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பாரத் ஹெவி இலெக்ட்ரிகல்ஸ் லிமிடெட்
भारत हेवी इलेक्ट्रिकल्स लिमिटेड
Bharat Heavy Electricals Limited
(A Government of India Enterprise)
High Pressure Boiler Plant
Tiruchirappalli - 620 014

MATERIALS MANAGEMENT

4th Floor, 24 Building, HPBP, BHEL, Thiruverumbur, Trichy-14
Phone: 0431 - 257 8109, 7446; E-mail: kevin@bhel.in, mohann@bhel.in; www.bhel.com

NOTICE INVITING e-TENDER

Ref: BHEL/1702100052

15.07.2021

Dear Sir/ Ma'am,

Ref : Tender Ref No. 1702100052

Subject : Two-part e-Tender inviting techno-commercial and price bids for Supply and Erection & Commissioning of Goods Elevators & its spares for Yadadri TPS 5x800 MW - Unit No.1-5 Projects.

Kindly submit your competitive offer as per the tender terms and conditions given in the tender document through e-procurement portal <https://eprocurebhel.co.in/> only.

Last date/ time for receipt of tender	10:00 Hrs on dt. 05.08.2021
Date/ time of opening of Techno-commercial bids	14:00 Hrs on dt. 05.08.2021 Change in opening date, if any, corrigendum/s will be issued.
Date of price bid opening	The date/ time of price bid opening will be intimated to the techno-commercial qualified bidders separately.

This two-part e-tender consists of the following documents:

1. Package Details
2. Annexure A -Techno - Commercial terms and Conditions
3. Annexure-B Vendor details
4. Technical Specification
5. Data Sheet
6. Mandatory Spares List
7. No Deviation Format
8. Self-Certification for Make In India
9. Integrity Pact

All the above documents shall be filled-up (wherever necessary) with sign & seal of company on all pages and uploaded along with your offer & other requisite PQR document.

General Instructions

- The tender documents shall be deemed to form an integral part of the purchase order.
- Tender can be cancelled at any stage due to unavoidable circumstances / administrative reasons.
- Bidders are advised not to wait till the last minutes w.r.t tender closing time to submit their offer to avoid complications related with internet connectivity / network problem/ power failure etc.

- Bidders are advised take due care while quoting the technical and price bids forms in the e-procurement system. Bidders, those who tampers with tendering procedure affecting ordering process or misusing the technical information of the tender document or withdrawing their offer after price bid opening, will be penalized as per BHEL guidelines on suspension of business dealings with suppliers/ contractors. Abridged version of the guideline is available in www.bhel.com.
- Bidders who have been suspended or black listed or issued with “Show Cause Notice” by BHEL, Tiruchirappalli or any other unit or GOI should declare the same in the tender. Even during the course of evaluation/ finalization of tender, if it is found that some of the parties are black listed/ barred from business transaction/ under business hold, BHEL will not consider them for further participation in the tender.
- Bidder to submit the complete set of tender documents with sign/seal on all pages. It is advised that all the documents to be submitted, are kept scanned or converted to PDF format in a separate folder on your computer before starting online submission.
- **DISCLAIMER CLAUSE:** Neither the Organization (Bharat Heavy Electricals Ltd.) nor the e-Procurement service provider is responsible for any failure of submission of bids, due to failure of internet or other connectivity problems or reasons thereof.

Thanking you,

For **Bharat Heavy Electricals Limited**

Kevin Ark Kumar

Manager / Materials Management

Fourth floor, 24 Building

B.H.E.L., Tiruchirappalli – 620 014, Tamil Nadu

Phone: 0431-2578109 / Email: kevin@bhel.in

ENQUIRY No. 1702100052 dt 15.07.2021

PACKAGE DETAILS

SL No.	ITEM DESCRIPTION	UOM	QTY	STATUS
10	GOODS ELEVATOR - CAPACITY: 3000kg; SPEED: 0.5m/sec - INCLUDING ALL ACCESSORIES AS PER 1) APPLICABLE SPECIFICATION: ELEVATOR SPECIFICATION REF. TDC:TCI:263:RC Rev 07 AND PROJECT SPECIFIC DATASHEET REF. CI:1823:ELEV REV 00. 2) NUMBER OF LANDINGS SHALL BE 17 INCLUDING GROUND FLOOR. 3) LANDING LEVELS OF ELEVATOR SHALL BE AS FOLLOWS: 0.0mm, 5700 mm, 12000mm, 17000mm, 22550mm, 29100mm, 32750mm, 36450mm, 40150mm, 44000mm, 53000mm, 57500 mm, 66700mm, 69700 mm, 73600mm, 82100mm and 88700mm. 4) FINISHED FLOOR LEVEL (FFL) = 0.00 mm. 5) APPLICABLE QUALITY PLAN: VENDOR QUALITY PLAN. COMPLETE ERECTION AND COMMISSIONING OF GOODS ELEVATOR AT PROJECT SITE IS IN VENDOR SCOPE.	No.	05.00	QUOTED / NOT QUOTED
20	MANDATORY SPARES FOR GOODS ELEVATOR AS PER LIST OF MANDATORY SPARES REF. CI:1823:ELEV:MS REV 00, ELEVATOR SPECIFICATION REF. TDC:TCI:263:RC Rev 07 AND PROJECT SPECIFIC DATASHEET REF. CI:1823:ELEV REV 00. Make, Model No., Rating and Type of all mandatory spare items shall be identical to the main supply for this project and one to one replaceable at site. APPLICABLE QUALITY PLAN : VENDOR QUALITY PLAN.	LOT	01.00	QUOTED / NOT QUOTED

NOTE: The tender will be evaluated as a Single package. Bidder to quote for all the above items (SI No. 10 & 20). Partial offer will be rejected. Bidder to indicate Quoted or Not Quoted.

Do not mention the prices here.

This document shall be uploaded along with the offer.

Sign & Seal of Company

ANNEXURE - A

TECHNO - COMMERCIAL TERMS AND CONDITIONS

Description of the Material:		Goods Elevators & its Spares for 5 x 800 MW Yadadri Project
BHEL Tender No. & Date		1702100052 dt 15.07.2021
GENERAL INFORMATION		
The bidder has to keep track of any changes by viewing the addendum / Corrigendum's Issued by the Purchaser on time-to- time basis in the E-Procurement platform. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.		
Sl. No.	Terms and conditions	Vendor's confirmation
1	<u>PRE-QUALIFICATION REQUIREMENT</u>	<u>Reply</u>
	i) Vendor should be an OEM (Original Equipment Manufacturer) of Goods Elevator and Passenger Elevator or authorized representative of OEM.	(i) <u>Yes / No</u>
	ii) Erection, Commissioning, Service and Annual Maintenance Support should be available. Any Emergency request from site should be attended within 72 hours.	(ii) <u>Yes / No</u>
	iii) Vendor should have commissioned and handed over Goods Elevator of at least 2 Tonne capacity and travel height of minimum 50 meter for an industrial application (similar to boiler area in thermal power plant). Purchase Order copy and Handing over certificate (signed by the customer) shall be furnished. The Elevator should have completed at least one year of successful operation.	(iii) <u>Attached / Not Attached</u>
	iv) Vendor should have experience of erecting and commissioning Elevators in Structural steel frames. Supporting documents for the same shall be furnished.	(iv) <u>Attached / Not attached</u>
	<u>It is mandatory to submit the above mentioned documents for evaluation.</u>	
	<u>TECHNICAL OFFER: The Goods Elevators shall be as per the</u> Specification: TDC:TCI:263:RC/Rev07 Datasheet: REF. CI:1823:ELEV REV 00. Quality Plan: Vendor Quality Plan for Elevator Packing Procedure: Vendor Standard	<u>Accepted / Not Accepted</u>
	<u>Deviations if any, shall be mentioned in the Deviation Format</u>	
2	Firm Price: The quoted / finalised rates shall be Firm till execution of the supplies. Vendor has to quote price according to the requirement as detailed in the attached technical documents. Unless there is a change in technical specification from BHEL side, impact price will not be allowed. BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on www.bhel.com) for this tender. RA shall be conducted among the techno-commercially qualified bidders. Price bids of all techno-commercially qualified bidders shall be opened and same shall be considered for 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." Any pre-bid query, kindly contact: Mr. Kevin Ark Kumar, Manager/Materials Management/BOI Tel: 0431-2578109, email: kevin@bhel.in ; Mr. N Mohan, Asst./Engineer/Materials Management/BOI Tel: 0431-2577446, email: mohann@bhel.in and get your queries cleared before submitting the offer in EPS. Rates/ other price elements once quoted in the price bid BoQ Format online in the Enterprise Procurement System (EPS) cannot be changed after due date shall remain final.	Accepted / Not Accepted
3	The tender is floated as a Single Package. Package Details: Elevator/s with container, Erection & Commissioning and Mandatory Spares. Partial offer will be rejected. The evaluation of offers will be done on Total Cost to BHEL on Destination basis.	Accepted
4	<u>Delivery term:</u> <u>Elevators:</u> The price of each Elevator shall be on F.O.R basis Inclusive of Packing, Forwarding, Freight & Container upto destination (Project Site). <u>Mandatory Spares:</u> The price of Lot shall be on F.O.R basis Inclusive of Packing, Forwarding, Freight & Container upto destination (Trichy stores). Insurance will in BHEL Scope. <u>Destination:</u> Elevators to Project Site Yadadri TPS, Nalagonda Dist, Telangana, Mandatory spares to BHEL Trichy stores	Accepted / Not Accepted

5	Elevator/s to be supplied in container to Project Site; price of Elevator shall be inclusive of Container Cost.	Noted
6	Payment Terms Supply: 80% direct payment after 60 days from the date of dispatch against site acknowledgement and 20% after handing over against HOC protocol, with 10% PBG valid for the warranty period. Spares: 100% direct EFT payment after 60 days of acceptance of materials at BHEL Stores Trichy. <u>Any deviation in the above Payment Terms, any other conditions in above payment terms or any other payment term will not be accepted and offers are liable to be commercially rejected.</u>	Accepted / Not Accepted
7	Techno-Commercial bids of vendors will be evaluated; however, the Price bid will be opened, subject to our customer's approval, else their offer will be rejected. Vendors shall submit credentials (Previous executed PO copies of similar Elevator/s, Completion / Handing Over Certificates for taking up with customer, for their approval).	Noted
8	Liquidated damages: Delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional LD at the rate of 0.5% of the PO pending value per week of the delay or part thereof subject to a maximum of 10% of the total order value.	Accepted / Not Accepted
9	Loading Criteria LD / Penalty: Any deviation on BHEL LD / Penalty clause, loading (Basic material Value) will be applied to the extent to which it is not agreed by the bidder.	Noted
10	Guarantee / Warranty Period : Guarantee clause 18 months from the date of Handing Over of Elevator at Site.	Accepted / Not Accepted
11	Deviation in Guarantee / Warranty Period: No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period. Their offer will be rejected.	Noted
12	Delivery Period: <u>04 Months</u> from manufacturing clearance. Vendor quoted delivery period shall include all activities i.e. manufacturing / production, Inspection, Packing, Forwarding, dispatch.	Accepted / Not Accepted
13	Validity: 120 days from techno commercial bid opening date	Accepted / Not Accepted
14	It is mandatory to register in Government e-Marketplace (GeM), the same can be done after quoting for this tender; However, order will be placed only upon receipt of GeM Seller ID.	Noted
15	RISK PURCHASE: In case of abnormal delays (beyond the maximum late delivery period as per LD clause) or non-fulfilment of any other terms and conditions given in work order, BHEL may cancel the work order in full or part thereof, and may also make a contract of such work/service from elsewhere / alternative source at the risk and cost of the original contractor. BHEL will take all reasonable steps to complete the contract obligations from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract. Risk & cost clause, in line with conditions of contract may be invoked in any of the following cases: - Contractor's poor progress of the work vis-à-vis execution timeline as stipulated in the contract, backlog attributable to contractor/ supplier including unexecuted portion of work/ supply does not appear to be executable within balance available period (#) considering its performance of execution. - Withdrawal from or abandonment of the work by contractor before completion of the work as per contract. - Non completion of work / Non-supply by the contractor within scheduled completion/delivery period as per contract or as extended from time to time, for the reason attributable to the contractor. - Termination of contract on account of any other reason (s) attributable to contractor. - Assignment, transfer, subletting of contract without BHEL's written permission resulting in termination of Contract or part thereof by BHEL. - Non-compliance to any contractual condition or any other default attributable to contractor. Risk and Cost amount against balance work will be calculated as follows: Risk & Cost Amount= [(A-B) + (A x H/100)] Where,	Accepted /

	A= Value of Balance scope of Work/ Supply (*) as per rates of new contract B= Value of Balance scope of Work/ Supply (*) as per rates of old contract being paid to the contractor/ supplier at the time of termination of contract i.e. inclusive of PVC & ORC, if any. H = Overhead Factor to be taken as 5 In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero). *(Balance scope of work/ supply) Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for 'Termination of Contract', shall be taken as balance scope of Work/ Supply for calculating risk & cost amount. Contract quantities are the quantities as per original contract. If, Contract has been amended, quantities as per amended Contract shall be considered as Contract Quantities. Items for which total quantities to be executed have exceeded the Contract Quantities based on drawings issued to contractor from time to time till issue of Termination letter, then for these items total Quantities as per issued drawings would be deemed to be contract quantities. Substitute/ extra items whose rates have already been approved would form part of contract quantities for this purpose. Substitute/ extra items which have been executed but rates have not been approved, would also form part of contract quantities for this purpose and rates of such items shall be determined in line with contractual provisions. However, increase in quantities on account of additional scope in new tender shall not be considered for this purpose. NOTE: In case portion of work is being withdrawn, contract quantities pertaining to portion of work withdrawn shall be considered as 'Balance scope of work/supply' for calculating Risk & Cost amount.	Not Accepted
16	GST DETAILS, BHEL TRICHY GST No. 33AAACB4146P2ZL	Noted
17	Please mention your GSTIN Number	
18	HSN Codes for Quoted Material:	
19	Applicable GST Rate:	
20	Implementation of GST 1. Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration no which should clearly mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer. 2. Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc. 3. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code). 4. A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL. 5. All documents like Mill Test Certificate, LR copy, Guarantee/Warranty certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so. 6. In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL. For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills	Noted

