
3.	sbdubey@bhel.in	Shyam Bhushan Dubey	SHYAM BHUSHAN DUBEY
4.	suman@bhel.in	SUMAN KUMARI	SUMAN KUMARI

GeMARPTS Details

GeMARPTS ID	LY83UAJYXPS9
Description	TURBINE FASTENERS (Hex Nut, Stud etc.)
Report Initiated On	21-Feb-2026
Valid Until	23-Mar-2026

Tender Properties

Auto Tendering Process allowed	No	Show Technical bid status	Yes
Show Finance bid status	Yes	Stage to disclose Bid Details in Public Domain	Technical Bid Opening
BoQ Comparative Chart model	Normal	BoQ Compative chart decimal places	3
BoQ Comparative Chart Rank Type	L	Form Based BoQ	No

TIA Undertaking

S.No	Undertaking to Order	Tender complying with Order	Reason for non compliance of Order
1	PPP-MII Order 2017	Agree	
2	MSEs Order 2012	Agree	

Tender Inviting Authority

Name	Manager
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Address	BHEL, HERP, VARANASI
<u>Tender Creator Details</u>	
Created By	SUNIL KUMAR ARYAN
Designation	Dy Manager
Created Date	23-Feb-2026 02:49 PM

Mandatory documents to be uploaded while submitting the offer through NIC portal against this enquiry.

1. Signed and stamped copy of following documents filled in all respect.

- **PQR**
- **GTC**
- **MII**
- **Part 1**
- **SC-ST/Women declaration**

2. Experience copy/PO copy as per PQR.

3. Udyam certificate FY (2025-2026).

4. List of manufacturing facilities.

5. Manufacturing process plan



Bharat Heavy Electricals Limited

Heavy Equipment Repair Plant

Tarna Shivpur Varanasi-221003

website: <https://herp.bhel.com>

Enquiry Number : E-301-25-0007-92-1 Date : 23/Feb/2026

Enquiry For Material :-

Sl No	Material Description	Material Code	Quantity	Unit
1	NUT HEX PM16 (HW-117.49) -- MACHINING AS PER STD. ST03003 REV.02 (SIZE NO.-020) SCRAP WT : 0.197 KG per No.	HW-117.49	3.0	NOS
2	NUT HEX PM24 (HW-136.024) -- MACHINING AS PER STD. ST03004 (SIZE NO. 024) REV.04 SCRAP WT : 0.712 KG per No.	HW-136.024	60.0	NO
3	NUT HEX PM30 (HW-136.030) -- - MACHINING AS PER STD. ST03004 (SIZE NO.-030) REV.04 SCRAP WT : 0.76 KG per No.	HW-136.030	90.0	NOS
4	NUT HEX PM42 (HW-136.042) - MACHINING AS PER STD. ST03004 (SIZE NO.-042) REV.04 SCRAP WT : 1.53 KG per No.	HW-136.042	90.0	NOS
5	NUT HEX PM30 (HW-174.030) -- MACHINING AS PERSTD. ST03003 REV.02 (SIZE NO.-030)	HW-174.030	20.0	NOS
6	PRESSOUT BOLT AM30X120 (HW-605.26) -- MACHINING AS PERSTD. ST01005 REV.07 (SIZE NO.- 086)	HW-605.26	80.0	NOS
7	HEAD CAP SCREW M12 (HW-621.08) -- MACHINING AS PER DRG. 41202556608 REV.00	HW-621.08	36.0	NOS
8	HEXAGONAL HEAD SCREW M36X180 (HW-622.07) -- MACHINING AS PER DRG. 41205356007 REV.00	HW-622.07	2.0	NO
9	HEXAGONAL HEAD BOLT M42X220 (HW-622.09) -- MACHINING AS PER DRG. 41205356009 REV.00	HW-622.09	16.0	NO
10	STUD (HW-630.05) -- MACHINING AS PER DRG. 31204456403 REV.01	HW-630.05	24.0	NO
11	ELONGATION (HW-635.17) -- MACHINING AS PER DRG. 31208756303 REV.00	HW-635.17	2.0	NOS
12	BOLT (HW-635.19) -- MACHINING AS PER DRG. 31208756310 REV.00	HW-635.19	2.0	NOS
13	STUD M24X121X35 (HW-656.08) -- MACHINING AS PER STD. ST01022 REV.03 (SIZE NO.- 004)	HW-656.08	60.0	NO
14	STUD M27X180X35 (HW-656.10) -- MACHINING AS PER STD. ST01022 (SIZE NO.-008) REV.03	HW-656.10	48.0	NO
15	NUT HEX PM27 (HW-656.15) -- MACHINING AS PER STD. ST03004 (SIZE NO.-027) REV.04	HW-656.15	48.0	NO

Remarks

(A)SUPPLY CONDITION :

1. ITEMS ARE TO BE SUPPLIED AT BHEL-HERP STORES.
2. INSPECTION WILL BE CARRIED OUT AS PER THE QP HW/SC/005 REV.00 AT PARTY'S WORKS BY BHEL REPRESENTATIVE. FOR REVISION OF DRAWING/STANDARD/SPECIFICATION, PLEASE REFER THE ATTACHED DOCUMENT NO. " IND202511578 ", DURING INSPECTION.
3. THE RAW MATL./ROUND WILL BE ISSUED IN RUNNING LENGTH TO THE PARTY BY BHEL-HERP FREE OF COST . FOR DETAILS OF FREE ISSUED MATERIAL, REFER THE ANNEXURE-723 .AFTER COMPLETE M/CING AS PER STD. /DRG , PARTY HAS TO RETURN THE FINISH AND M/CD ITEM TO BHEL HERP STORES.

(B)TECHNICAL DELIVERY CONDITION :

- 1 M/CING IS TO BE DONE AS PER STD./DRG. MENTIONED AGAINST EACH ITEM.
2. DIMENSION REPORT OF EVERY ITEM IS REQUIRED.
- 3 TECHNICAL REQUIREMENTS MENTIONED IN THE DRG./STD. TO BE FULFILLED STRICTLY.
4. ALL TOOLINGS/JIG/FIXTURE/TEMPLATES/GAUGES ARE TO BE ARRANGED BY PARTY.
5. PARTY WILL TAKE FULL PRECAUTION TO AVOID ANY TYPE OF MIXING OF BHEL MATL. WITH OTHER MATERIAL.

6. SURFACE TREATMENT WHEREVER MENTIONED (NITRIDING) IN THE DRG.; TO BE CARRIED OUT BHEL APPROVED SOURCE AS PER SPECN. 0912.002 MENTIONED IN THE DRG.

BHEL APPROVED SOURCES FOR SURFACE TREATMENT (PMD-STSC-016) ARE;

1 M/s HEAT TREAT ENTERPRISE AHMEDABAD

2 M/s MODERN METALS INDIA PRIVATE LIMITED FARIDABAD

3 M/s SHIVA TECHNIQUES SURFACES PRIVATE LIMITED FARIDABAD

7. OPERATIONS THAT ARE TO BE PERFORMED DURING ASSEMBLY AT SITE (AS MENTIONED IN DRG.) SHALL NOT BE DONE BY THE PARTY.

(C) TEST CERTIFICATE : REQUIRED FOR ITEMS WHERE NITRIDING/HARDENING TO BE CARRIED OUT, HARDNESS & CASE DEPTH AFTER NITRIDING/GAS NITRIDING/FLAME HARDENING.

(D) PACKING INSTRUCTION: ITEM TO BE SUPPLIED IN PROPERLY PACKED CONDITION IN WOODEN BOX OF 1" THICK PLANK WITH 1.5"X4" BKTS. FOR PRESERVATION REFER SPECN. ST33004. MOBILUX GREASE SHOULD BE USED FOR PRESERVATION OF THREADS AND HOLES. NITRIDED SURFACE OF THESE TYPE OF ITEMS SHOULD BE COVERED WITH BUBBLE SHEET, FOAM SHEET ETC. TO PROTECT IT FROM DAMAGE DURING TRANSPORTATION. THESE ITEMS SHOULD NOT BE CLUBBED WITH OTHER LOOSE ITEMS & SHOULD BE PACKED TIGHTLY IN THE BOX. EXCESSIVE RELATIVE MOTION MAY CAUSE DAMAGE OF PROTECTION LAYERS AND SUBSEQUENT DAMAGE OF ITEMS.

(E) DELIVERY SHOULD BE WITHIN 3 MONTHS FROM THE DATE OF RECEIPT OF FREE ISSUE. HOWEVER EARLY DELIVERY IS ACCEPTABLE.

(F) THE VALIDITY OF THE SUBCONTRACTING PO WILL BE 18 MONTHS FOR FI PURPOSE.

(G) ALL THE ITEMS OF ANNEXURE-723 ARE TO BE ORDER PLACED FROM SINGLE VENDOR AND ACCORDINGLY L1 VENDOR MAY BE DECIDED ON TOTAL VALUE BASIS.

(H) THE APPROXIMATE COST OF FREE ISSUED MATL. IS RS. 326971/-. PARTY SHALL HAVE TO QUOTE CONSIDERING SCRAP AS SCRAP IS TO BE KEPT WITH THEM.

(I) ANY BIDDER FALLING UNDER MSE CATEGORY SHALL FURNISH THE DECLARATION AS PER ATTACHED ANNEXURE-MSEs 2012 REV 01 ALONG WITH THEIR TECHNO-COMMERCIAL OFFER. THIS DECLARATION, ALONG WITH THE UDYAM CERTIFICATE, SHALL BE MANDATORY FOR BIDDERS TO AVAIL BENEFITS UNDER THE PUBLIC PROCUREMENT POLICY.

(J) BANK GUARANTEE: CURRENTLY TOTAL COST OF FIM FOR THE ENQUIRY IS RS. 326971/-. HOWEVER, IT MAY BE CHANGED DUE TO CHANGE IN PSL RATE AT THE TIME OF SENDING FIM. SO THE BG AMOUNT MENTIONED IN ENQUIRY IS TENTATIVE AND MAY CHANGE AT THE TIME OF SENDING FIM. IN THIS REGARD:

1. PARTY WILL HAVE TO SUBMIT EQUAL AMOUNT OF SECURITY DEPOSIT (IN THE FORM OF 10%

BG/FDR/DD/CHEQUE/BANK TRANSFER AND 90% INDEMNITY BOND) TOWARDS THE COST OF BHEL MATERIALS TO BE ISSUED TO THEM BEFORE THE ISSUE OF BHEL MATERIALS TO THEM. AT ANY POINT OF TIME, PROPORTIONATE SECURITY DEPOSIT OF TOTAL/CUMMULATIVE MATERIAL VALUE SHOULD BE MAINTENED.

2. BHEL MAY ASK THE SUPPLIER FOR SUBMISSION OF FULL SECURITY DEPOSIT AMOUNT OR PART DEPENDING UPON THE AVAILABILITY OF FREE ISSUE MATERIALS AT OUR END.

3. PARTY MUST HAVE TO SUBMIT THE SAME WITHIN 02 WEEK TIME FROM THE DATE OF WRITTEN INTIMATION BY BHEL WITHOUT FAIL OTHERWISE IT WOULD TREATED AS FAILURE OF HONOURING PO TERMS AND ACCORDINGLY BHEL MAY CANCEL THE PURCHASE ORDER AND INITIATE ALTERNATE PROCUREMENT ACTION AT SUPPLIER RISK & COST.

4. IN CASE OF ABSENCE OF DESIRED SECURITY DEPOSIT AT BHEL END AND ALSO NON RESPONSE OF POINT NO. 03 AS ABOVE,

I. BHEL MAY HOLD THE PENDING PAYMENTS OF SUPPLIER AVAILABLE AT BHEL ON THEIR CONSENT.

II. IF NO PAYMENT IS PENDING AT BHEL END, ACTION FOR ALTERNATE PROCUREMENT ACTION MAY BE INITIATED.

5. THE FORMAT OF BG AND IB SHALL BE PER ATTACHED ANNEXURE-BG/FIM AND IB-FIM RESPECTIVELY.

(K) TRANSPORTATION CHARGES FOR SENDING BHEL FREE ISSUE MATERIALS (FIM) TO THE PARTY WORKS WILL BE BORNE BY BHEL AND TRANSPORTATION CHARGES FOR SENDING THE FINISHED COMPONENTS FROM VENDOR'S WORKS TO BHEL STORES VARANASI WILL BE BORNE BY THE VENDOR ONLY. THE FREIGHT CHARGES FOR SENDING THE BHEL FIM FROM HERP STORES TO PARTY'S WORK FOR EACH ITEM WILL BE LOADED AS PER BHEL TRANSPORT CONTRACT AT THE TIME OF TOTAL LANDED COST CALCULATION. HOWEVER, FOR VARANASI/LOCAL BASED VENDOR, TO AND FRO TRANSPORTATION CHARGES FOR LIFTING AS WELL SENDING THE FINISHED COMPONENTS FROM VENDOR'S WORKS TO BHEL STORES VARANASI WILL BE BORNE BY THE VENDOR ONLY.

(L) ALL OTHER TERMS AND CONDITIONS SHALL BE AS PER THE GTC ATTACHED WITH ENQUIRY (PARTY HAVE TO STRICTLY ADHERE THESE TERMS & CONDITIONS).

List of required Quality Documents along with supply:-

S.No	Material Code	Material Description	Documents Description
1	HW-117.49	M/CING OF NUT HEX PM16 (HW-117.49) AS PER STD.ST03003 (SIZE NO.-020) REV.01	1. Dimension Report 2. Inspection Report by TPI/BHEL
2	HW-136.024	null	1. Inspection Report by TPI/BHEL 2. Dimension Report
3	HW-136.030	M/CING OF NUT HEX PM30 (HW-136.030) AS PER STD.ST03004 (SIZE NO.-030) REV.04	1. Dimension Report 2. Inspection Report by TPI/BHEL
4	HW-136.042	M/CING OF NUT HEX PM42 (HW-136.042) AS PER STD.ST03004 (SIZE NO.-042) REV.04	1. Inspection Report by TPI/BHEL 2. Dimension Report
5	HW-174.030	null	1. Dimension Report 2. Inspection Report by TPI/BHEL
6	HW-605.26	M/CING OF PRESSOUT BOLT AM30X120 (HW-605.26) AS PER STD.ST01005 (SIZE NO.-086) REV.07	1. Inspection Report by TPI/BHEL 2. Dimension Report
7	HW-621.08	M/CING OF HEAD CAP SCREW M12 (HW-621.08) AS PER DRG.41202556608 REV.00	1. Dimension Report 2. Inspection Report by TPI/BHEL
8	HW-622.07	null	1. Inspection Report by TPI/BHEL 2. Dimension Report
9	HW-622.09	null	1. Dimension Report 2. Inspection Report by TPI/BHEL
10	HW-630.05	null	1. Inspection Report by TPI/BHEL 2. Dimension Report
11	HW-635.17	M/CING OF ELONGATION (HW-635.17) AS PER DRG.31208756303 REV.00	1. Dimension Report 2. Inspection Report by TPI/BHEL
12	HW-635.19	M/CING OF BOLT(HW-635.19) AS PER DRG.31208756310 REV.00	1. Inspection Report by TPI/BHEL 2. Dimension Report
13	HW-656.08	null	1. Dimension Report 2. Inspection Report by TPI/BHEL
14	HW-656.10	null	1. Inspection Report by TPI/BHEL 2. Dimension Report
15	HW-656.15	null	1. Dimension Report 2. Inspection Report by TPI/BHEL
Note : Any other document mentioned in QP/Drg/Spec will also be applicable			

PQR (Turbine Spares)

	PQR Ref No: PQR/24-25/ Turbine Spares	Date: 23.08.2024
	Rev No: 03	Review Date:
	PQR Revision Date: 22.08.2025	22.08.2025
Sl. No.	BHEL Terms	Supplier's Compliance YES/NO
	1 Offers are accepted from:	
	1 Only Manufacturer's Offers shall be considered for the Tender Enquiry.	
	2 Supplier shall give list of In-House Facilities:	
2.a	Vendor shall have in-House necessary Manufacturing facilities required for manufacturing and supply of the item/s as per drng/spec..	
2.b	BHEL reserves right to visit the Works of the Manufacturer for Physical verification of the Manufacturing facilities (as declared by them) and assessment of their Quality systems during Technical Evaluation of the Offers.	
	3 Experience:	
3.a	Bidders shall submit the necessary documents proving their Experience in Supplying same or similar items to any Power Plant Equipment Manufacturer (Original Equipment Manufacturer)/ Defence Equipment Manufacturer (Original Equipment Manufacturer) (Govt or PSU)/AeroSpace Equipment Manufacturer (Original Equipment Manufacturer) (Govt or PSU) during last Five (05) years from the date of Enquiry. Documentary evidences to be submitted in the form of Executed Purchase Order copies along with Material Acceptance Report and drawings/specifications of the supplied item/items. No relaxation in experience shall be given to MSEs & Notified start-ups.	
3.b	BHEL reserves right to verify the details from the Bidder's customers based on Documents submitted as a part of past experience. BHEL may ask for other relevant documents in line with above to review the capacity and capability of vendor with respect to enquired items.	
	4 Manufacturing Process Plan:	
4.a	Bidders shall submit detailed Manufacturing process Plan along with the Technical Offer.	
	5 Financial Capability:	
5.a	Turn Over:- Turn over of Non-MSE vendors should be 100% of tender value. Relaxation for MSE vendors/ Notified Start-Ups on turn over will be as per MSME guidelines. Latest UDYAM Certificate required for MSE status.	
5.b	Applicable only for Non-MSE vendors: Audited balance Sheet and Profit and Loss account Statement of last three consecutive year (with UDIN) required along with part-1 bid. Or A CA Certified Consolidated summary (with UDIN) for last 3 consecutive years having annual turn over and Profit and Loss to be enclosed along with Part-1 bid . For Vendors having Turn over less than 1 crore in any of the financial year, CA certified Financial Turn over and Profit Loss (with UDIN) may be accepted for that year only.	
6	After placement of Purchase Order, Vendor shall submit Material Test Certificate before dispatching the Material to BHEL, for review and Dispatch clearance.	
Note-1: Non Submission of the above requested documents/non compliance to the above points is liable for rejection of the Offers without any further Notice/Intimation to the Bidder and no correspondence will be entertained at later stage.		
Note-2: "Similar items" means items having same or similar Constructional feature, manufacturing process, similar nature of use, etc.		

Annexure – MSEs 2012 Rev 01

OWNERSHIP STATUS (SC/ ST OR WOMEN-OWNED OR OTHERS) UNDER MSE
(Mandatory for all Non-GeM tenders and custom bids on GeM)

In order to avail benefits of MSE under various categories, all Bidders falling under MSE category shall furnish the following details & submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.

Type under MSE	SC/ST Owned	Women Owned	Others (excluding SC/ST & Women Owned)
Micro			
Small			

(Bidder details with Sign and date)

Note: In case party is falling under any of the above category, they shall mention **YES** in the against the box.

