

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	12-06-2023 12:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	12-06-2023 12:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	90 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Heavy Industries And Public Enterprises
Department Name/विभाग का नाम	Department Of Heavy Industry
Organisation Name/संगठन का नाम	Bharat Heavy Electricals Limited (bhel)
Office Name/कार्यालय का नाम	10270005 Pssr
Total Quantity/कुल मात्रा	2
Item Category/मद केटेगरी	PASSENGER CUM GOODS LIFT (Q3)
Minimum Average Annual Turnover of the bidder (For 3 Years)/बिडर का न्यूनतम औसत वार्षिक टर्नओवर (3 वर्षों का)	22 Lakh (s)
MSE Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से एमएसई छूट	No
Startup Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से स्टार्टअप छूट	No
Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Bidder Turnover, Additional Doc 1 (Requested in ATC), Additional Doc 2 (Requested in ATC) *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	Yes
RA Qualification Rule	50% Lowest Priced Technically Qualified Bidders
ITC available to buyer/क्रेता के लिए उपलब्ध आईटीसी	Yes
Type of Bid/बिड का प्रकार	Two Packet Bid
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	2 Days

Bid Details/बिड विवरण	
Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Payment Timelines	Payments shall be made to the Seller within 90 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10 days time as provided in clause 12 of GeM GTC)
Evaluation Method/मूल्यांकन पद्धति	Total value wise evaluation

EMD Detail/ईएमडी विवरण

Required/आवश्यकता	No
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ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	State Bank of India
ePBG Percentage(%)/ईपीबीजी प्रतिशत (%)	10.00
Duration of ePBG required (Months)/ईपीबीजी की अपेक्षित अवधि (महीने).	14

(a). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

Beneficiary/लाभार्थी :

Bharat Heavy Electricals Limited (BHEL)
PURCHASE DEPARTMENT PSSR, Bharat Heavy Electricals Limited (BHEL), INTEGRATED OFFICE BUILDING TNEB
ROAD VELACHERY TAMBARAM ROAD PALLIKARANI CHENNAI 600 100
(Purchase Department)

Splitting/विभाजन

Bid splitting not applied/बोली विभाजन लागू नहीं किया गया.

MII Purchase Preference/एमआईआई खरीद वरीयता

MII Purchase Preference/एमआईआई खरीद वरीयता	Yes
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MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. The minimum average annual financial turnover of the bidder during the last three years, ending on 31st March of the previous financial year, should be as indicated above in the bid document. Documentary evidence in the form of certified Audited Balance Sheets of relevant periods or a certificate from the Chartered Accountant / Cost Accountant indicating the turnover details for the relevant period shall be uploaded with the bid. In case the date of constitution / incorporation of the bidder is less than 3-year-old, the average turnover in respect of the completed financial years after the date of constitution shall be taken into account for this criteria.

2. Preference to Make In India products (For bids < 200 Crore): Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate. In case Buyer has selected Purchase preference to Micro and Small Enterprises clause in the bid, the same will get precedence over this clause.

3. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for %(selected by Buyer) percentage of total QUANTITY.

4. Reverse Auction would be conducted amongst first 50% of the technically qualified bidders arranged in the order of prices from lowest to highest. Number of sellers eligible for participating in RA would be rounded off to next higher integer value if number of technically qualified bidders is odd (e.g. if 7 bids are technically qualified, then RA will be conducted amongst L-1 to L-4). In case number of technically qualified bidders are 2 or 3, RA will be between all without any elimination. If Buyer has chosen to split the bid amongst N sellers, then minimum N sellers would be taken to RA round. In case Primary products of only one OEM are left in contention for participation in RA based on lowest 50% bidders qualifying for RA, the number of sellers qualifying for RA would be increased to get at least products of one more OEM (directly participated or through its reseller) if available. Further, if bid(s) of any seller(s) eligible for MSE preference is / are coming within price band of 15% of Non MSE L-1 or if bid of any seller(s) eligible for Make in India preference is / are coming within price band of 20% of non MII L-1, then such MSE / Make in India seller shall also be allowed to participate in the RA process.

Excel Upload Required/एक्सेल में अपलोड किए जाने की आवश्यकता :

TECHNICAL SPECIFICATION AND SCOPE OF WORK - [1685530290.xlsx](#)

PASSENGER CUM GOODS LIFT (2 pieces)

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/कमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

Buyer Specification Document/क्रेता विशिष्टि दस्तावेज़	Download
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Installation Commissioning and Testing (ICT) details for the above item:

% of Product Cost Payable on Product Delivery	90%
Min Cost Allocation for ICT as a % of product cost	10%
Number of days allowed for ICT after site readiness communication to seller	15 Days/दिन
ITC Available On GST	100%
ITC Available On GST Cess	100%

Input Tax Credit(ITC)/इनपुट कर क्रेडिट(आईटीसी) and/ तथा Reverse Charge(RCM)/रिवर्स प्रभार (आरसीएम) Details

ITC on GST/जीएसटी पर इनपुट कर क्रेडिट	ITC on GST Cess/जीएसटी उपकर कर क्रेडिट
100%	100%

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Rajesh Datti	627106,BHEL SITE OFFICE, KUDANKULAM NUCLEAR POWER PROJECT UNIT3&4 POST-KUDANKULAM RADHAPURAM TALUK DIST TIRUNELVELI	2	105

Buyer added Bid Specific Additional Scope of Work

S.No.क्र.सं.	Document Title	Description	Applicable/रिवर्स प्रभार के अनुसार जीएसटी i.r.o. Items
1	special conditions of contract and instruction of customer View	special conditions of contract and instruction of customer	PASSENGER CUM GOODS LIFT(2)

S.No.क्र.सं.	Document Title	Description	Applicable/रिवर्स प्रभार के अनुसार जीएसटी i.r.o. Items
2	Make in India and Rule 144 (xi) of GFR 2017 View	formats for complying with Make in India and Rule 144 (xi) of GFR 2017	PASSENGER CUM GOODS LIFT(2)
3	taxes and duties View	taxes and duties	PASSENGER CUM GOODS LIFT(2)

The uploaded document only contains Buyer specific Additional Scope of Work and / or Drawings for the bid items added with due approval of Buyer's competent authority. Buyer has certified that these additional scope and drawings are generalized and would not lead to any restrictive bidding.

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

1. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

PRE-QUALIFICATION REQUIREMENTS (PQR)

BIDDERS SHALL MEET ALL THE FOLLOWING REQUIREMENTS

I. Minimum 2 numbers of rack & pinion type passenger cum goods lift as per technical specification should have been manufactured and supplied by OEM anywhere in India during the last 5 years as on latest date of offer submission. Proof of Purchase Order or Invoice has to be submitted in this regard.

II. Performance Certificate of at least two numbers obtained from the previous customer to be furnished by bidder. The certificate shall be in English duly signed and stamped concerned customer.

B. Financial Criteria:

Average Turnover for any three consecutive latest financial years should be Rs.22.00 lakhs

a. In case audited balance sheet and profit & loss account has not been submitted for that three consecutive years indicated above, then the

applicable financial audited statements submitted by the bidders against the requisite years will be averaged for three years.

b. If financial statements are not required to be audited statutorily, then instead of audited financial statements, financial statements are required to be certified by chartered accountant.