21	Unregistered BHEL (Non-PMD) vendors for this item code should submit the filled in supplier registration forms (SRF) available in the BHEL website https://supplier.bhel.in and the other required documents called for in the SRF. The hard copy of the submitted SRF shall be submitted to SDC Dept. The contact details of SDC are as below: Officer, SDC / MM, 4th Floor, Building 24, BHEL, Trichy - 620014 Ph. No.: 0431-2577992, Registered BHEL PMD vendors need not submit the SRF and this point is not applicable.	Accepted / Not Accepted
22	Document Submission: Along with the offer: 1. All the technical documents which have been attached along with our enquiry i.e Specification, Drgs, Data Sheet etc, signature to be endorsed on all pages with company seal Technical documents & Sub-delivery enquiry deviation format. 2. Filled-in/signed Annexure-A, Commercial terms and conditions. (Mandatory for Commercial evaluation) 3. Unpriced offer submitted through EPS shall contain minimum of above documents, without which offer is liable for rejection. 4. If MSE vendor, please attach Udyam Regn Certificate.	Submitted/ Not Submitted
23	Any deviation on technical/QP/packing requirements shall specifically be indicated in the "sub-delivery enquiry deviation format" attached along with the enquiry. Deviations / clarifications declared elsewhere will not be evaluated. <u>Also, any deviations from the commercial terms and conditions shall be clearly spelt out in this format itself.</u> Deviations / clarifications declared elsewhere will not be evaluated. Deviations taken, if any, by vendor as per our requirement above shall be clearly got accepted by BHEL in writing during enquiry stage itself. In the event of an order no deviations, unless accepted clearly by BHEL in writing during enquiry stage will be entertained and all other techno-commercial requirements will be binding on successful bidder and failure to execute the terms will lead to disciplinary action by BHEL against the said bidder.	Accepted / Not Accepted
24	BENEFITS TO MSE VENDOR: MSE suppliers can avail the intended benefits only if they submit Udyam Registration Certificate. For Package basis (Non-Splittable): i. If L1 vendor is an MSE vendor entire project package will be ordered on L1 vendor. ii. If a Non MSE vendor is coming as L1, then L1 prices will be counteroffered on MSE vendor who is quoting price within the price band L1+15% and if they are agreeing, purchase order will be awarded for full /complete supply of total tendered value to MSE. iii. If more than one MSE vendors are available in the L1+15% price band then lowest of the MSE vendor will be selected for counteroffering. If lowest MSE vendor is not accepting it will be counteroffered to the next MSE vendor in the price band and so on. iv. Finally, if none of the MSE vendor in the price band is not accepting, it will be ordered on L1 non MSE vendor. Payment for MSE indigenous vendors will be as per MSME Act, 2006.	Accepted / Not Accepted
25	Definitions of MSEs owned by SC/ST is under: • In case of proprietorship firm, proprietor must be SC/ST. • In case of partnership firm, the SC/ST partners must be holding at least 51% shares in unit. In case of private limited companies, at least 51% share must be held by SC/ST promoters. Authorised Offices to Issue SC/ST certificate. The caste/Tribe/Community certificate issued by the following authorities in the prescribed form for SCs/STs can be considered. • District Magistrate / Additional District Magistrate / Collector / Deputy Commissioner / Additional Deputy Commissioner / Deputy Collector / 1st class stipendiary magistrate / Sub divisional Magistrate / Taluka Magistrate / Executive magistrate • Chief Presidency magistrate / Additional chief presidency magistrate/Presidency magistrate. • Revenue Officer not below the rank of Tehsildar. • Sub-Divisional officer of the area where the individual and / or his family normally resides. <i>To avail the benefits of MSE under SC/ST category, the related documents as stated above should be submitted along with tender documents.</i>	Accepted / Not Accepted
26	Vendors who have registered themselves as MSE, cannot claim the benefits unless they submit Udyam failing which vendor shall not claim MSE benefits. As per Gazette Notification no. S.O. 2119(E) dated 26.06.2020 issued by Ministry of MSME regarding change in definition of Micro, Small & Medium Enterprises (MSMEs) applicable w.e.f. 01.07.2020 as follows: Udyam Registration is a new process of MSME Registration launched by the Ministry of Micro, Small and Medium Enterprises on July 1, 2020. All existing enterprises registered under EM-Part-II or UAM or any other registration issued by any authority under the Ministry of MSME are required to register again on the Udyam Registration portal (https://udyamregistration.gov.in). Such enterprises are required to apply and obtain Udyam Registration on or after 1st July 2020. On registration, an enterprise is assigned with a permanent identity number, known as "Udyam Registration Number". An e-certificate, namely, "Udyam Registration Certificate" will be issued on	Noted

	completion of the registration process. The MSE status of existing enterprises registered prior to 30th June 2020 shall be valid only till 31st March 2021. (i.e.) Udyam Registration Certificate is mandatory for all MSME enterprises from 1st April 2021.	
27	Any pre-bid queries / clarification / document requirement etc. shall be asked within 3-4 days of floating tender in EPS. Tender due date extension will not be given without valid reason. Tender due date extension request has to be given before due date / time along-with a valid reason.	Noted
28	All the technical documents, if attached by BHEL along with the tender (Specification / Datasheet / Drawing / QP / Packing Procedure etc.) which are part of this e-tender, should bear your conformation / confirmation and sign with seal on each page. The same shall be scanned & attached as PDF files along with the offer for technical evaluation.	Technical Docs Submitted / Not Submitted
29	Technical / commercial clarification, if any, will be initiated through EPS / email. Vendor to respond to the clarifications within 3 working days. If the vendor fails to respond, even after three reminders, then the vendor will be considered as non-responsive and is liable to be rejected.	Noted
30	PO Acknowledgement: Within 7 days from the date of receipt of scanned PO copy through email.	Accepted
31	Document Submission after PO: Complete set of valid Documents as per BHEL format viz., Datasheet, GA drawing and QAP / RQP / VQP are to be submitted within 14 days from the date of receipt of PO (e-mail copy). If there is a delay in submission of valid documents within 14 days, the delay will be accounted for the calculation of LD.	Accepted
32	Inspection notice period: Vendor shall raise inspection call to Third Party Inspection Agency / BHEL at least three working days, prior to the proposed date of inspection. Place shall be vendor Works.	Accepted
33	Vendor shall dispatch the consignment immediately after getting dispatch clearance from BHEL, subsequent delay will be accounted for calculation of LD.	Accepted
34	FORCE MAJEURE CLAUSE: If, at any time during the continuance of Contract the performance in whole or in part by either party of any obligations under the Contract shall be prevented or delayed by reason of any War, Hostile acts of the public enemy Civil Commotion, Epidemics, or Acts of God (Floods, Storm/Cyclone, Hurricane, Earth Quake etc.) then provided notice of happening of any such event is given by either party to other within 7 days from the date of occurrence therefor neither party shall by reason of such event be entitled to terminate this Contract nor shall either party have any claim for damages against the other in respect of such non-performance and delay in performance under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist. If the performance in whole or part of any obligation under the Contract is prevented or delayed by reason of any such event, claims for extension of time shall be granted for periods considered reasonable by BHEL, subject to prompt notification by the contractor.	Accepted
35	In the event of PO, the reference date for LD calculation will be date of LR.	Accepted
36	Fraud Prevention Policy Suppliers involving in fraudulent practices or delayed supply (or) non-Supply will be dealt with provision as indicated in "Guidelines for Suspension of Business Dealings with Suppliers / Contractors" which is hosted in website www.bhel.com . The offers of the bidders who are under suspension as also the offers 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 . 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 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 issues 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 mal-practices, 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 omits in any manner which tantamount to an offence punishable under any provision of the Indian	Noted

	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.	
37	Inspection & testing requirements shall be done as per approved vendor QP	Noted
38	Repair & replacements: Within the guarantee period vendor has to replace / rectify the defective/damaged items on free of cost within a reasonable time of reporting from our end. All incidental charges like freight, insurance and customs duty / GST are to vendor account only. The defective parts and components shall be collected by your Indian agent or / authorized person, only after completing the replacement / repairs. The defective parts / components will not be returned back to vendor works by us due to procedural problems.	Accepted
39	BHEL reserves the right to cancel / modify the tender, if the need so arises, without assigning any further notice or reason therefore.	Accepted
40	Preference to Make in India: For this procurement, Government of India Order: Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017, 28.05.2018, 29.05.2019 & 04.06.2020 and subsequent orders issued by the respective Nodal ministry shall be applicable, even if issued after issue of this NIT but before finalization of contract/PO/WE against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/or local content in respect of this procurement, the same shall be applicable.	Noted
41	Indigenous vendors to submit Self-certification in Letterhead indicating the percentage of Local content as per the Format attached.	Submitted / Not Submitted
42	Integrity Pact is applicable for this Tender. It is mandatory to accept the Integrity pact & submit the signed document attached along with this tender.	Accepted
43	ARBITRATION & CONCILIATION: Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, 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, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the BHEL Unit/Region/Division issuing the Contract. The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties. Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made thereunder and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be (the place from which the contract is issued). The cost of arbitration shall be borne as per the award of the Arbitrator. Subject to the arbitration in terms of Clause above, the Courts at TRICHY shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract. Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the contractor shall proceed with and continue without hindrance the performance of its obligations under this contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract. 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 the Contract, such dispute or difference shall be referred by either Party for arbitration to the sole arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the Parties to the dispute, provided, however, any Party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties hereto finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.	Noted
44	JURISDICTION: In case of any suit or other legal proceedings arising under or relating to this Contract, the courts at Trichy, Tamil Nadu only shall have the Jurisdiction and is only after exhausting the aforesaid arbitration clause.	Noted
45	SECRECY OF CONFIDENTIAL INFORMATION: The Contractor undertakes and agrees that he/it will not disclose or reveal in part or full the proprietary/confidential information, which terms shall mean and include patents, trademarks, service marks, registered designs, copyright, design rights, know-how, confidential information, trade and business names and any other similar protected information of BHEL received during negotiation or currency of the contract to any third party or governmental authorities without written permission from BHEL. In the event of termination or expiry of the contract, the contractor shall return all proprietary/confidential information to BHEL. This clause shall survive termination or expiry of the contract. All the input details: transmittals and sample drawings supplied for preparation of drawings are confidential information of BHEL for specific purpose only. The contractor shall never pass on / part with the information to anybody and shall maintain the secrecy of the information. As soon as the bills are certified by BHEL, all the relevant drawing files shall be erased from PCs and shall not be made use under any circumstances. BHEL reserves the right to initiate appropriate action including legal proceeds / termination of contract, recovery of damages, penalties etc., if the contractor is found guilty / wrong usage of the documents given by BHEL for any unauthorised activity.	Noted

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Clause on Integrity Pact:
Integrity Pact is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. A panel of Independent External Monitors (IEMs) have been appointed to oversee implementation of IP in BHEL.
The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory who signs in the offer) along with techno-commercial bid. Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification
Following IEMs on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

IEM	E - mail
Shri Arun Chandra Verma, IPS (Retd.)	acverma1@gmail.com
Shri Virendra Bahadur Singh, IPS (Retd.)	vbsinghips@gmail.com

Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to the IEM mentioned in the tender.

Note: No routine correspondence should be addressed to the IEM (phone/post/email) regarding Clarifications, time extensions or any administrative queries on the tender issued. All such Clarifications/issues shall be addressed directly to the tender issuing (procurement) department's Officials whose contact details are provided below.

Name	Kevin Ark Kumar	Mohan . N
Department	Manager/MM/BOI	Asst.Engr/MM/BOI
Address	Bldg No.24, BHEL Trichy	Bldg No. 24, BHEL Trichy
Phone	0431-2578109/ 9489202825	0431-2577446
e-mail	kevin@bhel.in	mohann@bhel.in

By signing this Annexure, the vendor consents that the terms & conditions accepted, in this Annexure-A alone, shall be binding between BHEL and the Vendor; and no other terms quoted / mentioned, elsewhere in the Offer / Quotation will be considered / accepted by BHEL.

ANNEXURE-B

1	GEM ID NO	
2	ITEM	

VENDOR DETAILS

SI No	DESCRIPTION	DETAILS TO BE FILLED
1.	VENDOR / FIRM NAME	
2.	BHEL VENDOR CODE (IF ANY)	
3.	QUOTATION REFERENCE & DATE	
4.	CONTACT PERSON NAME	
5.	CONTACT PERSON MOBILE NO	
6.	CONTACT PERSON EMAIL ID	
7.	WORKS ADDRESS & TELE NO	
8.	OFFICE ADDRESS & TELE NO	
9.	PAN NO	
10.	GST NO	
11.	MSE VENDOR / NON MSE VENDOR	MICRO / SMALL

Sign & Seal of Company

Sl no	Terms	Questions	Vendor confirmation
1	HSN CODE	Pl mention	
2	GST	Pl Mention	%
3	MII	Pl mention the percentage of Local content	%
4	Attachments 1	Have you submitted the Udyam registration certificate? (applicable only for Micro & Small Enterprises)	Yes / No
5	Attachments 2	Have you submitted the point wise supporting documents required against Pre-Qualification Report (PQR)?	Yes / No
6	Attachments 3	Have you submitted the filled-in, signed / with company seal "NIL Deviation Format ".	Yes / No
7	Attachments 4	Have you submitted the signed / with company seal, all pages of "Technical Specification, Drawing, datasheet & Quality Plan" with respect to this tender along with your quoted offer.	Yes / No
8	Attachments 5	Have you submitted the filled-in, signed, sealed "Self declaration format for MII clause" as per format in your company letter head. (Indicate the % of Local Content)	Yes / No

PLEASE UPLOAD THIS DOCUMENT IN GEM PORTAL DULY FILLED SIGNED AND STAMPED ALONG WITH YOUR OFFER

Sign & Seal of Company

Bharat Heavy Electricals Limited

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPALLI-620014.