**GENERAL COMMERCIAL TERMS & CONDITIONS OF ENQUIRY
(FOR INDIAN VENDORS)**

**Amendment- 27
ANNEXURE-A**

**ITEM DESCRIPTION:
ENQUIRY NO:**

Sl No	BHEL STANDARD TERMS & CONDITIONS	Confirmation of supplier (Yes/No)
1.	A) OFFER MUST BE SUBMITTED IN TWO PART BID SYSTEM NAMELY TECHNO-COMMERCIAL BID & PRICE BID FOR THE ITEM AS PER ENQUIRY IN SEPARATE SEALED COVERS: (I) TECHNO – COMMERCIAL BID & (II) PRICE BID SHOULD BE CLEARLY SUPERSCRIBED THE ENQUIRY NO. AND DUE DATE ON THE ENVELOPES. (B) UN-PRICED OFFER WITH TECHNICAL BID IS REQUIRED TO BE FURNISHED BY THE VENDOR. TECHNICAL OFFER SHOULD CLEARLY REFLECT AT LEAST OUR MATERIAL CODE, ITEM DESCRIPTION & QUANTITY. (C) THE DIFFERENCE BETWEEN “UN-PRICED OFFER” AND “PRICED OFFER” SHOULD BE ONLY THE PRICES WHEREVER APPLICABLE. THE RATES AND AMOUNT SHOULD BE CLEARLY WRITTEN IN FIGURES AND WORDS BOTH WITHOUT ANY CUTTING / OVERWRITING. (D) IMPORTANT POINT FOR VENDOR WHO HAVE NOT SUBMITTED THE SRF (SUPPLIER REGISTRATION FORM) SO FAR: THE VENDORS, WHO HAVE NOT SUBMITTED THE SRF SO FAR, MUST SUBMIT THE SAME ALONG WITH PART- 1 BID. THE SRF TO BE DOWNLOADED FROM WWW.BHEL.COM OR https://herp.bhel.com .	
2.	BID SHOULD BE FREE FROM CORRECTION, OVERWRITING, USING CORRECTIVE FLUID, ETC. ANY INTERLINEATION , CUTTING , ERASURE OR OVERWRITING SHALL BE VALID ONLY IF THEY ARE ATTESTED UNDER FULL SIGNATURE(S) OF PERSON(S) SIGNING THE BID ELSE BID SHALL BE LIABLE FOR REJECTION .	
3.	YOUR TECHNO COMMERCIAL BID SHOULD MENTION THAT PRICE BID HAS BEEN SENT IN A SEPARATE ENVELOPE GIVING ITS REFERENCE.	
4.	VENDOR TO ENSURE THAT ITEM & QUANTITY MENTIONED IN THE OFFERS ARE EXACTLY SAME AS PER ENQUIRY. IF ANY DEVIATION IS THERE PARTY MUST MENTION SPECIFIC HEREWITH OTHERWISE BHEL SHALL CONSIDER THAT ITEM & QUANTITY AS REQUIRED IN ENQUIRY.	
5.	PLEASE MAKE SURE THAT THERE IS NO DISCREPANCY IN BETWEEN ACCEPTED TERMS & CONDITIONS MENTIONED IN THE CHECK LIST AND QUOTATION SUBMITTED BY VENDOR AND IF FOUND SO THEN THE TERMS & CONDITIONS WHICH ARE BENEFICIAL TO BHEL WOULD ONLY BE CONSIDERED.	
6.	THE TENDER RECEIVED AFTER 14:00 HRS ON THE DUE DATE WILL NOT BE CONSIDERED.	
7.	PART-I CONTAINING THE TECHNO-COMMERCIAL BID WILL BE OPENED ON THE DATE AND TIME SPECIFIED IN THE ENQUIRY, IN THE PRESENCE OF THOSE TENDERERS WHO WISH TO ATTEND. PART-II i.e., PRICE BID WILL BE OPENED ONLY OF THOSE BIDDERS WHO ARE FOUND TECHNO-COMMERCIALY SUITABLE AFTER SCRUTINY OF THEIR PART-I OFFERS.	
8.	NO REVISED OFFERS WILL BE ACCEPTED UNLESS ASKED BY BHEL AFTER OPENING OF PART-1 BID IN ANY CASE.	
9.	THE RATE OF GST SHOULD BE CLEARLY MENTIONED IN THE OFFER.	
10.	VALIDITY OF OFFER SHOULD BE MINIMUM 90 DAYS FROM THE DATE OF TECHNO - COMMERCIAL BID OPENING OR 60 DAYS FROM THE REVERSE AUCTION DATE.	
11.	BHEL RESERVES THE RIGHT TO REJECT THE OFFER, WHICH IS HAVING DEVIATIONS TO THE TERMS AND CONDITIONS GIVEN IN THE TENDER ENQUIRY.	
12.	PRICING TERMS: PRICES ONCE QUOTED SHALL REMAIN FIRM WITHIN THE VALIDITY OR ANY EXTENSION THEREOF FOR PLACEMENT OF ORDER, TILL COMPLETE EXECUTION OF THE ORDER, WITHOUT ANY ESCALATION/INCREASE FOR ANY REASON, WHATSOEVER, UNLESS SPECIFICALLY PROVIDED FOR IN THE ENQUIRY & PO. IN CASE OF FOREIGN VENDORS, THE QUOTED PRICE SHALL BE TAKEN AS INCLUSIVE OF THIRD PARTY INSPECTION AND TESTING CHARGES AS CALLED FOR IN THE NIT.	
13.	BID EVALUATION: UNLESS SPECIFIED IN THE TENDER, VENDOR MUST NOTE THAT BHEL WILL ARRIVE THE L1 STATUS FOR EACH ITEM ON LANDED COST BASIS. ACCORDINGLY, ORDER SHALL BE PLACED ON LOWEST BIDDER ON INDIVIDUAL ITEM BASIS ONLY, UNLESS BHEL ASK FOR TERMS OTHER THAN THIS ON EXCEPTION BASIS. IN THE COURSE OF EVALUATION, IF MORE THAN ONE BIDDER HAPPENS TO OCCUPY L-1 STATUS, EFFECTIVE L-1 WILL BE DECIDED BY SOLICITING DISCOUNTS FROM THE RESPECTIVE L-1 BIDDERS. IN CASE MORE THAN ONE BIDDERS HAPPENS TO OCCUPY THE L-1 STATUS EVEN AFTER SOLICITING DISCOUNT, THE L-1 BIDDER SHALL BE DECIDED BY A TOSS/DRAW OF LOTS, IN THE PRESENCE OF THE RESPECTIVE BIDDER(S) OR THEIR REPRESENTATIVE(S). RANKING WILL BE DONE ACCORDINGLY. BHEL'S DECISION IN SUCH SITUATION SHALL BE FINAL AND BINDING.	
14.	TERMS OF DELIVERY: I. FOR INDIGENOUS SUPPLIERS: THE TERMS OF DELIVERY SHOULD BE QUOTED ON F.O.R. DESTINATION (BHEL HERP STORES VARANASI) BASIS ONLY (i.e. FREIGHT & INSURANCE ON VENDOR'S ACCOUNT ONLY). IF ANY BIDDER STILL QUOTES OTHER DELIVERY TERM IN PLACE OF BHEL HERP STORES, THEIR OFFER MAY NOT BE CONSIDERED FOR FURTHER PROCESSING. IT MUST BE SPECIFICALLY NOTED.	
15.	IF ANY INDIAN SUPPLIERS ARRANGE SUPPLY FROM FOREIGN PRINCIPLES/WORKS, TERMS OF DELIVERY SHOULD BE QUOTED ON CIF JNPT MUMBAI (INDIA) SEA PORT BASIS ONLY (i.e. FREIGHT & INSURANCE ON VENDOR'S ACCOUNT UPTO JNPT MUMBAI (INDIA) SEA PORT) OR CFR MUMBAI AIRPORT. HOWEVER FREIGHT CHARGES AS PER BHEL TRANSPORT CONTRACT FROM JNPT MUMBAI SEAPORT/MUMBAI AIRPORT TO BHEL VARANASI FOR EACH ITEM WILL BE LOADED AT THE TIME OF TOTAL LANDED COST CALCULATION (RATE OF BHEL TRANSPORT CONTRACT SHALL BE AS APPLICABLE RATE ON PART-1 BID OPENING DATE).	
16.	INSURANCE CHARGES SHALL BE TO VENDOR'S ACCOUNT ONLY IF PRICE QUOTED ON BHEL HERP STORES BASIS. IN CASE PRICE QUOTED IS ON CIF JNPT MUMBAI BASIS/ CFR MUMBAI AIRPORT BASIS, INSURANCE UP TO CIF JNPT MUMBAI/ MUMBAI AIRPORT SHALL BE IN VENDOR ACCOUNT.	
17.	PAYMENT TERMS: I.FOR MSES VENDORS: 100% AGAINST SRV WITHIN 45 DAYS THROUGH EFT (ELECTRONIC FUND TRANSFER) FROM THE DATE OF RECEIPT OF MATERIAL (DATE OF SRV) AT BHEL HERP VARANASI STORES AS PER PO. II.FOR MEDIUM ENTERPRISES VENDORS: 100% AGAINST SRV WITHIN 60 DAYS THROUGH EFT (ELECTRONIC FUND TRANSFER) FROM THE DATE OF RECEIPT OF MATERIAL (DATE OF SRV) AT BHEL HERP VARANASI STORES AS PER PO. III. FOR NON- MSME: 100% AGAINST SRV WITHIN 90 DAYS THROUGH EFT (ELECTRONIC FUND TRANSFER) FROM THE DATE OF RECEIPT OF MATERIAL (DATE OF SRV) AT BHEL HERP VARANASI STORES AS PER PO. IV.BHEL HERP WILL MAKE PAYMENTS IN TWO PARTS: - PART-I: BASIC INVOICE VALUE AND ALL OTHER CHARGES (EXCEPT GST AMOUNT) WILL BE PAID AS PER P.O. PAYMENT TERMS. PART-II: GST PORTION OF INVOICE VALUE WILL BE PAID ONLY AFTER FULFILLING FOLLOWING CONDITIONS: (A) PAYMENT OF GST AMOUNT INTO GOVT. ACCOUNT BY SUPPLIER AGAINST INVOICE RAISED TO BHEL. (B) FILING OF GST RETURN (C) DISPLAY OF GST CREDIT AGAINST BHEL GSTIN NO.09AAACB4146P2ZC IN GSTR-2B ON GSTN PORTAL. NOTE: 1. PAYMENT WILL BE MADE AFTER ACCEPTANCE OF MATERIAL. 2. ADVANCE PAYMENT IS NOT ACCEPTABLE BY BHEL HERP VARANASI IN ANY CASE. 3. IF ANY SUPPLIER FALLS UNDER “NON MSE” OR “NON MEDIUM” CATEGORY AT THE TIME OF PO PLACEMENT AND IF PARTY DOES NOT INFORM BHEL REGARDING CHANGE IN THEIR STATUS BEFORE PROCESSING OF THE PAYMENT, THEIR PAYMENT TERM WILL BE CONSIDERED AS NON MSME SUPPLIER WITHOUT ANY FURTHER INTIMATION. IF SUCH SUPPLIER INFORM BHEL OR BHEL GETS UPDATED ON THEIR OWN ABOUT PARTY'S STATUS CHANGE (WHEN PARTY BECOMES MSME FROM NON-MSME) BEFORE PROCESSING OF THE PAYMENT, PARTY'S PAYMENT TERM WILL BE CHANGED AS PER APPLICABLE STATUS. ACCORDINGLY, PURCHASING OFFICER WILL CHANGE PAYMENT TERMS IN THE APPLICABLE PO/S ALSO.	
18.	LOADING OF PAYMENT TERM: IN CASE OF DEVIATION, LOADING @ REPO RATE+4% (AS ON PART-1 OPENING DATE) SHALL BE LOADED WHILE ARRIVING AT LANDED COST TO BHEL.	
19.	LIQUIDATED DAMAGES/ LATE DELIVERY (LD) PENALTY CLAUSE: SUBJECT TO FORCE MAJEURE CONDITIONS, FAILURE TO SUPPLY WITHIN PURCHASE ORDER DELIVERY SCHEDULE WILL MAKE THE SUPPLIER LIABLE TO AN UNCONDITIONAL PENALTY OF 0.5 % PER WEEK OR PART THEREOF SUBJECT TO THE MAXIMUM OF 10% OF THE UNDELIVERED PURCHASE ORDER VALUE EXCLUDING TAXES & DUTIES. NO GRACE PERIOD SHALL BE GIVEN.	

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20.	LOADING OF LIQUIDATED DAMAGES (LD): DEVIATION TO ABOVE STANDARD PENALTY CLAUSE, MAXIMUM LOADING OF 10% (IN CASE OF NON ACCEPTANCE OF LD CLAUSE) OR PART THEREOF (IN CASE OF PART ACCEPTANCE OF LD) SHALL BE LOADED WHILE ARRIVING LANDED COST TO BHEL. LOADING OF DELIVERY TERM: FURTHER IF DEVIATION IS FOUND IN THE ACCEPTED DELIVERY TERM AS WELL AS ACCEPTED PENALTY TERM, SUITABLE LOADING BASED ON TRANSPORTATION TIME TO BE TAKEN SHALL BE LOADED WHILE ARRIVING LANDED COST TO BHEL HERP STORES WHICH MAY BE AS BELOW: (i) 1% OF THE BASIC COST FOR INDIAN SUPPLIERS,	
21.	DELIVERY PERIOD: VENDOR SHOULD STRICTLY QUOTE THE DELIVERY PERIOD AS MENTIONED IN NIT.	
22.	IF ANY VENDOR DOES NOT SUPPLY THE ITEM WITHIN THE PURCHASE ORDER DELIVERY PERIOD, BHEL MAY/MAY NOT ACCEPT THE SUPPLY AT ITS SOLE DISCRETION.	
23.	BANK GUARANTEE: THE COST OF BHEL FREE ISSUE MATERIALS PER SET/PER ASSEMBLY AND TOTAL COST OF FIM FOR THE ENQUIRY ARE MENTIONED IN NIT. IN THIS REGARD: 1 (a). PARTY WILL HAVE TO SUBMIT EQUAL AMOUNT OF SECURITY DEPOSIT (IN THE FORM OF 10% BG/FDR/DD/CHEQUE/BANK TRANSFER AND 90% INDEMNITY BOND) TOWARDS THE COST OF BHEL MATERIALS TO BE ISSUED TO THEM BEFORE THE ISSUE OF BHEL MATERIALS TO THEM. AT ANY POINT OF TIME, PROPORTIONATE SECURITY DEPOSIT OF TOTAL/CUMMULATIVE MATERIAL VALUE SHOULD BE MAINTAINED. (b) IN CASE OF TRIAL/DEVELOPMENTAL ORDER, PARTY WILL HAVE TO SUBMIT 30% BG/FDR/DD/CHEQUE/BANK TRANSFER AND 70% INDEMNITY BOND TOWARDS THE COST OF BHEL FIM. 2. BHEL MAY ASK THE SUPPLIER FOR SUBMISSION OF FULL SECURITY DEPOSIT AMOUNT OR PART DEPENDING UPON THE AVAILABILITY OF FREE ISSUE MATERAILS AT OUR END. 3. PARTY MUST HAVE TO SUBMIT THE SAME WITHIN 02 WEEK TIME FROM THE DATE OF WRITTEN INTIMATION BY BHEL WITHOUT FAIL OTHERWISE IT WOULD TREATED AS FAILURE OF HONOURING PO TERMS AND ACCORDINGLY BHEL MAY CANCEL THE PURCHASE ORDER AND INITIATE ALTERNATE PROCUREMENT ACTION AT SUPPLIER RISK & COST. 4. IN CASE OF ABSENCE OF DESIRED SECURITY DEPOSIT AT BHEL END AND ALSO NON RESPONSE OF POINT NO. 03 AS ABOVE, I. BHEL MAY HOLD THE PENDING PAYMENTS OF SUPPLIER AVAILABLE AT BHEL ON THEIR CONSENT. II. IF NO PAYMENT IS PENDING AT BHEL END, ACTION FOR ALTERNATE PROCUREMENT ACTION MAY BE INITIATED. 5. THE FORMAT OF BG AND IB SHALL BE PER ATTACHED ANNEXURE-BG/FIM AND IB-FIM RESPECTIVELY 6. PARTY SHALL HAVE TO ARRANGE FURNISHING OF THE SFMS CODE ALONG WITH THE BG.	
24.	TRANSPORTATION CHARGES FOR SENDING BHEL FREE ISSUE MATERIALS (FIM) TO THE PARTY WORKS WILL BE BORNE BY BHEL ONLY. THE FREIGHT CHARGES FOR SENDING THE BHEL FIM FROM HERP STORES TO PARTY'S WORK FOR EACH ITEM WILL BE LOADED AS PER BHEL TRANSPORT CONTRACT AT THE TIME OF TOTAL LANDED COST CALCULATION (RATE OF BHEL TRANSPORT CONTRACT SHALL BE AS APPLICABLE RATE ON PART-1 BID OPENING DATE) . HOWEVER, VARANASI/LOCAL BASED VENDORS WILL LIFT THE FIM FROM BHEL STORES AND BORNE ITS TRANSPORTATION CHARGES.	
25.	IF BHEL ISSUES FREE ISSUE MATERIALS TO THE SUPPLIER, IT MUST BE RETURNED WITHIN THE TIME LIMIT AS PRESCRIBED IN GST LAW (PRESENTLY 01 (ONE) YEAR FROM THE DATE OF FREE ISSUE DATE) TO COMPLY THE GST RULES. IF ANY VENDOR DOES NOT RETURN THE BHEL FREE ISSUE MATERIALS AS MENTIONED ABOVE, THE FINANCIAL IMPLICATION ON ACCOUNT OF THIS, IF ANY, SHALL BE RECOVERED FROM THE PARTY BILLS.	
26.	REVERSE AUCTION: BHEL SHALL BE RESORTING TO REVERSE AUCTION (RA) (GUIDELINES AS AVAILABLE ON WWW.BHEL.COM) FOR THIS TENDER. RA SHALL BE CONDUCTED AMONG ALL THE TECHNO-COMMERCIALY QUALIFIED BIDDERS. PRICE BIDS OF ALL TECHNO-COMMERCIALY QUALIFIED BIDDERS SHALL BE OPENED AND SAME SHALL BE CONSIDERED AS INITIAL BIDS OF BIDDERS IN RA. IN CASE ANY BIDDER(S) DO (ES) NOT PARTICIPATE IN ONLINE REVERSE AUCTION, THEIR SEALED ENVELOPE PRICE BID ALONG WITH APPLICABLE LOADING, IF ANY, SHALL BE CONSIDERED FOR RANKING.	
27.	IF ANY OF THE VENDORS DO NOT ACCEPT THE ABOVE POINT MENTIONED AT SL. NO. 26, THEIR OFFER MAY BE LIABLE FOR REJECTION WITHOUT INTIMATION.	
28.	BHEL MAY SHORT CLOSE/CANCEL AN ORDER AT ANY TIME DURING THE CURRENCY OF THE CONTRACT/PO IRRESPECTIVE OF THE PO DELIVERY DATE, IF (I) THE WORK PROGRESS OF THE VENDOR IS POOR, OR (II) THE DELIVERY REQUIREMENT OF THE ITEM IS VERY CRITICAL & NOT BEING MET BY THE VENDOR ON WHICH ORDER HAS BEEN PLACED, OR (III) THERE IS NO RESPONSE FOR IMPROVEMENT IN DELIVERY AS PER BHEL REQUIREMENT,	
29.	THE OFFERS OF THE BIDDERS WHO ARE ON THE BANNED LIST AND ALSO THE OFFER OF THE BIDDERS, WHO ENGAGE THE SERVICES OF THE BANNED FIRMS, SHALL BE REJECTED. THE LIST OF BANNED FIRMS IS AVAILABLE ON BHEL WEB SITE www.bhel.com	
30.	RESERVATION RIGHTS OF BHEL: – BHEL RESERVES THE RIGHT TO REJECT ANY OR ALL QUOTATIONS WITHOUT ASSIGNING ANY REASONS THEREOF. BHEL ALSO RESERVES THE RIGHT TO INCREASE OR DECREASE THE TENDERED QUANTITIES. VENDORS SHOULD BE PREPARED TO ACCEPT ORDER FOR REDUCED QUANTITIES WITHOUT ANY EXTRA CHARGES. VENDOR SHOULD ALSO BE PREPARED FOR GIVING DISCOUNT IN CASE OF INCREASE IN QUANTITY.	
31.	NON-DISCLOSURE AGREEMENT: ALL DRAWINGS AND STANDARDS ARE PROPRIETARY OF BHEL. IT MUST NOT BE USED IN ANY WAY DETRIMENTAL TO THE INTEREST OF THE COMPANY. ALL SUPPLIERS SHALL FURNISH NDAS (NON-DISCLOSURE AGREEMENT) AGAINST USE OF DOCUMENTS FURNISHED BY BHEL TOWARDS UN-AUTHORIZED USE EXCEPT FOR THE PURPOSE IT HAS BEEN FURNISHED.	
32.	SETTLEMENT OF DISPUTE: IF ANY DISPUTE OR DIFFERENCE OF ANY KIND WHATSOEVER SHALL ARISE BETWEEN BHEL AND THE SUPPLIER/VENDOR, ARISING OUT OF THE CONTRACT FOR THE PERFORMANCE OF THE WORK WHETHER DURING THE PROGRESS OF CONTRACT TERMINATION, ABANDONMENT OR BREACH OF THE CONTRACT, IT SHALL IN THE FIRST PLACE REFERRED TO DESIGNATED ENGINEER FOR AMICABLE RESOLUTION BY THE PARTIES. DESIGNATED ENGINEER (TO BE NOMINATED BY BHEL FOR SETTLEMENT OF DISPUTES ARISING OUT OF THE CONTRACT) WHO WITHIN 60 DAYS AFTER BEING REQUESTED SHALL GIVE WRITTEN NOTICE OF HIS DECISION TO THE CONTRACTOR. SAVE AS HEREINAFTER PROVIDED, SUCH DECISION IN RESPECT OF EVERY MATTER SO REFERRED SHALL FORTHWITH BE GIVEN EFFECT TO BY THE SUPPLIER/VENDOR WHO SHALL PROCEED WITH THE WORK WITH ALL DUE DILIGENCE, WHETHER HE OR BHEL DESIRES TO RESOLVE THE DISPUTE AS HEREINAFTER PROVIDED OR NOT. IF AFTER THE DESIGNATED ENGINEER HAS GIVEN WRITTEN NOTICE OF THIS DECISION TO THE PARTY AND NO INTENTION TO PURSUE THE DISPUTE HAS BEEN COMMUNICATED TO HIM BY THE AFFECTED PARTY WITHIN 30 DAYS FROM THE RECEIPT OF SUCH NOTICE, THE SAID DECISION SHALL BECOME FINAL AND BINDING ON THE PARTIES. IN THE EVENT THE SUPPLIER/VENDOR BEING DISSATISFIED WITH ANY SUCH DECISION OR IF AMICABLE SETTLEMENT CANNOT BE REACHED THEN ALL SUCH DISPUTED ISSUES SHALL BE RESOLVED THROUGH CONCILIATION IN TERMS OF THE BHEL CONCILIATION SCHEME 2018 AS PER CLAUSE 14.1	
33.	CONCILIATION (Clause 14.1): ANY DISPUTE, DIFFERENCE OR CONTROVERSY OF WHATEVER NATURE HOWSOEVER ARISING UNDER OR OUT OF OR IN RELATION TO THIS AGREEMENT (INCLUDING ITS INTERPRETATION) BETWEEN THE PARTIES, AND SO NOTIFIED IN WRITING BY EITHER PARTY TO THE OTHER PARTY (THE "DISPUTE") SHALL, IN THE FIRST INSTANCE, BE ATTEMPTED TO BE RESOLVED AMICABLY IN ACCORDANCE WITH THE CONCILIATION PROCEDURE AS PER BHEL CONCILIATION SCHEME 2018. THE PROCEEDINGS OF CONCILIATION SHALL BROADLY BE GOVERNED BY PART-III OF THE ARBITRATION AND CONCILIATION ACT 1996 OR ANY STATUTORY MODIFICATION THEREOF AND AS PROVIDED IN - "PROCEDURE FOR CONDUCT OF CONCILIATION PROCEEDINGS" (AS AVAILABLE IN WWW.BHEL.COM)). Note: MINISTRY OF FINANCE HAS ISSUED OM REFERENCE NO. 1/2/24 DATED 03.06.2024 REGARDING "GUIDELINES FOR ARBITRATION AND MEDIATION IN CONTRACTS OF DOMESTIC PUBLIC PROCUREMENT. IN THE SAID OM IT HAS BEEN RECOMMENDED THAT GOVERNMENT DEPARTMENTS/ ENTITIES/AGENCIES ARE TO ENCOURAGE MEDIATION UNDER THE MEDIATION ACT. 2023. THE SAID ACT HAS NOT YET BEEN NOTIFIED BY THE GOVERNMENT. THEREFORE, THE CLAUSE "SETTLEMENT OF DISPUTES" SHALL BE MODIFIED ACCORDINGLY AS AND WHEN THE MEDIATION ACT 2023 GETS NOTIFIED.	
34.	ARBITRATION (14.2) :	