Document to be attached with bid

1. Proof of Supply if applicable and standalone Profit and loss statements as required under PQR document.
2. Technical specification offered.
3. Declaration for local content under Make in India clause
4. Declaration for procurement from countries under land border clause.

Document required for payment along with Invoice

For 80% Payment of Supply :

- (1). Original Tax Invoice in duplicate for 100% of Supply Value.

- (2). Acknowledged copy of DC/Invoice/Packing List in Dispatch along with Supplier Acknowledged PO Copy indicating with Date of receipt, Office Sign and seal.
- (3). Acknowledged receipt of materials or A copy of Stores receipt voucher (SRV issued by the consignee) or CRAC (consignee receipt acceptance certificate).
- (4). e-way bill
- (5). Inspection Report
- (6). Guarantee / Warrantee Certificate
- (7). O & M Manuals 3 Sets (Including Drawings)
- (8). PBG for 10% of the order value valid up to GUARANTY/WARRANTEE Period from any bank.

For Balance 20% Payment of Supply and E&C value :

- (1). Copy of Tax Invoice in duplicate for the Supply Value.
- (2). Work Completion certificate issued by the consignee.
- (3). Statutory Clearance from the authorities.

Payment terms

payment will be released as given under "Document required for payment along with Invoice" within number of days as given below from date of submission of bills and other documents to the consignee . For reimbursement of GST, refer taxes and duties clause in ATC.

sl	Type of bidder	payment terms (number of days)
1	MSE	45 days
2	Medium Enterprise	60 days
3	Non-MSe	90 days

Price to be quoted should be inclusive of all charges and taxes such as GST, TCS etc .Bidders are advised to check applicable GST on their own before quoting. Buyer will not take any responsibility in this regards. GST reimbursement will be as per actuals or as per applicable rates (whichever is lower), subject to the maximum of quoted GST % subject to receipt of proof of payment of GST by the buyer.

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 bidder happens to occupy L-1 status even after soliciting discounts, the L-1 bidder shall be decided by toss/draw of lots in the presence of respective L-1 bidder(s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding.

Time Line for completion of activities:

Delivery Date (Remarks) : 90 days from the date of P.O (Excluding E&C) and break-up as given below :

Sl no	Activity	no of days
1	GA Drawing ,TDS,QAP and any other documents submission (From the date of P.O)	15
2	No. of days vendor has to offer inspection of Lifts (from the date of Drawings/TDS clearance)	45
3	No. of Days equipment to be delivered (from BHEL despatch clearance)	30
4	Erection and Commissioning duration including Load test and statutory clearances etc	15

Bank Particulars

- a. Bank Name -: State Bank Of India
- b. Bank Telephone No.(with STD code)-: 044 – 2433 0583 / 2433 0407
- c. Branch Address-: SBI Saidapet Branch 00912, No.80-A, Chevalier Sivaji Ganesan Salai, South Boag Road, T.Nagar, Chennai-17
- d. Branch Code -: 00912
- e. 9 Digit MICR Code of the Bank Branch 600002045
- f. Bank Account Number -: 10610819499
- g. Bank Account Type -: CASH CREDIT ACCOUNT
- h. 11 Digit IFSC Code of Beneficiary Branch-: SBIN0000912
- i. Details for SFMS (Structured Financial Messaging System) transmission of BG

Bank and Branch SBI TFCPC Branch

Branch Code 5056

IFSC Code SBIN0005056

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2. Generic

Bidders are advised to check applicable GST on their own before quoting. Buyer will not take any responsibility in this regards. GST reimbursement will be as per actuals or as per applicable rates (whichever is lower), subject to the maximum of quoted GST %.

3. Generic

Installation, Commissioning, Testing, Configuration, Training (if any - which ever is applicable as per scope of supply) is to be carried out by OEM / OEM Certified resource or OEM authorised Reseller.

4. Generic

Supplier shall ensure that the Invoice is raised in the name of Consignee with GSTIN of Consignee only.

5. Inspection

Nominated Inspection Agency: On behalf of the Buyer organization, any one of the following Inspection Agency would be conducting inspection of stores before acceptance:
Pre-dispatch Inspection at Seller Premises (applicable only if pre-dispatch inspection clause has been selected in ATC):

ANY THRID PARTY INSPECTION AGENCY AUTHORISED BY BHEL

Post Receipt Inspection at consignee site before acceptance of stores:
NECESSARY CLEARANCE FROM STATUTORY AUTHROTIES IF APPLICABLE TO BE OBTAINED BY VENDOR

6. Scope of Supply

Scope of supply (Bid price to include all cost components) : Supply Installation Testing Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any)

7. Certificates

Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the

Bid document, ATC and Corrigendum if any.

8. **Forms of EMD and PBG**

Successful Bidder can submit the Performance Security in the form of Payment online through RTGS / internet banking also (besides PBG which is allowed as per GeM GTC). On-line payment shall be in Beneficiary name

BHARAT HEAVY ELECTRICALS LIMITED

Account No.

10610819499

IFSC Code

SBIN0000912

Bank Name

STATE BANK OF INDIA

Branch address

SBI Saidapet Branch 00912, No.80-A, Chevalier Sivaji Ganesan Salai, South Boag Road, T.Nagar, Chennai-1

. Successful Bidder to indicate Contract number and name of Seller entity in the transaction details field at the time of on-line transfer. Bidder has to upload scanned copy / proof of the Online Payment Transfer in place of PBG within 15 days of award of contract.

9. **Forms of EMD and PBG**

Successful Bidder can submit the Performance Security in the form of Fixed Deposit Receipt also (besides PBG which is allowed as per GeM GTC). FDR should be made out or pledged in the name of

PS-SOUTHERN REGION, BHARAT HEAVY ELECTRICALS LIMITED, CHENNAI

A/C (Name of the Seller). The bank should certify on it that the deposit can be withdrawn only on the demand or with the sanction of the pledgee. For release of Security Deposit, the FDR will be released in favour of bidder by the Buyer after making endorsement on the back of the FDR duly signed and stamped along with covering letter. Successful Bidder has to upload scanned copy of the FDR document in place of PBG and has to ensure delivery of hard copy of Original FDR to the Buyer within 15 days of award of contract.

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. Any clause(s) incorporated by the Buyer regarding following shall be treated as null and void and would not be considered as part of bid:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process.
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.

12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, 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. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।

---Thank You/धन्यवाद---

TECHNICAL SPECIFICATION AND SCOPE OF WORK FOR DESIGN ,ENGINEERING, SUPPLY, ERECTION , TESTING AND COMMISSIONING OF TWO NOS. RACK & PINION TYPE PASSENGER CUM GOODS LIFT TO 2x1000 MWe NPCIL KUDANKULAM POWER PLANT .