CONTROLS & INSTRUMENTATION/FB



TDC:TCI:263:RC / Rev 07

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SPECIFICATION FOR GOODS CUM PASSENGER ELEVATOR

REV. NO	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED	
			SRR	RD	ENGG. PMV	QAC SD
00	17-07-2003	INITIAL RELEASE	Sd./SRR	Sd./RD	Sd./ PMV	Sd./ SSM
01	25-05-2010	GENERAL REVISION	Sd./SRR	Sd./RD	Sd./ SRC	
02	16-06-2014	GENERAL REVISION	Sd./SKS	Sd./KB	Sd./ DMB	
03	02-01-2015	GENERAL REVISION	Sd./SR	Sd./KB	Sd./ AKP	
04	07-10-2015	GENERAL REVISION	Sd./SR	Sd./KB	Sd./ AKP	
05	04-04-2019	GENERAL REVISION	AA	KB	AKP	
06	01-11-2019	To change lift supporting structures scope from BHEL to vendor	AA	KB	AKP	
07	08-06-2021	To change lift supporting structures scope from vendor to BHEL and other revisions	AA	KB	AKP	

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS	
1.0	GENERAL SITE CONDITIONS	
	Altitude above MSL	Less than 1000m.
	Relative humidity	100%.
	Design Ambient Temp.	50 deg.C
	Atmosphere	Tropical, Dusty, Corrosive and highly polluted.
	Wind loads	As per IS-875(Part 3)
2.0	GENERAL	
	This specification is intended to cover the design, engineering, manufacture, inspection, delivery, erection, commissioning, maintenance and services before handing over to customer for Passenger cum Goods Elevator in boiler applications. Vendor shall ensure accurate, reliable and trouble-free operation in corrosive, dusty environments.	
3.0	PRE QUALIFICATION REQUIREMENT (APPLICABLE IN CASE OF OPEN TENDER)	
	i) Vendor should be an OEM (Original Equipment Manufacturer) of Goods Elevator and Passenger Elevator or authorized representative of OEM. ii) Erection, Commissioning, Service and Annual Maintenance Support should be available. Any Emergency request from site should be attended within 72 hours. iii) Vendor should have commissioned and handed over Goods Elevator of at least 2 Tonne capacity and travel height of minimum 50 meter for an industrial application (similar to boiler area in thermal power plant). Purchase Order copy and Handing over certificate (signed by the customer) shall be furnished. The Elevator should have completed at least one year of successful operation. iv) Vendor should have experience of erecting and commissioning Elevators in Structural steel frames. Supporting documents for the same shall be furnished.	
4.0	STATUTORY REQUIREMENTS	
	All registration and statutory inspection fees if any, in respect of his work pursuant to this contract shall be to account of the elevator vendor. However, any registration, statutory inspection fees lawfully payable under the provision of any statutory laws and its amendments from time to time, during erection in respect of the plant equipment ultimately to be owned by end customer shall be to the account of the end customer. Should any such inspection or registration need to be re-arranged due to the fault of the vendor or his sub-contractor, the additional fees for such inspection and / or registration shall be borne by the vendor. While the statutory payment shall be made by the end customer for any registration, statutory inspection etc. during erection, the vendor shall be responsible for carrying out and co-ordinating various activities with the statutory authority as well as for obtaining the clearance and registration of the equipment.	
5.0	REFERENCE STANDARDS	
	The Elevators shall be designed in line with the recommendation contained in the latest editions of Standards IS: 14665: 2000 (All Parts) . The equipment shall comply with latest revision of Indian standard and wherever Indian Standard is not available, it shall comply with the generally accepted international codes and practices.	
6.0	SCOPE OF WORK	
	i) Design, engineering, manufacture, inspection, delivery, erection, commissioning and handing over. ii) Maintenance & services during guarantee period. iii) Necessary erection / commissioning spares and consumables shall be included in vendor scope. iv) Necessary tools and tackles required for maintenance, testing and inspection shall be covered in vendor scope. v) Necessary chain and pulley block along with hand operated geared trolley arrangement for horizontal movement across the monorail, hoist, rope and hook arrangements at the machine room ceiling to carry out the maintenance and erection of equipment shall be supplied by Elevator vendor. The necessary mono-rail beam will be supplied by BHEL. vi) A steel ladder for access to the pit shall be supplied by the Elevator vendor. vii) Guard to protect the hoist way including temporary barricades at hoist way openings shall be supplied by Elevator vendor. viii) Scaffolding as per erection requirement shall be provided by the Elevator vendor. After completion of handing over activities, the scaffolding materials may be taken back by the vendor. ix) All the electrical equipment including Lift well, Hoist way & machine room lighting with fittings, Power/control/trailing cables, MCCB/MCB & ELCB for 415 V AC 3ph supply and 240 V AC single phase supply (to receive the incoming feeders provided by customer) shall be included in the Elevator vendor scope. x) The vendor shall assume all responsibility for proper design and operation of each and every component of the elevator as well as the elevator as a whole. Complying with Indian electricity rules & Indian electricity acts and applicable statutory requirements (of Government of India and applicable States) as well as procedural formalities also shall be taken care by the Elevator vendor.	

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS	
7.0	EXCLUSIONS	
	Works not included in elevator contract, but furnished by others in accordance with local codes and regulations and the approved drawing of the Elevator vendor. i) Civil works associated with the Elevator pit. ii) Furnishing and installation of steel beams (Hoisting beams) in the machine room to lift equipment during installation and to facilitate maintenance. iii) Machine room civil works including concrete flooring. iv) Steel structures for Columns and associated bracings and approach platforms up to landing doors at each level. (Only lift columns and lift frame will be provided by BHEL). v) Lift supporting structures - Car guide support channels, Counter guide support channels, Landing Door fixing channels and elevator machine room supporting structures shall be supplied by BHEL as per vendor requirement.	
8.0	ELEVATOR PARTICULARS & DESIGN PARAMETERS	
	i) Passenger cum Goods Elevator shall be provided with 1 no. fireman's switch (Alarm Switch). ii) The Elevator shall be located on the side of the boiler as indicated in the lift location diagram attached. iii) Foundation plan and elevation with landing levels shall be as per BHEL drawings. iv) The entire system and accessories should not contain any asbestos material.	
9.0	Design Criteria and Equipment specification for Passenger cum Goods Elevator.	
	i)	Type of service Passenger Elevator/Passenger Cum Goods Elevator/Goods Elevator as per project specific datasheet
	ii)	Number required As per project specific datasheet
	iii)	Elevator capacity As per project specific datasheet
	iv)	Rated speed 0.55 meter/ sec for Goods cum Passenger Elevator 1.0 meter/sec for Passenger Elevator. (Any project specific requirement mentioned in project specific datasheet shall be taken care.)
	v)	Total travel As per project specific datasheet
	vi)	No. of floors to be served (Landing levels) As per project specific datasheet
	vii)	Entrances One number in each floor
	viii)	Method of control Motor Speed Control: Logic Control: Variable Voltage variable frequency (VVVF) control. Microprocessor based Control with automatic level adjustment. The control system shall be of field proven design and having satisfactory track record.
	ix)	Flooring of Car MS Chequered plate (6 mm thick). Car floor shall comprise of a smooth non-slip surface.
	x)	Position of Machine room Directly above the Lift shaft
	xi)	Design, construction and finish of car MS sheet fabricated, smooth finish, spray painted to approved shade or SS (ASTM-304 No: 4 Hairline finish) as per project specific datasheet
	xii)	Car door MS sheet fabricated, smooth finish, spray painted to approved shade or SS (ASTM-304 No: 4 Hairline finish) as per project specific datasheet
	xiii)	Landing door MS sheet fabricated, smooth finish, spray painted to approved shade or SS (ASTM-304 No: 4 Hairline finish) as per project specific datasheet
	xiv)	Car Enclosure MS sheet fabricated, smooth finish, spray painted to approved shade or SS (ASTM-304 No: 4 Hairline finish) as per project specific datasheet
	xv)	Lighting and fan in the car LED light fittings for illumination level of 100 lux on Car floor shall be provided. Cabin charger ventilation fan with control suitable for operation on 240 V, 50 Hz, AC single phase power supply shall be provided. Adequate ventilation and illumination of car to be ensured.
	xvi)	Method of operation of car door and landing door Power operated type – automatic, Horizontal Centre opening / closing car and landing doors.
	xvii)	Operation of Elevator Automatic, simplex, selective, collective with and without attendant, through illuminated pushbutton station located inside the car with provision for locking control in Auto or attendant position.
	xviii)	Signals / Indicator Car position indicator in car, Digital hall position indicator at all floors, Up & down travel direction position indicator, tell-tale lights at all floors. Soft touch keys and digital luminous display in car operating panel and on all

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS		
			floors landings. “Door Open” button and “Door Close” button shall be provided in car operating panel. Battery operated alarm bell and emergency light with suitable battery and battery charger and controls. Audio annunciation and Visual indication for car position indication inside the car and at landing platforms shall also be provided inside the car. Overload warning indicator with visual & audio annunciation. For facilitating the movement of visually & hearing impaired persons, hall lantern and car arrival chimes shall be provided
	xix)	Shaft lighting	The Elevator shaft shall be suitably illuminated by providing CFL fittings at every 3m (three metres) from bottom of Lift well. Necessary switch/MCB's etc. for shaft lighting shall be supplied by the vendor.
10.0	DETAILS OF SPECIAL TREATMENT FOR ELEVATOR		
	As the Elevators are to be installed in a heavily polluted and dusty area in a thermal power station. All the Elevator components shall be given special corrosion resistant treatment.		
	i)	Car guide & Counter weight guide	Anti-corrosive epoxy paint
	ii)	Fish plates	Anti-corrosive epoxy paint
	iii)	Car & Counter weight buffer	Anti-corrosive epoxy paint
	iv)	Supports(Buffer)	Anti-corrosive epoxy paint
	v)	Rail Brackets	Anti-corrosive epoxy paint
	vi)	Bracket & rail fasteners	Zinc-passivated with epoxy painted
	vii)	Tie down bolts	Zinc-passivated with epoxy painted
	viii)	Machine	Anti-corrosive epoxy paint
	ix)	Brake adjusting screw & coupling fasteners	Zinc-passivated
	x)	Bracket	Anti-corrosive epoxy paint
	xi)	Controller cabinet	Anti-corrosive epoxy paint as per industry standard.
	xii)	Hall buttons	Dust-proof with stainless steel hardware.
	xiii)	Car operating panel	Dust proof contact & button with aluminium face plate and SS hardware. Main face plate SS.
	xiv)	Governor	Cover and casting epoxy painted. Other components zinc plated.
	xv)	Governor Tension frame	Hot dip galvanised and anti-corrosive epoxy paint with M.S. shaft for sheave.
	xvi)	Car frame, level brace rods and counter weight frame	Epoxy paint as per IS-1477 Part 1 & 2.
	xvii)	Safety equipment (Linkages)	Zinc-plated
	xviii)	Safety switch and car gate switch	IP-65. Dust proof heavily zinc plated arm, stainless steel shaft and housing as per vendor standard.
	xix)	Guide shoe	Zinc-plated
	xx)	Cam bar mountings and channels	Zinc-plated and anti-corrosive epoxy paint
	xxi)	Counter weight frame	Anti-corrosive epoxy paint
	xxii)	Guide shoe with Nylon ribs	Zinc-plated
	xxiii)	Filter weights	Anti-corrosive epoxy paint
	xxiv)	Rope fasteners	Zinc-passivated and chromate dipped
	xxv)	Hoist rope	Greased, Self-lubricating
	xxvi)	Governor rope	Greased, Self-lubricating
	xxvii)	Car enclosure, interior gate, car door and landing door	MS sheet fabricated, smooth finish, spray painted to approved shade or SS (ASTM-304 No: 4 Hairline finish) as per project specific datasheet
	xxviii)	Alarm and door open bells (Electronic hooter)	Painted.
	xxix)	Junction box	Metallic body - dust proof with Anti-corrosive epoxy paint
	xxx)	Hall position indicator and car position indicator	Dust proof with stainless steel enclosure and Face plate.
11.0	MECHANICAL EQUIPMENT		
11.1	ELEVATOR CAR		

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS
	The car platform frame and sling shall be of steel construction. The platform shall be suitably isolated from its sling. The car shall be enclosed with suitably braced and reinforced sheet metal panel. The sheet metal panel shall have ventilation slots at the base. All other exposed steel or cast surfaces shall be painted with anti-corrosive epoxy paint and suitable primer. The car shall be provided with the following accessories: i) Car control station with position indicator inside the car and at landing platforms. ii) An emergency stop switch (shall have two sets of potential free contact. Second one shall be taken and terminated in machine room for further connection by Customer / BHEL). This is as per IS 14665 Part 2 Amendment 3 Clause 9.6. iii) A three pin plug & socket with switch on top of Elevator car for use by persons working there on. iv) Telephone instrument shall be provided inside the car. Connection from the same shall be brought up to the machine room for further connection to plant network by customer. Telephone instrument provided inside the car shall have provision for hands free operation also, i.e. Speaker phone shall be provided for hands free operation. v) For better safety, elevator vendor to provide car top barricade on car top to ensure that service personnel stay inside the car region. A selector switch and a set of push buttons shall be provided to operate the elevator locally for inspection and maintenance. The selector switch when set to position "Inspection" shall exclude control from other places and movement of the car in the desired direction shall be effected by the push buttons. For normal operation of the elevator, the selector switch shall be set to the position "Working". It shall be possible to operate the elevator only when the appropriate button is kept in pressed condition. The roof shall be strong enough to support at least two persons. vi) Adequate lighting and ventilation shall be provided in the Elevator car. The car shall be fitted with fan of adequate capacity and LED light fittings. The car platform shall be robust in construction and elegant in appearance. vii) The car shall be provided with an emergency alarm push button which shall be clearly marked. The alarm shall be clearly audible outside the Lift way in order to obtain assistance in case of breakdown or failure between the floors. viii) Car interior shall be equipped with handrails on three sides.
11.2	CAR DOOR
	The car door shall be of hollow metal construction minimum 16-gauge thick sheet steel. Sides of the door shall be flush with all seams continuously welded. Guide shoes shall be rubber or roller type designed for operation on unlubricated guides. The car door shall be provided with locking gear of heavy and robust construction, so arranged mechanically and interlocked that the doors cannot be opened unless the Elevator car is within a particular landing zone. Conversely the Elevator shall not move until all the landing doors are closed and interlocked properly. Width of Car Entrance shall be 1800 mm for Passenger cum Goods elevator. (Any specific requirement in the project specific datasheet shall be taken care). The live load shall be taken into consideration while designing doors, door frame and hanger tracks. The car doors shall be designed such that their closing and opening is not likely to injure a person. Electronic door detector (Infra-red curtain type) shall be provided. Mechanical device shall also be provided to re-open the door if presence of person or any object is detected in between the door.
11.3	LANDING DOORS
	All landing openings in the lift well enclosure shall be protected with doors which shall extend the full height and width of the landing opening. The door width shall be identical to the elevator car door. Every landing door shall be fitted with a locking device. The door shall be suitably interlocked so that they cannot open unless the car is within a particular landing zone. The locking device is closed until the door is closed. The levers operating the locking devices shall not interfere with the landing side or Elevator enclosures. Landing doors of the elevators shall have fire resistance of at least two hours as per IS 14665 Part 2/Sec-1 Amendment no.1. These doors shall also be smoke tight as far as possible. Rain canopy for landing door operating panel shall be provided.
11.4	LOAD PLATE
	A load plate displaying the rated load of the Elevator in terms of persons and kilograms shall be fitted in the car in a conspicuous position.
11.5	SUSPENSION ROPES
	The car and the counter weights shall be suspended by steel wire ropes. Chain shall not be used for suspension. Not less than four independent stranded steel wire suspension ropes shall be used for car or counter weights of the Elevator with traction drive. The diameter of the stranded rope shall not be less than 12.5 mm and minimum factor of safety shall not be less than 12. The suspension ropes shall conform to latest edition of IS 2365 – "Specification for steel wire suspension ropes for Lifts and hoists".