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	14.2.1 EXCEPT AS PROVIDED ELSEWHERE IN THIS CONTRACT, IN CASE PARTIES ARE UNABLE TO REACH AMICABLE SETTLEMENT (WHETHER BY CONCILIATION TO BE CONDUCTED AS PROVIDED IN CLAUSE 14.1 HEREIN ABOVE OR OTHERWISE) IN RESPECT OF ANY DISPUTE OR DIFFERENCE; ARISING OUT OF THE FORMATION, BREACH, TERMINATION, VALIDITY OR EXECUTION OF THE CONTRACT; OR, THE RESPECTIVE RIGHTS AND LIABILITIES OF THE PARTIES; OR, IN RELATION TO INTERPRETATION OF ANY PROVISION OF THE CONTRACT; OR, IN ANY MANNER TOUCHING UPON THE CONTRACT (HEREINAFTER REFERRED TO AS THE 'DISPUTE'), THEN, EITHER PARTY MAY, REFER THE DISPUTES TO ARBITRAL INSTITUTION (TO BE IDENTIFIED BY BHEL VARANASI) AND SUCH DISPUTE TO BE ADJUDICATED BY SOLE ARBITRATOR APPOINTED IN ACCORDANCE WITH THE RULES OF SAID ARBITRAL INSTITUTION. 14.2.2 A PARTY WILLING TO COMMENCE ARBITRATION PROCEEDING SHALL INVOKE ARBITRATION CLAUSE BY GIVING NOTICE TO THE OTHER PARTY IN TERMS OF SECTION 21 OF THE ARBITRATION & CONCILIATION ACT, 1996 (HEREINAFTER REFERRED TO AS THE 'NOTICE') BEFORE REFERRING THE MATTER TO ARBITRAL INSTITUTION. THE NOTICE SHALL BE ADDRESSED TO THE HEAD OF THE UNIT, BHEL, EXECUTING THE CONTRACT AND SHALL CONTAIN THE PARTICULARS OF ALL CLAIMS TO BE REFERRED TO ARBITRATION WITH SUFFICIENT DETAIL AND SHALL ALSO INDICATE THE MONETARY AMOUNT OF SUCH CLAIM INCLUDING INTEREST, IF ANY. 14.2.3 AFTER EXPIRY OF 30 DAYS FROM THE DATE OF RECEIPT OF AFORESAID NOTICE, THE PARTY INVOKING THE ARBITRATION SHALL SUBMIT THAT DISPUTE TO THE ARBITRAL INSTITUTIONS (TO BE IDENTIFIED BY BHEL VARANASI)AND THAT DISPUTE SHALL BE ADJUDICATED IN ACCORDANCE WITH THEIR RESPECTIVE ARBITRATION RULES. THE MATTER SHALL BE ADJUDICATED BY A SOLE ARBITRATOR WHO SHALL NECESSARILY BE A RETD JUDGE HAVING CONSIDERABLE EXPERIENCE IN COMMERCIAL MATTERS TO BE APPOINTED/NOMINATED BY THE RESPECTIVE INSTITUTION. THE COST/EXPENSES PERTAINING TO THE SAID ARBITRATION SHALL ALSO BE GOVERNED IN ACCORDANCE WITH THE RULES OF THE RESPECTIVE ARBITRAL INSTITUTION. THE DECISION OF THE PARTY INVOKING THE ARBITRATION FOR REFERENCE OF DISPUTE TO A SPECIFIC ARBITRAL INSTITUTION FOR ADJUDICATION OF THAT DISPUTE SHALL BE FINAL AND BINDING ON BOTH THE PARTIES AND SHALL NOT BE SUBJECT TO ANY CHANGE THEREAFTER. THE INSTITUTION ONCE SELECTED AT THE TIME OF INVOCATION OF DISPUTE SHALL REMAIN UNCHANGED. 14.2.4 THE FEE AND EXPENSES SHALL BE BORNE BY THE PARTIES AS PER THE ARBITRAL INSTITUTIONAL RULES. 14.2.5 THE ARBITRATION PROCEEDINGS SHALL BE IN ENGLISH LANGUAGE AND THE SEAT AND VENUE OF ARBITRATION SHALL BE AT Varanasi (U.P.). 14.2.6 SUBJECT TO THE ABOVE, THE PROVISIONS OF ARBITRATION & CONCILIATION ACT 1996 AND ANY AMENDMENT THEREOF SHALL BE APPLICABLE. ALL MATTERS RELATING TO THIS CONTRACT AND ARISING OUT OF INVOCATION OF ARBITRATION CLAUSE ARE SUBJECT TO THE EXCLUSIVE JURISDICTION OF THE COURT(S) SITUATED AT Varanasi (U.P.). 14.2.7 NOTWITHSTANDING ANY REFERENCE TO THE DESIGNATED ENGINEER OR CONCILIATION OR ARBITRATION HEREIN, A. THE PARTIES SHALL CONTINUE TO PERFORM THEIR RESPECTIVE OBLIGATIONS UNDER THE CONTRACT UNLESS THEY OTHERWISE AGREE. SETTLEMENT OF DISPUTE CLAUSE CANNOT BE INVOKED BY THE CONTRACTOR, IF THE CONTRACT HAS BEEN MUTUALLY CLOSED OR 'NO DEMAND CERTIFICATE' HAS BEEN FURNISHED BY THE CONTRACTOR OR ANY SETTLEMENT AGREEMENT HAS BEEN SIGNED BETWEEN THE EMPLOYER AND THE CONTRACTOR. 14.2.8 IT IS AGREED THAT MECHANISM OF RESOLUTION OF DISPUTES THROUGH ARBITRATION SHALL BE AVAILABLE ONLY IN THE CASES WHERE THE VALUE OF THE DISPUTE IS LESS THAN RS. 10 CRORES. 14.2.9 IN CASE THE DISPUTED AMOUNT CLAIM, COUNTER CLAIM INCLUDING INTEREST IS RS. 10 CRORES AND ABOVE, THE PARTIES SHALL BE WITHIN THEIR RIGHTS TO TAKE RECOURSE TO REMEDIES OTHER THAN ARBITRATION, AS MAY BE AVAILABLE TO THEM UNDER THE APPLICABLE LAWS AFTER PRIOR INTIMATION TO THE OTHER PARTY. SUBJECT TO THE AFORESAID CONDITIONS, PROVISIONS OF THE ARBITRATION AND CONCILIATION ACT, 1996 AND ANY STATUTORY MODIFICATIONS OR RE-ENACTMENT THEREOF AS AMENDED FROM TIME TO TIME, SHALL APPLY TO THE ARBITRATION PROCEEDINGS UNDER THIS CLAUSE. 14.2.10 IN CASE, MULTIPLE ARBITRATIONS ARE INVOKED (WHETHER SUB-JUDICE OR ARBITRAL AWARD PASSED) BY ANY PARTY TO UNDER THIS CONTRACT, THEN THE CUMULATIVE VALUE OF CLAIMS (INCLUDING INTEREST CLAIMED OR AWARDED) IN ALL SUCH ARBITRATIONS SHALL BE TAKEN IN ACCOUNT WHILE ARRIVING AT THE TOTAL CLAIM IN DISPUTE FOR THE SUBJECT CONTRACT FOR THE PURPOSE OF CLAUSE 14.2.9. DISPUTES HAVING CUMULATIVE VALUE OF LESS THAN 10 CRORES SHALL BE RESOLVED THROUGH ARBITRATION AND ANY ADDITIONAL DISPUTE SHALL BE ADJUDICATED BY THE COURT OF COMPETENT JURISDICTION. 14.2.11 IN CASE OF CONTRACT WITH PUBLIC SECTOR ENTERPRISE (PSE) OR A GOVERNMENT DEPARTMENT, THE FOLLOWING SHALL BE APPLICABLE: IN THE EVENT OF ANY DISPUTE OR DIFFERENCE RELATING TO THE INTERPRETATION AND APPLICATION OF THE PROVISIONS OF COMMERCIAL CONTRACT(S) BETWEEN CENTRAL PUBLIC SECTOR ENTERPRISES (CPSES)/ PORT TRUSTS INTER SE AND ALSO BETWEEN CPSES AND GOVERNMENT DEPARTMENTS/ORGANIZATIONS (EXCLUDING DISPUTES CONCERNING RAILWAYS, INCOME TAX, CUSTOMS & EXCISE DEPARTMENTS), SUCH DISPUTE OR DIFFERENCE SHALL BE TAKEN UP BY EITHER PARTY FOR RESOLUTION THROUGH AMRCD (ADMINISTRATIVE MECHANISM FOR RESOLUTION OF CPSES DISPUTES) AS MENTIONED IN DPE OM NO. 05/0003/2019-FTS-10937 DATED 14-12-2022 AS AMENDED FROM TIME TO TIME.	
35.	JURISDICTION : THIS CONTRACT SHALL BE GOVERNED BY THE LAW FOR THE TIME BEING IN FORCE IN THE REPUBLIC OF INDIA. THE CIVIL COURT HAVING ORIGINAL CIVIL JURISDICTION AT VARANASI-UP, SHALL ALONE HAVE EXCLUSIVE JURISDICTION IN REGARD TO ALL MATTERS IN RESPECT OF THE CONTRACT.	
36.	I. FOLLOWING DOCUMENTS SHOULD BE ENCLOSED AND ADDRESSED TO DGM (FINANCE) AND SAME SHALL BE DISPATCHED TO MM DEPTT. BHEL, HERP, TARNA, SHIVPUR, VARANASI-221003 FOR PAYMENT PURPOSE: 05 (FIVE) COPIES OF GST INVOICES - COPY OF GR/RR. - TEST CERTIFICATE AND GUARANTEE/WARRANTEE CERTIFICATE AND PDI REPORT, IF APPLICABLE. (ONE COPY). II. FURTHER TO ABOVE, 02 (TWO) COMPLETE SETS OF DOCUMENTS (COPIES OF ABOVE MENTIONED DOCUMENTS AT SL. NO. I FOR INDIAN SUPPLIERS (UNDER THIS CLAUSE) SHALL BE SENT FOR PURCHASE AND QUALITY DEPARTMENTS. ORIGINAL COPIES OF TC, GC, PDI REPORTS & OTHER QUALITY PAPERS SHALL BE ATTACHED IN THE SET OF DOCUMENTS FOR QUALITY DEPARTMENTS. III. THE VENDOR SHOULD PROVIDE BILLS & OTHER DOCUMENTS COMPLETE IN ALL RESPECT AS PER PURCHASE ORDER ALONG WITH DESPATCH OF MATERIALS. BHEL SHALL SEEK CLARIFICATION(S) (IF ANY) RELATED TO PAYMENT DOCUMENTS IN ONE GO. THE VENDOR SHOULD PROVIDE ALL SUCH CLARIFICATION(S) IMMEDIATELY. ANY DELAY IN PROCESSING OF PAYMENT, DUE TO NON RECEIPT OF CLARIFICATION(S) SOUGHT BY BHEL, SHALL BE ATTRIBUTABLE COMPLETELY TO VENDOR. IV. DIGITALLY SIGNED INVOICE IS ALSO ACCEPTABLE FOR PROCESSING OF PAYMENT.	
37.	THE VENDOR SHALL ENSURE THAT THEIR BANK DETAILS ARE UPDATED WITH US FOR TIMELY PAYMENT THROUGH EFT (ELECTRONICS FUND TRANSFER).	
38.	GUIDELINES FOR SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS/ CONTRACTORS: THE REVISED GUIDELINES FOR SUSPENSION OF BUSSINESS DEALINGS ARE AVAILABLE ON BHEL WEBSITE AT "www.bhel.com" on "SUPPLIER REGISTRATION PAGE". RESPECTIVE BIDDERS / SUPPLIERS MAY REFER THIS BEFORE QUOTING AS PER THEIR REQUIREMENT. ACTION AGAINST THE DEFAULTED SUPPLIERS/ CONTRACTORS' SHALL BE TAKEN AS PER THESE GUIDELINES ONLY.	
39.	VENDOR MUST FOLLOW THE SEQUENTIAL DELIVERY SCHEDULE i.e. ITEMS TO BE SUPPLIED IN SUCH A MANNER THAT THE PURCHASE ORDER HAVING OLDER DELIVERY SCHEDULE SHOULD BE SUPPLIED EARLIER AND PURCHASE ORDER HAVING LATTER DELIVERY SCHEDULE TO BE SUPPLIED LATTER. IF ANY VENDOR DOES NOT FOLLOW THE SEQUENTIAL DELIVERY SCHEDULE ESPECIALLY FOR SAME ITEM, BHEL MAY ACCOUNT FOR THE ITEM IN SEQUENTIAL MANNER OR MAY RECOVER THE FINANCIAL IMPLICATION.	
40.	ALL ABOVE ACCEPTED TERMS & CONDITIONS SHALL BE PART OF PURCHASE ORDER WITH OR WITHOUT MENTIONING IN THE PO/CONTRACT BASED ON YOUR ACCEPTANCE AND OFFER SUBMITTED.	

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41.	IMPORTANT INSTRUCTION: I.VENDORS ARE REQUESTED TO QUOTE THEIR RATE WITH DESCRIPTION MENTIONED IN THE ENQUIRY CONSIDERING ALL TECHNICAL TERMS & CONDITIONS OF THE ENQUIRY. ALSO RATES QUOTED SHOULD BE EXACTLY AS PER SL. NO. OF HARD COPY OF THE ENQUIRY (IF ENQUIRY HAS BEEN FLOATED THROUGH CONVENTIONAL MODE) OR AS PER SL. NO. APPEARING IN THE e-Procurement PORTAL (IF ENQUIRY HAS BEEN FLOATED THROUGH e-Procurement) ONLY. IT MUST BE FOLLOWED UP TO AVOID CONFUSION AT LATER STAGES. ALSO RATES TO BE SUBMITTED BOTH IN NUMERICS AS WELL AS IN WORD. IN CASE OF DISCREPENCY, RATES SUBMITTED IN WORDS SHALL BE CONSIDERED FOR FURTHER PROCESSING. II.DOCUMENTS SUBMITTED WITH THE OFFER SHOULD BE SIGNED AND STAMPED IN EACH PAGE BY AUTHORIZED REPRESENTATIVE OF THE BIDDER. II.IN CASE OF PDI, VENDOR SHALL RAISE ONLINE INSPECTION CALL IN ONLINE INSPECTION PORTAL/INTIMATE BHEL IN WRITING (WHERE INSPECTION IS IN BHEL HERP SCOPE) AT LEAST 01 WEEK IN ADVANCE OR AS MUTUALLY AGREED PERIOD ABOUT THE DATE AND PLACE AT WHICH GOODS WILL BE READY FOR INSPECTION. IV.PURCHASER OR HIS AUTHORIZED REPRESENTATIVE SHALL BE ENTITLED TO CARRY OUT SURVEILLANCE INSPECTION OF MATERIAL AND WORKMANSHIP AT SELLER'S PREMISES OR AT HIS SUB-CONTRACTOR'S PREMISES AT ALL REASONABLE TIMES DURING EXECUTION OF THE CONTRACT. SUCH INSPECTION, EXAMINATION AND TESTING, IF MADE, SHALL NOT ABSOLVE THE SELLER FROM HIS OBLIGATIONS UNDER THE CONTRACT. V.SUCH PRE-DISPATCH INSPECTION, EXAMINATION AND TESTING, IF MADE, AT VENDOR'S WORKS SHALL NOT ABSOLVE THE SELLER FROM HIS OBLIGATIONS TO MANUFACTURE/MACHINING THE GOODS UNDER THE CONTRACT. IF DEFECTS ARE FOUND AT LATER STAGE, IT IS THE SOLE RESPONSIBILITY OF THE VENDOR TO REPLACE/RECTIFY THE SAME.	
42.	IMPORTANT CLAUSE FOR GST: INPUT TAX CREDIT OF GST CAN BE AVAILED BY BHEL ONLY WHEN THE MATERIAL HAS BEEN PHYSICALLY RECEIVED AND GST INVOICE IS IN POSSESSION OF BHEL. THEREFORE, SUPPLIERS SHOULD ENSURE THE FOLLOWING IN RESPECT OF POS ISSUED BY BHEL: I. GST INVOICE SHOULD CONTAIN ADDRESS, GST NO. AND PAN NO. OF BHEL AS WELL AS OF SUPPLIER. APPLICABLE HSN CODE OF THE MATERIAL SHOULD BE INDICATED IN THE GST INVOICE. II. FIVE COPIES OF GST INVOICE AND LORRY RECEIPT MAY BE DESPATCHED ALONGWITH SHIPMENT OF THE GOODS IN ORDER TO AVOID ANY DELAY IN AVAILING INPUT CREDIT BY BHEL. III. DECLARE SUCH INVOICE IN HIS GSTR-1 RETURN FOR THE MONTH OF DESPATCH OF MATERIAL. IV. PAYMENT OF GST TO STATUTORY AUTHORITIES WITHIN PRESCRIBED TIME. V. IN CASE OF DISCREPANCY IN THE DATA UPLOADED BY THE BIDDER IN THE GSTN PORTAL VIS-A-VIS THE TAX INVOICE OR IN CASE OF ANY SHORTAGES OR REJECTION IN THE SUPPLY, THEN BHEL WILL NOT BE ABLE TO AVAIL THE TAX CREDIT. BIDDER HAS TO RECTIFY THE DATA DISCREPANCY IN THE GSTN PORTAL OR ISSUE CREDIT NOTE OR DEBIT NOTE (DETAILS ALSO TO BE UPLOADED IN GSTN PORTAL) FOR THE SHORTAGES OR REJECTIONS IN THE SUPPLIES OR ADDITIONAL CLAIMS FOR PROCESSING OF SUCH INVOICES. VI. GST TDS DEDUCTED AS PER GST ACT, IS UPLOADED IN GSTN PORTAL ALONG GSTR7. BIDDERS CAN DIRECTLY DOWNLOAD THE GST TDS CERTIFICATE FROM THE GSTN PORTAL. IN CASE GST CREDIT IS DELAYED /DENIED TO BHEL DUE TO NON OR DELAYED RECEIPT OF GOODS AND OR TAX INVOICE OR EXPIRY OF TIMELINE PRESCRIBED IN GST LAW FOR AVAILING SUCH ITC OR ANY OTHER REASON NOT ATTRIBUTABLE TO BHEL, GST AMOUNT SHALL BE RECOVERABLE FROM VENDOR ALONG WITH INTEREST /PENALTY LEVIABLE ON BHEL. IN CASE SUPPLIERS DELAYS DECLARING SUCH INVOICE IN HIS RETURN AND GST CREDIT AVAILED BY BHEL IS DENIED OR REVERSED SUBSEQUENTLY AS PER GST LAW, GST AMOUNT PAID BY BHEL TOWARDS SUCH ITC REVERSAL SHALL BE RECOVERABLE FROM SUPPLIER ALONGWITH INTEREST LEVIED/LEVIABLE ON BHEL. IN CASE OF RAISING ANY SUPPLEMENTARY TAX INVOICE (DEBIT/ CREDIT NOTE), THE SUPPLIER SHALL ISSUE THE SAME CONTAINING ALL THE DETAILS AS REFERRED TO IN SECTION 34 READ WITH SECTION 31 OF GST ACT & RULES REFERRED THERE UNDER .	
43.	STATUTORY VARIATION CLAUSE : ANY INCREASE IN THE RATE OF GST SHALL BE PAYABLE ONLY FOR DELIVERIES COMPLETED WITHIN THE SCHEDULED DELIVERY PERIOD, IN OTHER WORDS INCREASE IN THE RATE OF GST SHALL NOT BE PAYABLE FOR VALUE OF CONSIGNMENT DELIVERED AFTER THE SCHEDULED PURCHASE ORDER DELIVERY PERIOD.2.NEW TAXES AND DUTIES , IF IMPOSED SUBSEQUENT TO DUE DATE OF OFFER SUBMISSION, BY STATUTORY AUTHORITY DURING CONTRACT PERIOD (INCLUDING EXTENSION IF THE SAME IS NOT ATTRIBUTABLE TO BIDDER) SHALL BE REIMBURSED BY BHEL ON PRODUCTION OF RELEVANT SUPPORTING DOCUMENTS TO THE SATISFACTION OF BHEL . HOWEVER, BIDDER SHALL TAKE PRIOR APPROVAL OF BHEL BEFORE DEPOSITING NEW TAXES AND DUTIES.	
44.	IMPORTANT INSTRUCTION FOR MSEs SUPPLIERS: I. "MSE SUPPLIERS CAN AVAIL THE INTENDED BENEFITS ONLY IF THEY SUBMIT ALONG WITH OFFER, ATTESTED COPIES OF EITHER EM-II CERTIFICATE HAVING DEEMED VALIDITY (FIVE YEARS FROM THE DATE OF ISSUE OF ACKNOWLEDGEMENT IN EM-II) OR VALID NSIC CERTIFICATE OR EM-II CERTIFICATE ALONG WITH CA CERTIFICATE (FORMAT ENCLOSED AS PER ANNEXURE-1 WHERE DEEMED VALIDITY OF EM-II CERTIFICATE OF FIVE YEARS HAS EXPIRED) APPLICABLE FOR THE RELEVANT F/Y (LATEST AUDITED).DATE TO BE RECKONED FOR DETERMINING THE DEEMED VALIDITY WILL BE THE DATE OF BID OPENING (PART -1 IN CASE OF TWO PART BID). NON SUBMISSION OF SUCH DOCUMENTS WILL LEAD TO CONSIDERATION OF THEIR BID AT PAR WITH OTHER BIDDERS. NO BENEFIT SHALL BE APPLICABLE FOR THIS ENQUIRY IF ANY DEFICIENCY IN THE ABOVE REQUIRED DOCUMENTS ARE NOT SUBMITTED BEFORE PRICE BID OPENING. IF THE TENDER IS TO BE SUBMITTED THROUGH e-procurement PORTAL, THEN THE ABOVE REQUIRED DOCUMENTS ARE TO BE UPLOADED ON THE PORTAL. DOCUMENTS SHOULD BE NOTARIZED OR ATTESTED BY A GAZETTED OFFICE. II.IN CASE OF ANY CHANGE IN THE MSE STATUS OF THE BIDDER, IT SHALL BE RESPONSIBILITY OF THE BIDDER TO NOTIFY THE CHANGE AS A PART OF THE BID DOCUMENT. IF AT A LATER DATE IT COMES TO NOTICE OF BHEL, THAT THE CHANGE IN THE STATUS HAS NOT BEEN INTIMATED BY THE BIDDER AND THE ORDER IS OBTAINED UNDER THE PREMISE OF AN MSE, THEN BHEL WOULD CANCEL THE PENDING ORDER AGAINST THIS TENDER AND TAKE NECESSARY ACTION SUSPENSION OF THE BUSINESS DEALING WITH THE BIDDER AS PER PROCUREMENT POLICY OF BHEL. III.25 % OF THE TENDERED QUANTITY IS EARMARKED FOR MSE SUPPLIERS IN THIS TENDER. IV.OUT OF THIS 25% TENDERED QUANTITY RESERVED FOR MSE SUPPLIERS, 4 % SHALL BE EARMARKED FOR PROCUREMENT FROM MSEs OWNED BY SC/ST ENTREPRENEURS. V.OUT OF THIS 25% TENDERED QUANTITY RESERVED FOR MSE SUPPLIERS, 3% SHALL BE EARMARKED FOR PROCUREMENT FROM MSEs OWNED BY WOMEN. VI.IN CASE MSE VENDOR PARTICIPATING IN THE TENDER QUOTES WITHIN THE PRICE BAND OF "L1+15%", THEY WILL BE ALLOWED TO SUPPLY THE 25% PORTION OF THE REQUIREMENT SUBJECT TO ACCEPTANCE OF L1 PRICE (ON LANDED COST BASIS) BY MSE VENDOR. IN CASE OF MORE THAN ONE SUCH MSE VENDOR WITHIN THE "L1+15% PRICE BAND" THE SUPPLY SHALL BE SHARED PROPORTIONATELY (TO 25% TENDERED QUANTITY). VII.IF THE L1 VENDOR HAPPENS TO BE A MSE VENDOR AGAINST ANY ITEM CODE, THEN 100% OF THE TENDERED QTY (FOR RESPECTIVE ITEM CODE) SHALL BE PROPOSED TO ORDER ON THE L1 (MSE) VENDOR, EVEN THOUGH THERE MAY BE OTHER MSE VENDORS WITHIN THE "L1+15% PRICE BAND". VIII.IN CASE AFTER OPENING OF PRICE BID, IT IS SEEN THAT NO MSE HAS BECOME L1, THEN DEPENDING ON THE NATURE OF THE ITEM, IF IT IS NOT POSSIBLE TO SPLIT THE TENDERED ITEMS/QUANTITIES ON ACCOUNT OF REASONS LIKE CUSTOMER CONTRACT REQUIREMENTS OF SUPPLYING ONE MAKE FOR A GIVEN PROJECT OR TECHNICAL REASONS LIKE TENDERED ITEMS BEING A SYSTEM etc. THEN BHEL WOULD NOT COUNTER OFFER THE L1 PRICES EVEN THOUGH THERE MAY BE MSE BIDDERS WITHIN THE "L1+15% PRICE BAND" OF L1.	
45.	THE STARTUPS AS DEFINED IN THE GAZETTE OF INDIA NOTIFICATION NO.: G.S.R. 127 (E) DATED 19/02/2019 WILL BE EXEMPTED FROM FULFILLING THE CRITERIA, IF MENTIONED, IN THE PQR (PRE-QUALIFYING REQUIREMENT) REGARDING PRIOR TURNOVER AND PRIOR EXPERIENCE. HOWEVER, THERE MAY BE CIRCUMSTANCES (LIKE PROCUREMENTS OF ITEMS RELATED TO PUBLIC SAFETY, HEALTH, CRITICAL SECURITY OPERATIONS AND EQUIPMENTS ETC.) WHERE BHEL MAY PREFER THE VENDORS TO HAVE PRIOR EXPERIENCE RATHER THAN GIVING ORDER TO NEW ENTITIES. FOR SUCH PROCUREMENTS, BHEL MAY NOT RELAX THE CRITERIA OF PRIOR EXPERIENCE/TURNOVER FOR THE STARTUPS.	
46.	PURCHASE PREFERENCE FOR INDIAN VENDORS: FOR THIS PROCUREMENT, THE LOCAL CONTENT TO CATEGORIZE A SUPPLIER AS A CLASS I LOCAL SUPPLIER / CLASS II LOCAL SUPPLIER /NON LOCAL – SUPPLIER AND PURCHASE PREFERENCE TO CLASS I LOCAL SUPPLIER, IS AS DEFINED IN PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04.06.2020 ISSUED BY DPIIT. IN CASE OF SUBSEQUENT ORDERS ISSUED BY THE NODAL MINISTRY, CHANGING THE DEFINITION OF LOCAL CONTENT FOR THE ITEMS OF THE NIT, THE SAME SHALL BE APPLICABLE EVEN IF ISSUED AFTER ISSUE OF THIS NIT, BUT BEFORE OPENING OF PART –II BIDS AGAINST THIS NIT. MODEL CLAUSE FOR TENDER. I. ANY BIDDER FROM A COUNTRY WHICH SHARES A LAND BORDER WITH INDIA WILL BE ELIGIBLE TO BID IN THIS TENDER ONLY IF THE BIDDER IS REGISTERED WITH THE COMPETENT AUTHORITY.	