RACK & PINION TYPE PASSANGER CUM GOODS HOIST / ELEVATOR

TECHNICAL SPECIFICATION

	GENERAL TECHNICAL REQUIREMENT	Supplier's specification
A	<u>General:</u>	
1.	Capacity -- 1000 Kg (1MTonne)	
2.	Type -- Electrically operated vertically (up & down) rack & pinion type / construction having 2 Nos. electrical TEFC motors (415V \pm 10% 50 Hz).	
3.	Each motor having 100% capacity for 1000 Kg lift & confirming to IP 55 protection or better.	
4.	Each motor equipped with disc type spring loaded electrically actuated breaks holding 100 % load.	
5.	Ascend and descend speed - - Appx.40Mtr per minute (max.)	
6.	Suitable strong mast, square in section with a minimum dimension of (650 x 650 x 1508) mm, made of ERW C class tubular pipe of minimum diameter 76.1 mm & minimum thickness of 4.5 mm. Quickly assemble-able with pins or bolts extendable to a height of approx. 65 Mtrs. Designs should incorporate self – erect system. Mast & Tie ins should be hot dipped galvanized. Cage should be spray painting covered with galvanized sheet.	
7.	The mast supports to nearest structure should be adjustable in lengths and lockable and with suitable end connections to mast (bolted preferred) and to structure (welded cum bolted). The pitch of supports for the mast height should not be more than 6/7 Mtrs.	

8.	The traveling cabin size should be able to accommodate approximately 13 persons comfortably in standing position, but not exceeding 15 (weight limited to 1000 Kg.).	
9.	Cabin floor should be strong enough to resist wear and tear by transporting of welding machines, gas cylinders, etc., a metal sheet (preferably aluminum corrugated and galvanized) covered floor is preferred.	
10.	Cabin frame should be integral part of drive mechanism attached to mass for movements. Cabin frame can be of tubular or square bars. The cage wall shall be of perforated galvanized sheet which are bolted to cage structure.	
11.	Cabin entry and exit doors should be on opposite ends. A horizontally sliding door is preferred over inside swing opening or vertically sliding doors.	
12.	Suitable peep-out windows should be provided in cabin at suitable location.	
13.	Cabin should have a trap door for passengers to get out (Trap door located at roof is preferred) during any emergency.	
14.	Cabin roof should have suitable all around handrails of standard height.	
15.	Cabin should have provisions for one fan and two tube lights (each of 2 feet length) complete with fittings.	
16.	Cabin should be equipped with one emergency tube light fitting to automatically go "ON" on power failure.	
17.	Cabin length centre line's offset with mast centerline should be as low as possible to avoid cab swaying and vibrations.	
18.	The operator controls should be suitably located inside the cabin at a convenient location. Controls should be either Joystick or push button. Suitable key locking arrangement should be provided to avoid unauthorized use of lift.	
19.	Suitable buffer springs adequate numbers should be provided at lower mast point to absorb shocks of accidentally sitting/sliding cabin, without damage to the cabin.	

20.	Cabins take-off to up or down side should be without jerks. The motors should smoothly take over the required operation, timely releasing the brakes.	
21.	Cabin doors & landing bar type gate should be mechanically and electrically interlocked to prevent the cab from being operated unless the cab doors / landing gate are fully closed and to prevent the doors from being operated while the cab is in motion.	
B.	<u>SAFETY DEVICES</u>	
1.	All controls should be fail-safe.	
2.	The cab should have a safety device to lock the cabin gradually (without sudden jerk) in case of overspend or freefall of cabin.	
3.	A centrifugal safety device actuating at a pre –determined speed higher than the normal is preferred. A remote Control shall be provided for testing the safety device from the remote control unit.	
4.	An overriding manual actuation of the device is preferred.	
5.	Once operated the manual resetting should be possible with ease preferably without leaving the cabin.	
6.	Actual support & minimum life of following should be indicated.	
a.	Guide rollers	
b.	Main drive pinion	
c.	Rack	
7.	In case of total power failure, a suitable arrangement inside the cabin to manually release the brakes should be provided. The safety device must remain active during this descend.	
8.	Provision of single phasing protection in the scheme.	
9.	The safe testing method to test the device prior to normal operation should be available.	

10.	The numbers of cycles of operation as life of device before major replacements are needed, should be indicated.	
C.	<u>FOUNDATION:</u>	
1.	Bidder to indicate complete foundation details. A slab type, re-useable (after shifting to next location) RCC foundation is preferred. Based on foundation drawing furnished by bidder foundation shall be provided at site by BHEL.	
D.	<u>BOTTOM ENCLOSURE:</u>	
1.	A suitable base enclosure should be provided to prevent entry of any one to active zone.	
2.	A door in outer enclosure, with suitable mechanical and electrical interlocks should be provided.	
3.	An auxiliary panel with suitable displays and a main switch to cut off the supply should be incorporated in base enclosure.	
E.	<u>CABLES:</u>	
1.	Bidder to indicate the specification of power cable up to main switch on bottom enclosure.	
2.	The trailing cable should be highly flexible copper conductor FRLS cable of suitable rating and in single length to take the cabin to a maximum height to 65 Mtrs. from ground. Length of the cable should be supplied considering the safety margin to meet the eventualities.	
3.	The trailing cable fixation method should be to minimize self-load tension on cable.	
4.	Special cable reeling arrangement should be provided for trailing cable arrangement.	
5.	Mast should have suitable cable guides. The design of these guides should be such that entangling of swaying cable with guide should be avoided.	
6.	In case lift is installed to a lower height than 65 Mtrs, the balance cable safe storage with reeling arrangement should be ensured.	

F.	LANDING GATE	
1.	It is proposed to have landing platform at Three locations. Each landing platform should be provided with bar type landing gate with interlock	
G.	<u>SAFETY INTERLOCKS:</u>	
	The elevator should have following safety interlocks:	
1.	Against open bottom enclosure door	
2.	Against open cabin in and outdoors	
3.	Against open trap door	
4.	First over travel limiter in either direction allowing other direction travel only.	
5.	A second over travel limiter making all controls invalid beyond crossing first level over travel.	
6.	Motor overload and over heating.	
7.	Against open control panel door.	
8.	Against single phase or reverse phase supply.	
9.	UP / DOWN Limit Switch Protections	
10.	Mechanical release system of electromagnetic brake during power failure	
11.	Provision of 3-Phase Cam at top & Bottom landing	
12.	Safety hook for preventing pinion from disengage from rack	
13.	Provision of counter rollers and Cable guides for safety of pinion and trailing cable	
14.	Provision of buffer springs at ground for maintenance of elevator.	
15.	Provision of changeover switch from VFD control to DOL control.	

H.	<u>ELECTRICAL GENERAL:</u>	
1.	Electrical system should use MCB and HRC fuses only.	
2.	Cross ferruling on cable/wire should be done for ease of trouble shooting.	
3.	Wiring and logic diagrams should be provided. Contact (No. & NC) reference should be brought in schematic.	
I.	<u>PAINTING</u>	
	All metal exposed parts, such Mast section, cabin etc shall be applied with epoxy based primer one coat and two coat of finish paint as IS standard.	