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS
11.6	SHEAVES AND PULLEYS
	All driving sheaves and pulleys fixed to and revolving with the shaft shall be fixed by means of sunk keys of sufficient strength and quality. Sheaves and pulleys shall be made of cast iron as per the latest edition of IS 14665 and free from cracks, sand holes and other injurious defects. They shall have suitable flanges and smoothly machined rope grooves. The diameter of the sheave or pulley shall be as specified in the latest edition of IS 14655 or equivalent International Standards.
11.7	SHAFT
	Shafts and axles shall be forged steel. They shall have sufficient rigidity and bearing surface. Any shaft when stepped shall be turned to a reasonable radius at the point of reduction.
11.8	COUNTER WEIGHTS
	The Elevator shall be provided with suitable counter weights located in the lift shaft. The counter weight shall be designed for smooth and easy operation of the Elevator and shall be in accordance with Indian Standard (or) equivalent international standard. Suitable counter weight screen shall be provided in the Elevator shaft. The counter weights shall consist of cast iron weight contained in structural steel frame. The traction should be such that no appreciable slip may occur but that slip shall be free to take place upon the landing of either the car or the counter weights.
11.9	GUIDE RAILS
	Guide rails for the car and counter weights shall be machined 'T' sections and continuous throughout the entire length and shall be provided with adequate steel brackets or equivalent fixing of such design and spacing between brackets shall be such that to avoid any deflection during the normal operation. Guide rails section shall be adequate to withstand the forces resulting from the application of the safety gear when stopping the counter weights or fully loaded car. The guide shoes or their lining shall be easily renewable, adjustable and self-lubricated. Guides shall be of such length that it shall not be possible for any of the car or the counter weight shoes to run off the guides.
11.10	BUFFERS
	Sufficient number of buffers of spring loaded type shall be fitted below the elevator car and counter weights. The buffers shall be capable of stopping the car or counter-weights without permanent damage or deformation to itself or any part of the Elevator equipment. The number of buffers shall be so fixed as to ensure proper sharing of the impact loads by all of them.
11.11	EMERGENCY SAFETY DEVICES AND BRAKES
	The Elevator shall be provided with safety device attached to the elevator car frame and placed beneath the car. The safety device shall be capable of stopping and sustaining the elevator car up to governor tripping speed with full rated load in car. The application of the safety device shall not cause the elevator platform to become out of level in excess of 3 cm/m measured in any direction. Slack rope switches, if necessary, shall also be provided. The elevator vendor shall also provide personnel evacuation system during the power failure to the Elevator. The Machine shall be provided with direct current spring set, solenoid release double shoe brakes of sufficient capacity to stop the car at any position with the design load. These brakes shall be designed in such a way that it gets applied automatically in the event of power failure. In case fire alert, a safety device shall ensure automatic return of the cabin to the floor access level. Emergency indicator to indicate the location of elevator in case of elevator being stuck up between the floors through automatic flushers (both visual & audio)
11.12	AUTOMATIC RESCUE DEVICE (ARD)-(BATTERY DRIVE)
	Vendor shall provide a modern advanced electronic drive system of "RESCUING Passengers Trapped in an ELEVATOR" in case of power failure. In addition to the above, bell and cranking device to be provided with hand wheel connected with motor shaft for manual lowering of elevator to the nearest landing level. For all Elevators with ARD, an audio & visual indicator shall be provided inside the Elevator car to alert the person trapped inside that he/she is being rescued. Capacity of battery shall be such that minimum three rescue operations can be performed without recharging. ARD panel shall be suitable for floor mounting.
11.13	OVERLOAD DEVICE
	Every Passenger cum Goods Elevator shall be provided with an overload device, which will prevent the Elevator from starting in case the Elevator car is loaded to 110 percent of the rated capacity of the Elevator or more. Elevator shall remain stationery with door open. Audio & visual warning device (Load weighing device) shall be provided to alert the passenger in case of overload.
11.14	OVER SPEED GOVERNOR AND GOVERNOR ROPES
	Governor shall be located where there is sufficient room for their proper operation and where they cannot be struck by the Elevator car or counter weight in the event of over run. Each governor shall be marked with tripping speed

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS
	in terms of car speed in m/sec and the motor control and brake control circuit shall be opened before or at the time the governor trips. As per IS 14665 (part4/Sec 4):2001, the nominal rope diameter for over speed governor shall be minimum 6mm. However for elevators where travel height is more than 90 meters, the nominal rope diameter for over speed governor shall be minimum 8mm.
11.15	LEVELLING DEVICE
	The Elevator shall be provided with a two-way automatic levelling device. The levelling device shall take care of over run and under run of the car and rope stretch, such that car floor is within 6.0 mm from the landing level at all floors while in operation. Aprons of sufficient depth shall be fitted to the car floor to ensure that no space is permitted between the threshold and the landing while the car is being levelled to floor.
11.16	MACHINE ROOM AND OVERHEAD STRUCTURES
	All the overhead machinery shall be located in machine room above the lift well and supported on beam to be furnished by the vendor. The machinery support beam shall rest on top of or be designed to be framed into the vendor's structural steel frame for the boiler house. Adequate machine room and hoist way lighting shall be provided by the Elevator vendor. The maximum loads transmitted by the single heaviest equipment to the machine room floor and other structures like guides etc. shall be furnished by the elevator vendor. Sound reducing materials below machines in machine room shall be provided. Machine room shall be provided with minimum 200 Lux illumination. MACHINE ROOM Air conditioning Machine room shall be provided with 5 tonnes A/C units or with 1 No. of 2 tonnes and 2 nos. of 1.5 tonnes capacity A/C units (minimum). If higher capacity of A/C is required for proper cooling, the same is to be supplied and indicated explicitly in the offer. Air conditioning shall be envisaged to run with single phase supply unless otherwise specifically mentioned in the project specific datasheet.
11.17	TERMINAL SLOW DOWN NORMAL STOPPING AND FINAL LIMIT SWITCHES
	Every electric lift shall be provided with upper and lower terminal slowdown and normal stopping limit switches arranged to stop the car automatically within the limits of top car clearance and bottom run by (over travel) from any speed attained in normal operation in accordance with IS 14665 (Part 3/Sec 1): 2000. Such limit switches shall act independently of the operating device and the final limit switches. Final limit switches in accordance with IS 14665 (Part 3/Sec 1): 2000 shall be provided to stop the car automatically within the top and bottom clearance independent of normal operating device and the terminal stopping device. The switches shall be so arranged so as to open before the buffers are engaged. The final limit switch shall act to prevent movement of the car under power in both directions of travel and shall after operating, remain open until the elevator car has been moved by a hand operating mechanism within the limits of normal travel. Elevator shall be suitable for continuous 24 hours round the clock operation.
12.0	ELECTRICAL EQUIPMENT AND CONTROLS
12.1	OPERATION AND INTERLOCKS
	The operation of the Elevator shall be simplex, selective, collective, and automatic, with or without operator. The Elevator operation shall conform to the following requirements. i) The operation of the Elevator shall be through a push button station located inside the car. ii) The Elevator shall not move unless the car door, landing door and all other protected openings connected with the control circuit are closed. iii) Two push buttons, one for upward and the other for downward movement at each intermediate landing and one push button at each terminal landing shall be provided in the landing floors in order to call the car. iv) The landing doors shall be interlocked so that the landing door at any floor shall not open when the Elevator is not on that floor. v) Push button shall be fixed in the car for holding the doors open for any length of time required.
12.2	ELEVATOR DRIVE
	The Elevator drive shall be equipped with automatic electromagnetic coil type brakes. The elevator shall be driven by a drive suitable for method of control offered by the Elevator vendor. No friction gearing or clutch mechanism shall be used for connecting the main driving gear to the sheaves.
12.3	ELECTRIC MOTORS
	Motors shall be as per IS 325 and suitable for the Variable Voltage Variable Frequency (VVVF) application. All motors shall be squirrel cage induction type, suitable for operation at 415 V (+/- 10% variation), 3 phase, 3 wire, 50HZ (+3% to -5% variation) supply suitable for frequent starting with S4 duty class (S3 duty class also acceptable, if necessary to that application and subject to end user acceptance), CDF 40%, Maximum 150 starts per hour at 50 Deg. C ambient and with IP 54 protection class. Motor pull out torque shall be at least 275% of rated torque (Pull out torque 240% of rated torque also acceptable, if necessary for the application and subject to end user acceptance). Motor shall be of TEFC type. Motor insulation shall be class F or superior with temperature rise limited to 70 Degree Celsius.

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS
12.4	CONTROLLERS
	The controllers shall be designed to start, accelerate, stop and reverse the Elevator when the appropriate push buttons are pressed. The controllers shall be advanced microprocessor based having latest design. Contact finger buttons shall be easy to adjust and replace. The speed control device shall be such as to give smooth, easy and accurate speed control. The elevator controls shall be housed in dust and vermin proof enclosures. The controls shall be wired with stranded copper conductor cables. All equipment mounted shall be neatly labelled as per wiring diagram. Ventilating louvers are to be provided in the panels for proper heat dissipation. Control panel shall be suitable for floor mounting.
12.5	CABLES AND INTERNAL WIRING
	Wiring shall be done as required to interconnect all elevator electrical equipment including all power wiring from the main supply source in the machine room. Power cables shall be 1100 V grade multi core copper or aluminium, suitably sized, stranded with XLPE insulation, FRLS type ST2 inner sheathed, galvanised steel wire armoured and overall extruded FRLS, Type ST2 PVC outer sheath. If unarmoured cables are used all the cabling/wiring between the equipment in the lift machine room and between machine room and equipment in the lift well and at the landings shall be wired in HDP conduit/ galvanised steel conduit. For internal wiring in the control panel/controller only copper cables to be used. The circular trailing cables shall conform to IS 4289 Part-I (Elastomer insulated) or IS 4289 Part II (PVC insulated) / Flat type trailing cable shall conform to IEC 60227-06. All other cables shall conform to latest edition of IS: 7098, IS:1554 & IS:5831. Following FRLS properties shall be complied with. a) Oxygen index of min. 29 (as per IS:10810 Part-58) b) Acid gas emission of max. 20% (as per IEC-754-I). c) Smoke density rating shall not be more than 60% (as per ASTM-D-2843).
12.6	EARTHING
	Earthing shall be carried out as per IS 14665, IS 3043 and Indian Electricity Rules. The Elevator structures, motor, frames, metal cases and all electrical equipment including Elevator control panel, conduit, cable armouring and guards shall be properly bonded and earthed by two separate and distinct connections. The earthing connection shall be terminated in machine room. Further earth connection from elevator machine room to station earth mat shall be done by the Customer / BHEL.
12.7	POWER SUPPLY
	One three phase 415V, AC, 50 Hz, 3 wire emergency supply for elevator main motor, and one three phase 415V, AC, 50Hz, 4 wire supply feeders for lighting, air conditioner and control panels will be provided in the machine room by BHEL. The exact Power requirement in kVA of three phase supply and single phase power supply shall be indicated in the offer itself by the vendor. The junction box having MCCB/MCB/ELCB Isolation of adequate rating shall be arranged by the vendor to receive the above supplies. The Elevator vendor shall also indicate the proposed location of junction box in the machine room. All further distribution including cabling and wiring from the junction box shall be carried out by the Elevator vendor. The vendor shall arrange to tap power supply required for constructional purposes from the point terminated by the Customer / BHEL.
13.0	OTHER REQUIREMENTS
	Electric high speed door operators for the opening and closing of the car doors and landing doors shall be furnished and installed. The car and landing doors shall be mechanically connected and shall move simultaneously in opening and closing. The car door and landing door shall be power closed and shall be controlled in opening and closing by oil cushioning mechanism built into the gear unit or alternate arrangement equal / better. Necessary lockable switches shall be provided in the Elevator machine room to control the operation of the door. Should the electric power fail, it must be possible for the doors to be opened from within the car, provided the car is exactly at the landing level. Overload relays shall be provided to protect the drive motor against overload or a power failure. Suitable protection shall be provided on the controller to protect the Elevator equipment from phase reversal, low voltage. Suitable arrangement shall be provided to intimate Boiler unit control room during emergency in the form of audio-visual alarm.

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS
	Complete set of special tools and tackles required shall be supplied along with Elevator. Each tool and tackle shall be stamped so as to be identified easily for its use and size. Tools shall be supplied in a steel tool box. The list of tools and tackles shall be furnished along with the offer by the vendor.
	One number Fire extinguisher (suitable for electrical fire) shall be provided along with each elevator.
14.0	SPARES
	The vendor shall furnish the List of start-up, commissioning and recommended spare parts during normal operation separately in the offer with item wise price under the title "Schedule of Spare Parts".
	The spares recommended above with unit prices shall be valid for at least for three years of normal consumption for operation of the plant. The vendor shall also indicate the service expectancy for these spare parts under normal operating conditions before the replacement is necessary.
	All the spares offered shall be strictly interchangeable with the parts for which they are intended for replacement.
15.0	DRAWINGS / DOCUMENTS
	The following preliminary documents / drawings should be enclosed along with the offer without fail. i) Detailed description of the system offered. ii) List of thermal power plants where the offered system is in operation. iii) Performance certificate of the system offered. iv) Write-up on interlocks, controls and safety devices provided. v) General Arrangement of Elevator (including hoist way, pit well etc.) vi) General Arrangement of machine room and equipment in machine room. vii) Electrical control scheme with legend and write-up. viii) Machine room Air-Conditioning details. ix) Foundation and loading details of machine room floor and the concrete structure. x) Filled in vendor data sheet. xi) Filled in vendor quality plan. xii) The major components of Elevator with weight details to be indicated by the vendor in the offer itself. xiii) The make, type, capacity, range of all bought out items xiv) Any deviation from the enquiry specification shall be indicated in the "Sub-delivery Enquiry Deviation Format" attached along with the enquiry. No deviations, unless explicitly taken up by vendor in the enquiry stage itself in the said format and accepted by BHEL in writing, shall be considered after firm order. In case no deviations are there, vendor to indicate "No-deviation" in the fully filled up format.
	The following documents / drawings shall be submitted within 15 days from the firm order. i) Elevator General Arrangement drawings for BHEL/Customer approval. ii) Elevator Technical Datasheet
	Separate contract-wise drawing approvals shall be obtained by vendor before manufacture of elevators.
16.0	WARRANTY
	The Elevator Vendor shall guarantee that the materials, workmanship and performance of the apparatus installed under this specification is perfect in every respect and that they will make good of any defects (not due to careless operation) which may develop within 18 months from the date of formal handing over of the equipment.
17.0	MAINTENANCE
	After the completion of the installation, maintenance and service for the equipment furnished under this specification shall be provided by the vendor for a period of eighteen months. This service shall include monthly inspections of the installation during regular working hours by trained employees and shall include all necessary adjustments, greasing and oiling, cleaning, supply of genuine standard parts to keep the equipment in proper operation except any part made necessary by misuse, accidents or negligence caused by others.
18.0	ACCEPTANCE
	After erection, the performance of the Elevator shall be tested for ascertaining the conformity with the specification and upon satisfactory completion of the tests, the Elevator will be taken over. The responsibility for obtaining commissioning and handing over protocol signed by the customer lies with the Elevator vendor.
19.0	QUALITY ASSURANCE AND TESTING
19.1	For Contracts with BHEL Inspection
	i) Vendor shall prepare Quality plan in the BHEL standard Quality Plan format (copy enclosed) along with enquiry. Such a QP shall contain all the required quality checks right from the raw material stage through in process, Assembly, Testing & Final inspection. Any comments given by BHEL shall be incorporated by vendor.