**GENERAL COMMERCIAL TERMS & CONDITIONS OF ENQUIRY
(FOR INDIAN VENDORS)**

**Amendment- 27
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	II. "BIDDER" (INCLUDING THE TERM 'TENDERER', 'CONSULTANT' OR 'SERVICE PROVIDER' IN CERTAIN CONTEXTS) MEANS ANY PERSON OR FIRM OR COMPANY, INCLUDING ANY MEMBER OF A CONSORTIUM OR JOINT VENTURE (THAT IS AN ASSOCIATION OF SEVERAL PERSONS, OR FIRMS OR COMPANIES), EVERY ARTIFICIAL JURIDICAL PERSON NOT FALLING IN ANY OF THE DESCRIPTIONS OF BIDDERS STATED HEREINBEFORE, INCLUDING ANY AGENCY BRANCH OR OFFICE CONTROLLED BY SUCH PERSON, PARTICIPATING IN A PROCUREMENT PROCESS. III. "BIDDER FROM A COUNTRY WHICH SHARES A LAND BORDER WITH INDIA" FOR THE PURPOSE OF THIS ORDER MEANS: - a) AN ENTITY INCORPORATED, ESTABLISHED OR REGISTERED IN SUCH A COUNTRY; OR b) A SUBSIDIARY OF AN ENTITY INCORPORATED, ESTABLISHED OR REGISTERED IN SUCH A COUNTRY; OR c) AN ENTITY SUBSTANTIALLY CONTROLLED THROUGH ENTITIES INCORPORATED, ESTABLISHED OR REGISTERED IN SUCH A COUNTRY; OR d) AN ENTITY WHOSE BENEFICIAL OWNER IS SITUATED IN SUCH A COUNTRY; OR e) AN INDIAN (OR OTHER) AGENT OF SUCH AN ENTITY; OR f) A NATURAL PERSON WHO IS A CITIZEN OF SUCH A COUNTRY; OR g) A CONSORTIUM OR JOINT VENTURE WHERE ANY MEMBER OF THE CONSORTIUM OR JOINT VENTURE FALLS UNDER ANY OF THE ABOVE IV. THE BENEFICIAL OWNER FOR THE PURPOSE OF (III) ABOVE WILL BE AS UNDER: 1. IN CASE OF A COMPANY OR LIMITED LIABILITY PARTNERSHIP, THE BENEFICIAL OWNER IS THE NATURAL PERSON (S) WHO, WHETHER ACTING ALONE OR TOGETHER, OR THROUGH ONE OR MORE JURIDICAL PERSON, HAS A CONTROLLING OWNERSHIP INTEREST OR WHO EXERCISES CONTROL THROUGH OTHER MEANS. EXPLANATION – a. "CONTROLLING OWNERSHIP INTEREST" MEANS OWNERSHIP OF OR ENTITLEMENT TO MORE THAN TWENTY-FIVE PER CENT. OF SHARES OR CAPITAL OR PROFITS OF THE COMPANY b. "CONTROL" SHALL INCLUDE THE RIGHT TO APPOINT MAJORITY OF THE DIRECTORS OR TO CONTROL THE MANAGEMENT OR POLICY DECISIONS INCLUDING BY VIRTUE OF THEIR SHAREHOLDING OR MANAGEMENT RIGHTS OR SHAREHOLDER'S AGREEMENTS OF VOTING AGREEMENTS; 2. IN CASE OF A PARTNERSHIP FIRM, THE BENEFICIAL OWNER IS THE NATURAL PERSON (S) WHO, WHETHER ACTING ALONE OR TOGETHER, OR THROUGH ONE OR MORE JURIDICAL OF CAPITAL OR PROFITS OF THE PARTNERSHIP; 3. IN CASE OF AN UNINCORPORATED ASSOCIATION OR BODY OF INDIVIDUALS, THE BENEFICIAL OWNER IS THE NATURAL PERSON (S), WHO, WHETHER ACTING ALONE OR TOGETHER, OR THROUGH ONE OR MORE JURIDICAL PERSON, HAS OWNERSHIP OF OR ENTITLEMENT TO MORE THAN FIFTEEN PERCENT OF THE PROPERTY OF CAPITAL OF PROFITS OF SUCH ASSOCIATION OR BODY OF INDIVIDUALS; 4. WHERE NO NATURAL PERSON IS IDENTIFIED UNDER (1) OR (2) OR (3) ABOVE, THE BENEFICIAL OWNER IS THE RELEVANT NATURAL PERSON WHO HOLDS THE POSITION OF SENIOR MANAGING OFFICIAL; 5. IN CASE OF TRUST, THE IDENTIFICATION OF BENEFICIAL OWNER (S) SHALL INCLUDE IDENTIFICATION OF THE AUTHOR OF THE TRUST, THE TRUSTEE, THE BENEFICIARIES WITH FIFTEEN PERCENT OR MORE INTEREST IN THE TRUST AND ANY OTHER NATURAL PERSON EXERCISING ULTIMATE EFFECTIVE CONTROL OVER THE TRUST THROUGH A CHAIN OF CONTROL OR OWNERSHIP. V. AN AGENT IS A PERSON EMPLOYED TO DO ANY ACT FOR ANOTHER, OR TO REPRESENT ANOTHER IN DEALINGS WITH THIRD PERSON. CERTIFICATE: IN ORDER TO AVAIL THE BENEFITS, VENDORS TO SUBMIT (ALONG WITH OFFER) THE SELF-CERTIFICATION THAT THE ITEM OFFERED MEETS THE CONTENT REQUIREMENT FOR CLASS-I/ CLASS-II LOCAL SUPPLIER AS THE CASE MAY BE, INDICATING THE PERCENTAGE OF LOCAL CONTENT. AND SHALL GIVE DETAILS OF LOCATION AT WHICH THE LOCAL VALUE ADDITION IS MADE (refer attached Make in India (Model Certificate no I).	
47.	13.1 "FORCE MAJEURE" SHALL MEAN CIRCUMSTANCE WHICH IS: A) BEYOND CONTROL OF EITHER OF THE PARTIES TO CONTRACT, B) EITHER OF THE PARTIES COULD NOT REASONABLY HAVE PROVIDED AGAINST THE EVENT BEFORE ENTERING INTO THE CONTRACT, C) HAVING ARISEN, EITHER OF THE PARTIES COULD NOT REASONABLY HAVE AVOIDED OR OVERCOME, AND D) IS NOT SUBSTANTIALLY ATTRIBUTABLE TO EITHER OF THE PARTIES AND PREVENTS THE PERFORMANCE OF THE CONTRACT SUCH CIRCUMSTANCES INCLUDE BUT SHALL NOT BE LIMITED TO: I) WAR, HOSTILITIES, INVASION, ACT OF FOREIGN ENEMIES. II) REBELLION, TERRORISM, REVOLUTION, INSURRECTION, MILITARY OR USURPED POWER, OR CIVIL WAR. III) RIOT, COMMOTION OR DISORDER BY PERSONS OTHER THAN THE CONTRACTOR'S PERSONNEL AND OTHER EMPLOYEES OF THE CONTRACTOR AND SUB-CONTRACTORS. IV) STRIKE OR LOCKOUT NOT SOLELY INVOLVING THE CONTRACTOR'S PERSONNEL AND OTHER EMPLOYEES OF THE CONTRACTOR AND SUB-CONTRACTORS. V) ENCOUNTERING MUNITIONS OF WAR, EXPLOSIVE MATERIALS, IONIZING RADIATION OR CONTAMINATION BY RADIO-ACTIVITY, EXCEPT AS MAY BE ATTRIBUTABLE TO THE CONTRACTOR'S USE OF SUCH MUNITIONS, EXPLOSIVES, RADIATION OR RADIO- ACTIVITY. VI) NATURAL CATASTROPHES SUCH AS EARTHQUAKE, TSUNAMI, VOLCANIC ACTIVITY, HURRICANE OR TYPHOON, FLOOD, FIRE, CYCLONES ETC. VII) EPIDEMIC, PANDEMIC ETC 13.2 THE FOLLOWING EVENTS ARE EXPLICITLY EXCLUDED FROM FORCE MAJEURE AND ARE SOLELY THE RESPONSIBILITIES OF THE NON-PERFORMING PARTY: A) ANY STRIKE, WORK-TO-RULE ACTION, GO-SLOW OR SIMILAR LABOUR DIFFICULTY (B) LATE DELIVERY OF EQUIPMENT OR MATERIAL (UNLESS CAUSED BY FORCE MAJEURE EVENT) AND (C) ECONOMIC HARDSHIP. 13.3 IF EITHER PARTY IS PREVENTED, HINDERED OR DELAYED FROM OR IN PERFORMING ANY OF ITS OBLIGATIONS UNDER THE CONTRACT BY AN EVENT OF FORCE MAJEURE, THEN IT SHALL NOTIFY THE OTHER IN WRITING OF THE OCCURRENCE OF SUCH EVENT AND THE CIRCUMSTANCES THEREOF WITHIN 15 (FIFTEEN) DAYS AFTER THE OCCURRENCE OF SUCH EVENT. 13.4 THE PARTY WHO HAS GIVEN SUCH NOTICE SHALL BE EXCUSED FROM THE PERFORMANCE OR PUNCTUAL PERFORMANCE OF ITS OBLIGATIONS UNDER THE CONTRACT FOR SO LONG AS THE RELEVANT EVENT OF FORCE MAJEURE CONTINUES AND TO THE EXTENT THAT SUCH PARTY'S PERFORMANCE IS PREVENTED, HINDERED OR DELAYED. THE TIME FOR COMPLETION SHALL BE EXTENDED BY A PERIOD OF TIME EQUAL TO PERIOD OF DELAY CAUSED DUE TO SUCH FORCE MAJEURE EVENT. 13.5 DELAY OR NON-PERFORMANCE BY EITHER PARTY HERETO CAUSED BY THE OCCURRENCE OF ANY EVENT OF FORCE MAJEURE SHALL NOT I) CONSTITUTE A DEFAULT OR BREACH OF THE CONTRACT. II) GIVE RISE TO ANY CLAIM FOR DAMAGES OR ADDITIONAL COST EXPENSE OCCASIONED THEREBY, IF AND TO THE EXTENT THAT SUCH DELAY OR NON-PERFORMANCE IS CAUSED BY THE OCCURRENCE OF AN EVENT OF FORCE MAJEURE. 13.6 BHEL AT ITS DISCRETION MAY CONSIDER SHORT CLOSURE OF CONTRACT AFTER 1 YEAR OF IMPOSITION OF FORCE MAJEURE IN LINE WITH EXTANT GUIDELINES. IN ANY CASE, SUPPLIER/VENDOR CANNOT CONSIDER DEEMED SHORT-CLOSURE AFTER 1 YEAR OF IMPOSITION OF FORCE MAJEURE.	
48.	FRAUD PREVENTION POLICY : THE BIDDER ALONG WITH ITS ASSOCIATE/ COLLABORATORS/ SUB-CONTRACTORS/ SUB-VENDORS/ CONSULTANTS/ SERVICE PROVIDERS SHALL STRICTLY ADHERE TO BHEL FRAUD PREVENTION POLICY DISPLAYED ON BHEL WEBSITE WWW.BHEL.COM AND SHALL IMMEDIATELY BRING TO THE NOTICE OF BHEL MANAGEMENT ABOUT ANY FRAUD OR SUSPECTED FRAUD AS SOON AS IT COMES TO THEIR NOTICE.	
49.	SHORT SHIPMENTS/ WARRANTY/GUARANTEE REPLACEMENTS: IN CASE OF ANY SHORT SHIPMENT DURING INITIAL SUPPLY WHICH IS SUBSEQUENTLY DISPATCHED BY THE VENDOR OR ANY GUARANTEE / WARRANTY REPLACEMENTS SHALL BE DISPATCHED ON "FOR-BHEL STORES/DESIGNATED DESTINATION" BASIS FOR INDIGENOUS	

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**Amendment- 27
ANNEXURE-A**

	ITEMS. TAXES, IF ANY PAID BY INDIGENOUS VENDOR FOR GUARANTEE /WARRANTEE REPLACEMENT, REPAIR ACTIVITY EXCLUDING SHORT SUPPLY SHALL BE TO VENDOR'S ACCOUNT ONLY. THE VENDOR HAS TO RAISE A CREDIT NOTE FOR SHORT SUPPLIED QUANTITY AS PER GST PROVISIONS.	
50.	E WAY BILL: THE SUPPLIER HAS TO ARRANGE FOR E WAY BILL AS APPLICABLE FOR ANY MOVEMENT OF GOODS ALONG WITH OTHER PRESCRIBED DOCUMENTS AS PER GST LAW. THE SUPPLIER HAS ALSO TO COMPLY WITH ANY AMENDMENT AS PRESCRIBED FROM TIME TO TIME UNDER E WAY BILL RULE. ANY FINANCIAL IMPLICATION ARISES ON BHEL DUE TO NONCOMPLIANCE OF E WAY BILL RULE WILL BE PASSED ON TO THE SUPPLIER.	
51.	THE BIDDER DECLARES THAT THEY WILL NOT ENTER INTO ANY ILLEGAL OR UNDISCLOSED AGREEMENT OR UNDERSTANDING, WHETHER FORMAL OR INFORMAL WITH OTHER BIDDER (S). THIS APPLIES IN PARTICULAR TO PRICES, SPECIFICATIONS, CERTIFICATIONS, SUBSIDIARY CONTRACTS, SUBMISSION OR NON- SUBMISSION OF BIDS OR ANY OTHER ACTIONS TO RESTRICT COMPETITIVENES OR TO INTRODUCE CARTELIZATION IN THE BIDDING PROCESS. IN CASE, THE BIDDER IS FOUND HAVING INDULGED IN ABOVE ACTIVITIES, SUITABLE ACTION SHALL BE TAKEN BY BHEL AS PER EXTANT POLICIES / GUIDELINES.	
52.	THE BIDDER SHALL REGISTER THEMSELVES ON GEM PORTAL AND SHALL QUOTE THEIR GEM SELLER ID IN THEIR OFFER. GEM SELLER ID IS MANDATORY FOR PLACEMENT OF PURCHASE ORDER EXCEPT IN CASES WHERE FREE ISSUE MATERIAL IS TO BE ISSUED BY BHEL .	
53.	REJECTION/REPLACEMENT: THE SELLER SHALL ARRANGE REPLACEMENT / REPAIR UNDER ITS OBLIGATION UNDER THE CONTRACT. SELLER SHALL BE GIVEN GROUND RENT FREE PERIOD OF 90 DAYS FROM THE DATE OF REJECTION TO LIFT REJECTED MATERIAL. BEYOND 90 DAYS, A GROUND RENT OF 0.25% OF VALUE OF REJECTED MATERIAL PER WEEK WILL BE LEVIED FOR A MAXIMUM PERIOD OF 4 WEEKS. BEYOND THIS PERIOD SUPPLIER FORFEITS THEIR RIGHT TO THE MATERIALS.	
54.	TREATMENT OF CASES REGARDING CONFLICT OF INTEREST: THE BIDDER NOTES THAT A CONFLICT OF INTEREST WOULD SAID TO HAVE OCCURRED IN THE TENDER PROCESS AND EXECUTION OF THE RESULTANT CONTRACT, IN CASE OF ANY OF THE FOLLOWING SITUATIONS: I) IF ITS PERSONNEL HAVE A CLOSE PERSONAL, FINANCIAL, OR BUSINESS RELATIONSHIP WITH ANY PERSONNEL OF BHEL WHO ARE DIRECTLY OR INDIRECTLY RELATED TO THE PROCUREMENT OR EXECUTION PROCESS OF THE CONTRACT, WHICH CAN AFFECT THE DECISION OF BHEL DIRECTLY OR INDIRECTLY; II) THE BIDDER (OR HIS ALLIED FIRM) PROVIDED SERVICES FOR THE NEED ASSESSMENT/ PROCUREMENT PLANNING OF THE TENDER PROCESS IN WHICH IT IS PARTICIPATING; III) PROCUREMENT OF GOODS DIRECTLY FROM THE MANUFACTURERS/ SUPPLIERS SHALL BE PREFERRED. HOWEVER, IF THE OEM/ PRINCIPAL INSISTS ON ENGAGING THE SERVICES OF AN AGENT, SUCH AGENT SHALL NOT BE ALLOWED TO REPRESENT MORE THAN ONE MANUFACTURER/ SUPPLIER IN THE SAME TENDER. MOREOVER, EITHER THE AGENT COULD BID ON BEHALF OF THE MANUFACTURER/ SUPPLIER OR THE MANUFACTURER/ SUPPLIER COULD BID DIRECTLY BUT NOT BOTH. IN CASE BIDS ARE RECEIVED FROM BOTH THE MANUFACTURER/ SUPPLIER AND THE AGENT, BID RECEIVED FROM THE AGENT SHALL BE IGNORED. HOWEVER, THIS SHALL NOT DEBAR MORE THAN ONE AUTHORISED DISTRIBUTOR (WITH/ OR WITHOUT THE OEM) FROM QUOTING EQUIPMENT MANUFACTURED BY AN ORIGINAL EQUIPMENT MANUFACTURER (OEM) IN PROCUREMENTS UNDER A PROPRIETARY ARTICLE CERTIFICATE. IV) A BIDDER PARTICIPATES IN MORE THAN ONE BID IN THIS TENDER PROCESS. PARTICIPATION IN ANY CAPACITY BY A BIDDER (INCLUDING THE PARTICIPATION OF A BIDDER AS A PARTNER/ JV MEMBER OR SUB-CONTRACTOR IN ANOTHER BID OR VICE-VERSA) IN MORE THAN ONE BID SHALL RESULT IN THE DISQUALIFICATION OF ALL BIDS IN WHICH HE IS A PARTY. HOWEVER, THIS DOES NOT LIMIT THE PARTICIPATION OF AN ENTITY AS A SUB-CONTRACTOR IN MORE THAN ONE BID IF HE IS NOT BIDDING INDEPENDENTLY IN HIS OWN NAME OR AS A MEMBER OF A JV. THE BIDDER DECLARES THAT THEY HAVE READ AND UNDERSTOOD THE ABOVE ASPECTS, AND THE BIDDER CONFIRMS THAT SUCH CONFLICT OF INTEREST DOES NOT EXIST AND UNDERTAKES THAT THEY WILL NOT ENTER INTO ANY ILLEGAL OR UNDISCLOSED AGREEMENT OR UNDERSTANDING, WHETHER FORMAL OR INFORMAL WITH OTHER BIDDER(S), IN THIS REGARD. THIS APPLIES IN PARTICULAR TO PRICES, SPECIFICATIONS, CERTIFICATIONS, SUBSIDIARY CONTRACTS, SUBMISSION OR NON-SUBMISSION OF BIDS OR ANY OTHER ACTIONS TO RESTRICT COMPETITIVENESS OR TO INTRODUCE CARTELIZATION IN THE BIDDING PROCESS. IN CASE, THE BIDDER IS FOUND HAVING INDULGED IN ABOVE ACTIVITIES, THE SAME WILL BE CONSIDERED AS A VIOLATION OF THE TENDER CONDITIONS, AND SUITABLE ACTION SHALL BE TAKEN BY BHEL AS PER EXTANT POLICIES/ GUIDELINES.	
55.	VENDOR MUST VISIT OUR WEBSITE https://herp.bhel.com REGULARLY FOR ENQUIRY/PO/CLARIFICATIONS/FOR ANY LATEST UPDATES.	
56.	MSME VENDORS CAN AVAIL BENEFITS OF PAYMENT THROUGH TREDS.	
57.	"THE OFFERS OF THE BIDDERS WHO ARE UNDER SUSPENSION AS ALSO THE OFFERS OF THE BIDDERS, WHO ENGAGE THE SERVICES OF THE FIRMS DEBARRED ACROSS BHEL, SHALL BE REJECTED. THE LIST OF FIRMS DEBARRED ACROSS BHEL IS AVAILABLE ON BHEL WEBSITE WWW.BHEL.COM. 1.0 INTEGRITY COMMITMENT, PERFORMANCE OF THE CONTRACT AND PUNITIVE ACTION THEREOF: 1.1. COMMITMENT BY BHEL: BHEL COMMITS TO TAKE ALL MEASURES NECESSARY TO PREVENT CORRUPTION IN CONNECTION WITH THE TENDER PROCESS AND EXECUTION OF THE CONTRACT. BHEL WILL DURING THE TENDER PROCESS TREAT ALL BIDDER(S) IN A TRANSPARENT AND FAIR MANNER, AND WITH EQUITY. 1.2. COMMITMENT BY BIDDER/ SUPPLIER/ CONTRACTOR: 1.2.1. THE BIDDER/ SUPPLIER/ CONTRACTOR COMMIT TO TAKE ALL MEASURES TO PREVENT CORRUPTION AND WILL NOT DIRECTLY OR INDIRECTLY INFLUENCE ANY DECISION OR BENEFIT WHICH HE IS NOT LEGALLY ENTITLED TO NOR WILL ACT OR OMIT IN ANY MANNER WHICH TANTAMOUNT TO AN OFFENCE PUNISHABLE UNDER ANY PROVISION OF THE INDIAN PENAL CODE, 1860 OR ANY OTHER LAW IN FORCE IN INDIA. 1.2.2. THE BIDDER/ SUPPLIER/ CONTRACTOR WILL, WHEN PRESENTING HIS BID, DISCLOSE ANY AND ALL PAYMENTS HE HAS MADE, AND IS COMMITTED TO OR INTENDS TO MAKE TO AGENTS, BROKERS OR ANY OTHER INTERMEDIARIES IN CONNECTION WITH THE AWARD OF THE CONTRACT AND SHALL ADHERE TO RELEVANT GUIDELINES ISSUED FROM TIME TO TIME BY GOVT. OF INDIA/ BHEL. 1.2.3. THE BIDDER/ SUPPLIER/ CONTRACTOR WILL PERFORM/ EXECUTE THE CONTRACT AS PER THE CONTRACT TERMS & CONDITIONS AND WILL NOT DEFAULT WITHOUT ANY REASONABLE CAUSE, WHICH CAUSES LOSS OF BUSINESS/ MONEY/ REPUTATION, TO BHEL. IF ANY BIDDER/ SUPPLIER/ CONTRACTOR DURING PRE-TENDERING/ TENDERING/ POST TENDERING/ AWARD/ EXECUTION/ POST-EXECUTION STAGE INDULGES IN MALPRACTICES, CHEATING, BRIBERY, FRAUD OR AND OTHER MISCONDUCT OR FORMATION OF CARTEL SO AS TO INFLUENCE THE BIDDING PROCESS OR INFLUENCE THE PRICE OR ACTS OR OMMITS IN ANY MANNER WHICH TANTAMOUNT TO AN OFFENCE PUNISHABLE UNDER ANY PROVISION OF THE INDIAN PENAL CODE, 1860 OR ANY OTHER LAW IN FORCE IN INDIA, THEN, ACTION MAY BE TAKEN AGAINST SUCH BIDDER/ SUPPLIER/ CONTRACTOR AS PER EXTANT GUIDELINES OF THE COMPANY AVAILABLE ON WWW. BHEL.COM AND/OR UNDER APPLICABLE LEGAL PROVISIONS".	
58.	BID SECURITY OR EARNEST MONEY DEPOSIT (EMD): TO SAFE GUARD AGAINST A BIDDER'S WITHDRAWING OR ALTERING ITS/ HIS BID DURING THE BID VALIDITY PERIOD, BID SECURITY [ALSO KNOWN AS EARNST MONEY DEPOSIT (EMD)] SHALL BE OBTAINED FROM THE BIDDERS ALONG WITH THEIR BIDS (EXCEPT MICRO AND SMALL ENTERPRISES (MSES) OR STARTUPS AS RECOGNIZED BY DEPARTMENT FOR PROMOTION OF INDUSTRY AND INTERNAL TRADE (DPIIT)). THE AMOUNT OF EMD SHALL BE AS MENTIONED IN ENQUIRY. 1. MODES OF DEPOSIT A) THE EMD MAY BE ACCEPTED ONLY IN THE FOLLOWING FORMS AND THE SAME MUST BE SUBMITTED BEFORE TENDER OPENING: (I) ELECTRONIC FUND TRANSFER CREDITED IN BHEL ACCOUNT. (II) BANKER'S CHEQUE/ PAY ORDER/ DEMAND DRAFT, IN FAVOUR OF BHEL. (III) FIXED DEPOSIT RECEIPT (FDR).(IN THE NAME OF " BIDDER'S NAME A/C BHEL") (IV) BANK GUARANTEE FROM ANY OF THE SCHEDULED BANKS. (V) INSURANCE SURETY BONDS. B) IN CASE THE EMD IS MORE THAN RUPEES TWO LAKH AND IN CASE OF FOREIGN BIDDERS, IT MAY BE IN THE FORM OF A BANK GUARANTEE (IN EQUIVALENT FOREIGN EXCHANGE AMOUNT, IN CASE OF FOREIGN BIDDERS) ISSUED/ CONFIRMED FROM ANY OF THE SCHEDULED COMMERCIAL BANK IN INDIA IN AN ACCEPTABLE FORM. THE EMD SHALL REMAIN VALID FOR A PERIOD OF 45 (FORTY-FIVE) DAYS BEYOND THE FINAL BID VALIDITY PERIOD. 2. FORFEITURE OF EMD	