TECHNICAL INFORMATION TO BE FURNISHED BY TENDERER WITH OFFER

A.	<u>ELEVATOR PARTICULARS :</u>	
1.	Load carrying capacity:	
2.	Type of loading for which the elevator is designed :	
3.	Type of elevator :	
4.	Speed of elevator :	
5.	Travel Height :	
6.	No. of floors served :	
7.	Elevation of floors served :	
8.	Method of control :	
9.	Details of control switches and indications available in cabin / base panel (to mention details specifically):	
10.	Weight of cabin complete without load :	
11.	Weight of hoist cabin with pay load :	
12.	Detailed write-up on control systems with schematic to be attached : (Brief write up on function of schematic should also be enclosed)	
B.	<u>GROUND ENCLOSURE :</u>	
1.	Size of the enclosure :	
2.	Material of construction :	

3.	Size of landing entrance :	
4.	Method of operation of doors :	
5.	Whether electrical & mechanical doors interlocks provided :	
6.	Method of fixing the enclosure with structure: (drawing to be furnished)	
7.	Any other details not covered above.	
C.	<u>MAST :</u>	
1.	Material of mast :	
2.	Cross section of mast, with dimensional details :	
3.	Size of each piece of mast :	
4.	Method of fixing mast with structure – spacing and dimensional details (drawing to be enclosed):	
5.	Details of extending mast sections (drawing to be enclosed):	
a.	Static and dynamic load on foundation	
b.	Static and dynamic load on structure (where ties are connected)	
D.	<u>CABIN :</u>	
1.	Internal size	
2.	Material of construction with relevant standard :	
3.	Type of floor :	
4.	Size of cabin door.	
5.	Method of operation of cabin door :	
6.	Details of electrical and mechanical inter locking arrangement.	
7.	Whether escape hatch electrically interlocked with elevator :	
8.	Whether Guide Roller and safety hooks provided	
9.	Whether arrangement of light / Fan inside Cabin made	
10.	Whether Indicators & Controls provided inside cabin	
11.	Type and number of buffers and their mounting arrangements :	
E.	<u>ELEVATOR DRIVE UNIT:</u>	
1.	Location of the drive unit :	
2.	Details of drive unit :	
F.	<u>ELECTRICAL MOTOR:</u>	
1.	Manufacturer :	

2.	Motor Type :	
3.	Equipment driven by motor :	
4.	Application standard to which motor conforms to :	
5.	Frame size & type designation	
6.	Rated Output / Maximum load. Considering size of motor :	
7.	Maximum Power Input at design duty point (HP/KW rating) :	
8.	Service factor :	
9.	Whether each motor is having 100% capacity of elevator:	
10.	Speed (RPM) :	
11.	Duty Cycle	
12.	Rated voltage with acceptable variation:	
13.	Current at rated voltage : (a) Full load :	
14.	Current at rated voltage: (b) Locked rotor. :	
15.	Insulation class :	
16.	Type of enclosure and method of cooling :	
17.	Degree of Protection :	
18.	Type of bearing and type of lubrication:	
19.	Electric heaters	
20.	Panel protection class	
21.	Motor terminal box enclosure protection class :	
22.	Type of brakes:	
23.	Number of starts per hour	
G.	<u>REDUCTION GEAR: - MANUFACTURER'S NAME</u>	
1.	Material of gears :	
2.	Hardness of gears :	
3.	Type of gear :	
4.	Gear power transmitted :	
5.	Gear ratio :	
6.	Input and output speed :	
7.	Lubrication used and periodicity of replacement :	
H.	<u>DRIVE PINION</u>	

1.	Material :	
2.	Hardness:	
3.	Fixing arrangement :	
4.	Minimum life	
I.	<u>GUIDE ROLLERS</u>	
1.	Material :	
2.	Hardness:	
3.	Fixing arrangement :	
4.	Minimum life	
J.	<u>SAFETY DEVICE:</u>	
1.	a) Number of safety devices provided : b) Types of safety device : c) Sequence of operation :	
2.	Speed at which safety device comes to action.	
3.	Method of operation : a) Normal operation b) In case of power failure :	
4.	Free fall distance before the safety device takes over in course of failure of normal brakes.	
5.	System of release of safety device in case of power failure :	
6.	How often safety device to be checked / operated for drop test to meet safety / statutory requirement.	
7.	Is any gadget available to conduct the drop test :	
8.	Any other information not covered above.	
K.	<u>BRAKES :</u>	
1.	Type of brakes provided :	
2.	Method of operation :	
3.	Interlocking , if any provided :	
4.	Whether electromagnetic brake and external magnetic brake release provided :	
5.	Degree of protection :	
6.	Whether remote control for testing the safety device provided :	
7.	Whether centrifugal brake for power failure provided :	
L.	<u>BUFFERS :</u>	

1.	No. & location of buffers provided :	
2.	Type of buffers :	
3.	Diameter of spring :	
4.	Maximum compression under extreme condition :	
5.	No. of spring coils :	
6.	Sectional dimensions :	
7.	Material of spring :	
8.	Compression / Unit load	
M.	<u>DETAILS OF CONTROL PANEL</u>	
1.	No. of panels	
2.	Type of enclosure (Degree of Protection)	
3.	Thickness of sheet metal used	
4.	Painting : Colour	
N.	<u>VARIABLE FREQUENCY DRIVE (VFD)</u>	
1.	Make :	
2.	Model :	
3.	Ambient Temperature range:	
4.	Operating Mode :	
5.	Overload Capacity :	
6.	Output Frequency :	
7.	Control Functions :	
O.	<u>POWER & CONTROL CABLE (FIXED & TRAILING):</u>	
1.	Manufacture.	
2.	Type & material	
3.	Rated voltage	
4.	Rated current	
5.	Type of insulation	
6.	Number of strand per core :	
7.	Number of cores	
8.	Number of cable guides and their material:	
9.	Number of anchors provided for trailing cable :	
10.	Details of cable reeling system (drawing to be enclosed):	

P.	<u>MOTOR STARTER CONTRACTORS FUSES PUSH BUTTONS</u>	Indicating Lamps Circuit Breaker Isolation
1.	Manufacture	
2.	Type	
3.	Rating	
4.	Applicable standard	
Q.	<u>Over travel limit switch:</u> (One lower limit, upper limit & one final over travel power cut off) only <u>industrial / heavy duty</u> are applicable.	
1.	Make	
2.	Type	
3.	Material of contract	
4.	Contact rating	
R.	<u>Details of earthing conductor :</u>	
S.	<u>Details of fire protection envisaged :</u>	
T.	<u>Maximum permissible vibration levels</u> with machine in operation: Specify in micron / sec.	
a.	Between 10 to 20 Mtrs. Height.	
b.	Between 20 to 40 Mtrs. Height.	
c.	Between 40 to 65 Mtrs. Height.	
U.	<u>PAINTING / GALVANISING:</u>	
1.	Applicable standards for a. Mast and Tie Ins b. Cage c. Other Structural	
2.	Procedure to be adopted for painting /galvanizing in details :	
3.	Procedure for painting inside tubes (if applicable)	
4.	Whether one coat of final painting is envisaged after Erection & Commissioning at site.	
V.	<u>List of Tools being supplied against tool-kit /box</u>	
W.	<u>Details of service visits (normal) to be made during warranty/ Guarantee period free of cost :</u>	
1.	Number of visits :	
2.	Number of days per visit :	