CLAUSE NO.	TECHNICAL DELIVERY CONDITIONS
	ii) In case of order receipt, this QP will be approved by BHEL. iii) Elevators are subject to inspection by BHEL and inspection call shall be given 15 days in advance.
19.2	For Contracts with BHEL & Customer Inspection:
	i) All the points covered under Clause no. 19.1 are applicable for this category. ii) The QP will be approved by customer & elevator will be subject to inspection by customer. Any additional points indicated by customer have to be carried out by the vendor.
20.0	PACKING
	Packing shall be done as per vendor standard. However, the following points to be taken are by the vendor. At the time of shipment equipment shall be clean inside and outside. The vendor shall pack all equipment and materials furnished by him in such a manner as to ensure protection against damage and deterioration during shipment and storage which includes local transportation and site storage. Modules, or electronic equipment shall be wrapped and sealed in plastic to protect from rain and dust. The plastic wrapping shall include, as required, the use of a desiccant to protect the equipment from excessive moisture. All the items shall be treated and packed for long storage under the climatic conditions prevailing at site. Each item part shall clearly be marked or labelled on the outside of the packing in single case. The general description of the contents shall be shown on the outside of such cases. All cases, containers and other packages shall be marked suitably and numbered for the purpose of identification. All cases, containers and other packages are liable to be opened for such examination as may be felt reasonable by BHEL / Customer. The vendor shall bear in mind the shipment of the equipment having ball or roller type bearings for which the following special provisions shall apply: i) If temporary transit bearings are fitted to such equipment, then, additionally, two complete sets of service bearings shall be included and shipped with such equipment. ii) If the item of the equipment is shipped with service bearings in position, then additionally one complete set of service bearings shall be included and shipped with such equipment. In either or both of the above provisions, the cost of the additional sets of bearings shall be included in the offer. iii) If replacement of any bearing is required due to damages during shipment or other causes, the spare bearings shall be used to replace the same.
21.0	O&M MANUALS
	Vendor to furnish standard O&M manuals (.pdf format) for each capacity of elevator, immediately after the release of first purchase order for BHEL's further use (.pdf format). The O&M manual prepared shall be such that the same shall be usable along with the relevant drawing for each project. The O&M manual shall contain As – built GA drg, updated Technical Data Sheet, Details of VFD, parameters to be set in VFD, electronic card details, grounding details, inter panel wiring details and field cable termination details etc. The O&M manual shall be comprehensive document covering all the aspects of elevator facilitating easy maintenance and trouble shooting. Project wise O&M manuals along with project-wise details, if any, has to be updated by vendor and handed over to site (Customer & BHEL/Site, after commissioning of elevator) in necessary format as desired by customer.

Doc Ref CI:1823:ELEV Rev 00 Project Specific Datasheet (Yadadri TPS – 5X800 MW)**DATASHEET**

SI No.	Item Description	3000 Kg Elevator
1.	No of elevators	One per Boiler (Total – 5 Nos)
2.	Type of Service	Goods Elevator
3.	Rated load on the elevator	3000 Kgs (minimum)
4.	Rated speed of lift	0.5 m/s
5.	Travel Height	88.7m
6.	No of Landings (including ground floor)	17
7.	Landing Levels	0.0m, 5.7m, 12m, 17m, 22.55m, 29.1m, 32.75m, 36.45m, 40.15m, 44m, 53m, 57.5m, 66.7m, 69.7m, 73.6m, 82.1m, 88.7m
8.	Landing openings	All openings are on one side
9.	Finished Floor Level in Boiler Area	(-) 200mm
10.	Car and landing door	Horizontal Sliding door.
11.	Entrance and platform Size	As per IS-14665
12.	Lift Pit Buffer	Steel Buffer shall be provided in lift pit. Fixing of steel buffer in lift pit is vendor scope. RCC buffer will not be provided inside lift pit. Lift Pit Height :- 1600mm below ground floor. Clear space available inside lift pit 3600 mm X 3600 mm.
13.	Drive Motor	A.C. Motor
14.	Method of control	Microprocessor based AC variable voltage and variable frequency type.
15.	Flooring	MS chequered flooring, MS base & framework with shock absorber.
16.	Position of machine room	Directly above the lift shaft/Top of hoist way. Machine room shall be air conditioned
17.	Design, construction and finish of the car	S.S. sheet fabricated hairline finish (ASTM 304)
18.	Lighting and fan	One cabin fan, two recessed fluorescent lamp fittings suitable for operation on 240V, 50 Hz, A.C. single phase power supply.
19.	Car entrance and landing door	S.S. panel centre opening door horizontal sliding door. (ASTM 304)
20.	Car Enclosure, Car door & Landing door	S.S. construction (Hairline finish) (ASTM 304)
21.	Method of operation of car and landing door	Power operated with automatic door opening and closing device
22.	Operation	Automatic, simplex collective with and without attendant with provision for locking control in "Auto" or "Attendant" position. Provide Key type lock switch.
23.	Signals	Car position indicator in car, car position indicator at all floors, tell-tale lights at all floors,

		battery operated alarm bell and emergency light with suitable battery, battery charger and controls. Remote alarm shall be provided.
24.	Power supply	
	Power	415 Volts, 3 phase, 50 Hz, 3 wire system
	Lighting, fan & AC	415 Volts, 3 phase, 50 Hz, 4 wire - Separate supply terminated at M/C room.
25.	Other requirements	Plant Telephone Communication system shall be extended up to the elevator car, through EPABX in M/C room.
		Suitable arrangement shall provide to intimate unit control room during emergency in the form of audio-visual alarm.
		Automatic rescue device.
		Hall Lantern & gong with scrolling indicator.
		Scrolling indicator in car.
		CFL lighting inside car
		Overload sensing device & warning indicator.
		Announcement of floor level.

CODES AND STANDARDS

The design, manufacture and testing of the elevators and components thereof shall, unless specifically stated otherwise, conform to the following specific codes and standards as applicable, including its latest amendments subsequent to the date of publication as mentioned below:

- IS-14665 : Electric Traction Lifts.
- IS-2365 : Specification for Steel Wire Suspension Ropes for Lifts and Hoists.
- State Elevator and Escalator Act
- State Elevator and Escalator Rules
- Indian Electricity Act.
- Indian Electricity Rules

The installation of the elevators under this section shall be carried out in conformity with the local acts/rules with latest amendments which are in force, including the rules of fire lifts, as shall be required by the Bidder to obtain license for the elevator from concerned authorities.

Minimum acceptable degree of protections for various equipment are presented in Annexure.

In case of any contradiction between the above standards and attachments the stipulation in the attachments shall prevail and shall be binding on the Contractor.

Stipulations in this section shall prevail in case of any contradiction between this section and main specification (TDC:TCI: 263: RC: Rev 07).

SCOPE OF SUPPLY

The elevators shall be provided with the following accessories as applicable

- Elevator car complete with door, door hangers and tracks, push button station and operating panel, car position indicators, fan, telephone hooked upto EPABX of the plant and illumination fittings and other required accessories.

- Counter weight, counter weight guard, sheaves and beams, ropes, hoist rope compensation, terminal buffers and guide rail lubricator device.
- Complete drive machinery and accessories, electrical and control equipment including power and lighting distribution boards and switch fuse units for power and lighting. Necessary brakes and also automatic levelling device, terminal and final limit switches and all required protective devices including starters, switch fuse unit etc.
- Complete drive machinery shall include motors, starters, switchgears, fuses, switches, relays, junction boxes etc. as minimum requirement.
- Hoist way doors and push button station with tell-tale lights at all the elevator landings.
- Any other fittings and accessories required for the safe and efficient operation of the elevators.
- All required foundation plates and/or base plates, inserts, anchor bolts, lifting lugs, eye bolts etc. wherever necessary.
- Fireman's switch as per rules of fire lifts.
- Earth leakage circuit breaker.

OPERATION AND CONTROL PHILOSOPHY

The elevators, while starting from any level, shall start at rated speed but during stopping, elevator shall slow down to lower speed when the car reaches around one meter of the selected landing floor and stop when reached the landing floor. The control system shall be microprocessor based with AC variable voltage and variable frequency drive.

The elevators specified herein shall be operated in selective collective automatic mode of operation as defined in IS-14665. Operation and Control features of this elevator shall be as follows:

One push button for each of the all landings shall be provided inside the car. Two push buttons, one "UP" button and one "DOWN" button, shall be provided at each of the intermediate landings. The uppermost and lower most landings shall be provided with one push button. Calls initiated by the car or landing push buttons shall be registered and stored until answered, irrespective of the car being in motion or any landing door being open.

The car shall answer calls in one direction of travel, that is all "UP" landing calls shall be answered when the car travels in the upward direction and "DOWN" landing calls shall be answered when the car travels in the downward direction, except in the case of uppermost or lowermost calls which shall be answered as soon as they are reached irrespective of the direction of travel of the car.

Besides the automatic mode of operations described in Clauses 3.02.00 above, the elevators shall have provision for attendant operation also, transfer of operation between automatic control and attendant operation being achieved by a key operated switch in the car.

The operation of the elevators shall be through push button station located inside the lift car. Suitable interlock shall be provided so that the elevators shall not move unless the door are properly closed. The landing doors of any floor shall not open when the elevator is not on that floor. Push buttons shall be fixed in one car for holding the doors open for any length of time required.

The elevators under this section shall be treated as "Fire Lifts". "Fire Switch" in a glass front box shall be provided adjacent to the lifts at the entrance level, the function of which is to enable the fire authority to take over the complete control of the lifts, when required. When the switch is on, landing call points shall become inoperative and the lift shall be on the car control only. When the switch is off, the lift will return to normal working.

Car

Car Frame

Lift car shall be carried in a complete frame of steel which shall be sufficiently rigid to withstand the operation of the safety gear without permanent deformation to the car frame.

At least four renewable guide shoes or guide shoes with renewable linings or set of roller guides shall be provided, two at the top and two at the bottom of the car frame.

Car Enclosure

Car shall be enclosed on all sides by means of car body and door. The sides of the car shall be lined with heavy gauge sheet steel panels properly braced and reinforced. The enclosure shall be flush on the inside and securely fastened to the platform. Car inside enclosure shall be of stainless steel plate of grade SS:304 of bright finish.

Car of the elevators specified herein shall be equipped with decorated Stainless Steel hand rails on three sides. Car shall be equipped with fan with grills and suitable lighting complete with decorative fittings. The light shall be left burning during the whole time the lift is available for use.

Necessary provisions shall be made for adequate ventilation of the car. Ventilation openings shall be provided in the enclosure walls as per requirement of IS-14665. To permit switching off of the power supply to the lift without switching off the fan and light a separate switch shall be provided for fan and light.

The enclosure of lift car shall withstand the maximum possible thrust applied normally at any point, excepting any vision panel, without permanent deformation. Glass shall not be used in the lift car except for the following purposes:

- a) As covers for certificate.
- b) For lighting fixtures.
- c) For appliances used in connection with the operation of the car.
- d) For vision panels and mirrors.

Suitable arrangement to secure isolating cushion between car and the steel car-frame shall be provided. Telephone or paging facility shall be installed in the lift car. The Bidder shall provide suitable cabinets in the car to house handsets. The Bidder shall also provide necessary wiring for telephone or paging connection from the car to a terminal box adjacent to the lift well.

Car Platform

It shall be constructed of structural steel shapes securely fastened together. The platform construction should be designed on the basis of rated loads evenly distributed.

Since, the car levelling devices will be used, substantial aprons of sufficient depth shall be fitted to the car floor to ensure that no space is permitted between the threshold and the landing while the car is being levelled to a floor.

Car Roof

Car roof shall be covered with sheet metal. The construction of roof should be strong enough to be capable of supporting at least two persons. A three pin plug socket with switch of industrial type having adequate capacity for a hand lamp shall be fitted on top of the lift car for use by persons working thereon during maintenance.

Door Hangers and Tracks

Hangers and tracks for car door and each hoist way door shall be furnished. Suitable material shall be used to minimise noise. Ball bearing, rollers or equal arrangement shall be provided to take upward thrust of the doors. Suitable devices shall be furnished for transmitting motion from one door panel to the other.

All required materials for landing entrance e.g. extruded aluminium or equivalent sills, strut angles, headers etc. shall be provided.

Door Operators

The door operation shall have power opening and power closing. Necessary electric type door operators shall be furnished. The car door and the hoist way door shall be mechanically connected and shall move simultaneously during opening and closing. The necessary door cushioning devices shall be furnished.

The car door and the hoist way door shall open automatically when the car stops at a landing. Should the electric power fail, the door operator shall be so designed that doors can be manually opened from within the car.

Necessary door locking devices shall be furnished. Necessary switches shall be furnished in the elevator machine room to control the operation of the door.

Car Self-levelling Device

The elevator shall be equipped with automatic self-levelling devices, to bring the car to the floor landings. These self-levelling devices shall correct for over travel and rope stretch.

Car Operating Panel

In the car, these shall be furnished, an operating panel containing push buttons, numbered to elevations of the landings served; two position key-operated switch, marked to indicate "With Attendant" and "Without Attendant"; an emergency stop switch; a buzzer; an emergency call button connected to a bell to be provided by the Contractor at the bottom most landing of each elevator to serve as an emergency signal and also in the control room with an indication; a non-stop button; push button, or switches for lighting and fan; up push button, down push button, one door open push button and other push buttons, switches, emergency light, telephone hand set etc. as required.

The emergency call button mentioned above shall have two sets of potential free contact and shall be suitably wired upto the control panel in the machine room for indication or annunciation at unit Control Room shall be provided.

When the key switch in the car operating panel is set at the attendant position, the attendant will have full control of the operation of the elevator.

Any hoist way calls and other door close push button which are then registered will cause a buzzer to sound in the car operating panel and the appropriate indicator light to illuminate.

Car Position Indicator in Car

For the elevators, signal indication above the entrance in the car shall be provided by the appropriate numeral (which shall be the elevation of the respective floor) being illuminated when the car is passing the corresponding floor. The indication shall remain illuminated when the car is stopped at a floor. Up and down direction jewel lights shall also be provided.

Push Button Station and Call-registered Tell-tale Lights at Hoist way

The elevators shall be equipped with a push button station consisting of a single up or down push button at terminal landings, and up and down push buttons at each intermediate landing including call registered lights (up or down call registered lights at each terminal landings and both up and down call-registered lights at all intermediate landings). These shall illuminate when the corresponding button is pressed to indicate that the call is registered and shall remain illuminated until the call is answered. An illuminated car position indicator similar to that specified for car shall be provided above the entrance of all the landings.

The word "Fire Lift" shall be conspicuously displayed in radium paint on the lift landing doors of the elevators designated as fire lifts.

Safety Shoe Device on Car Door

Safety shoe device shall be furnished on car doors. Safety shoe shall extend the full height on the closing edges of the car doors. The arrangement shall be such that should the safety shoe touch a person or an object while the door is closing, the car and the hoist way door shall return to the open position. The doors shall remain open until the expiration of a pre-determined interval and then close automatically.

Emergency Exit

Elevator car shall be provided with an emergency exit of adequate dimensions. The location of the emergency exit shall be at the top of the car.

Terminal Buffers

The terminal buffers shall be furnished for stopping the car and the counter-weight at the extreme ends of travel. All structural steel members required to install the buffer shall be supplied under this section.

Load Plate

A load plate giving the rated pay load of the elevator shall be fitted in the car in a conspicuous position. The rated load shall be given in kilograms and also in number of passengers.

Counter-weights and Counter-weight Frames

Counter-weight sections shall be mounted on structural metal frames so designed to retain the weights securely in its place. Counter-weight frames shall be guided on each guide rail by upper and lower guiding members attached to the frame. A substantial metal counter-weight guard of required length shall be provided at the bottom of the hoist-way.

Guides for Car and Counter-weight

Car and counter-weight guides shall be of rigid steel and shall be continuous throughout the entire length and shall be provided with adequate steel bracings and stiffeners. The necessary lubrication device for guide rail shall be provided.

Limit Switches

Normal terminal limit switches to slowdown and stop the car automatically, shall be provided at terminal landings and final limit switches shall be furnished to automatically cut-off the power and apply the brake, should the car travel beyond the terminal landings.