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	I) A BIDDER'S EMD WILL BE FORFEITED IF THE BIDDER WITHDRAWS OR AMENDS ITS/HIS TENDER OR IMPAIRS OR DEROGATES FROM THE TENDER IN ANY RESPECT WITHIN THE PERIOD OF VALIDITY OF THE TENDER OR IF THE SUCCESSFUL BIDDER FAILS TO FURNISH THE REQUIRED PERFORMANCE SECURITY WITHIN THE SPECIFIED PERIOD MENTIONED IN THE TENDER. (II) EMD BY THE TENDERER SHALL BE WITHHELD IN CASE ANY ACTION ON THE BIDDER IS ENVISAGED UNDER THE PROVISIONS OF EXTANT "GUIDELINES ON SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS/ CONTRACTORS" AND FORFEITED/ RELEASED BASED ON THE ACTION AS DETERMINED UNDER THESE GUIDELINES. 3. RETURN OF EMD (I) BID SECURITIES OF THE UNSUCCESSFUL BIDDERS SHALL BE RETURNED TO BIDDER AT THE EARLIEST AFTER EXPIRY OF THE FINAL BID VALIDITY PERIOD AND LATEST BY THE 30TH DAY AFTER THE AWARD OF THE CONTRACT. HOWEVER, IN CASE OF TWO PACKET OR TWO STAGE BIDDING, BID SECURITIES OF UNSUCCESSFUL BIDDERS DURING FIRST STAGE I.E. TECHNICAL EVALUATION ETC. SHALL BE RETURNED WITHIN 30 DAYS OF DECLARATION OF RESULT OF FIRST STAGE I.E. TECHNICAL EVALUATION ETC. (II) BID SECURITY SHALL BE REFUNDED TO THE SUCCESSFUL BIDDER ON CONCLUSION OF THE ORDER/ RECEIPT OF A PERFORMANCE SECURITY (IF CALLED IN THE TENDER). (III) EMD SHALL NOT CARRY ANY INTEREST.	
59.	PERFORMANCE SECURITY (PS): TO ENSURE DUE PERFORMANCE OF THE CONTRACT, PERFORMANCE BANK GUARANTEE (PBG) OR SECURITY DEPOSIT (SD), HEREAFTER REFERRED AS PERFORMANCE SECURITY SHALL BE OBTAINED FROM THE SUCCESSFUL BIDDER AWARDED THE CONTRACT. THE PERFORMANCE SECURITY OF REQUIRED AMOUNT IS TO BE SUBMITTED BY THE DATE SPECIFIED IN THE PO/CONTRACT. 1. MODES OF DEPOSIT: A) PERFORMANCE SECURITY MAY BE FURNISHED IN THE FOLLOWING FORMS: (I) LOCAL CHEQUES OF SCHEDULED BANKS (SUBJECT TO REALIZATION)/ PAY ORDER/ DEMAND DRAFT/ ELECTRONIC FUND TRANSFER IN FAVOUR OF BHEL. (II) BANK GUARANTEE FROM SCHEDULED BANKS / PUBLIC FINANCIAL INSTITUTIONS AS DEFINED IN THE COMPANIES ACT. THE BANK GUARANTEE FORMAT SHOULD HAVE THE APPROVAL OF BHEL. (III) FIXED DEPOSIT RECEIPT ISSUED BY SCHEDULED BANKS / PUBLIC FINANCIAL INSTITUTIONS AS DEFINED IN THE COMPANIES ACT (FDR SHOULD BE IN THE NAME OF THE CONTRACTOR, A/C BHEL). (IV) SECURITIES AVAILABLE FROM INDIAN POST OFFICES SUCH AS NATIONAL SAVINGS CERTIFICATES, KISAN VIKAS PATRAS ETC. (HELD IN THE NAME OF CONTRACTOR FURNISHING THE SECURITY AND DULY ENDORSED/ HYPOTHECATED/ PLEDGED, AS APPLICABLE, IN FAVOUR OF BHEL). (V) INSURANCE SURETY BOND. (NOTE: BHEL WILL NOT BE LIABLE OR RESPONSIBLE IN ANY MANNER FOR THE COLLECTION OF INTEREST OR RENEWAL OF THE DOCUMENTS OR IN ANY OTHER MATTER CONNECTED THEREWITH) B) IN CASE OF GTE TENDERS, THE PERFORMANCE SECURITY SHALL BE IN THE SAME CURRENCY AS THE CONTRACT AND MUST CONFORM TO UNIFORM RULES FOR DEMAND GUARANTEES (URDG 758) - AN INTERNATIONAL CONVENTION REGULATING INTERNATIONAL SECURITIES. (C) PERFORMANCE SECURITY IS TO BE FURNISHED WITHIN A SPECIFIED DATE (GENERALLY 14(FOURTEEN) DAYS AFTER NOTIFICATION OF THE AWARD) AND IT SHOULD REMAIN VALID FOR A PERIOD OF 60 (SIXTY) DAYS BEYOND THE DATE OF COMPLETION OF ALL CONTRACTUAL OBLIGATIONS OF THE SUPPLIER, INCLUDING WARRANTY OBLIGATIONS. "BIDDER AGREES TO SUBMIT PERFORMANCE SECURITY REQUIRED FOR EXECUTION OF THE CONTRACT WITHIN THE TIME PERIOD MENTIONED. IN CASE OF DELAY IN SUBMISSION OF PERFORMANCE SECURITY, ENHANCED PERFORMANCE SECURITY WHICH WOULD INCLUDE INTEREST (REPO RATE+4%) FOR THE DELAYED PERIOD, SHALL BE SUBMITTED BY THE BIDDER. FURTHER, IF PERFORMANCE SECURITY IS NOT SUBMITTED TILL SUCH TIME THE FIRST BILL BECOMES DUE, THE AMOUNT OF PERFORMANCE SECURITY DUE SHALL BE RECOVERED AS PER TERMS DEFINED IN NIT CONTRACT, FROM THE BILLS ALONG WITH DUE INTEREST" 2. FORFEITURE OF PERFORMANCE SECURITY: THE PERFORMANCE SECURITY WILL BE FORFEITED AND CREDITED TO BHEL'S ACCOUNT IN THE EVENT OF A BREACH OF CONTRACT BY THE SUPPLIER. 3. RETURN OF PERFORMANCE SECURITY (PS): PS SHALL BE REFUNDED TO THE BIDDER WITHOUT INTEREST, AFTER HE DULY PERFORMS AND COMPLETES THE CONTRACT IN ALL RESPECTS BUT NOT LATER THAN 60(SIXTY) DAYS OF COMPLETION OF ALL SUCH OBLIGATIONS INCLUDING THE WARRANTY UNDER THE CONTRACT. 4. THE PERFORMANCE SECURITY SHALL NOT CARRY ANY INTEREST.	
60.	BREACH OF CONTRACT, REMEDIES AND TERMINATION: 16.1 BREACH OF CONTRCAT: THE FOLLOWING SHALL AMOUNT TO BREACH OF CONTRACT: I. NON-SUPPLY OF MATERIAL/ NON-COMPLETION OF WORK BY THE SUPPLIER/VENDOR WITHIN SCHEDULED DELIVERY/ COMPLETION PERIOD AS PER CONTRACT OR AS EXTENDED FROM TIME TO TIME. II. THE SUPPLIER/VENDOR FAILS TO PERFORM AS PER THE ACTIVITY SCHEDULE AND THERE ARE SUFFICIENT REASONS EVEN BEFORE EXPIRY OF THE DELIVERY/ COMPLETION PERIOD TO JUSTIFY THAT SUPPLIES SHALL BE INORDINATELY DELAYED BEYOND CONTRACTUAL DELIVERY/ COMPLETION PERIOD. III. THE SUPPLIER/VENDOR DELIVERS EQUIPMENT/ MATERIAL NOT OF THE CONTRACTED QUALITY. IV. THE SUPPLIER/VENDOR FAILS TO REPLACE THE DEFECTIVE EQUIPMENT/ MATERIAL/ COMPONENT AS PER GUARANTEE CLAUSE. V. WITHDRAWAL FROM OR ABANDONMENT OF THE WORK BY THE SUPPLIER/VENDOR BEFORE COMPLETION AS PER CONTRACT. VI. ASSIGNMENT, TRANSFER, SUBLETTING OF CONTRACT BY THE SUPPLIER/VENDOR WITHOUT BHEL'S WRITTEN PERMISSION RESULTING IN TERMINATION OF CONTRACT OR PART THEREOF BY BHEL. VII. NON-COMPLIANCE TO ANY CONTRACTUAL CONDITION OR ANY OTHER DEFAULT ATTRIBUTABLE TO SUPPLIER/VENDOR. VIII. ANY OTHER REASON(S) ATTRIBUTABLE TO VENDOR TOWARDS FAILURE OF PERFORMANCE OF CONTRACT. IN CASE OF BREACH OF CONTRACT, BHEL SHALL HAVE THE RIGHT TO TERMINATE THE PURCHASE ORDER/ CONTRACT EITHER IN WHOLE OR IN PART THEREOF WITHOUT ANY COMPENSATION TO THE SUPPLIER/VENDOR. IX. ANY OF THE DECLARATIONS FURNISHED BY THE CONTRACTOR AT THE TIME OF BIDDING AND/ OR ENTERING INTO THE CONTRACT FOR SUPPLY ARE FOUND UNTRUTHFUL AND SUCH DECLARATIONS WERE OF A NATURE THAT COULD HAVE RESULTED IN NON-AWARD OF CONTRACT TO THE CONTRACTOR OR COULD EXPOSE BHEL AND/ OR OWNER TO ADVERSE CONSEQUENCES, FINANCIAL OR OTHERWISE. X. SUPPLIER/VENDOR IS CONVICTED OF ANY OFFENCE INVOLVING CORRUPT BUSINESS PRACTICES, ANTINATIONAL ACTIVITIES OR ANY SUCH OFFENCE THAT COMPROMISES THE BUSINESS ETHICS OF BHEL, IN VIOLATION OF THE INTEGRITY PACT ENTERED INTO WITH BHEL HAS THE POTENTIAL TO HARM THE OVERALL BUSINESS OF BHEL/ OWNER NOTE- ONCE BHEL CONSIDERS THAT A BREACH OF CONTRACT HAS OCCURRED ON THE PART OF SUPPLIER/VENDOR, BHEL SHALL NOTIFY THE SUPPLIER/VENDOR BY WAY OF NOTICE IN THIS REGARD. CONTRACTOR SHALL BE GIVEN AN OPPORTUNITY TO RECTIFY THE REASONS CAUSING THE BREACH OF CONTRACT WITHIN A PERIOD OF 14 DAYS. IN CASE THE CONTRACTOR FAILS TO REMEDY THE BREACH, AS MENTIONED IN THE NOTICE, TO THE SATISFACTION OF BHEL, BHEL SHALL HAVE THE RIGHT TO TAKE RECOURSE TO ANY OF THE REMEDIAL ACTIONS AVAILABLE TO IT UNDER THE RELEVANT PROVISIONS OF CONTRACT 16.2 REMEDIES IN CASE OF BREACH OF CONTRACT. I.WHEREIN THE PERIOD AS STIPULATED IN THE NOTICE ISSUED UNDER CLAUSE 14.1 HAS EXPIRED AND SUPPLIER/VENDOR HAS FAILED TO REMEDY THE BREACH, BHEL WILL HAVE THE RIGHT TO TERMINATE THE CONTRACT ON THE GROUND OF "BREACH OF CONTRACT" WITHOUT ANY FURTHER NOTICE TO CONTRACTOR. II. UPON TERMINATION OF CONTRACT, BHEL SHALL BE ENTITLED TO RECOVER AN AMOUNT EQUIVALENT TO 10% OF THE CONTRACT VALUE FOR THE DAMAGES ON ACCOUNT OF BREACH OF CONTRACT COMMITTED BY THE SUPPLIER/VENDOR. THIS AMOUNT SHALL BE RECOVERED BY WAY OF ENCASHING THE SECURITY INSTRUMENTS LIKE PERFORMANCE BANK GUARANTEE ETC AVAILABLE WITH BHEL AGAINST THE SAID CONTRACT. IN CASE THE VALUE OF THE SECURITY INSTRUMENTS AVAILABLE IS LESS THAN 10% OF THE CONTRACT VALUE, THE BALANCE AMOUNT SHALL BE RECOVERED FROM OTHER FINANCIAL REMEDIES (I.E. AVAILABLE BILLS OF THE SUPPLIER/VENDOR, RETENTION AMOUNT, FROM THE MONEY DUE TO THE SUPPLIER/VENDOR ETC. WITH BHEL) OR THE OTHER LEGAL REMEDIES SHALL BE PURSUED	

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	III. WHEREVER THE VALUE OF SECURITY INSTRUMENTS LIKE PERFORMANCE BANK GUARANTEE AVAILABLE WITH BHEL AGAINST THE SAID CONTRACT IS 10% OF THE CONTRACT VALUE OR MORE, SUCH SECURITY INSTRUMENTS TO THE EXTENT OF 10% CONTRACT VALUE WILL BE ENCASHED. IN CASE NO SECURITY INSTRUMENTS ARE AVAILABLE OR THE VALUE OF THE SECURITY INSTRUMENTS AVAILABLE IS LESS THAN 10% OF THE CONTRACT VALUE, THE 10% OF THE CONTRACT VALUE OR THE BALANCE AMOUNT, AS THE CASE MAY BE, WILL BE RECOVERED IN ALL OR ANY OF THE FOLLOWING MANNERS: IV. IN CASE THE AMOUNT RECOVERED UNDER SUB CLAUSE (A) ABOVE IS NOT SUFFICIENT TO FULFIL THE AMOUNT RECOVERABLE THEN; A DEMAND NOTICE TO DEPOSIT THE BALANCE AMOUNT WITHIN 30 DAYS SHALL BE ISSUED TO SUPPLIER/VENDOR. V. IF SUPPLIER/VENDOR FAILS TO DEPOSIT THE BALANCE AMOUNT WITHIN THE PERIOD AS PRESCRIBED IN DEMAND NOTICE, FOLLOWING ACTION SHALL BE TAKEN FOR RECOVERY OF THE BALANCE AMOUNT: A. FROM DUES AVAILABLE IN THE FORM OF BILLS PAYABLE TO DEFAULTED SUPPLIER/VENDOR AGAINST THE SAME CONTRACT. B. IF IT IS NOT POSSIBLE TO RECOVER THE DUES AVAILABLE FROM THE SAME CONTRACT OR DUES ARE INSUFFICIENT TO MEET THE RECOVERABLE AMOUNT, BALANCE AMOUNT SHALL BE RECOVERED FROM ANY MONEY(S) PAYABLE TO SUPPLIER/VENDOR UNDER ANY CONTRACT WITH OTHER UNITS OF BHEL INCLUDING RECOVERY FROM SECURITY DEPOSITS OR ANY OTHER DEPOSIT AVAILABLE IN THE FORM OF SECURITY INSTRUMENTS OF ANY KIND AGAINST SECURITY DEPOSIT OR EMD. C. IN-CASE RECOVERIES ARE NOT POSSIBLE WITH ANY OF THE ABOVE AVAILABLE OPTIONS, LEGAL ACTION SHALL BE INITIATED FOR RECOVERY AGAINST DEFAULTED SUPPLIER/VENDOR. VI. IT IS AN AGREED TERM OF CONTRACT THAT THIS AMOUNT SHALL BE A GENUINE PRE-ESTIMATE OF DAMAGES THAT BHEL WOULD INCUR IN COMPLETION OF BALANCE CONTRACTUAL OBLIGATION OF THE CONTRACT THROUGH ANY OTHER AGENCY AND BHEL WILL NOT BE REQUIRED TO FURNISH ANY OTHER EVIDENCE TO THE SUPPLIER/VENDOR FOR THE PURPOSE OF ESTIMATION OF DAMAGES. VII. IN ADDITION TO THE ABOVE, IMPOSITION OF LIQUIDATED DAMAGES, DEBARMENT, TERMINATION, DE-SCOPING, SHORT-CLOSURE, ETC., SHALL BE APPLIED AS PER PROVISIONS OF THE CONTRACT. NOTE: 1) THE DEFAULTING SUPPLIER/VENDOR SHALL NOT BE ELIGIBLE FOR PARTICIPATION IN ANY OF THE FUTURE ENQUIRIES FLOATED BY BHEL TO COMPLETE THE BALANCE WORK. THE DEFAULTING CONTRACTOR SHALL MEAN AND INCLUDE: (A) IN CASE DEFAULTED SUPPLIER/VENDOR IS THE SOLE PROPRIETORSHIP FIRM, ANY SOLE PROPRIETORSHIP FIRM OWNED BY SAME SOLE PROPRIETOR (B) IN CASE DEFAULTED SUPPLIER/VENDOR IS THE PARTNERSHIP FIRM, ANY FIRM COMPRISING OF SAME PARTNERS/ SOME OF THE SAME PARTNERS ; OR SOLE PROPRIETORSHIP FIRM OWNED BY ANY PARTNER(S) AS A SOLE PROPRIETOR.	
61.	NO INTEREST PAYABLE TO CONTRACTOR: NOTWITHSTANDING ANYTHING TO THE CONTRARY CONTAINED IN ANY OTHER DOCUMENT COMPRISING IN THE CONTRACT, NO INTEREST SHALL BE PAYABLE BY BHEL TO CONTRACTOR ON ANY MONEYS OR BALANCES INCLUDING BUT NOT LIMITED TO THE SECURITY DEPOSIT, EMD, RETENTION MONEY, RA BILLS OR THE FINAL BILL, OR ANY AMOUNT WITHHELD AND/OR APPROPRIATED BY BHEL ETC., WHICH BECOMES OR AS THE CASE MAY BE, IS ADJUDGED TO BE DUE FROM BHEL TO CONTRACTOR WHETHER UNDER THE CONTRACT OR OTHERWISE	
62.	OVER RUN CHARGES: NO OVERRUN CHARGES ARE APPLICABLE	
63.	ORDER OF PRECEDENCE: THE PURCHASE ORDER ALONG WITH ITS ANNEXURES THE NIT, ITS AMENDMENTS /CORRIGENDUM'S SHALL ALL TOGETHER CONSTITUTE THE ENTIRE CONTRACT BETWEEN THE PARTIES AND SHALL BE COMPLEMENTARY TO ONE ANOTHER. IN CASE OF ANY CONTRADICTION, THE ORDER OF PRECEDENCE SHALL BE AS BELOW: - PURCHASE ORDER ALONG WITH ITS ANNEXURES - AMENDMENTS/CLARIFICATIONS/CORRIGENDA/ERRATA ETC. ISSUED IN RESPECT OF THE TENDER DOCUMENTS BY BHEL. - NIT	
64.	OTHER POINTS: YOU SHALL HAVE TO OBSERVE ALL WORK QUALITY, SAFETY REGULATIONS, GENERAL TECHNICAL GUIDE LINES AS STIPULATED IN RELEVANT CLAUSES TENDER SPECIFICATION. YOU SHALL SUBMIT PROGRESS REPORTS TO BHEL AS PER TENDER CONDITIONS, REVIEW THE PROGRAMME FROM TIME TO TIME AND TAKE SUITABLE STEPS TO MEET OVERALL PROJECT SCHEDULE, IN CONSULTATION WITH BHEL/ BIFCL ENGINEER VENDOR SHOULD FOLLOW THE AGREED TENDER TERM (CL. NO. 29.0 OF GTC) STRICTLY: -- "THE OFFERS OF THE BIDDERS WHO ARE ON THE BANNED LIST AS ALSO THE OFFER OF THE BIDDERS, WHO ENGAGE THE SERVICES OF THE BANNED FIRMS, SHALL BE REJECTED. THE LIST OF BANNED FIRMS IS AVAILABLE ON BHEL WEB SITE WWW.BHEL.COM)". ALL OTHER TERMS & CONDITIONS NOT COVERED HERE SHALL BE AS PER THOSE SPECIFIED IN THE TENDER DOCUMENT (NIT) ALONG WITH TCNS INCLUDING TECHNICAL SPECIFICATION, SPECIFIC CONDITIONS OF CONTRACT & GENERAL CONDITIONS OF CONTRACT. YOU ARE REQUESTED TO SEND US THE ACKNOWLEDGEMENT AS PER SPECIFIED FORMAT AND CONVEY YOUR UNQUALIFIED ACCEPTANCE TO THIS PURCHASE ORDER AS PER ENCLOSED ANNEXURE-X WITHIN 7 (SEVEN) DAYS ELSE IT WILL BE DEEMED ACCEPTED.	
65.	FOR SUPPLY ORDERS PLACED ON INDIAN SUPPLIERS: IRRESPECTIVE OF THE VALUE OF THE INVOICE AMOUNT, THE BIDDER / VENDOR SHOULD NECESSARILY UPLOAD THE DESPATCH & INVOICE DETAILS ON BHEL SUVIDHA PORTAL AT HTTPS://SUVIDHA.BHEL.IN/SUVIDHA/, PRIOR TO DESPATCH. ALL DOCUMENTS AS PER PO CHECKLIST , ALONG WITH ADDITIONAL DOCUMENTS (IF ANY), MUST BE UPLOADED ON THE PORTAL. IT IS MANDATORY THAT TAX INVOICES WITH A NET AMOUNT (INCLUDING TAXES) EXCEEDING RS FIVE LAKHS UPLOADED ON THE PORTAL ARE DIGITALLY SIGNED USING A CLASS 3 DIGITAL SIGNATURE CERTIFICATE (DSC) ISSUED BY A LICENSED CERTIFYING AUTHORITY. SUBMISSION OF INVOICE DOCUMENT IN HARD COPY IS ALLOWED FOR INVOICES WITH A NET AMOUNT (INCLUDING TAXES) EQUAL TO AND UPTO RS FIVE LAKHS , IN CASE THEY WERE NOT DIGITALLY SIGNED AND UPLOADED ON THE PORTAL. THE MATERIAL WILL NOT BE ACCEPTED INSIDE BHEL IN ABSENCE OF THE ABOVE	

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66.	GRIEVANCE REDRESSAL MECHANISM: TO PROMOTE TRANSPARENCY AND ENSURE FAIR TREATMENT OF ALL BIDDERS, A STRUCTURED GRIEVANCE REDRESSAL MECHANISM IS IN PLACE TO ADDRESS ANY CONCERNS OR ISSUES ARISING DURING THE TENDERING PROCESS OR IN SUBSEQUENT BUSINESS DEALINGS WITH THE COMPANY. SUPPLIERS/CONTRACTORS ARE REQUESTED TO FOLLOW THE BELOW ESCALATION PROCESS FOR GRIEVANCE RESOLUTION: 1. FIRST LEVEL: ANY GRIEVANCE SHOULD INITIALLY BE ADDRESSED TO THE DESIGNATED DEALING OFFICER, WHOSE CONTACT DETAILS ARE PROVIDED IN THE NOTICE INVITING TENDER (NIT)/CONTRACT. SECOND LEVEL: IF THE ISSUE REMAINS UNRESOLVED, IT MAY BE ESCALATED BY LODGING A FORMAL GRIEVANCE THROUGH THE SUVIDHA PORTAL: HTTPS://SUVIDHA.BHEL.IN/SUVIDHA/. RESPONSES WILL BE PROVIDED IN ACCORDANCE WITH THE DEFINED ESCALATION MATRIX	
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NOTE:

1. PLEASE FILL IN THIS FORMAT AND SEND COMPULSORILY ALONG WITH QUOTATION WITH VENDOR'S SEAL, SIGNATURE AND DATE.

SIGNATURE ALONG WITH SEAL AND DATE:

On Bidder's office letter pad

Make in India (Model Certificate) Annexure-I

Self-Declaration

Enquiry No.	
Enquiry Date	

In line with Government public procurement order Number P-45021/2/2017-B.E-II dated 15.06.2017, and further modified order dt. 28.05.2018, 29.05-2019, 04.06.2020 and 19.07.2024.

I / We hereby declare that I / We are a "Local Supplier" meeting the requirement of minimum local content (..... %) defined in the above government notification for the goods against above mentioned enquiry Number.

Details of location at which local value addition will be made is as follows:

Door No.	
Street / Address 1	
Street / Address 2	
District	
State	
Country	
PIN Code	

We also understand that the false declarations will be considered as breach of Integrity and liable for action.

For Company Name:

Seal:

Signature:

Date:

Place:

(Please fill all Yellow colour field)

**S301250004****ANNEXURE - 723**

							FREE ISSUED DETAILS	
S.N	REF NO	Item Description	Qty.	Drng /Std.	SPEC	CBOM/ DRG DIA/THI K	DIA/ THIC K	LENGTH/ PIECE (SIZE)
1	HW-117.49	NUT HEX PM16 (HW-117.49) --	3	ST03003 020	AA10622	32	36	25
2	HW-136.024	NUT HEX PM24 (HW-136.024) --	60	ST03004 024	AA10622	40	45	45
3	HW-136.030	NUT HEX PM30 (HW-136.030) -- -	90	ST03004 030	AA10622	56	56	95
4	HW-136.042	NUT HEX PM42 (HW-136.042) -	90	ST03004 042	AA10622	80	80	55
5	HW-174.030	NUT HEX PM30 (HW-174.030) --	20	ST03003 030	AA10622	56	56	35
6	HW-605.26	PRESSOUT BOLT AM30X120 (HW-605.26) --	80	ST01005.086	AA10622	56	56	150
7	HW-621.08	HEAD CAP SCREW M12 (HW-621.08) --	36	41202556608	AA10622	25	25	85
8	HW-622.07	HEXAGONAL HEAD SCREW M36X180 (HW-	2	41205356007	HW10566	70	70	230
9	HW-622.09	HEXAGONAL HEAD BOLT M42X220 (HW-	16	41205356009	HW10566	75	75	265
10	HW-630.05	STUD (HW-630.05) -- MACHINING AS PER	24	31204456403	HW10566	50	50	430
11	HW-635.17	ELONGATION (HW-635.17) -- MACHINING	2	31208756303	AA10622	100	100	420
12	HW-635.19	BOLT (HW-635.19) -- MACHINING AS PER	2	31208756310	AA10622	100	100	350
13	HW-656.08	STUD M24X121X35 (HW-656.08) --	60	ST01022 004	HW10683	32	36	140
14	HW-656.10	STUD M27X180X35 (HW-656.10) --	48	ST01022 008	HW10683	32	36	210
15	HW-656.15	NUT HEX PM27 (HW-656.15) --	48	ST03004 027	AA10622	45	45	40
			581					

NOTE:

1. RODS SHALL BE ISSUED IN RUNNING LENGTH.
PARTY WILL HAVE TO PART OFF AS PER REQUIREMENTS.
2. DETAILS OF FREE ISSUED MATERIAL(LIKE DIA & LENGTH/PIECE)
SHALL BE AS PER COLUMN "FREE ISSUED DETAILS" OF ANNEXURE.
3. DIA & LENGTH OF FREE ISSUED MATERIAL IS BASED ON ACTUAL AVAILABILITY
& INVENTORY OF RODS AT BHEL-HERP OR ACTION TAKEN FOR RODS

PREPARED BY
ASHISH UPADHYAY
(AE/E&M)

CHECKED BY
SHABBIR HUSSAIN
(MGR/E&M)



PLANT STANDARD

HEEP-HARDWAR

0912.002

PAGE 1 OF 7

TECHNOLOGICAL INSTRUCTIONS FOR SURFACE HARDENING

© BASED ON
MUN 054.3/1,
TEXT BOOK *
OWN EXPERIENCE

- 1.0 SCOPE :** These technological instructions cover the requirements of surface hardening such as Gas Nitriding, Bath Nitriding, Flame Hardening, Induction Hardening, Gas Carburising & Boronising.
- 2.0 APPLICATIONS:** These instructions for surface hardening are applicable for components of thermal sets, hydro sets, and electrical machines as well as dies and toolings.
- 3.0 PREPARATION OF COMPONENTS:**
- 3.1** Prior to surface hardening the components and test samples shall be heat treated to desired properties as per the drawing requirements.
- 3.2** The components requiring nitriding shall be stress relieved at 30 to 50°C below the last tempering temperature, before nitriding.
- 3.3** Prior to the surface hardening operation all the component surfaces shall be ensured free from rust.
- 3.4** Surface protection: Surfaces where, gas nitriding/boronising/ carburising is not required, shall be preserved as per specification HW 0980804. IN CASE OF BATH NITRIDING, PROTECTION OF SURFACE, THREADS ARE NOT REQUIRED. (d)
- 3.5** Test Samples: The test samples must be made of same steel grade and must be subjected to similar heat treatment as the component. If more than one steel grade has been charged, one test piece for each grade shall be charged. The dimensions of the test piece shall be as following:

TSX	A.K. TRIPATHI	22/9/93			
HGE	MANJIT SINGH	21/9/93		NAME	SIGN & DATE
TGE	S.K. BHARGAVA	21/9/93	DRAWN		
STE	B.S. SRIVASTAVA	21/9/93	WORKED	A.K. SARKAR	10.9.93
GTE	A. WADHERA	18/9/93	CHECKED	J.P. MEENA	10.9.93
AGREED DEPT	NAME	SIGN & DATE	SUPERVISED	V.B. ARORA	18.9.93
REVISION: 02	DATE 14.01.2019 (REAFFIRMED)	APPROVED:	PLANT STANDARDIZATION COMMITTEE		
					6.44
			PREPARED: MTE	ISSUED: STANDARDS DIVISION	DATE: 22.9.93

C/A No. TSX (MTE) - 19-23 DT. 09.01.2019

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SIGN & DATE

SUPERSEDES INVENTORY No.