3	No. of service personnel (Mechanical / Electrical)	
X.	<u>Drawings to be enclosed with offer :</u>	
1.	GA of rack & pinion & pinion hoist	
2.	GA of cage & drive unit.	
3	Wiring diagrams.	
4.	Schematic diagrams.	
5.	Trailing cable arrangement	
6.	Tie-in arrangement of mast	
7.	Landing gate arrangements	
8	Erection Drgs	
Y.	<u>Misc. Requirements</u>	
1.	List of recommended spares required for operation of elevator for two years. List to be furnished	
2.	Details of quality check during manufacturing. “Manufacturing Quality Plan” to be submitted	
3.	Details of shop tests.	
4.	Details of performance test including overload testing at site.	
5.	Detailed Bill of Quantity of Material / Dispatch able unit	
6	Arrangement for training of BHEL personnel at site.	
7	Dive List of Electrical Power & Control Scheme	
8	Painting Procedure	

Special Conditions of Contract

Indent reference No : IND:23:PS:0005:PUR:2 Dt: 09.05.2023

1. Warranty : The Elevator shall be warranted for a period of 18 months from the date of supply or 12 months from the date of commissioning whichever occurs later. Any deviation from warranty terms is not acceptable.
2. BHEL Scope of Work at site :
 - a) Unloading & storage at site. Prior despatch clearance shall be obtained from site.
 - b) Incoming power supply of 415 V, 3 phase, 100 Amps, 50 Hz and 4 wire to lift base control panel located at ground level.
 - c) Foundation at base level as per lift drawing.
 - d) Landing Platforms with railings for installation of landing doors.
 - e) Manpower during erection.
3. Performance Bank Guarantee of 10 % of the order value for each lift shall be collected separately effective from date of receipt of each lift and PBG is applicable till warranty/Guarantee period of individual lifts.
4. Delivery Period :

For 1st Lift : 3 months from the date of Purchase Order on FOR site basis.
For 2nd Lift : This lift has to be supplied by October 2023 only and it should not be supplied before that.
5. Quoted rate shall include transportation to site. Responsibility of delivering material to the project site lies with the vendor. Necessary transit insurance, other statutory compliance, certifications, permits etc. are in the scope of vendor.
6. Defective/ Failed material replacement – Supplier shall replace the defective/Failed material free of cost (inclusive of freight, material cost, taxes etc.) up to destination within one month from notification of defect/ Test failure.
7. BHEL reserves the right at its own discretion, to cancel the Order or to place the order for part/ full quantity.
8. Inspection shall be carried out at supplier works by BHEL / BHEL approved third party agency (TPIA).
9. The following safety rules must be followed as per Site HSE plan for Electrical safety and AEFR must be followed very strictly .
10. The quoted rates shall be for FOR destination basis.

Atomic Energy Factories Rules (AEFR 1996) strictly followed at Kudankulam Site.

Form 3 & 4 must be submitted by the competent person (attached) and AEFR 1996 Rule 34 and 35 (attached) .

Kindly ensure that all safety related documents readily available before sending lift materials at site .

Minimum safety requirements for the passenger and Goods lifts :

- I. Gates open close with interlocking or other efficient device like sensor etc.,
- II. Load indicator.
- III. Over load alarm
- IV. Over reach sensor
- V. Emergency Push Button
- VI. Form 3 (Attached)

Documents to be submitted before Erection:

- I. Distinguishing Number or Mark and description to identify the lifting machine , Chains , rope or Lifting Tackle.
- II. Date when lifting machine , chain , rope or lifting tackle was first used in the factory .
- III. Date and Number of certificate of last examination made under section 29 (1) a iii and by whom it was carried out .
- IV. Date and number of certificate relating to any test & examination made, under rules 35.1 & 35.15 together with the name & address of the certifying person.
- V. Date & certificate of annealing or other heat treatment of the chain and lifting tackle carried out as per rule 35.7 and by whom it was carried out.
- VI. Particulars of any defect found at any such examination or after annealing and affecting the safe working load and steps taken to remedy such defect.
- VII. All related documents .

Rules 32 (Sch.VII)-34

- (i) Conveyors handling flammable material or fine powders shall have only explosion proof electrical fixtures. The dust levels in the area shall be restricted to PLE Limits by suitable means; and
 - (j) Conveyors running in tunnels & pits shall have sufficient clearance at sides for workers engaged in lubricating or repair works.
4. Conveyors at height.-
- (a) Conveyors at elevated locations shall be provided with access platform with toe-board & guard rails.
 - (b) Conveyors installed within 2 metres of floor or walkway surface shall be provided with crossovers or passages
 - (c) Overhead conveyors shall be provided with sideboards along the edges & screen guards underneath. Underpasses shall be provided with sheet metal ceiling for protection of the persons crossing.
 - (d) Conveyors passing through building floors, walls shall have interlocks installed in such a way that all will have to operate at one time to start the system. These switches shall be clearly marked & area near them shall be kept clean and free of obstructions. The openings shall be guarded with hand rails, toe-boards etc.
5. Maintenance.- The operation, maintenance of conveyors shall be done under work permit system keeping in mind the nature of materials handled. The entire mechanism of conveyors, electrical switches, interlocks etc. shall be inspected and maintained regularly especially for brakes, back stops, anti-runaway devices, overload releases and such other safety devices.
6. Fire Fighting.- The entire length of the conveyor shall be covered by installation of fire detection and warning system. Wherever conveyor passes through wall or floor openings, automatic system shall be installed for closing of them to stop the passage of flame through them. Wherever necessary automatic water sprinkler system shall also be provided.
33. **Register of workers employed for work on or near machinery in motion.-In every factory a register shall be maintained in Form 1 in which the name and other particulars of every such worker as may be employed for such examination or operation as referred to in the proviso to sub-section (1) of section 21 shall be entered.**
34. **HOISTS AND LIFTS.-**
- (1) A register shall be maintained to record particulars of examination of hoists and lifts and shall give particulars as shown in Form 3.

Rules 34-35

- (2) In pursuance of the provisions of sub-section (4) of Section 28, in respect of any class or description of hoist or lift specified in the first column of the following Schedule, the requirements of section 28 specified in the second column of the said Schedule and set opposite to that class or description of hoist or lift shall not apply.

SCHEDULE

Class or description of hoist or lift	Requirements which shall not apply
Hoists or lifts mainly used for raising materials for charging blast furnaces or lime kilns.	Sub-section 1(b) in so far as it requires a gate at the bottom landing; sub-section 1(d); sub-section 1(e)
Hoists not connected with mechanical power and which are not used for carrying persons.	Sub-section 1(b) in so far as it requires the hoistway or liftway enclosure to be so constructed as to prevent any person or thing from being trapped between any part of the hoist or lift and any fixed structure or moving part; sub-section 1(e)

35. LIFTING MACHINES, CHAINS, ROPES AND LIFTING TACKLES.-

- (1) No lifting machine and no chain, rope or lifting tackle, except a fibre rope or fibre rope sling, shall be taken into use in any factory for the first time in that factory unless it has been tested and all parts have been thoroughly examined by a competent person and a certificate of such a test and examination specifying the safe working load or loads and signed by the person making the test and the examination, has been obtained and is kept available for inspection.
- (2) Every jib-crane so constructed that the safe working load may be varied by the raising or lowering of the jib, shall have attached there to either an automatic indicator of safe working loads or an automatic jib angle indicator and a table indicating the safe working load at corresponding inclinations of the jib or corresponding radii of the load. An audio-visual alarm be preferably provided in addition, to give alarm wherever the limits given in table are exceeded.
- (3) A table showing the safe working loads of every kind and

Rule 35

size of chain, rope or lifting tackle in use, and, in the case of a multiple sling, the safe working loads at different angles of the legs, shall be pasted in the store in which the chains, ropes or lifting tackles are kept, and in prominent positions on the premises, and no chain, rope or lifting tackle not shown in the table shall be used:

Provided that this sub-rule shall not apply in respect of such lifting tackle if the safe working load thereof, or in the case of a multiple sling, the safe working load at different angles of the legs, is plainly marked upon it.