Controller & Traction Machine

The design ambient temperature for these equipment shall be taken as 50°C. The insulation of motor shall be class "F" and temperature rise shall be limited to Class "B".

Complete details of controller and traction machine shall be furnished by the Bidder.

The elevators being offered with Microprocessor based AC variable voltage and variable frequency type control, motor and generator shall be mounted on independent shafts coupled with proper coupling.

Necessary brakes shall be provided in the traction machine.

Protective relays shall be furnished on the controller to protect against phase reversal, low voltage and phase failure. Overload and other protective relays shall also be furnished for traction motor. Single phasing preventor shall also be provided to protect motor while running at no-load.

Other Electrical Items

Special care and precaution shall be taken regarding the handling of lift trailing cable loops between the points of suspension. A 1/4" sling rope should be used for tying up. Conductor and insulation of these trailing cables shall be flexible with suitable reinforcement provided.

All control cables shall have crimped type lugs and wire numbering ferrules at either ends.

Safety Gears

The elevator shall be provided with one or more safety devices capable of stopping and sustaining the lift car with full rated load in the car at governor tripping speed. When the safety

gear is applied, decrease in the tension of the governor rope or motion of the car in the descending direction shall not release the safety gear.

Over speed Governor

The elevator shall be equipped with over speed governor device which operates to apply the safety gear in the event of the speed of the car in the descending direction exceeding a predetermined limit.

Brakes

The machine shall be provided with direct current spring set, solenoid released, double shoe brakes of sufficient capacity to stop the car at any position with the design load. These brakes shall be designed in such a way to apply automatically in the event of power supply failure. The details of equipment offered shall be indicated in the offer.

Rope

Suitable traction steel hoist ropes of the sizes and number to ensure proper wearing qualities shall be supplied. As a minimum, the number of ropes shall comply with the factor of safety requirements of Indian Standard for lift/elevator. The full details of ropes, the maker's name, trade name, breaking strength, designed factor of safety of all ropes shall be submitted with the bid.

Ringling of Stranded Lift

During prolonged power failure, arrangement shall be provided, so that, after cutting out supply point manually through hand wheel the lift stranded between two floors may be brought to the nearer floor.

Lifting Attachments

All equipment/component shall be equipped with suitable lifting attachments, e.g. lifting lugs, eye bolts etc. to facilitate erection and maintenance.

INSPECTION AND TESTING

The following specific test as applicable shall be carried out by the Contractor as minimum requirement for the elevators.

- All materials used in manufacture of various components shall be of tested quality and shall conform to relevant standards/ specifications.
- All welding shall be carried out as per welding procedures qualified as per ASME Section-IX or equivalent national / international standard. Welding procedures shall be forwarded for approval. Only qualified welders shall be employed for welding.
- All NDT operators should be qualified as per ASNT-TC-IA.

- Forged blanks greater than or equal to 40 mm thick and rounds greater than or equal to 50 mm dia shall be subjected to ultrasonic test to ensure free from internal defects.
- All welds shall be subjected to dye-penetration test and visual examination.
- All forged components shall be subjected to DPT/MPT after machining.
- Buffer springs shall be subjected to load test as per relevant specifications. Material certificates for springs shall also be furnished.
- Steel wire ropes shall be subjected to all the tests including material test as per relevant standard. Braking load test shall be carried out as per relevant national/international standards.
- All components prior to assembly shall be checked for dimensions.
- All rotating components shall be shop tested for dynamic balancing as per ISO-1940.
- Car sling and car body in assembled condition shall be checked for position of all major components i.e. car sling inside depth, width, height and respective positions of all accessories within the same.
- Induction Motor shall be subject to both type and routine tests in accordance with IS-325 and IS-4029. In addition, following tests shall also be carried out:
 - 20% over speed test for 2 minutes.
 - Vibration measurement.
 - Measurement of noise level as type test.
 - Degree of protection test on motor enclosure and terminal box as per IS-4691 as type test.

Following items shall be tested as per relevant standard:

- Trailing cable and copper conductors. PVC cables shall also be subjected to type, routine and acceptance tests.
- Brake coil.
- Relays contactors, instruments and controlling equipment.
- The control panels, door operating panels, junction box & other metallic enclosures test shall conform to specific degree of protection.
- Mechanical balance test and vibration levels of elevator and accessories shall be carried out.
- Insulation, resistance test, high voltage withstand test of all wiring shall be carried out.
- After installation of complete elevator, necessary trial run and performance tests shall be carried out by the Contractor in presence of Purchaser to determine that equipment supplied is satisfactorily installed and commissioned.

The performance tests to be conducted shall interalia include but not limited to the following:

- Car operates smoothly for full length of travel.
- Car stops at each platform elevation under both loaded and unloaded conditions and alignment with floor level.
- Car travels at specified speed when loaded at specified capacity.
- Enclosure doors operate properly.
- Mechanical and electrical equipment function as specified.
- Input power at motor terminal at specified design capacity and speed
- Working of all safety interlocks and safety features including emergency braking in case of freefall of the car

All performance tests shall be conducted by the Contractor and the procedure for conducting such tests shall be approved by Owner.

Permits & Inspection

Regarding Permits and Inspection, Bidder shall obtain and pay for necessary Municipal or State inspections and permits as required including license fees for installation and inspection of elevator equipment and also make such tests as called for by the regulations of such authorities in the presence of the Purchaser representative. Bidder shall be responsible to obtain license for operating the elevator at site. Checking and inspection by the statutory authorities and obtaining license shall be Bidder responsibilities.

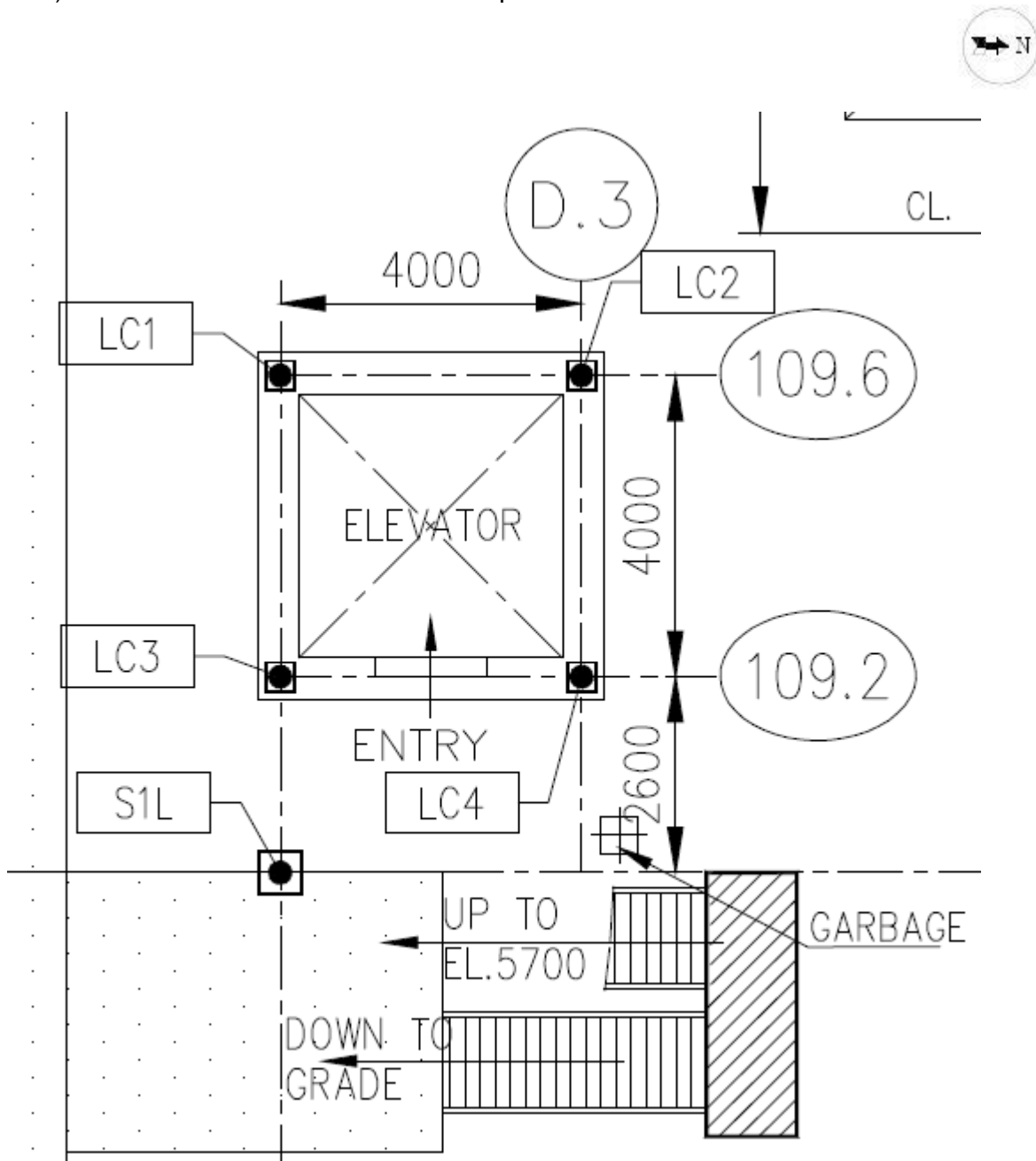


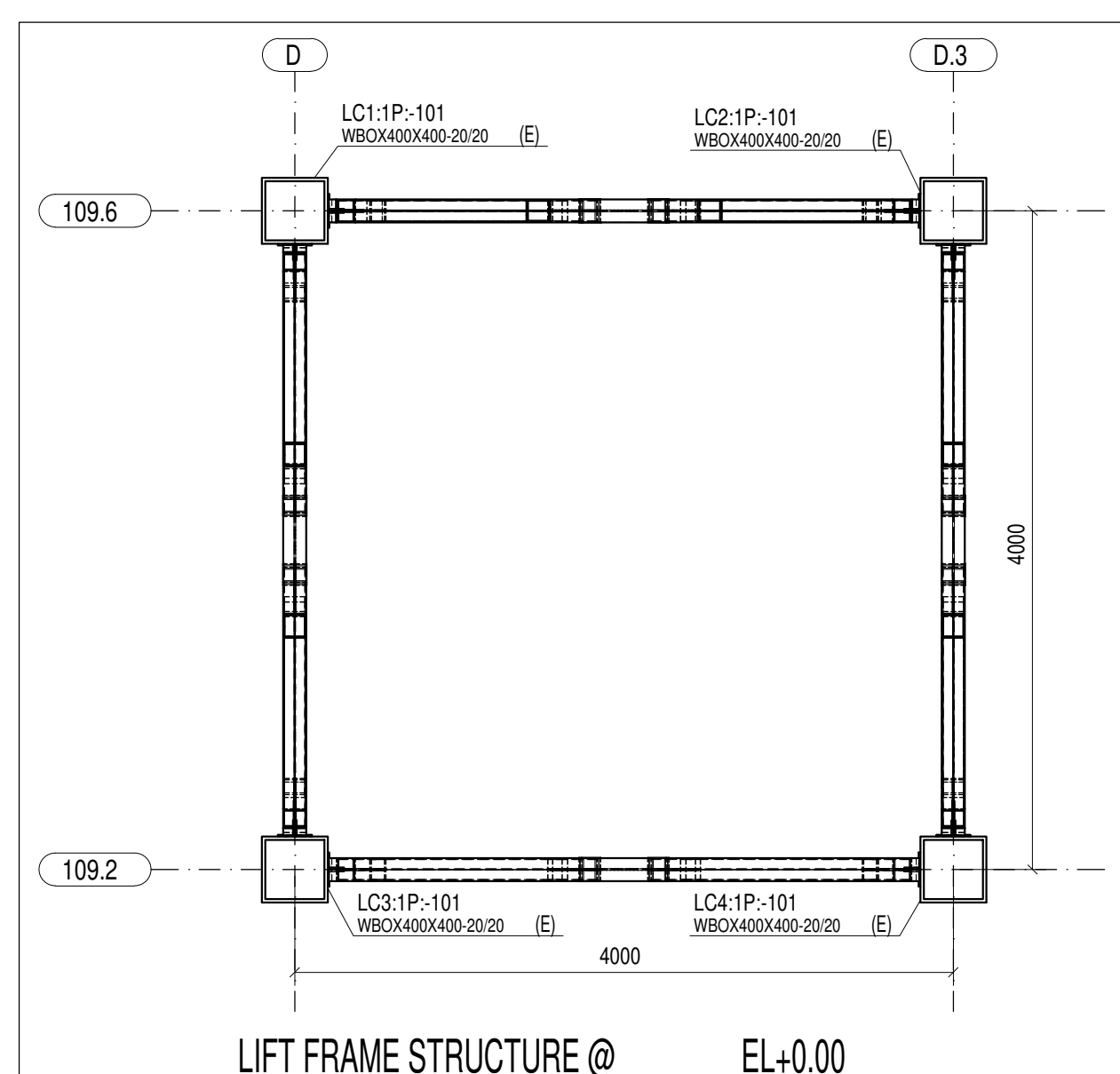
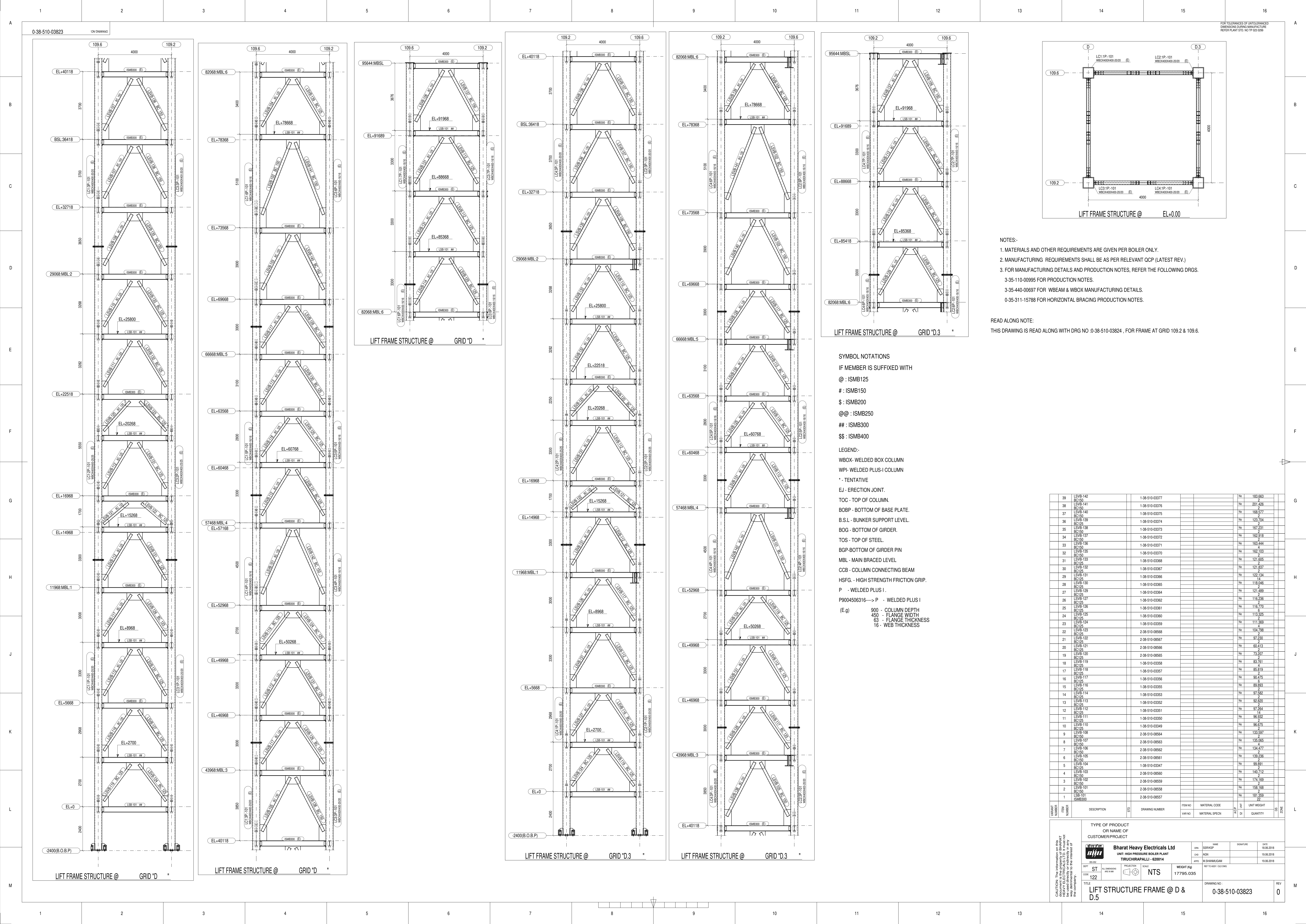
ELEVATOR LOCATION DIAGRAM

YADADRI TPS – 5 X 800 MW

1) Elevator Location diagram for GOODS ELEVATOR

- a) Capacity 3000 Kg, Speed 0.5 m/Sec.
- b) Lift well size: 4000mm X 4000mm.
- c) Location of Car entrance and Trap door are on the boiler side.