SIGN & DATE

INVENTORY No.

P-286



PLANT STANDARD

HEEP-HARDWAR

0912.002

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SIGN & DATE

SUPERSEDES
INVENTORY No.

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SIGN & DATE

INVENTORY No.

P-286

REVISION: 02

DATE 14.01.2019

WORKED BY

A.K. SARKAR

10.9.93

CHECKED BY

J.P. MEENA

10.9.93

- ② - Test sample: Approx. OD X ID X H = 30x8x25 ~~25x10x25~~ mm Surface finish 6.3 μ
- The test sample shall be stamped on flat surface with *material specification/grade.*

4.0 NITRIDING PROCESS :

4.1 Gas Nitriding : The job alongwith test sample shall be placed inside the nitriding furnace (electrically heated) in such a way that all the surfaces requiring nitriding treatment come into contact with the ammonia gas. After loading and sealing the furnace at the start of the nitriding cycle, the air inside the furnace shall be purged out by ammonia gas at 150°C max. for 8-10 minutes. After purging flow rate of ammonia gas shall be maintained at 4 to 6 liters/minute. Then the furnace temperature shall be increased to 570 $\pm$ 10 °C @ 120°C/hour max. The job shall be soaked at this temperature for ~~* 66 $\pm$ 6~~ hours. After completion of the soaking period, the job shall be allowed to cool inside the furnace. During cooling, flow of ammonia shall be continued upto 200 °C @ 1-2 liter/minute after which the gas flow shall be cut off and furnace shall be opened to take out the jobs. The case depth & hardness on the test sample/job shall be as per table-1.

② - * 80 $\pm$ 5

4.2 Bath Nitriding:

Bath nitriding shall be performed in bath nitriding furnace (electrically heated) at 570 $\pm$ 10 °C. The soaking time shall be ~~3 $\pm$ 0.5 hours~~ 2.5 to 4.5 HOURS. — ②

The job requiring bath nitriding shall be preheated at 350-400°C in preheating furnace (soaking time minimum 1 hr. per 25mm). After pre-heating, the job & test sample shall be transferred to tuffride salt bath (TF 1). The bath shall be kept at temperature 570 $\pm$ 10 °C. The soaking time shall be ~~* 2.5 $\pm$ 0.5~~ hours. After soaking, the job shall be quenched in a neutralising salt bath (AB 1) for 1/2 to 1 hour. Then the bath nitrided job shall be thoroughly rinsed in the water bath for minimum 5 minutes.

④
3.0 to 6.0
② - * ~~2.5 to 4.5~~

② - Bath control: TF 1 salt Bath shall be replenished by REG-1 & TF 1 salts if %CNO in bath



PLANT STANDARD

HEEP-HARDWAR

0912.002

PAGE 3 OF 7

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INVENTORY No.

P-286

5.0 FLAME HARDENING PROCESS:

is less than 38%. ^(e)

TF1, AB1 & REG-1 are proprietary salt of M/s DEGUSSA, Germany.

The minimum case depth and hardness shall be as per table:1.

The job shall be mounted on a suitable fixture and the surface marked for hardening as per drawing shall be heated with the help of neutral Oxy-acetelene flame to the temperature 50°C above the normalising/hardening temperature (refer HW 0640599). However for grade T118Cr45 & C40 the flame hardening temperature shall be 850-900 °C & 880-930 °C respectively. After heating, the job shall be quenched in water/oil/air. For thin components, to avoid through hardening, the job (except the surface requiring hardening) shall be kept under water while heating. The flame hardened job shall be tempered at 150-250 °C for 1/2 to 1 hour.

The hardness shall be as per table-1. Case depth is given for reference only.

6.0 INDUCTION HARDENING PROCESS:

The job shall be mounted on a suitable induction coil and heated to the temperature 50°C above normalising/hardening temperature (refer HW 0640599). However for grade T118Cr45 & C40 the induction hardening temperature shall be 850-900 °C & 880-930 °C respectively. After heating, the job shall be quenched in water/oil/air. The induction hardened job shall be tempered at 150-250 °C for 1/2 to 1 hour.

The hardness shall be as per table-1. Case depth is given for reference only.

7.0 GAS CARBURISING PROCESS:

The job along with the test sample shall be placed in the basket/fixture and kept inside the gas carburising furnace. There should be clearance between components for free circulation of carburising gas. The furnace temperature is raised to carburising temperature of 910±10 °. Then the supply of kerosene shall be started and exhaust gases are ignited near the exhaust pipe (so called test candle). If the tip of flame is yellow red colour without any soot, the process is considered to be normal and if there is any soot on the tip of the flame, it indicates the incomplete atomisation of kerosene which can be corrected by reducing

REVISION:

02

DATE

14.01.2019

WORKED BY

A.K. SARKAR

10.9.93

CHECKED BY

J.P. MEENA

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PLANT STANDARD

HEEP-HARDWAR

0912.002

PAGE 4 OF 7

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the flow of kerosine. In case there is flickering of flame it indicates insufficient kerosine supply. The supply of kerosine shall be regulated. The time for holding (soaking) at carburising temperature is dependant on case depth requirement which is as following:

Depth of carburis-
ed layer in mm (min.)

Holding time in
hours. (min.)

0.8 mm	5 hrs
* 1.0 mm	8 hrs
* 1.5 mm	14 hrs

* If specified on drawing.

After soaking, the job shall be cooled in the furnace up to 700°C and below 700°C it is allowed to cool in the open air. Again the items shall be austenised at $820 \pm 10^\circ\text{C}$ for 30-45 minutes and quenched in water followed by tempering at 160 - 190°C for 1/2 to 1 hour.

The minimum hardness & case depth shall be as per table-1.

8.0 BORONISING PROCESS :

The jobs requiring boronising shall be finish machined and the surfaces shall be free from dust, grease. Surfaces where no boronising is required shall be preserved. The jobs to be boronised and the boriding powder are to be kept into a box. The bottom of the box shall be covered with a layer of boriding powder, at least 10mm thick. The components are put on the top of the boriding powder layer and pressed down lightly. The components are to be covered with a approximately 10mm thick layer of fresh boriding powder. If several components are to be treated, these are kept side by side or in a layers but covered by a layer of fresh boriding powder of appx 10mm thickness. The of the box is to be filled up to the top with boriding powder (fresh or used) and sealed with a lid. The box is put into the chamber furnace and heated to $900 \pm 20^\circ\text{C}$. The soaking time is 5-6 hrs. At the end of soaking time the box is removed from the furnace and allowed to cool in air & the component is removed from the box. The powders which get sintered can be reused in part. For

SIGN & DATE

INVENTORY No.

P-286

REVISION :
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DATE
14.01.2019

WORKED BY	A.K. SARKAR	10.9.93
CHECKED BY	J.P. MEGNA	10.9.93



PLANT STANDARD

HEEP-HARDWAR

0912.002

PAGE 5 OF 7

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INVENTORY No.

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9.0 RECORDING & DOCUMENTATION :

9.1

each fresh boronising process the 10mm layer must be of fresh boriding powder. Sintered boriding powder can be used for topping up the boxes. Boronised components shall be washed and dried. The case depth & hardness shall be as per the table:1.

The following informations shall be recorded in a heat treatment chart or register by the furnace operator and countersigned by section supervisor :

- 9.1.1 Drawing nos. of jobs to be heat treated in the heat load.
- 9.1.2 Steel grade, quantity
- 9.1.3 Heat treatment batch no.
- 9.1.4 The actual heat-treatment regime (soaking time, temperature)

9.2 Identification of samples shall be done by shop QC & the record of hardness and case depth shall be maintained as desired in drawings.

10.0 SAFETY PRECAUTIONS:

All safety precautions as per the instructions of safety department are to be observed during the above processes.

11.0 REWORK:

In case properties as required are not achieved, Metallurgy engineering shall be consulted regarding repeatability of the process cycle.

12.0 SALT SPECIFICATION FOR BATH NITRIDING & BORONISING :

Following are the plant purchase specification no. for salts used in bath nitriding and boronising:

Salt	Specification No.
(For bath nitriding)	
TF1	HW 55180
REG1	HW 55181

DURBORID-1 (For boronising) HW 55172

REVISION: P2

DATE: 14.01.2019

WORKED BY: A.K.SARKAR

10.9.93

CHECKED BY: J.P.NEENA

10.9.93



PLANT STANDARD

HEEP-HARDWAR

0912.002

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TABLE 1

CASE DEPTH AND HARDNESS VALUES TO BE ACHIEVED DURING
SURFACE HARDENING PROCESS

TYPE OF SURFACE TREATMENT	MATERIAL GRADE	EQV. SPEC-LOAD INC ICATION -REAMENT	HARDNESS HV(MIN)	CASE DEPTH (MIN) MM
GAS NITRIDING	15X1M1Φ	0500.701 HV30	900	0.6
	21CrMoNiV47	HW19386/HW10673 HV30	550	0.6
	30CrMoV9	HW10582 HV30	900	0.6
	42Cr4Mo2	HW10573 HV30	900	0.6
	24CrAlMo5	AA10502 HV30	550	0.6
	40Cr7AlMo2	AA19353 HV30	550	0.6
	38XM10A	HW10672 HV30	550	0.6
	40CrMoV97	AA10721/ HV5	550	0.2 - (d)
	X20Cr13	AA19321 HV5	550	0.4 } - (f)
	30CrMoV9	HW19482 HV5	550	0.6 }
	16MnCr5	HW10584 HV5	550	0.2
	X22CrMoV12 1	HW19390/ HV5		
	(15X11MΦ)	HW10683/		
		HW10687		
	25Cr1Mo1V1/4	HW10681/ HV30	550	0.6
BATH NITRIDING	(25X1 MΦ)	0500.213		
	20X1M1ΦTP	AA10622 HV30	550	0.6
	C 40	AA10208/ HV5 HV1	450	0.1
		AA10219/		
		AA10218		
	21CrMoNiV47	HW19386/ HV5 HV1	500	0.1
		HW10673 - (e)		
	24CrMo5	HW19388/ HV5 HV1	500	0.1
		HW10674/		
		HW19388		
	X20Cr13	AA10721/ HV5 HV1	500	0.1
	(2X13)	AA19321/		
		HW10765		
	X30Cr13(3X13)	AA10722 HV5 HV1	500	0.1
	X22CrMoV12 1	HW10683/ HV5 HV1	500	0.1
	(15X11MΦ)	HW19390/		
		HW10687		
	40Cr4	0500.052/HV5 HV1	450	0.1
		AA19351/		
		HW10571/		
		AA10504		
	10CrMo910	HW10685 HV5 HV1	500	0.1
	40Cr1Mo28	HW10573 HV5 HV1	450	0.1
	20X1M1ΦTP	AA10622 HV5 HV1	550	0.1

REVISION:

02

DATE

14.01.2019

WORKED BY

A.K. SARKAR

10.9.93

CHECKED BY

J.P. MEENA

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INVENTORY No.

P-286

14/09/93



PLANT STANDARD

HEEP-HARDWAR

0912.002

PAGE 7 OF 7

CONTD. TABLE-1

TYPE OF SURFACE TREATMENT	MATERIAL GRADE	EQV. SPEC-LOAD INC ICATION	HARDNESS -REAMENT HV (MIN)	CASE DEPTH (MIN) MM
(f) — 40Cr7Al10Mo234CrAlMo7	40Ni2Cr1Mo18	AA10502	Hv5- HVI	450
		AA10501/	Hv5- HVI	450
		AA19358/		
		HW19376		
	16MnCr5 C 20	HW10584	Hv5- HVI	450
		HW10191/	Hv5- HVI	450
		AA10108/		
		AA10119		
	(d) — x8CrNiNb1613	HW10782	Hv5- HVI	450
		25Cr1Mo1V1/4	Hv5- HVI	500
		25X1Mφ	Hv5- HVI	500
(d) — 21CrMoV57	15Mo3	HW10673	Hv5- HVI	450
		HW10567	Hv5- HVI	450

FLAME HARDENING

AND

INDUCTION HARDENING

X20Cr13 (2X13)	AA10721/	Hv30	500	0.6
	AA19321			
X30Cr13 (3X13)	AA10722	Hv30	500	0.6
X22CrMoV12 1	HW10683/	Hv30	500	0.6
	HW19390/			
	HW10687			
	AA19351/	Hv30	500	0.6
40Cr4 (40X)	0500.052/			
	HW10571/			
C 40	AA10504			
	AA10208/	Hv30	400	0.6
T118Cr45	AA10209/			
	AA10218			
	IS 3741	Hv30	500	0.6
	AA10506/	Hv30	500	0.6
40Ni6Cr4Mo3	AA19358			

CARBURIZING

16MnCr5	HW10583/	Hv30	700	0.8
	HW10584			
C 20	HW10191/	Hv30	600	0.8
	HW19381/			
	AA10108/			
	AA10119/			
(f) — * 832M13 (En36c) — AA10503	AA10109/			
	HW19331/	Hv30	600	0.8

BORONISING

15Mo3	HW10568	Hv5- HVI	500	0.02
21CrMoV57	HW10673	Hv5- HVI	500	0.02

- NOTE:
- For steel grades not covered in table, the hardness & depth shall be achieved as specified on the drg. or to be obtained from respective design deptt.
 - If case depth & hardness as desired other than table 1, the same shall be specified on the drawing by respective design department.

REVISION: 02 DATE 14.01.2019

WORKED BY A.K. SARKAR 10.9.93
CHECKED BY J.P. MEENA 10.9.93

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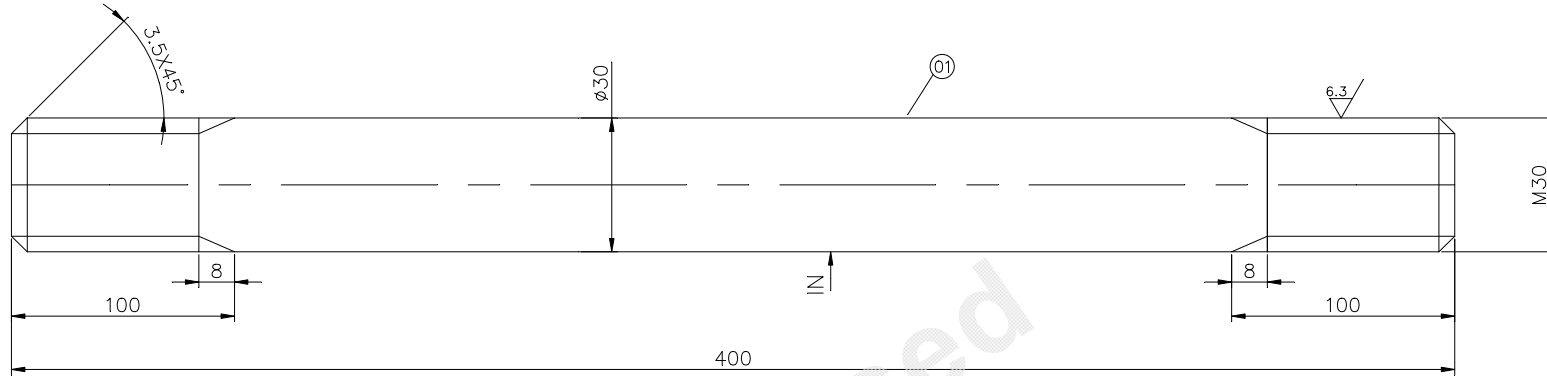
SIGN & DATE

INVENTORY No.

P-286 14/30-9

DRAWING NO.
3-12044-56403

12.5 / THE REST



TECHNICAL REQUIREMENTS: —

1. IDENTIFICATION SHALL BE ACC. TO HW0400397
AT A PLACE MARKED WITH IN.

GRADE OF UNTOL DIM : —		GMS NO./GR SP NO- CBOM NO. -21204456400		STATUS OF DRG U		TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT									
M/CG-Ø/M/P AA0230208		TTX		DILIP		—SD—		12.03.16		BHARAT HEAVY ELECTRICALS LTD.					
WELDING-A/B/C/D AA0621104		—		—		—		—		HARDWAR					
GAS CUTTING-T3'AA0621104		—		—		—		—		NAME SIGN DATE NO. OF					
REV DATE ALTERED		REV DATE ALTERED		UVERMA sd/-		DEPT STE		SCALE		WEIGHT (kg)		REF TO ASSY DRG.		TEM No OF	
CHECKED		01 12.02.18		CHECKED VIKAS sd/-		CODE 4011		N.T.S		2.2		2 12044 56400		NO 05	
				CHANGED AS PER C/R NO. STE-18-F0029.		TITLE		STUD		CARD CODE		DRAWING NO. 3-12044-56403		REV.	
												SHEET NO. 01		NO.OF SHEETS 01	

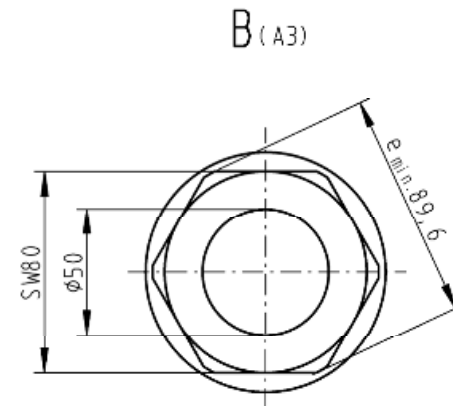
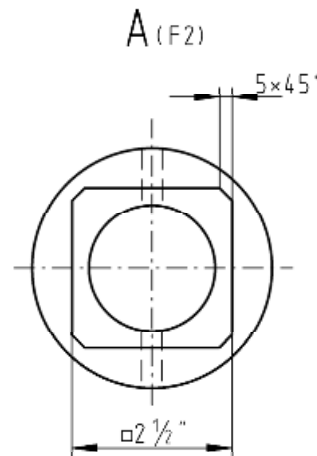
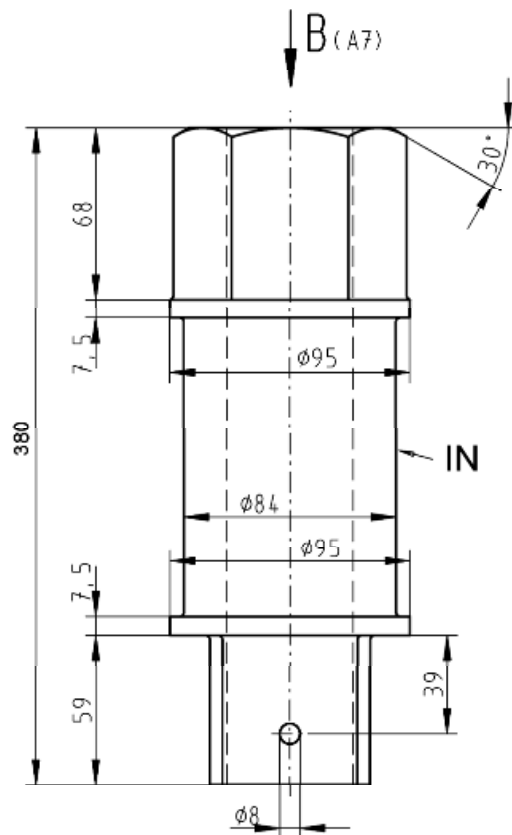
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM DG 38(B)

3-12087-56303

DRAWING No.

12.5/ ALL OVER EXCEPT
OTHERWISE STATEDALL UNDIMENSIONED RADII $R \leq 1.6$ ALL UNDIMENSIONED EDGES $\sim 0.5 \times 45^\circ$ IDENTIFICATION IS TO BE CARRIED OUT AS PER
HW 0400397 AT THE PLACE MARKED WITH IN

A (A5)

GMS No./G B O M 0 12087 56000			STATUS OF DRG U
AGREED DEPT	NAME	SIGN	DATE
TTX	DILIP	SD/-	23.03.13

TYPE OF PRODUCT **STEAM TURBINE**
OR
NAME OF CUSTOMER/PROJECT

BHARAT HEAVY ELECTRICALS LTD.
RANIPUR, HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	MONIKA SINGH	SD/-	21.06.2012	—
CHD	PRADEEP	SD/-	21.06.2012	—
APPD	D.K RAY	SD/-	23.03.13	73 74

REV	DATE	ALTERED	REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED			CHECKED

DEPT	STE	SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM No.	NO. OF ITEMS
CODE 4011		1:1	11	0 12087 56300	303	75 77

TITLE	CARD CODE	DRAWING NO.	22 23 24
ELONGATION		3-12087-56303	
SHEET No.		No. OF SHEETS	

SIZE A3

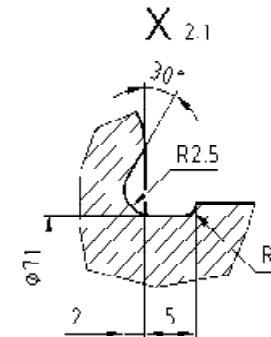
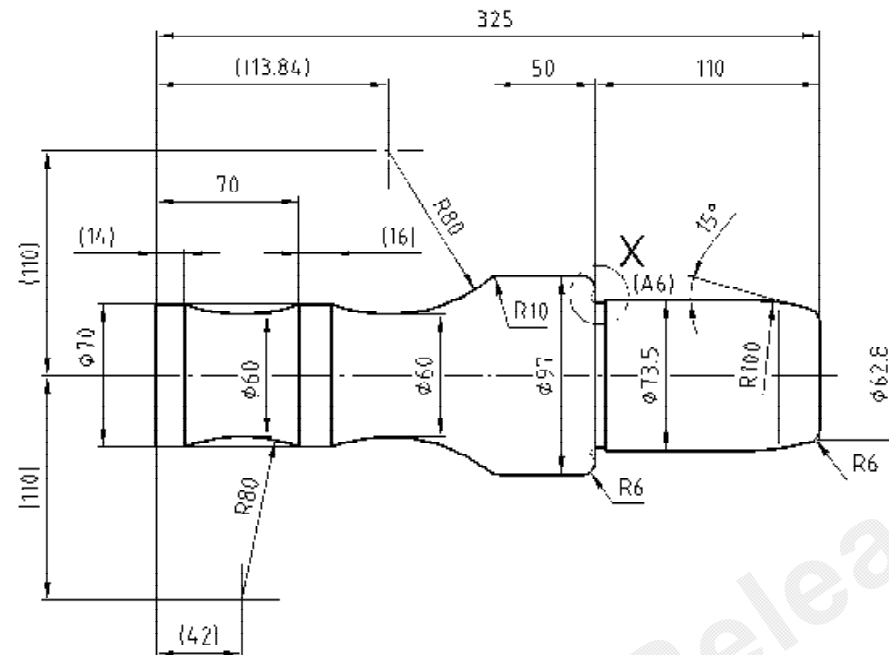
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm)

FORM DG 38(B)

3-12087-56310

DRAWING NO.