- (4) The register to be maintained under clause (a)(iii) of sub-section (1) of Section 29 of the Act shall contain the report as given in Form - 4, giving following particulars and shall be kept readily available for inspection:-
- (a) Name of occupier of factory.
 - (b) Address of factory.
 - (c) Distinguishing number or mark, if any, and description sufficient to identify the lifting machine, chain, rope, or the lifting tackle.
 - (d) Date when the lifting machine, chain, rope or lifting tackle was first taken into use in the factory.
 - (e) Date and number of the certificate relating to any test and examination made under sub-rules (1) and (15) together with the name and address of the person who issued the certificate.
 - (f) Date of each periodical thorough examination made under clause (a) (iii) of sub-section(1) of Section 29 of the Act and sub-section (3) and by whom it was carried out.
 - (g) Date of annealing or other heat treatment of the chain and other lifting tackle made under sub-rule (7) and by whom it was carried out.
 - (h) Particulars of any defects affecting the safe working load found at any such thorough examination or after annealing and of the steps taken to remedy such defects.
- (5) All rails on which a travelling crane moves and every track on which the carriage of a transporter or runway moves shall be of proper size and adequate strength and have an even running surface; and every such rail or track shall be properly laid, adequately supported and properly maintained.

Rule 35

- (6) To provide access to rail tracks of overhead travelling cranes suitable passage-ways of at least 50 centimeters width with toeboards and double hand rails 90 centimeters high shall be provided alongside, and clear of, the rail tracks of overhead travelling cranes, such that no moving part of the crane can strike persons on the ways, and the passage-way shall be at a lower level than the crane track itself. Safe access ladders shall be provided at suitable intervals to afford access to these passage-ways, and from passage-ways to the rail tracks:

Provided that the Competent Authority may, for reasons to be specified in writing, exempt any factory in respect of any overhead travelling crane from the operation of any provision of this sub-rule subject to such conditions as it may specify.

- (7) All chains and lifting tackles except a rope sling shall, unless they have been subjected to such other heat treatment as may be approved by the Competent Authority of Factories, be effectively annealed under the supervision of a competent person at the following intervals:-

- (a) all chains, slings, rings, hooks, shackles and swivels used in connection with molten metal or molten slag or when they are made of 12.5 millimeters bar or smaller, once at least in every six months; and
- (b) all other chains, rings, hooks, shackles and swivels in general use, once at least in every twelve months:

Provided that chains and lifting tackle not in frequent use shall, subject to the Competent Authority's approval, be annealed only when necessary. Particulars of such annealing shall be entered in a register prescribed under sub-rule (4).

- (c) Slings-
 - (i) Chains shall not be joined by bolting or wiring links together. They shall not be shortened by tying knots. A chain in which the links are locked, stretched or do not move freely shall not be used. The chain shall be free of kinks and twists. Proper eye splices shall be used to attach the chain hooks.
 - (ii) Pulley blocks of the proper size shall be used to allow the rope free play in the sheave grooves and to protect the wire rope from sharp bends under load. Idle sling shall not be carried on the crane hook along with a loaded sling. When idle slings are carried they shall be hooked.

Rule 35

- (iii) While using multilegged slings, each sling or leg shall be loaded evenly and the slings shall be of sufficient length to avoid a wide angle between the legs.
 - (iv) Sling hitches on loads shall be made under the supervision of experienced persons.
- (8) Nothing in the foregoing sub-rule (7) shall apply to the following classes of chains and lifting tackles, namely:-
 - (a) chains made of malleable cast iron;
 - (b) plate link chains;
 - (c) chains, rings, hooks, shackles and swivels made of steel or of any non-ferrous metal;
 - (d) pitched chains, working on sprocket or pocketed wheels;
 - (e) rings, hooks, shackles and swivels permanently attached to pitched chains, pulley blocks or weighing machines;
 - (f) hooks and swivels having screw threaded parts or ball bearing or other case hardened parts;
 - (g) socket shackles secured to wire ropes by white-metal capping; and
 - (h) bordeaux connections:

Provided that such chains and lifting tackles shall be thoroughly examined by a competent person once at least in every twelve months, and particulars entered in the register kept in accordance with sub-rule (4).
- (9) Cranes shall be operated only by authorised persons who are well trained and experienced, operators shall ensure that all safety devices are functioning properly before crane is put into operation.
- (10) A mobile crane shall be operated so that none of its parts can approach live electric lines closer than 3 m. While lifting loads such a crane shall be located on level ground.
- (11) Standard signals shall be used and operators shall recognise signals from only one person during crane operation. Signal men shall direct equipment movement at fills, quarries, pits, intersections or any other place where necessary to prevent possible accidents.
- (12) No person shall be permitted to work or walk under a load.

Rules 35-36

- (13) Thorough inspection and load testing of a crane shall be done by a competent person at least once every 12 months. The load to be used for the purpose of testing shall be as follows:

Safe working load Test load

Up to 20 tons 25% in excess

20 - 50 tons 5 tons in excess

Over 50 tons 10% in excess

- (14) All lifting machines, ropes, chains and lifting tackles, except a fibre rope or fibre sling, which have been lengthened, altered or repaired by welding or otherwise, shall, before being again taken into use, be adequately re-tested and re-examined by a competent person and certificate of such test and examination be obtained, and particulars entered in the register kept in accordance with sub-rule (4).
- (15) No person under 18 years of age and no person who is not sufficiently competent and reliable shall be employed as driver of a lifting machine whether driven by mechanical power or otherwise, or to give signals to a driver.
- (16) Where the Competent Authority is satisfied that in a factory due to shutdown or for any other reasons it is not practicable to maintain a minimum distance of 6 metres between the person employed or working on or near the wheel track of a travelling crane and the crane, it may on the request of the manager reduce the distance to such extent as it may consider necessary and also prescribe further precautions indicating appointment of suitable number of supervisors to ensure the safety of the persons while they are employed or working on or near the track.