- NOTES:
- 1. MATERIALS AND OTHER REQUIREMENTS ARE GIVEN PER BOILER ONLY.
 - 2. MANUFACTURING REQUIREMENTS SHALL BE AS PER RELEVANT QCP (LATEST REV.)
 - 3. FOR MANUFACTURING DETAILS AND PRODUCTION NOTES, REFER THE FOLLOWING DRGS.
3-35-110-00995 FOR PRODUCTION NOTES.
3-35-440-00697 FOR WBEAM & WBOX MANUFACTURING DETAILS.
0-35-311-15788 FOR HORIZONTAL BRACING PRODUCTION NOTES.

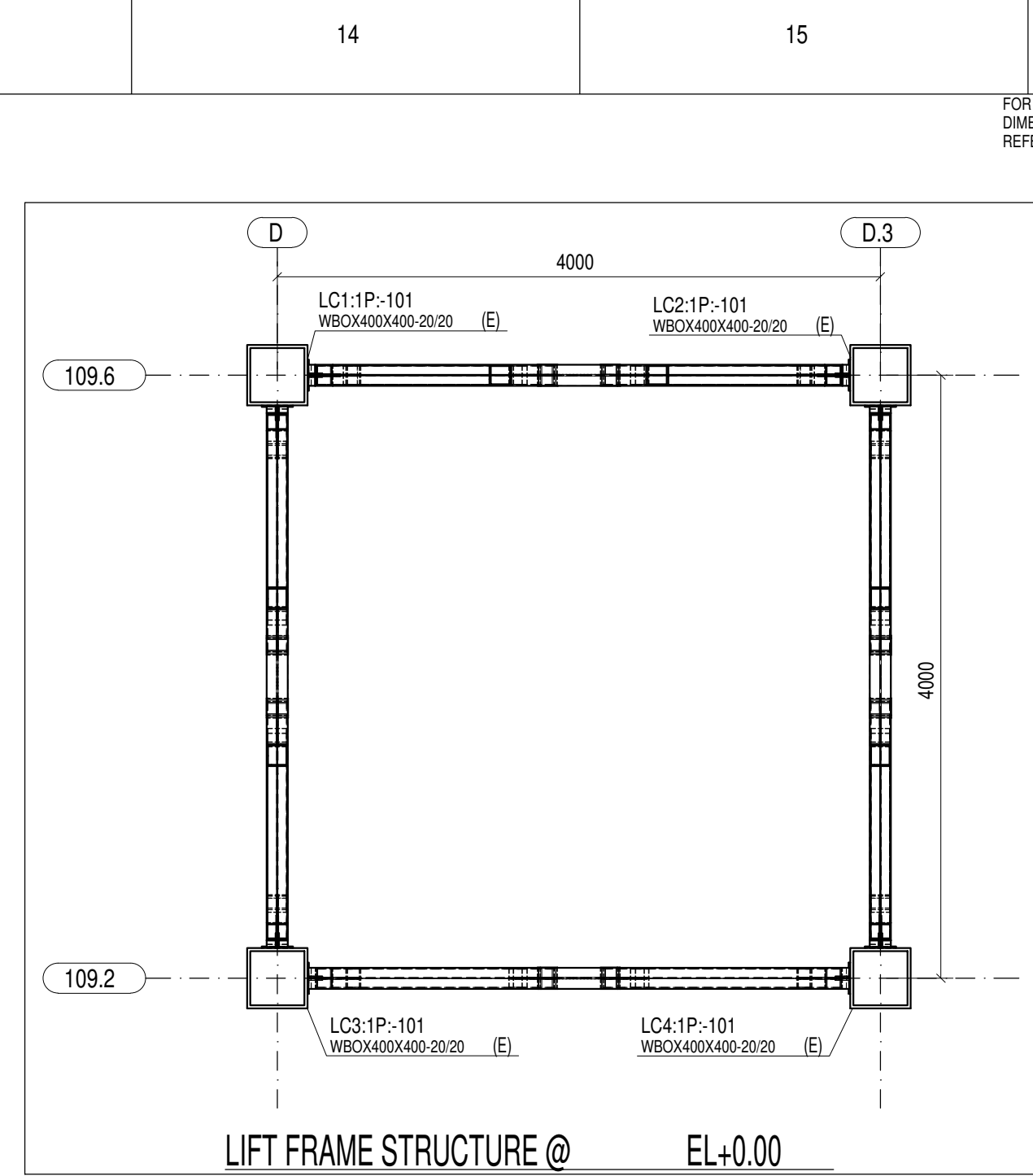
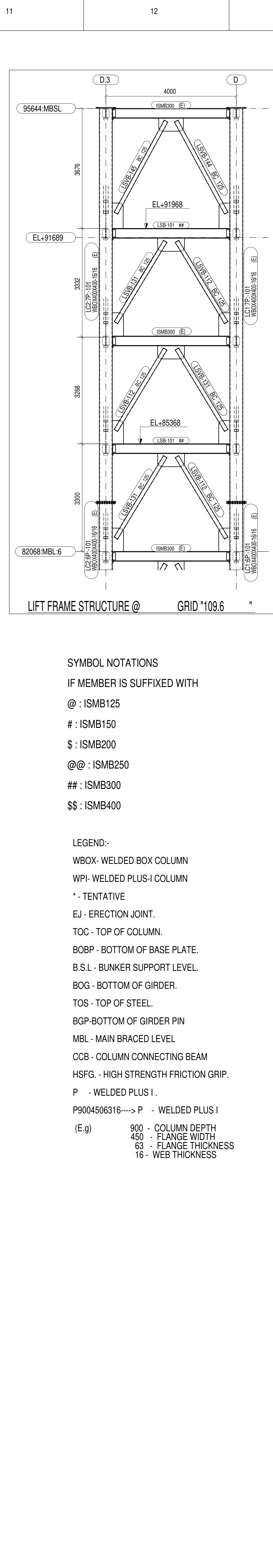
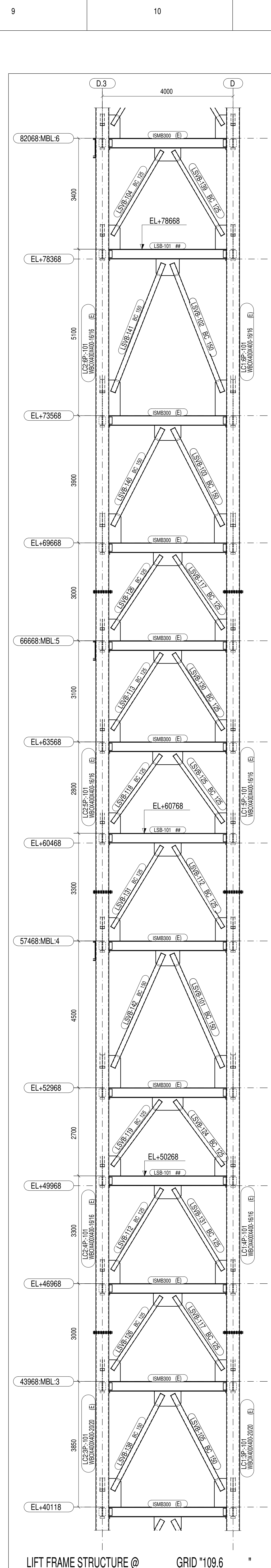
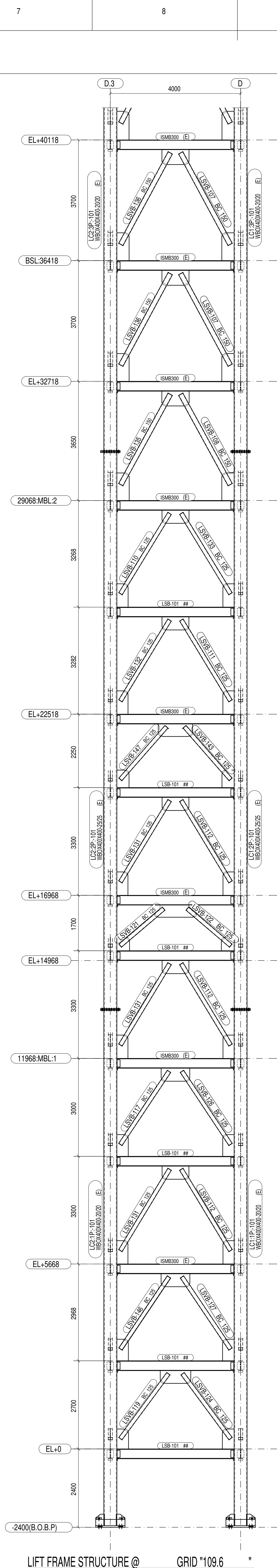
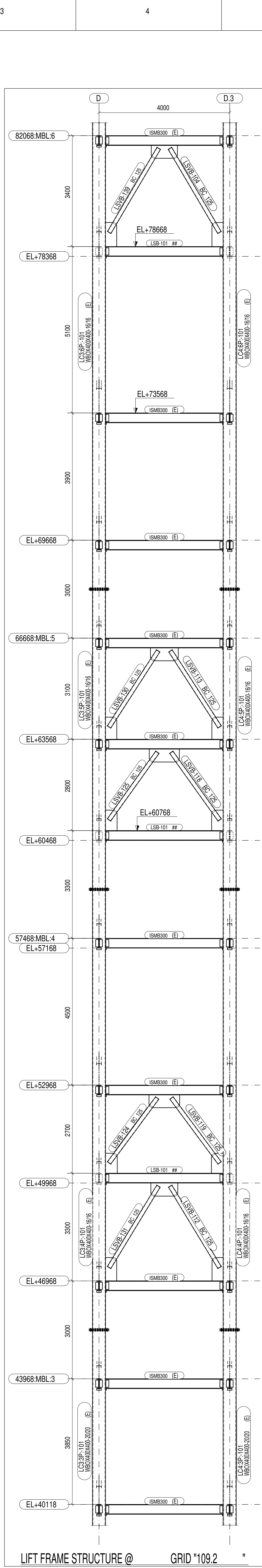
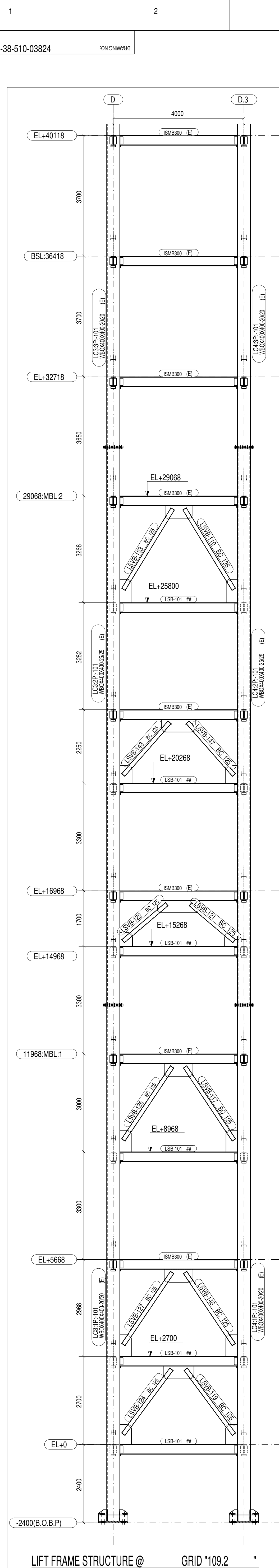
READ ALONG NOTE:
THIS DRAWING IS READ ALONG WITH DRG NO 0-38-510-03824 , FOR FRAME AT GRID 109.2 & 109.6.