12.5/ ALL OVER EXCEPT
OTHERWISE STATED

Attention,
if only one lifting location is used, it is only allowed
to use the lifting location nearest to the coupling!
IDENTIFICATION IS TO BE CARRIED OUT AS PER
HW 0400397

TIN PSK020Q237

GMS No./ C.B.O.M		STATUS	
0 12087 56000		OF DRG	
DATE	NAME	DATE	NAME
TTX	DII IF	SDI	25.03.13

TYPE OF PRODUCT **STEAM TURBINE**
OR
NAME OF CUSTOMER/PROJECT



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR, HARDWAR

UWA	NAME	SIGN	DATE	NO. OF
CHD	MONIKA SINGH	SDI	21.09.2012	VAR
APPD	PRADEEP	SDI	21.06.2012	
	D.K RAY	SDI	25.03.13	13/24

GRADE OF UNTOLD DIM

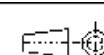
M/CG.-CM/P AA0230208

WELDING-A/B/C/D / / AA0821104

GAS CUTTING-T3/AA0621101

REV	DATE	ALTERED	REV	DATE	ALTERED	REV	DATE	ALTERED
		CHECKED			CHECKED			CHECKED

DEPT STE
CODE 4011



SCALE

WEIGHT (KG)

REF. TO ASSY. DRG.

ITEM NO. NO. OF ITEMS

TITLE :

BOLT

CARD CODE

DRAWING NO.
3-12087-56310

SHEET No.

No. OF SHEETS

SIZE A3

TIN NO.
PSK020Q237Rev Drawing No.
D320C 3018955
11/06/2012

Sign & Date

Inventory No.

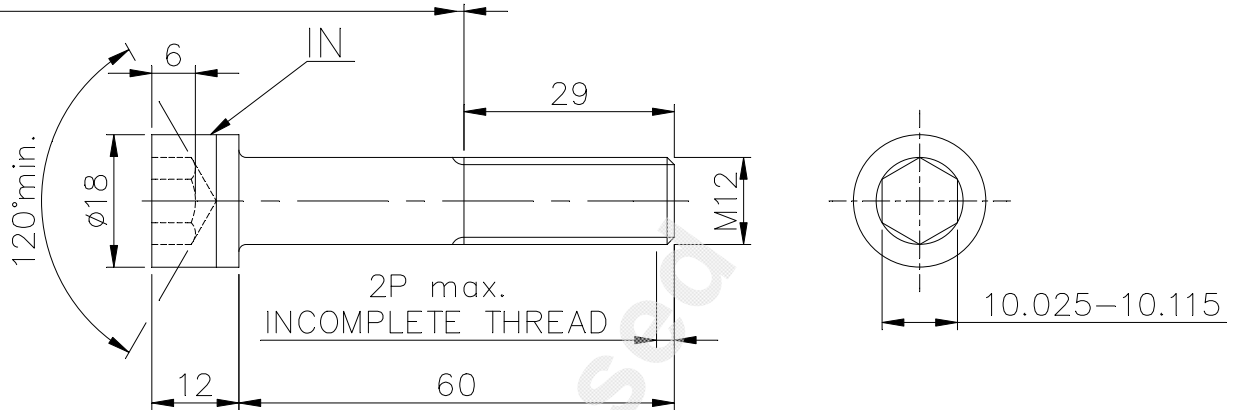
FIRST ANGLE PROJECTION

(ALL DIMENSIONS ARE IN mm) FORM DG 39(B)

REV	DATE	ALTERED CHECKED	REV	DATE	ALTERED CHECKED	CBOM No. 11202556600/00		STATUS OF DRG	
						AGREED DEPT.	NAME	SIGN	DATE
						TTX	DILIP	-SD-	06.04.15
GRADE OF UNTOL.DIM.M/CGC/M/P/AA0230208						WELDING A/B/C/D AA0621104			
						GAS CUTTING-T3-AA0621101			

3.2/ ALL OVER UNLESS
OTHERWISE STATED

REFER STANDARD AA0231830



TECHNICAL REQUIREMENTS: —

- IDENTIFICATION SHALL BE ACCORDING TO HW0400397 AT A PLACE MARKED WITH IN.
- ALL UNDIMENSIONED EDGES ARE CHAMFERED TO 0.5X45°.



BHARAT HEAVY ELECTRICALS LTD
HARDWAR

	NAME	SIGN	DATE	NO. OF VAR
DRN	RAKESH	—SD—	16.02.15	
CHD	SHUBHAM	—SD—	08.03.15	
APD	R.RAWAT	—SD—	20.05.15	

DSPPG-0008012 REV. B
REF.DRG.No.

SIGN & DATE

INVENTORY No.	DEPT/STE		SCALE	WEIGHT(Kg)	REF.TO ASSY.DRG.	ITEM No.	No OF ITEMS
	CODE 4011		1:1	0.07	11202556600	08	—
	TITLE HEXAGON SOCKET HEAD SCREW M12				—	DRAWING No. 4-12025-56608 —	
					SHEET No.1	No OF SHEETS1	

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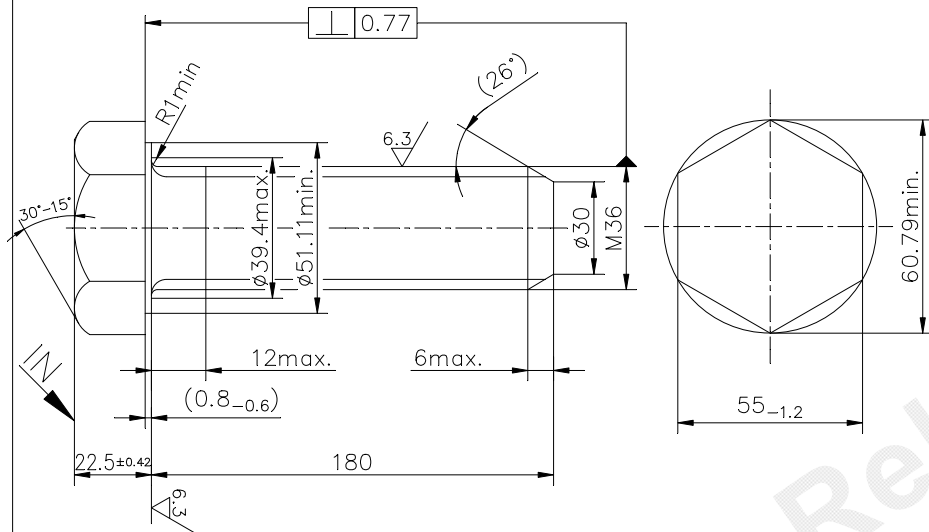
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Released



REV	DATE	ALTERED	REV	DATE	ALTERED	GMS No./ C.B.O.M.- NO. 1-12053-56000			STATUS OF DRG U	
		CHECKED			CHECKED					
ZONE					AGREED DEPT	NAME	SIGN	DATE		
					WT	V.KUMAR	sd/-	10.01.12		
					TTX	S.SARKAR	sd/-	16.01.12		
GRADE OF UNTOL.DIM M/CG. O/M/F -AA0230208 WELDING X/B/O/D AA0621104 GAS CUTTING-T3 AA0621101										

12.5/ALL OVER EXCEPT
OTHERWISE STATED



TECHNICAL REQUIREMENT:—

1. IDENTIFICATION ACCORDING TO HWO400397 AT THE PLACE MARKED WITH IN →

ISO 4017-M36*
Ref. Drawing No.

Sign & Date



BHARAT HEAVY ELECTRICALS LTD.
RANIPUR, HARDWAR

	NAME	SIGN	DATE	No. OF VAR
DRN	ASHOK	sd/-	02.12.11	
CHD	NEERAJ	sd/-	02.12.11	
APPD	A.SHAH	sd/-	17.01.12	

Inventory No.

DEPT	STE		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM	NO. OF ITEMS
CODE	4011		N.T.S	1.6	0-12053-56000	No. 7	
TITLE :				CARD CODE	DRAWING NO.		
HEXAGON HEAD BOLT					4-12053-56007		
					SHEET No. 01 No. OF SHEETS 01		

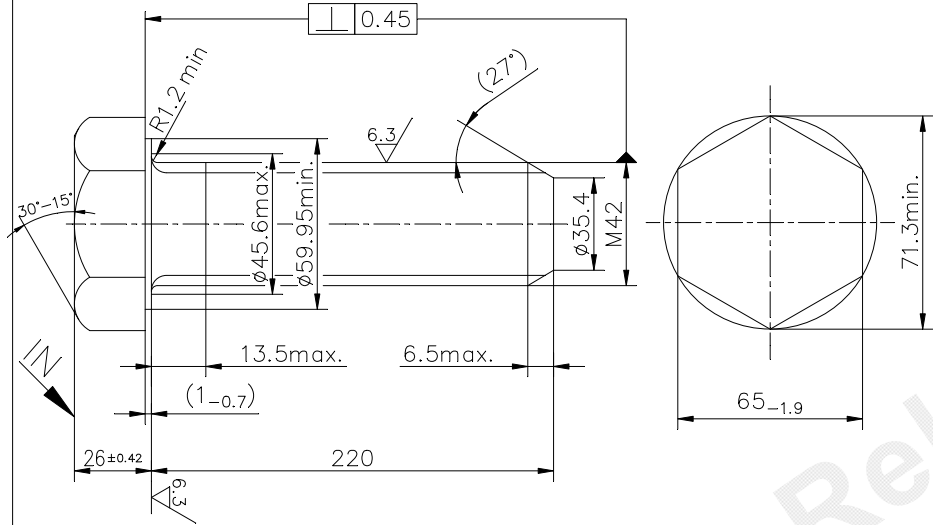


Released



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

REV	DATE	ALTERED	REV	DATE	ALTERED	GMS No./ C.B.O.M.- NO. 1-12053-56000	STATUS OF DRG U
		CHECKED					
ZONE			ZONE				

12.5/ALL OVER EXCEPT
OTHERWISE STATED

TECHNICAL REQUIREMENT: -

1. IDENTIFICATION ACCORDING TO HW0400397 AT THE PLACE MARKED WITH IN .

ISO 4017-M42+1
Ref. Drawing No.

Sign & Date

BHARAT HEAVY ELECTRICALS LTD.
RANIPUR, HARDWAR

NAME	SIGN	DATE	NO. OF VAR
DRN ASHOK	sd/-	02.12.11	
CHD NEERAJ	sd/-	02.12.11	
APPD A.SHAH	sd/-	17.01.12	

Inventory No.	DEPT	STE		SCALE	WEIGHT (KG)	REF. TO ASSY. DRG.	ITEM No.	NO. OF ITEMS
	CODE	4011		N.T.S	4.0	1-12053-56000	-	
	TITLE :					CARD CODE	DRAWING NO.	
	HEXAGON HEAD BOLT					7	4-12053-56009	
						SHEET No. 01		No. OF SHEETS 01

A4 SIZE



BHEL-HERP, VARANASI
QUALITY PLAN

Components : MACHINING OF TURBINE FASTENERS/COMPONENTS (STUDS / CAP NUT / THREADED RING / PILOT VALVE ETC. (MATL. AA10622/HW10683/HW10673))

Sl.No.	Component / Operation	Characteristic Checked	Type/Method of Check	Extent of Check	Reference Documents & Acceptance Norm	Format of Record	Agency			Remarks
							P	W	V	
1.0	Receiving Inspection of free issue material received from BHEL HERP	1.1) Dimensions	Measurement	100%	Purchase Order and Drawing	Inspection Report	2	-	1	Party will check the received material w.r.t. PO and drawing and report within 10 days in case of any discrepancy observed. Party will verify the Punch of BHEL at Rod end.
2.0	In Process Inspection	2.1) Identification marking of segments to be cut for processing 2.2) Transfer of seal after part processing	Punching of BHEL seal on extra length of each segment Transfer of BHEL seal on face of finished end	100%	-	Inspection Report	2	1	-	Before punching the seal on segments, BHEL shall verify the identification of Rod as done in step 1
3.0	Inspection after final machining	3.1) verification of identification done in step 2 3.2) Verification of dimensions (Checking of threads with Pitch Micrometer or gauges) 3.3) Finish of threads 3.4) D.P. Test 3.5) Surface Treatment (if specified in PO) 3.6) Identification & Marking 3.7) Packing	Visual Measurement Visual D.P. Test on threads Hardness Punching of P.O.No. & Inspector Seal (tagging may be done in case of small items) As per instruction mentioned in the Purchase order	100% 100% by supplier 10% by BHEL on random basis 100% 10% on random basis 100% 100% 100%	- Drawing Threads should be smooth and free from chattering marks No crack as specified in PO Drawing Purchase Order	Inspection Report Dimension Report Inspection Report Inspection Report Inspection Report Inspection Report Inspection Report	2 2 2 2 2 2 2	1 1 1 1 1 1 1	- - - - - - -	For small items where seal transfer on face is not possible, 100% PMI by XRF Analyser will be done and witnessed by BHEL representative
Q.P.No.	HW/SC/005 REV.00	Prepared by	Apoorva Srivastava	Approved by	Santosh Kumar					
Date	30-10-2015	Signature & Date								

LEGEND: P = PERFO T.C. = TEST CERTIFICATE

SANTOSH KUMAR H.T. = HEAT TREATMENT

V = VERIFY

संतोष कुमार/Santosh Kumar

वरिष्ठ अभियन्ता (योजना विभाग)/Sr. Engineer (P&D)

भारत हेवी इलेक्ट्रिकल्स लि./BHEL RAIPUR MATL. MANUFACTURER
तारना, शिवपुर, वाराणसी/Tarna, Shivpur, Varanasi

अनुप श्रीवास्तव/Anoop Srivastava

सहा. अभियन्ता (पी.एच.डी.)/Asstt. Engineer (Plg. & Dwr.)

भारत हेवी इलेक्ट्रिकल्स लि.
Bharat Heavy Electricals Ltd.

हर्ष, वाराणसी/HERP, Varanasi



Document for REVISION NO. OF DRAWING/STD./SPECN./QP., etc.

S301250004 (IND202511578)		
SL.	DRAWING & SPEC.	REV
01	ST03003	02
02	ST03004	04
03	ST01005	07
04	41202556608	00
05	41205356007	00
06	41205356009	00
07	31204456403	01
08	31208756303	00
09	31208756310	00
10	ST01022	03
11	HW/SC/005	00
12	ANNEXURE-723	
13	912.002	02

ASHISH UPADHYAY

AE/E&M



STEAM TURBINE ENGINEERING

ST 01005

PAGE 1 OF 7

BASED ON BHEL
OWN EXPERIENCESIGN & DATE
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BOLT, PRESSOUT, HEXAGON

FULLY THREADED,

PITCH COARSE & FINE

TYPE A& B

ALLOY STEEL

1. DESIGNATION:

1.1 TYPE-A

A pressout bolt of nominal dimension.

 d_1 = M30, coarse pitch, length l = 160 mm
and size number 00 shall be designated as:

1.1.1 On Drawings:

i) Drawing Col. - ST 01005.008

ii) Description Col .

BOLT PRESSOUT AM30x160

1.1.2 For Placing Inquents
On Purchase:

BOLT Pressout AM 30x160-ST01005.008

1.2 TYPE-B

A Pressout bolt of nominal size

 d_1 = M42x3, fine pitch, length l = 240 mm and size number 650-

shall be designated as:

SIGN & DATE

AGREED

INVENTORY No.

Revision : 07
REAFFIRMED

Date : 17.3.05

Distribution Qty.

Approved :

ENG. DEV. MANAGER

ST

Prepared

Issued

Date

DEPTT.	NAME.	SIGN. & DATE	DRAWN.	NAME	SIGN. & DATE
TSX	S. KUMAR	<i>S. Kumar 19.1.05</i>		M. S. BISHT.	<i>M. Bisht. 10.1.00</i>
				PRITAM SINGH.	<i>Pritham 10.1.00</i>
				PRITAM SINGH.	<i>Pritham 10.1.00</i>
				PRITAM SINGH.	<i>Pritham 10.1.00</i>



SIGN & DATE

PRODUCT STANDARD
STEAM TURBINE ENGINEERING

ST 01005

PAGE 2 OF 7

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DIN

561

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INVENTORY No.

-2018

1.2.1 On Drawings:

i) Drawing Col. ST-01005.650

ii) Description Col.

BOLT PRESS OUT-BM 42x3x240

1.2.2 For Placing Invents

on Purchase:

BOLT PRESSOUT BM 42x3x240--ST01005.650

2. MATERIAL

Alloy steel as per 0500.213 with heat
HW10673~~treatment to category of strength 65-60.~~2. DIMENSIONS, TOLERANCES
& GEN. REQUIREMENTS.

Various dimensions, of pressout bolts,

type-A and type B shall be as per

table-1 and figures-1, 2.

3.1 T THREADS:

Pitch coarse X

pitch fine X to IS: 4218

Tolerance Quality - Medium

③ Tolerance class - 6g.

The surface finish on the threads to be as per
ST38014 except otherwise mentioned on the
standard.

3.2 IDENTIFICATION:

As per HW 0400 397

3.3 FINISH

Unplated

3.4 Free dimension tolerances shall be as per AA 0230208
class medium.

3.5 Technical delivery conditions shall be as per IS: 1367

3.6 Blank drawings for pressout bolts are :

ST01005-BD1 for type A and

ST 01005-BD2 for type B

3.7 For size number refer tables-3 and 4. Size number range
for type A and type B are as below:

Type A: Pitch coarse 001 to 200

Pitch fine 201 to 400



Type - B	Pitch coarse	401 to 600
	Pitch fine	601 to 800

3.8 Weights in table-1 are given for bolts of type-B, coarse pitch. For other type of bolts weights to be calculated separately.

4. NOTES

4.1 Size within brackets are non preferred and should be avoided where-ever possible.

4.2 Lengths above 300 mm should be kept in steps of 20 mm.

4.3 Refer standard 13, 14, 8929 for pressout bolts (M16-M85), length 45 mm to 300 mm of material property class 4

4.4 Refer standard 40.8929 for pressout bolts with trapezoidal threads (Trap. 32x6 to trap 50x8) length 80 mm to 500 mm. Steel class IV forgings.

4.5 Refer standard 13, 14. 8902 for set screws, Hex. head with cylindrical ends, sizes range M6- M30.
Material C40.

5. This standard was prepared referring to DIN 561

6. Cross referred standards:
IS: 4218, ST 38014, HW 0400397, AA 0230208, IS:1367,
HW10673.

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SIGN & DATE

INVENTORY No.

-2010



FORM-A

FORM-B.

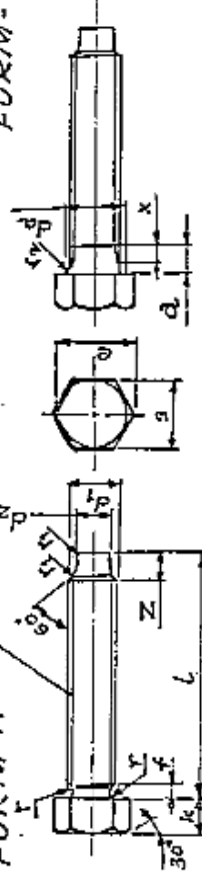


TABLE-1

d ₁	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56
d ₂	4	5.5	7	8.5	12	15	18	23	28	32	36	45
d _{a max}	6.8	9.2	11.2	14.2	18.2	22.4	26.4	33.4	39.4	45.6	52.6	63
e min.	8.87	11.05	14.38	18.70	21.70	26.75	33.53	39.98	51.28	61.31	72.61	83.91
k	5	6	7	9	11	14	17	21	25	30	34	40
l ₁	0.4	0.4	0.5	0.6	0.8	1	1	1.2	1.6	2	2	2.5
l _{2 min}	0.25	0.4	0.4	0.6	0.6	0.8	0.8	1	1	1.2	1.6	2
s	8	10	13	17	19	24	30	36	46	55	65	75
z	3.5	5	5.5	7	9	9	11	14	14	18	18	18
d max.	3	4	4.5	5.3	6	7.5	9	10.6	12	13.5	15	16.5
x max	2.5	3.2	3.8	4.3	5	6.3	7.5	9	10	11	12.5	14
f min.	2.1	2.7	3.2	3.9	4.5	5.6	6.7	7.7	9	10.5	11.5	12.5
r	0.5	0.6	0.75	0.9	1	1.25	1.5	1.75	2	2.25	2.5	2.75

WEIGHT IN KG. PER 1000 PCS.

l

12	4.26											
(14)	4.60											
(15)	4.77	8.33										
16	4.95	8.66										
(18)	5.30	9.30										
20	5.65	9.94	17.0									
25	6.53	11.4	19.5	34.1								
30	7.38	13.0	22.0	37.7	62.6							
35		14.6	24.4	41.2	69.1							
40		16.1	26.9	44.8	75.7	132						
45			29.4	48.4	82.3	143	233					
50			31.9	52.0	88.9	154	249					
60				59.2	102	176	281	446				
70				66.4	115	198	313	493				
80					128	220	345	540	876	1320		
90					142	242	377	587	944	1410	2040	
100						264	409	634	1010	1510	2160	3120
120							473	727	1150	1700	2410	3450
140								921	1280	1890	2660	3780
160								914	1420	2080	2910	4110
180									1560	2270	3160	4440
200									1690	2460	3410	4770
220										2650	3660	5000
240										2840	3910	5330
260										3030	4160	5660
280											4310	5990
300											4560	6320

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SUPERSEDES
INVENTORY NO.

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INVENTORY NO.

-2018



TYPE - A. Size number range.

Pitch - Coarse - 001 to 200

Pitch - Fine - 201 to 400

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INVENTORY No.

d ₁	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56
	-	-	-	-	-	M20x2	M24x2	M30x2	M36x3	M42x3	M48x3	M56x4

Size number coarse pitch.

Size number fine pitch.

12	001											
(14)	002											
(15)	003	011										
16	004	012										
(18)	005	013										
20	006	014	021									
25	007	015	022	031								
30	008	016	023	032	046							
35		017	024	033	047							
40		018	025	034	048	061						
45			026	035	049	062	071					
50			027	036	050	063	072					
60				037	051	064	073	081				
70				038	052	065	074	082				
80					053	066	075	083	091	101		
90					054	067	076	084	092	102	116	
100						068	077	085	093	103	117	131
120						069	078	086	094	104	118	132
140							079	087	095	105	119	133
160								088	096	106	120	134
180								089	097	107	121	135
200								090	098	108	122	136
220								091	099	109	123	137
240								092	100	110	124	138
260								093	101	111	125	139
280								094	102	112	126	140
300								095	103	113	127	141



TYPE - B. Size number range.
Pitch coarse - 401 to 600
Pitch fine - 601 to 800

TABLE - A

d ₁	M6	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56
	-	-	-	-	-	M20x2	M24x2	M30x2	M36x3	M42x3	M48x3	M56x4
Size number Coarse pitch.												
Size number fine pitch.												
12	401											
14	402											
15	403	411										
16	404	412										
18	405	413										
20	406	414	421									
25	407	415	422	431								
30	408	416	423	432	446							
35		417	424	433	447							
40		418	425	434	448	461 601						
45			426	435	449	462 602	471 611					
50			427	436	450	463 603	472 612					
60				437	451	464 604	473 613	481 621				
70	409			438	452	465 605	474 614	482 622				
80					453	466 606	475 615	483 623	491 631	501 641		
90					454	467 607	476 616	484 624	492 632	502 642	516 656	
100						468 608	477 617	485 625	493 633	503 643	517 657	531 671
120							478 618	486 626	494 634	504 644	518 658	532 672
140								487 627	495 635	505 645	519 659	533 673
160								488 628	496 636	506 646	520 660	534 674
180									497 637	507 647	521 661	535 675
200									498 638	508 648	522 662	536 676
220										509 649	523 663	537 678
240										510 650	524 664	538 679
260										511 651	525 665	539 680
280											526 666	540 681
300											527 667	541 682

SIGN & D.

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INVENTORY No.

P-20/8

DIN
561
561



STEAM TURBINE ENGINEERING

TYPE B

TABLE 4. (Contd.)

d ₁	M 6	M 8	M 10	M 12	M 16	M 20	M 24	M 30	M 36	M 42	M 48	M 56
	-	-	-	-	-	M 20x2	M 24x2	M 30x2	M 36x3	M 42x3	M 48x3	M 56x4
l	Size number											
	Coarse pitch						fine pitch					
170							480 620					

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INVENTORY No.

-2018



PRODUCT STANDARD
STEAM TURBINE ENGINEERING

ST 01022

PAGE 1 OF 4

BASED ON BHEL'S
OWN EXPERIENCE

STUD, SPECIAL
WITH ADDITIONAL CLEARANCE
ON PITCH DIA
(M12 TO M24)
ALLOY STEEL

- 1. DESIGNATION:** A special stud of nominal size $d_1 = 20$ mm,
nominal length $L_1 = 90$ mm, thread length
 $L_2 = 35$ mm and size No. 001 shall be designated as:
- 1.1 On Drawings:** i) Drawing Col. ST 01022.001
ii) Description Col. STUD M20x90x35
- 1.2 For Placing Indents on Purchase:** STUD M24x90x35-ST 01022.001
- 2. MATERIAL:** ALLOY STEEL BARS AS PER AA10623.
- 2.1 HEAT TREATMENT:** Heat treat the material for studs to achieve the
category of strength 70 as specified in the
specification AA 10623.
- 3. DIMENSIONS, TOLERANCES & GEN. REQUIREMENTS:** Various dimensions of studs shall be as per Table-1
and figure-1.
- 3.1 THREADS:** As per table-1.
- 3.2 TOLERANCES:** Free dimension tolerances shall comply with
AA02B0208 class medium.
- 3.3 IDENTIFICATION MARKING:** As per HW 0400397, punch standard number and
size number at the place marked 'IN'.