36. PRESSURE VESSELS OR PLANTS.-

- (1) Interpretation.-In this rule-
- (a) "design pressure" means the maximum pressure that a pressure vessel or plant is designed to withstand safely when operating normally;
 - (b) "maximum permissible working pressure" means the maximum pressure at which a pressure vessel or plant is permitted to be operated or used under this rule and is determined by the technical requirement of the process;
 - (c) "plant" means a system of piping that is connected to a pressure vessel and is used to contain a gas, vapour or liquid under pressure greater than the atmospheric pressure, and includes the pressure vessel;

REPORT OF EXAMINATION OF HOISTS & LIFTS

(See Rule 34)

1. Name of the Factory :
- 2.1 Type of hoist or lift and identification No. or description :
- 2.2 Date of construction/reconstruction :
3. Are all parts of the hoist or lift, of good mechanical :
: construction, sound material and adequate strength
(so far as ascertainable)
4. Are the following parts of the hoist or lift properly :
: maintained and in good working order? If not, state
: what defects have been found.
 - .1. Enclosure of hoistway or liftway :
 - .2. Landing gates and cage gate(s) :
 - .3. Interlocks and the landing gates and cage :
: gate(s)
 - .4. Other gate fastenings :
 - .5. Cage and platform and fittings, guides, :
: buffers, interior of the hoistway or liftway.
 - .6. Overrunning devices :
 - .7. Suspension ropes or chain and their :
: attachments.
 - .8. Safety gear i.e. arrangement for preventing :
: fall of platform or cage brakes.
 - .9. Brakes :
 - .10. Worm or spur gearing :
 - .11. Other electrical equipment :
 - .12. Other parts :
5. What parts(if any) were inaccessible :
6. Repairs, renewals :
7. Maximum safe work load :

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(2)

8. Is any of the lift made as per requirements of fire lift & if so its location & identification No. ;
9. Other particulars :

I/we certify that on (date) I/we thoroughly examined this hoist or lift and that the above is a correct report of the result.

Signature:

Date:

Name :

REPORT OF EXAMINATION OF LIFTING MACHINES

Ropes & Lifting Tackles

(See rule 35(4))

1. Name of the Factory :
2. Distinguishing number or mark (if any) and description sufficient to identify the lifting machine, chains, rope or lifting tackle. :
3. Date when lifting machine chain, rope or lifting tackle was first used in the factory. :
4. Date and number of certificate of last examination made under section 29(1)a (iii) and by whom it was carried out. :
5. Date and number of certificate relating to any test & examination made, under rules 35.1 & 35.15 together with the name & address of the certifying person. :
6. Date & certificate of annealing or other heat treatment of the chain and lifting tackle carried out as per rule 35.7 and by whom it was carried out. :
7. Particulars of any defect found at any such examination or after annealing and affecting the safe working load and steps taken to remedy such defect. :

I/We certify that on I/We thoroughly examined the above mentioned lifting machine/chain rope/lifting tackle and that the above is a correct report of the result.

Signature:

Date:

Name:

CHAPTER-14

Electrical Systems

- 14.1 All electric supply lines and electrical apparatus used at site shall be of sufficient ratings for power, insulation and estimated fault current and of sufficient mechanical strength, for the duty which they may be required to perform under the environmental conditions of installation, and shall be constructed, installed, protected, worked and maintained in such a manner as to ensure safety of human beings, animals and property. All such material and apparatus shall conform to requirements under relevant codes of Bureau of Indian Standards.
- 14.2 All parts of electrical installations shall be so constructed, installed and maintained as to prevent danger of electric shock, fire and external explosion.
- 14.3 Before construction is commenced and during the progress thereof, adequate steps shall be taken to ascertain the presence of and to guard against danger to workers from any live electrical cable or apparatus which is under, over or on the site.
- 14.4 If use of electrical energy is required for execution of the work, the Contractor shall deploy qualified and licensed electrician(s). Minimum qualification for such electrician shall be ITI in electrical trade. He should also possess electrician/wireman license issued by concerned state government authority.
- 14.5 The laying and maintenance of electrical cables and apparatus on construction sites should be governed by national laws and regulations.
- 14.6 The electrical distribution at each site shall be via an isolator which cuts off current from all conductors, is readily accessible and can be locked in the "off" position but not locked in the "on" position.
- 14.7 The power supply to all electrical equipment should be provided with means of cutting off current from all conductors in an emergency.
- 14.8 Adequate precautions should be taken to prevent installations from receiving current at a higher voltage from other installations.
- 14.9 Where necessary to prevent danger, installations should be protected against lightning.
- 14.10 All power distribution boards, electrically operated equipment/tools, cables, power extension boards etc. shall be inspected every month for ensuring their healthiness. Inspection stickers shall be affixed on all such equipment/tools.
- 14.11 Metal clad power sockets and plugs shall be used at worksites for extension of power to equipment. MCBs shall be used as isolation switch as well as overload protection device. Flexible cables used for extension of power shall be double sheathed three core type. Twisted insulated wires shall not be used for this purpose.
- 14.12 Lines for signaling and telecommunication systems should not be laid on the same supports as medium- and high-voltage lines.
- 14.13 Only flameproof equipment and conductors shall be installed in explosive atmospheres or in store-places for explosives or flammable liquids.

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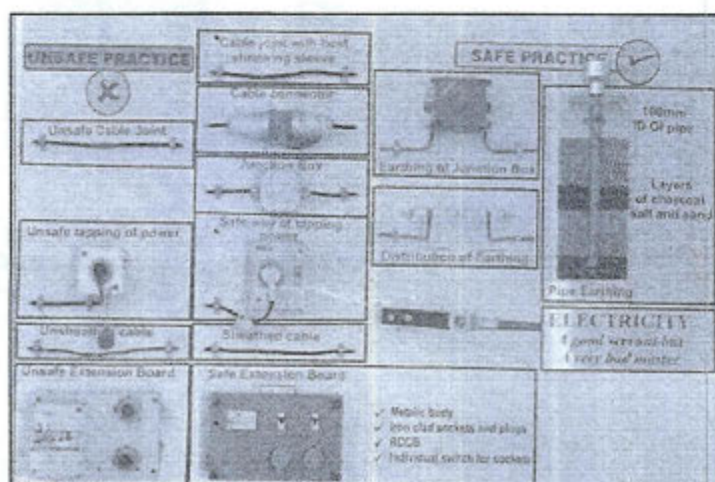
- 14.14 A notice or notices shall be kept exhibited at suitable places:
- Prohibiting unauthorized persons from entering electrical equipment rooms or from handling or interfering with electrical apparatus.
 - Containing directions as to procedures in case of fire, rescue of persons in contact with live conductors and the restoration of persons suffering from electric shock.
 - Specifying the person to be notified in case of electrical accident or dangerous occurrence, and indicating how to communicate with him.
- 14.15 Suitable warnings should be displayed at all places where contact with or proximity to electrical equipment can cause danger.
- 14.16 Persons having to operate electrical equipment should be fully instructed as to any possible dangers of the equipment concerned.
- 14.17 Cable joints shall be kept as minimum as reasonably possible. Drawing of power without the use of proper plug top shall be strictly prohibited.
- 14.18 Temporary joints shall not be allowed in the cable. Permanent type heat shrinkable / mould filling type joints shall only be used.
- 14.19 Earth leakage protection shall be provided to all electrical equipment/tools/appliances using ELCB (sensitivity 30mA). ELCBs shall be inspected every month for their healthiness. The specifications for power distribution boards shall be in accordance with the requirements of NPCIL.
- 14.20 Equipment grounding must be ensured in accordance with applicable statutory requirements and Indian standard.
- 14.21 Earth pits as specified in IS 3043:1987, shall be provided and maintained at Contractor's work premises. Healthiness of earthing shall be checked physically at least once in a month and earth pit resistance shall be measured at least once in 3 months.
- 14.22 At least one portable fire extinguisher (DCP or CO₂) shall be provided near each power distribution board.
- 14.23 Rubber mats conforming to IS:15652 shall be used in front of all Power distribution boards.
- 14.24 Rubber hand gloves conforming to IS:4770 and Safety shoes shall be used by personnel working on electrical systems.