SYMBOL NOTATIONS
IF MEMBER IS SUFFIXED WITH
@ : ISMB125
: ISMB150
\$: ISMB200
@@ : ISMB250
: ISMB300
\$\$: ISMB400

LEGEND:-
WBOX- WELDED BOX COLUMN
WPI- WELDED PLUS-I COLUMN
* - TENTATIVE
EJ - ERECTION JOINT.
TOC - TOP OF COLUMN.
BOBP - BOTTOM OF BASE PLATE.
B.S.L - BUNKER SUPPORT LEVEL.
BOG - BOTTOM OF GIRDER.
TOS - TOP OF STEEL
BGP-BOTTOM OF GIRDER PIN
MBL - MAIN BRACED LEVEL
CCB - COLUMN CONNECTING BEAM
HSFG - HIGH STRENGTH FRICTION GRIP.
P - WELDED PLUS I.
P9004506316----> P - WELDED PLUS I
(E.g) 900 - COLUMN DEPTH
450 - FLANGE WIDTH
63 - FLANGE THICKNESS
16 - WEB THICKNESS

39	LSVB-142	1.38-510-03377		No	183.663
38	LSVB-141	1.38-510-03376		No	201.426
37	LSVB-140	1.38-510-03375		No	168.577
36	LSVB-139	1.38-510-03374		No	123.704
35	LSVB-138	1.38-510-03373		No	167.231
34	LSVB-137	1.38-510-03372		No	162.918
33	LSVB-136	1.38-510-03371		No	163.444
32	LSVB-135	1.38-510-03370		No	162.108
31	LSVB-134	1.38-510-03369		No	121.606
30	LSVB-133	1.38-510-03368		No	121.837
29	LSVB-132	1.38-510-03367		No	122.134
28	LSVB-131	1.38-510-03366		No	118.046
27	LSVB-130	1.38-510-03365		No	121.289
26	LSVB-129	1.38-510-03364		No	116.770
25	LSVB-128	1.38-510-03363		No	111.369
24	LSVB-127	1.38-510-03362		No	116.236
23	LSVB-126	1.38-510-03361		No	113.325
22	LSVB-125	1.38-510-03360		No	104.798
21	LSVB-124	2.38-510-08598		No	97.230
20	LSVB-123	2.38-510-08597		No	60.413
19	LSVB-122	2.38-510-08596		No	83.761
18	LSVB-121	1.38-510-03359		No	85.619
17	LSVB-120	1.38-510-03357		No	90.476
16	LSVB-119	1.38-510-03356		No	88.893
15	LSVB-118	1.38-510-03355		No	97.582
14	LSVB-117	1.38-510-03354		No	92.820
13	LSVB-116	1.38-510-03353		No	97.264
12	LSVB-115	1.38-510-03352		No	96.932
11	LSVB-114	1.38-510-03351		No	96.675
10	LSVB-113	1.38-510-03350		No	133.597
9	LSVB-112	2.38-510-08594		No	134.265
8	LSVB-111	2.38-510-08593		No	124.477
7	LSVB-110	2.38-510-08592		No	128.236
6	LSVB-109	2.38-510-08591		No	99.891
5	LSVB-108	1.38-510-03347		No	140.712
4	LSVB-107	2.38-510-08590		No	174.169
3	LSVB-106	2.38-510-08589		No	158.168
2	LSVB-105	2.38-510-08588		No	181.359
1	LSVB-104	2.38-510-08587		No	22

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		Bharat Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620014		DATE 19.06.2018
REPT ST CODE 122	PROJ 17795.035	SCALE NTS	WEIGHT (KG) 17795.035	DRAWING NO. 0-38-510-03823
TITLE LIFT STRUCTURE FRAME @ D & D.5				REV 0



- NOTES:-
1. MATERIALS AND OTHER REQUIREMENTS ARE GIVEN PER BOILER ONLY.
 2. MANUFACTURING REQUIREMENTS SHALL BE AS PER RELEVANT QCP (LATEST REV.)
 3. FOR MANUFACTURING DETAILS AND PRODUCTION NOTES, REFER THE FOLLOWING DRGS.
3-35-110-00995 FOR PRODUCTION NOTES.
3-35-440-00697 FOR WBEAM & WBX MANUFACTURING DETAILS.
0-35-311-15788 FOR HORIZONTAL BRACING PRODUCTION NOTES.

THIS DRAWING IS READ ALONG WITH DRG NO :0-38-510-03823 , FOR FRAME AT GRID D & D.3.

SYMBOL NOTATIONS
IF MEMBER IS SUFFIXED WITH

@ : ISMB125

: ISMB150

\$: ISMB200

@@ : ISMB250

: ISMB300

\$\$: ISMB400

LEGEND:-

WBOX- WELDED BOX COLUMN

WPI- WELDED PLUS-I COLUMN

* - TENTATIVE

EJ - ERECTION JOINT.

BOBB. BOTTOM OF BASE PLATE

BSI - BUNKER SUPPORT LEVEL

BOG - BOTTOM OF GIRDER.

TOS - TOP OF STEEL.

BGP-BOTTOM OF GIRDER P

MBL - MAIN BRACED LEVEL

CCB - COLUMN CONNECTING BEAM

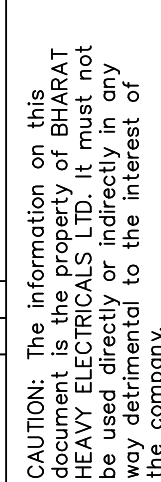
ASFG. - HIGH STRENGTH

00004506316 - B WELDED BLUES

(E.g) 900 - COLUMN DEPTH
 450 - FLANGE WIDTH
 63 - FLANGE THICKNESS
 16 - WEB THICKNESS

QTY	ITEM	DESCRIPTION	STD	DRAWING NUMBER	ITEM NO	MATERIAL	MATERIAL SPEC	UNIT	UNIT WEIGHT	QTY	WEIGHT
37	LSWB-147 BC125			2-38-510-08569				N3	73.641		
36	LSWB-146 BC12X			1-38-510-03381				N3	89.893		
35	LSWB-145 BC125			1-38-510-03380				N3	156.056		
34	LSWB-144 BC125			1-38-510-03379				N3	128.498		
33	LSWB-143 BC125			1-38-510-03378				N3	156.240		
32	LSWB-142 BC150			1-38-510-03377				N3	183.663		
31	LSWB-141 BC150			1-38-510-03376				N3	201.426		
30	LSWB-140 BC150			1-38-510-03375				N3	168.577		
29	LSWB-139 BC125			1-38-510-03374				N3	123.704		
28	LSWB-138 BC150			1-38-510-03373				N3	167.231		
27	LSWB-136 BC150			1-38-510-03371				N3	183.444		
26	LSWB-135 BC150			1-38-510-03370				N3	166.103		
25	LSWB-133 BC125			1-38-510-03368				N3	121.806		
24	LSWB-132 BC125			1-38-510-03367				N3	121.837		
23	LSWB-131 BC125			1-38-510-03366				N3	122.134		
22	LSWB-130 BC125			1-38-510-03365				N3	118.046		
21	LSWB-127 BC125			1-38-510-03362				N3	116.236		
20	LSWB-126 BC125			1-38-510-03361				N3	116.770		
19	LSWB-125 BC12X			1-38-510-03360				N3	113.325		
18	LSWB-124 BC125			1-38-510-03359				N3	111.269		
17	LSWB-122 BC125			2-38-510-08567				N3	97.230		
16	LSWB-121 BC125			2-38-510-08566				N3	90.413		
15	LSWB-119 BC125			1-38-510-03358				N3	85.761		
14	LSWB-118 BC125			1-38-510-03357				N3	85.819		
13	LSWB-117 BC125			1-38-510-03356				N3	90.475		
12	LSWB-113 BC125			1-38-510-03352				N3	92.880		
11	LSWB-112 BC125			1-38-510-03351				N3	97.284		
10	LSWB-111 BC12X			1-38-510-03350				N3	96.582		
9	LSWB-110 BC125			1-38-510-03349				N3	93.675		
8	LSWB-108 BC125			2-38-510-08564				N3	124.579		
7	LSWB-107 BC125			2-38-510-08563				N3	130.065		
6	LSWB-106 BC125			2-38-510-08561				N3	139.236		
5	LSWB-104 BC125			1-38-510-03347				N3	99.801		
4	LSWB-103 BC125			2-38-510-08560				N3	140.712		
3	LSWB-102 BC150			2-38-510-08559				N3	174.169		
2	LSWB-101 BC150			2-38-510-08558				N3	158.168		
1	LSB-101 SMB300			2-38-510-08557				N3	181.359		

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT		NAME		SIGNATURE		DATE	
BHARAT Heavy Electricals Ltd UNIT: HIGH PRESSURE BOLLER PLANT TRICHUPALLI - 620014		DIN		SR/SK/PC		18.06.2018	
		CNC		ACN		19.06.2018	
		APPC		M/REDMAN		19.06.2018	
DESG 12T		ALTERNATOR 450 KW		PROTECTION 		SCALE NTS	
COC 12T				WEIGHT (KG) 13494.215			
TITLE		DRAWING NO.					
LIFT STRUCTURE FRAME @ 109 2 & 109.6		0-38-510-03824					
		REV					
		0					



List of Mandatory Spares – Yadadri TPS

1) Vendor to take note of the following.

- Vendor to supply all the items as per this list.
- The mandatory spare supplied shall be of the same make and model as used in the main elevator and shall be one to one replaceable.
- Vendor to mandatorily quote for all the items in this list. If any of the item mentioned in this list is not applicable or not required as per vendor's design, vendor to supply suitable alternate/substitute item in its place. The alternate/substitute item, if offered, shall be indicated against respective sl no.

SL No	Description	Qty	If Quoted - YES Else - Alternate Item Description
1	Control Panel		
1.1	Copper Contactors	20 Nos .of each type/rating & size	
1.2	Carbon Contacts	20 Nos .of each type/rating & size	
1.3	Compression Spring	20 Nos .of each type/rating & size	
1.4	Interlocking switch	20 Nos .of each type/rating & size	
1.5	Contactors	2 Nos .of each type/rating & size	
1.6	Coils for contactors	4 Nos .of each type/rating & size	
1.7	Relays	4 Nos .of each type/rating & model	
1.8	Relay Coils	20 Nos .of each type/rating & model	
1.9	Resistors	200% of total quantity in one elevator	
1.10	Capacitors	200% of total quantity in one elevator	
1.11	Suppressor Unit	200% of total quantity In one elevator	
1.12	Control Rectifier	2 Nos .of each type/rating & size	
1.13	Impulse module	200% each type	
1.14	Electronic Control Card	2 Nos. each Card	
2	Lift Car		
2.1	Fixed contact assembly	12 Nos .of each type/rating & size	
2.2	Moving contact assembly	12 Nos .of each type/rating & size	

2.3	Operating Lever	8 Nos .of each type/rating & size	
2.4	Roller & Tyre	10 Nos .of each type/rating & size	
2.5	Dry reed switch	2 Nos .of each type/rating & size	
2.6	Cam arrangement	2 Nos .of each type/rating & size	
2.7	Roller assembly	4 Nos.	
2.8	Set of Over Travel Limit Switch	4 Nos.	
3	Entrances		
3.1	Fixed contact assembly	20 Nos each type	
3.2	Moving contact assembly	20 Nos each type	
3.3	Lock arm assembly	20 Nos each type	
3.4	Roller tyre	12 Nos. each type	
3.5	Landing push button station C/W push & cover plate	20 Nos each type	
4	Miscellaneous		
4.1	Push button to suit car and landing push stations	24 Nos each type	
4.2	Indicator units to suit car and landing indicators	24 Nos each type	
4.3	Emergency battery unit	4 Nos.	
5	Winding Unit		
5.1	Set of Brake shoe lining with rivets	12 sets each type	
5.2	Brake Coil	4 Nos.	
5.3	Hoist Motors	2 Nos. each type and rating	
5.4	Set of Bearings for all motors	2 Sets	
5.5	Micro switches	4 Nos. each type	
5.6	Solenoids	4 Nos.each type	
5.7	Trailing Cable	200% length of each type	



**PURCHASE / M M / BOI
ENQUIRY DEVIATION**

429-024

PAGE

1 OF 1

**SCHEDULE OF DEVIATION TO
BOI ENQUIRY NO:**

1702100052

15.07.2021

DESCRIPTION

Supply and Erection & Commissioning of Goods Elevators & its spares for
Yadadri TPS 5x800 M W – Unit No.1-5 Projects

SPECIFICATION

TDC:TCI:263:RC Rev 07

Quality Plan

Vendor Quality Plan

**Project Specific Data Sheet /
Drawings**

CI:1823:ELEV REV 00.

DOCUM ENT REFERENCE

BHEL ENQ. CALLED FOR

FIRM 'S ALTERNATIVE OFFER

CERTIFIED THAT OTHER THAN THE ABOVE DEVIATIONS, WE ARE ACCEPTING ALL THE OTHER
SPECIFICATIONS AND REQUIREMENTS IN FULL TO YOUR ENQUIRY.

STATION:

DATE:

SIGNATURE OF FIRM 'S REPRESENTATIVE

FIRM SEAL

NOTE 1. Deviations should be taken only in the extreme case.

2. If necessary, use additional sheets with page control number.

/ On Bidder's office letter pad /

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,

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 the yellow color field)

INTEGRITY PACT

Between

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

and

.....(description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

Preamble

The Principal intends to award, under laid-down organizational procedures, Contract/s for supply of **Goods Elevators (Capacity 3000 Kg) & Mandatory Spares for Elevator**. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint independent External Monitor(s), who will monitor the tender process and the execution of the Contract for compliance with the principles mentioned above.

Section 1- Commitments of the Principal

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:

1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.

1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder(s)/ Contractor(s)

2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender Process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. 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.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 Foreign Bidder(s)/ Contractor (s) shall disclose the name and address of the agent and representative in India and Indian Bidder(s)/ Contractor (s) to disclose their foreign principle or associates. The Bidder(s)/ Contractor (s) 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.

2.2 The Bidder(s)/ Contractor (s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

2.3 The Bidder(s)/ Contractor (s) shall not approach the courts while representing the matters to IEMs and will await their decision in the matter.

Section 3 - Disqualification from Tender process and exclusion from future Contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors" framed by the Principal.

Section 4 - Compensation for Damages

4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/Bid Security.

4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

Section 5 - Previous Transgression

5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/ Contractors / Sub-Contractors

6.1 The Bidder(s)/ Contractor(s) undertake(s) to obtain from all subcontractors a commitment consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20 % of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).

6.2 The Principal will disqualify from the tender process all Bidders who do not sign this pact or violate its provisions.

Section 7 - Criminal Charges against violating Bidders/ Contractors /Sub-contractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section 8 -Independent External Monitor(s)

8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.

8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all Contract documentation of the Principal including that provided by the Bidder(s) / Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-Contractor(s). The Monitor is under Contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non-disclosure agreement.

8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.

8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an interesting bidder regarding any aspects of the tender which allegedly restricts competition or bias towards some bidder. At the same time, it must be understood that IEMs are not consultant to the management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.


Dr. KEVIN ARK KUMAR
Manager
Materials Management
BHEL, TRICHY - 620 014


N. MOHAN
Engineer
Materials Management / BOI
BHEL, TIRUCHY - 620 014.

8.6 for ensuring the desired transparency all complaints received by them and give their recommendations / views to CMD, BHEL at the earliest. They may also send their report directly to the CVO and the commission in case of suspicion of serious irregularities requiring legal / administrative action. IEMs will tender their advice on complaints within 10 days as far as possible.

8.7 The IEMs would examine all complaints received by them and give their recommendations / views to CMD. BHEL, at the earliest. They may also send their reports directly to the CVO and the commission, in case of suspicion irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible/

8.8 The CMD, BHEL shall decide the compensation to be paid to the monitor and its terms and conditions.

8.9 IEM should examine the process integrity they are not expected to concern themselves with fixing of responsibility of the officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organization

8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.12 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration:

9.1 This Pact shall be operative from the date of IP is signed by both the parties till the final completion of contract of successful bidder and for all other bidder 6 months after the Contract has been awarded. Issues like warranty guarantee etc., should be outside the purview of IEMs.

9.2 If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified as above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

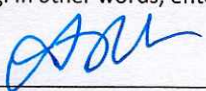
10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those Bidders / Contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.


For & On behalf of the Principal
(Office Seal)

Dr. KEVIN ARK KUMAR
Manager
Materials Management
BHEL, TRICHY - 620 014

Place: Trichy
Date: 15.07.2021

Witness:
(Name & Address of Witness)


N. MOHAN
Dy. Engineer
Materials Management / BOI
BHEL, TIRUCHY - 620 014.

<SIGNATURE OF BIDDER / CONTRACTOR>

For & On behalf of the Bidder/ Contractor
(Office Seal)

Place:
Date:

Witness: <SIGNATURE OF WITNESS>
(Name & Address of Witness)