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TUN 8803-13

SIGN & DATE

INVENTORY No.

AGREED.					NAME	SIGN & DATE
					M.S. BISHT.	Bishta 13.2.20
					S. KUMAR	S. Kumar 13.2.20
	TSX	S. KUMAR	G. Kumar 18.2.20	CHECKED.	S. KUMAR.	S. Kumar 15.2.20
	DEPTT.	NAME	SIGN & DATE	SUPERVISED.	PRITAM SINGH.	Pritam 15.2.20
Revision : 03 REAFFIRMED Date : 17.3.05			Distribution Qty.	Approved : ENGG. DEV. MANAGER		ST. 5/13
				Prepared Pritam 21	Issued STE (TE) HARDWAR.	Date



PRODUCT STANDARD
STEAM TURBINE ENGINEERING

ST 01022

PAGE 2 OF 4

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TUM
0303.13

SIGN & DATE

INVENTORY No.

- 3.4 **FINISH:** Unplated.
- 3.5 Technical delivery condition shall be as per IS:1367 for M12 and for other sizes as per ST 38001.
- 3.6 Centre holes as per AA0230808.
- 3.7 Nominal length L_1 shall be kept from 60 mm and above in steps of 5 mm and to be mentioned in description column of GMS/BOM.
- 3.8 Blank drawing for studs is ST 01022-BD1.
- 3.9 Per size No. refer table-2. New size No. as & when required may be added in the table-2 as a running serial No. through change advice.
- 4.0 **NOTES:**
- 4.1 For corresponding hexagonal nuts refer ST 03004, ST 03010.
- 4.2 For long threaded length studs, suitable cap nuts may be used from ST 03005.
- 4.3 New size nos. shall be taken on computer in future.

①
(R_z10) $\frac{3.2}{\sqrt{\text{THREADS}}}$
 $\frac{6.3}{\sqrt{\text{THE REST}}}$

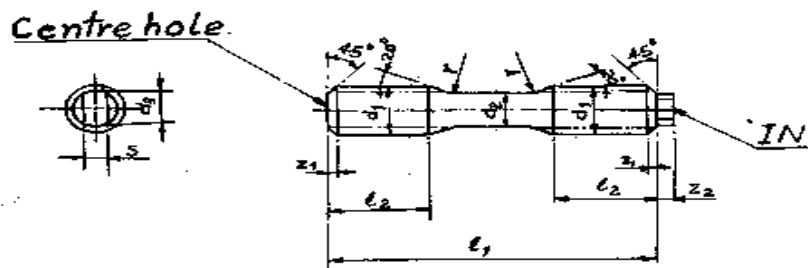


FIG.-1

5. This standard was prepared referring to TUM 0303.13
6. Cross referred standards:
AA 10623, AA 0230208, IS: 1367, ST 38001, AA 0230808.



PRODUCT STANDARD STEAM TURBINE ENGINEERING

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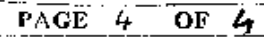
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INVENTORY No.

SIGN & DATE

TABLE-1.

Thread d ₁	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M48	M52	M56	M64
Major ϕ	Max.	11.986	15.825	19.825	23.740	26.740	29.740	32.740	35.740	38.740	41.740	44.740	47.654	51.654	55.654
	Min.	11.101	15.685	19.685	23.540	26.540	29.540	32.540	35.516	38.516	41.516	44.516	47.430	51.430	55.430
Pitch ϕ	Max.	10.829	14.526	18.201	21.791	24.791	27.467	30.467	33.142	36.142	38.817	41.817	44.406	46.406	52.082
	Min.	10.579	14.366	18.041	21.591	24.591	27.267	30.267	32.918	35.918	38.593	41.593	44.182	48.182	51.938
Minor ϕ	Max.	9.819	13.227	16.577	19.842	22.842	25.194	28.194	30.544	33.544	35.894	38.994	41.158	45.158	48.516
	Min.	9.543	13.027	16.377	19.592	22.592	24.944	27.944	30.264	33.264	35.614	38.614	40.878	44.878	48.230
d ₂	9	12	15	18	21	23	26	28.5	31	33.5	36	38.5	42	45.5	52.5
d ₃	8	12	14	14	18	18	25	25	28	30	32	32	36	40	40
L ₂	Long	25	30	35	40	45	50	55	60	65	66	70	75	80	90
	Short	20	25	30	35	40	40	45	45	50	50	55	60	65	70
r	10	10	10	16	16	16	16	16	16	16	20	20	20	20	20
s	7	10	12	12	14	14	22	22	24	24	27	27	30	32	32
Z ₁	1.75	2	2.5	3	3	3.5	3.5	4	4	4.5	4.5	5	5	5.5	6
Z ₂	4	6	8	8	10	10	10	12	12	12	12	14	14	14	14

[illegible]

REV. 03

FORM

ST 03003



PRODUCT STANDARD STEAM TURBINE ENGINEERING

PAGE 1 OF 5

 BASED ON BHEL
EXPERIENCE

NUTS, HEXAGON, PRODUCT GRADE A&B

COARSE & FINE PITCH : STEEL 24CrM05 (UP TO SIZE M150)

THIS STANDARD SPECIFIES REQUIREMENTS
FOR M1 TO M150 HEXAGON NUTS, ASSIGN-
ED TO PRODUCT GRADE A (UPTO SIZE M16)
OR PRODUCT GRADE B (FOR SIZES ABOVE M16).

1. DESIGNATION :-

1.1 COARSE PITCH :- A hexagon, steel nut, nominal diameter 48 MM
coarse pitch and size number 048 shall be designated as:

1.1.1 ON DRAWING :- i) Drawing col. - ST03003.048

ii) Description col. - NUT HEX PM48

IN CASE PRODUCT GRADE A IS REQUIRED THEN
THIS SHALL BE NUT HEX PM48-A.

1.1.2. FOR PLACING INDENTS ON PURCHASE :-

NUT HEXAGON M48-ST03003.048

OR NUT HEXAGON M48-A ST03003.048

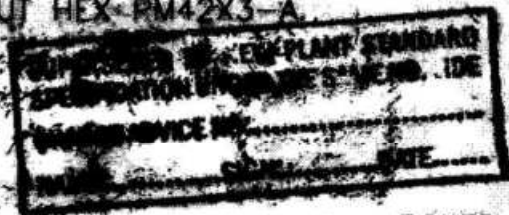
1.2 FINE PITCH :- A hexagon, steel nut, nominal diameter M42, fine
pitch 3 mm and size number 242 shall be designated as :

1.2.1 ON DRAWING :- i) Drawing col. - ST03003.242

ii) Description col. - NUT HEX PM42X3

IN CASE PRODUCT GRADE A REQUIRED THEN THIS
SHALL BE NUT HEX PM42X3-A.

SUPERSEDES THE OLD TRACING
UNDER SAME NUMBER



CROSS REFERRED STANDARD :- HW 10681, IS:4218,

CONTD..

NW 0400397, ST03010, IS:1367, AA 0230208, AA7151109, AA0231800, AA0230201, DIN 934.

AGREED		NAME		SIGN & DATE	
DEPTT.	NAME	SIGN & DATE	DRAWN	NAME	SIGN & DATE
TSX	P. S. S. A. N. A.	25/3/96	WORKED	D.K. RAY	D.K. Ray 23.3.96
			CHECKED	DR. V. K. SINGH	25/3/96
			SUPERVISED	A. NARAIN	25/3/96
Revision: 01		REAPPROVED		Approved	
REAPPROVED		REVISION NO. 02		AGM (STE) 23-3-96	
DATE: 21.03.05		DATE: 21/03/2005		ST 5.13	
		Prepared		Issued	
		D.K. RAY		STE (TE) HARDWAR	
				DATE 23/03/96	

SIGN & DATE

SUPERSEDES INVENTORY NO.

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DIN

SIGN & DATE

INVENTORY NO.

 P-2.002
21/3/96

FORM



PRODUCT STANDARD STEAM TURBINE ENGINEERING

ST 03003

PAGE 2 OF 5

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INVENTORY NO. P-2002

SIGN & DATE

21/2/96

1.2.2 FOR PLACING INDENTS ON PURCHASE :-

NUT HEXAGON M42X3-ST03003.242

OR NUT HEXAGON M42X3-A ST03003.242

ALLOY STEEL 24CrMn5: HW10681

2. MATERIAL :- As per 0500.213 with heat treatment to GS 50

3. DIMENSIONAL REQUIREMENTS & GEN. REQUIREMENTS :-

Various dimensions of nuts shall be as per Table -1,
Figure -1,2.

3.2 THREADS :- Pitch Coarse)
Pitch Fine) IS : 4218
Tolerance Quality - Medium
Tolerance Class - 6H

3.2 IDENTIFICATION :- As per HW0400397

3.3 FINISH :- Unplated.

3.4 For sizes with thread diameter M42 and above d2 is an approximate value.

3.5 Sizes above M105 fine & coarse pitch shall be supplied as per Figure -2.

3.6 Blank drawings for nuts are ST-03010-BD1 for sizes upto M100.
ST03010-BD2 for sizes M105 & above.

3.7 Technical delivery conditions as per IS: 1357

3.8 Free dimension tolerances shall be as per AA0230208
Class - Medium.

4. NOTES :-

4.1 Sizes within brackets are non preferred and should not be used as far as possible.

4.2 For nuts, hexagon, product grade 'B', coarse pitch, class of property 4 (M20-M39) refer standard AA7151109.

4.3 For screw threads, general(metric) refer to standard AA0231800.

4.4 For tolerance grade, position & class refer to standard AA0230201

4.5 This std. was made referring to DIN 934

REV. NO. - 02

SUPERSEDED BY ST PLANT STANDARD
SPECIFICATION UNDER THE S. NO. 1357
CHANGE ADVICE NO.

FORM

ST 03003

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PRODUCT STANDARD STEAM TURBINE ENGINEERING

INVENTORY NO. **P-2002** SIGN & DATE **31/12/96**

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INVENTORY NO. **P-2002** SIGN & DATE **31/12/96**

TABLE-1 (CONTINUED)

COARSE PITCH		NOMINAL SIZE		FINE PITCH		d ₂ min	e ₁ min	m	S	e ₂	WT. PER 1000 PCS IN Kg.		COARSE PITCH	FINE PITCH		SERIES-2
d ₁	SIZE NO.	d ₁	SIZE NO.	d ₁	SIZE NO.									SERIES-1	SERIES-2	
(M14)	019	(M14X1.5)	214	-	420	19.8	24.49	11	22	-	25.0	24.5	-	-	-	-
(M16)	020	(M16X1.5)	216	-	422	21.6	26.75	13	24	-	33.3	32.6	-	-	-	-
(M18)	021	(M18X2)	218	M18X1.5	424	24.3	30.14	15	27	-	49.4	48.2	47.2	-	-	-
(M20)	022	(M20X2)	220	M20X1.5	426	27	33.53	16	30	-	64.4	62.8	62.3	-	-	-
(M22)	023	(M22X2)	222	M22X1.5	427	28.8	35.72	18	32	-	79.0	77.2	75.7	-	-	-
(M24)	024	(M24X2)	224	M24X1.5	428	32.4	39.98	19	36	-	110	106	105	-	-	-
(M26)	-	(M26X1.5)	-	(M26X1.5)	430	36.9	45.63	22	41	-	-	-	165	-	-	-
(M27)	027	(M27X2)	227	M27X1.5	432	36.9	45.63	22	41	-	165	161	158	-	-	-
(M28)	-	(M28X1.5)	-	(M28X1.5)	433	36.9	45.63	22	41	-	-	-	150	-	-	-
(M30)	030	(M30X2)	230	M30X1.5	435	41.4	51.28	24	46	-	223	221	219	-	-	-
(M32)	-	(M32X1.5)	-	(M32X1.5)	436	45	55.80	26	50	-	-	-	285	-	-	-
(M33)	033	(M33X2)	233	M33X1.5	438	45	55.80	26	50	-	286	279	276	-	-	-
(M35)	-	(M35X1.5)	-	(M35X1.5)	439	49.5	61.31	29	55	-	-	-	387	-	-	-
(M36)	036	(M36X2)	236	M36X1.5	440	49.5	61.31	29	55	-	393	387	374	-	-	-
(M38)	-	(M38X1.5)	-	(M38X1.5)	442	54	66.96	31	60	-	-	-	492	-	-	-
(M39)	039	(M39X2)	239	M39X1.5	445	54	66.96	31	60	-	502	492	478	-	-	-
(M40)	-	(M40X1.5)	-	(M40X1.5)	448	54	66.96	31	60	-	-	-	464	-	-	-
(M42)	042	(M42X2)	242	M42X1.5	450	62	72.61	34	65	-	652	636	620	-	-	-
(M45)	045	(M45X2)	245	M45X1.5	452	66	78.26	36	70	-	800	780	742	-	-	-
(M48)	048	(M48X2)	248	M48X1.5	456	71	83.91	38	75	-	977	949	883	-	-	-
(M50)	-	(M50X1.5)	-	(M50X1.5)	458	71	83.91	38	75	-	-	-	927	-	-	-
(M52)	052	(M52X2)	252	M52X1.5	460	76	89.56	42	80	-	1220	1180	1160	-	-	-
(M56)	056	(M56X2)	256	M56X1.5	464	81	95.07	45	85	-	1420	1410	1370	-	-	-
(M58)	-	(M58X1.5)	-	(M58X1.5)	468	85	100.72	48	90	-	-	-	1680	-	-	-
(M60)	060	(M60X2)	260	M60X1.5	472	85	100.72	48	90	-	1690	1650	1610	-	-	-
(M64)	064	(M64X2)	264	M64X1.5	476	90	106.37	51	95	-	1980	1930	1880	-	-	-
(M68)	068	(M68X2)	268	M68X1.5	480	95	112.02	54	100	-	2300	2250	2230	-	-	-
(M72)	072	(M72X2)	272	M72X1.5	484	100	117.67	58	105	-	2670	2610	2550	-	-	-
(M76)	076	(M76X2)	276	M76X1.5	488	105	123.32	61	110	-	3040	2970	2900	-	-	-
(M80)	080	(M80X2)	280	M80X1.5	492	110	128.97	64	115	-	3440	3370	3290	-	-	-

REV. NO-02

FORM

ST 03003

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INVENTORY NO. SIGN & DATE
P. 2002 31/3/96

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PRODUCT STANDARD STEAM TURBINE ENGINEERING

TABLE-1 (CONTINUED)

NOMINAL SIZE													WT. PER 1000 PCS IN Kg.	
COARSE PITCH		FINE PITCH					d ₂ min	e ₁ min	m	S	e ₂			
		SERIES-1		SERIES-2										
d ₁	SIZE NO.	d ₁	SIZE NO.	d ₁	SIZE NO.	d ₂ min	e ₁ min	m	S	e ₂	COARSE PITCH	SERIES-1	SERIES-2	
M85X6	085	M85X4	285	M85X2	485	115	134.62	68	120	-	3930	3780	3690	
M90X6	090	M90X4	290	M90X2	490	125	145.77	72	130	-	4930	4830	4680	
M95X6	095	M95X4	295	M95X2	495	130	151.42	76	135	-	5970	5380	5270	
M100X6	100	M100X4	300	M100X2	500	140	162.72	80	145	-	6820	6700	6580	
M105X6	105	M105X4	305	M105X2	505	145	168.37	84	150	165	7800	7400	7350	
M110X6	110	M110X4	310	M110X2	510	150	174.02	88	155	170	8200	8100	8000	
M115X6	115	M115X4	315	M115X2	515	160	185.32	92	165	180	10100	10000	9900	
M120X6	120	M120X4	320	M120X2	520	165	190.97	96	170	186	11700	11600	11400	
M125X6	125	M125X4	325	M125X2	525	175	202.27	100	180	196	13000	12700	12500	
M130X6	130	-	-	M130X3	530	180	207.75	104	185	200	13800	-	13500	
(M135X6)	135	-	-	(M135X3)	535	185	213.40	108	190	206	15200	-	14700	
M140X6	140	-	-	M140X3	540	195	224.70	112	200	218	17500	-	17200	
(M145X6)	145	-	-	(M145X3)	545	205	236.00	116	210	230	20000	-	19600	
M150X6	150	-	-	M150X3	550	205	236.00	120	210	230	20700	-	20000	

REV. No. 02

प्रपत्र डीजी ४१(डी) FORM DG 41(D)

डॉक्यूमेंट सर्वर पर मौखिक कर दी गई है। DOCUMENT RELEASED FROM SERVER/CTA		हस्ताक्षर दिनांक SIGN & DATE		डॉक्यूमेंट सर्वर पर जमा कर दी गई है। DOCUMENT DEPOSITED IN SERVER		हस्ताक्षर दिनांक SIGN & DATE		संशोधन प्रपत्र CHANGE ADVICE FORM		
 संशोधन सूचना संख्या CHANGE ADVICE NO.		जारीकर्ता विभाग ISSUING DEPTT.		उत्पाद का प्रकार TYPE OF PRODUCT		जीएमएस/जीआरएसपी/सीबीएम संख्या GMS / GRSP / CBOM NO.		मुद्रण दिनांक PRINT DELIVERY DATE		स्वीकृतिकर्ता APPROVED BY
376-19-18		STE		STEAM TURBINE						 डॉ. कृष्ण कुमार शर्मा
अधिकृत्य दस्तावेज सं. (7)	संशोधन सूचना संख्या REV. NO.	संशोधन को लागू करने का कारण REASON OF CHANGE	संशोधन का विवरण DETAILS OF REVISION			प्रारंभिक संख्या CHANGEABLE HEAD NO.	संशोधन/जीएमएसपी/जीआरएसपी/सीबीएम संख्या VARIANT NO. OF CBOM/GMS/GRSP	अन्य संख्या OTHER CBOM /GMS NO./ GRSP NO./ CBOM NO. WHERE APPLICABILITY		
ROUTE (7a)	संशोधन संख्या REV. NO.	संशोधन को लागू करने का कारण REASON OF CHANGE	संशोधन का विवरण DETAILS OF REVISION			प्रारंभिक संख्या CHANGEABLE HEAD NO.	संशोधन/जीएमएसपी/जीआरएसपी/सीबीएम संख्या VARIANT NO. OF CBOM/GMS/GRSP	अन्य संख्या OTHER CBOM /GMS NO./ GRSP NO./ CBOM NO. WHERE APPLICABILITY		
ST03003	ALL	02	03	REAFFIRMED SUPERSEDES OLD STANDARD UNDER THE SAME NUMBER			204	---	---	REVIEW
CODES FOR REASON OF CHANGES:- 01- ENGINEERING ERROR (INCLUDING D.O. ERROR), 02- DESIGN UPGRADE/ADDITION (INCLUDING ADDITION OF VARIANT), 03- DESIGN REVIEW INCLUDING CHANGES DUE TO CHANGE ADVICE IN OTHER DOCUMENTS, 04- TO MEET MANUFACTURING REQUIREMENTS, 05- TO MEET TECHNOLOGICAL MODIFICATIONS, 06- TO SUIT CUSTOMER DEMANDS, 07 TO SUIT STATUTORY REQUIREMENTS, 08 TO REPLACE DAMAGED/TURN OUT ORIGINALS BY A FRESH ORIGINALS, 09- ANY OTHER										
AGREED सहमति (20)										
नाम NAME		हस्ताक्षर SIGN	दिनांक DATE	अधिकृत्य संख्या ENG.	तैयारीकर्ता TECHNOLO-GY	प्रमाणित QUALITY	विभाग एवं दूर विभाग I & T DEPTT.	वेल्डिंग प्रौद्योगिकी WELDING TECHNOLOGY	केन्द्रीय संयंत्र प्रयोग CPM	अन्य विभाग (PSC MEMBER)
विभाग/कार्य WORKED BY										
जांचकर्ता CHECKED BY										
मानक नियंत्रण STD. CONTROL										
(19)										
प्रमाणित RECEIVED BY										
(18)										
मानक नियंत्रण STD. CONTROL										
(19)										



PRODUCT STANDARD
STEAM TURBINE ENGINEERING

HW 7151299
ST 03004

PAGE 1 OF 4

BASED ON BHEL'S
OWN EXPERIENCE

NUT, PRECISION, COARSE PITCH, HEXAGONAL WITH COLLAR

STEEL 25Cr16Mo30 V 22

1. DESIGNATION.

1.1 A precision hexagonal nut of nominal size M42, coarse pitch and *SIZE NO.* 042 shall be designated as:

ON DRAWINGS: 1) Drawing Col. - ST 03004.042

1i) Description Col. NUT P M42

1.2 NOTE.

For Placing Indents on Purchase- NUT P M42-ST03004.042

2. MATERIAL.

2.1 Steel 25 Cr16 Mo 30 V 22 as per 0500.213. (cs.50) OR HW10681 (SEE NOTE 4.2)

2.2 HEAT TREATMENT: Material to be heat treated to get properties as specified in specification 0500.213. *Category of strength - cs 50.*

3. DIMENSIONS, TOLERANCES - Various dimensions, weights and & GEN. REQUIREMENTS. *SIZE NO.* of nuts shall be as per table-1 and Figure-1.

3.1 THREADS: 1) Metric threads, coarse pitch as per AA 0230202.

1i) Tolerance class 6 H

1ii) Medium quality.

②3 THE SURFACE FINISH ON THE THREADS TO BE AS PER ST 38014 EXCEPT OTHERWISE MENTIONED ON THE STANDARD.

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SIGN & DATE

INVENTORY No.

AGREED:				NAME	SIGN. & DATE.
				DRAWN.	M.S. BISHT.
				WORKED.	PRITAM SINGH
TSX	S. KUMAR			CHECKED	PRITAM SINGH
DEPTT.	NAME	SIGN. & DATE	SUPERVISED.	PRITAM SINGH	

Revision : 0004
REAFFIRMED

Date : 16.3.05

Distribution Qty.

Approved :

ENG. DEV. MANAGER

ST

3,10

Prepared

Pratam Singh

Issued

STE (TE)
HARDWARE

Date

21-11-79

TUN
0303-21
MAY 1958

PS-1953



PRODUCT STANDARD
STEAM TURBINE ENGINEERING

HW 7151299
ST 03004

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SIGN & DATE

INVENTORY No.

PS-1953

REV. 04

- 3.2 TOLERANCES: Free dimensions tolerances shall comply with AA 0230208.
- 3.3 IDENTIFICATION: As per HW 0400397
- 3.4 FINISH: Unplated.
- 3.5 Nuts to be manufactured as per this standard without making separate drawing. (Blank drawing No. ST 03004-BD.)

3.2 / (RZ 16) 1/6 THREADS

3.2 / THE REST.

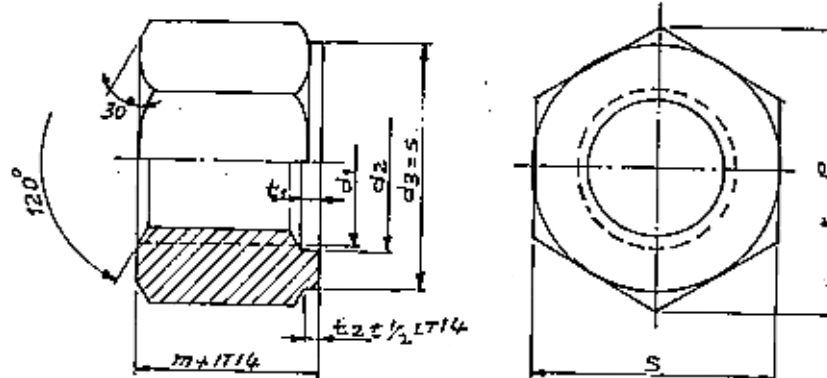


FIG. 1

SIGN & DATE

INVENTORY No.

080321

SIGN & DATE



PRODUCT STANDARD
STEAM TURBINE ENGINEERING

(b)

HW 7151299
ST 03004

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INVENTORY No.

3.5 Permissible values of α as per table-2.

TABLE-2.

α	
Upto M 39	Above M42
$90^{\circ} \pm 30'$	$90^{\circ} \pm 15'$

4. NOTES:

4.1 Sizes within brackets are non-preferred.

④ 4.2 For all future sets material of nut should be HW10681 only.

5. This standard was prepared referring to TUN 0303.21

6. Cross referred standards:

0500.213, HW10681, AA0230202, ST38014, AA0230208
HW0400397.

TUN

0303.21