POWER EXTENSION BOARDS

- 14.25 All electrical power extension boards shall be of metallic construction and shall be painted. Double earthing shall be provided for all power distribution board.
- 14.26 Its internal wirings shall be fully concealed within the body.
- 14.27 Extension boards shall be provided with industrial type (metallic) power sockets with covers. Domestic type switches, sockets and plugs shall not be used with the extension boards. Resistance cables are to be tied up.
- 14.28 Each power socket shall have individual control switch (preferably MCBs).

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- 14.29 ELCB/RCCB of 30mA sensitivity shall be provided on the board. All the sockets shall be under the protection zone of the ELCB.
- 14.30 Industrial type (metallic) 3-pin plug shall be used in the extension board for drawing single phase power.
- 14.31 Cable glands shall be provided at the cable entry opening on the board.



EARTH PITS SHOULD BE INSPECTED AND MAINTAINED REGULARLY. EARTH PIT RESISTANCE SHOULD BE MONITORED PERIODICALLY



HOW TO PROTECT YOURSELF ?

USE GOOD QUALITY EQUIPMENT AND TOOLS



USE ELCB/RCCB



USE INDUSTRIAL PLUG AND SOCKETS



ENSURE REGULAR INSPECTION OF EQUIPMENT AND TOOLS

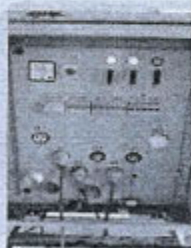


USE APPROPRIATE PPEs



AUTHORIZED PERSONS ONLY SHOULD WORK ON ELECTRICAL SYSTEM

USE CABLE CONNECTORS INSTEAD OF TEMPORARY JOINTS



POWER SOCKETS SHOULD HAVE INDIVIDUAL ISOLATION SWITCHES IN POWER DISTRIBUTION BOARDS. ALL CIRCUITS SHOULD BE ROUTED THROUGH ELCB/RCCB

EARTH PITS SHOULD BE INSPECTED AND MAINTAINED REGULARLY. EARTH PIT RESISTANCE SHOULD BE MONITORED PERIODICALLY



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**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04TH JUNE, 2020 AND
SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04th June, 2020 and subsequent order(s).

Ref : 1) NIT/Tender Specification No:,
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... *(specify the name of the organization here)* has a local content of _____ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' ** as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |

Thanking you,
Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

**** - Strike out whichever is not applicable.**

Note:

1. Bidders to note that above format Duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

Ref : 1) NIT/Tender Specification No:,
2) All other pertinent issues till date

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries. I certify that _____ *(specify the name of the organization here)*, is not from such a country / has been registered with the Competent Authority *(attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT))*; and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. *(attach relevant valid registration, if applicable)*

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

Thanking you,

Yours faithfully,

**(Signature, Date & Seal of
Authorized Signatory of the Bidder)**

Note: Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

1. TAXES AND DUTIES

1.1. TAXES AND DUTIES CLAUSE

- 1.1.1. All taxes including GST with applicable cess (mentioned elsewhere in the Bid) and including, Charges, Royalties, any State or Central Levy and other Taxes for materials if any obtained for the work and for the execution of the contract shall be borne by the bidder and shall not be payable extra by BHEL.
- 1.1.2. Any increase in the above at any stage during execution including extension of the contract, if any, shall have to be borne by the contractor. Quoted/ accepted rates/ price shall be inclusive of all such requirements.
- 1.1.3. The successful bidder shall furnish proof of GST registration with GSTN Portal covering the services under this contract. Registration should also bear endorsement for the premises from where the billing shall be done by the successful bidder on BHEL for this project/ work.
- 1.1.4. Bidder's quoted rates/ price should be after considering the Input Credit under GST law at their end.
- 1.1.5. TDS under Income Tax shall be deducted at prevailing rates on gross invoice value from the running bills unless exemption certificate from the appropriate authority/ authorities is furnished.
- 1.1.6. TDS under GST shall be deducted at applicable rates on gross invoice value from the running bills.
- 1.1.7. Bidder shall note that the GST Tax Invoice complying with GST Invoice Rules (Section 31 of GST Act & Rules referred there under) wherein the 'Bill To' details shall be as per following.
- 1.1.8. BHEL GSTN – As indicated in Consignee details in GEM Bid /As communicated by BHEL
NAME - Bharat Heavy Electricals Limited
ADDRESS – Shall be as per Consignee details in GEM Bid
- 1.1.9. In case of delay in submission of the above mentioned documents on the date of dispatch, BHEL may incur penalty / interest for not adhering to Invoicing Rules under GST Law. The same will be liable to be recovered from the successful bidder, if such delay is attributable to the bidder.
- 1.1.10. In case of raising any Supplementary Tax Invoice (Debit / Credit Note) Bidder 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.
- 1.1.11. Bidder shall Comply with the Time limit prescribed under the GST Law and rules thereof for raising of the tax invoice. If any supply of goods is applicable, Bidder shall also ensure prompt delivery of Goods after dispatch.
- 1.1.12. Bidder shall note that in case GST credit is delayed/ denied to BHEL due to delayed / non receipt of goods and /or tax invoice or expiry of the timeline prescribed in GST Law for availing such ITC, or any other reasons attributable to the bidder, GST amount shall be recoverable from the bidder along with interest levied / leviable on BHEL, as the case may be.
- 1.1.13. Bidder shall upload the Invoices raised on BHEL in GSTR-1 within the prescribed time as given in the GST Act. Bidder shall note that in case of delay in declaring such invoice in your 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 as per GST law shall be recoverable from the bidder along with interest levied / leviable on BHEL.
- 1.1.14. Way Bill: Successful Bidder shall arrange way bill / e-waybill for any transfer of goods for the execution of the contract.
- 1.1.15. The Bidder has to make their own arrangement at their cost for completing the formalities, if required, with Issuing Authorities, for bringing materials, plants & machinery at site for

execution of the works under this contract, Road Permit/ Way Bill, if required, shall be arranged by the contractor and BHEL will not supply any Road Permit/ Way Bill for this purpose.

- 1.1.16. Any new taxes & duties, if imposed subsequent to the due date of offer submission as per NIT & TCN, by statutory authority during contract period (including extensions for which delay is not attributable to the bidder), shall be reimbursed by BHEL on production of relevant supporting document to the satisfaction of BHEL. However, bidder shall obtain prior approval from BHEL before depositing any such new taxes and duties.
- 1.1.17. Benefits and/or abolition of all existing taxes must be passed on to BHEL against new taxes, if any, introduced at a later date.
- 1.1.18. In case of LD recovery, the applicable GST shall be also be recoverable from the suppliers.

2. INCOME TAX:

- 2.1. TDS u/s 194Q as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted from contractor's bill.