RITES LIMITED (A Govt. of India Enterprise)

RITES BHAWAN, Plot No.-1, Sector-29, Gurgaon-122001

TENDER NOTICE

RITES Limited, on behalf of "SAIL-RITES Bengal Wagon Industry Private Limited" (SRBWIPL), Kulti (Distt. Bardhman), West Bengal, invites sealed bids from reputed firms having experience in supply, installation, Testing & Commissioning of the following items: -

Tender No.	Item Description	Qty	Estimated cost ₹ (in Lakhs)	EMD ₹ (in Lakhs)	Sale of Tender	Tender Submission Upto 1400 hrs	Tender Opening At 1430 hrs	Cost of Tender Document
RITES/RW&IE/ SRBWIPL/ M&P-17/2011	EOT CRANE (Cap. 5/2 Ton each)	2 nos.	108.00	2.16	24/08/2011 To 23/09/2011	26/09/2011	26/09/2011	Rs. 5000/-
RITES/RW&IE/ SRBWIPL/ M&P-18/2011	WELDING EQUIPMENT	50 nos.	202.74	3.86	24/08/2011 To 26/09/2011	27/09/2011	27/09/2011	Rs. 5000/-
	CUTTING EQUIPMENT	7 nos.		0.195				
RITES/RW&IE/ SRBWIPL/ M&P-19/2011	SURFACE TRAVERSER (Cap. 35 Tons)	1 no.	130.00	2.60	24/08/2011 To 27/09/2011	28/09/2011	28/09/2011	Rs. 5000/-

The detailed NIT, eligibility criteria and tender specification and documents can be downloaded from RITES web site at **www.rites.com**. w.e.f. the date of sale of tender document. Further addendum/corrigendum if any will be published on the RITES web site only.

The interested bidder may purchase the respective tender documents in person during office hours from **Sr. Dy. General Manager (Mech.), 2nd floor, Central Wing, RITES Bhawan, Plot No.-1, Sector-29, Gurgaon. Tele No.-01242818227,** on payment of above mentioned (non-refundable) in the form of DD/Banker's Cheque favoring RITES Limited, payable at Gurgaon. Tender documents will not be sent by post/ courier. Downloaded tender documents can be submitted along with fee of Rs.5000/- as applicable in the form of a Demand Draft/banker's cheque.

General Manager (Mech.)
For and on behalf of SRBWIPL, Kulti

SIZE : 12CM(W) X 7CM(H)

RITES Limited
(A GOVERNMENT OF INDIA ENTERPRISE)

RITES BHAWAN, NO. 1, SECTOR – 29,
GURGAON – 122 001 HARYANA – INDIA

TENDER NO: RITES/RW&IE/SRBWIPL/M&P-17/2011

TENDER DOCUMENT
FOR

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, ERECTION, TESTING & COMMISSIONING INTO SERVICE
OF
ELECTRICALLY OPERATED OVERHEAD CRANES

FOR
SAIL-RITES BENGAL WAGON INDUSTRY PRIVATE LIMITED
KULTI (Distt. BARDHMAN)
WEST BENGAL

August, 2011

Issued to :
M/s. _____
_____
_____
_____

NOT TRANSFERABLE

INDEX

TENDER NO: RITES/RW&IE/ SRBWIPL /M&P-17/2011

TENDER DOCUMENT

FOR

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, ERECTION, TESTING & COMMISSIONING INTO SERVICE

OF

ELECTRICALLY OPERATED OVERHEAD CRANES

SECTION – I

INVITATION FOR TENDERS

SECTION – I

INVITATION FOR TENDERS

TENDER NO: RITES/RW&IE/ SRBWIPL/M&P-17/2011

1.0 Sealed Tenders are invited by RITES Ltd., on behalf of "SAIL-RITES Bengal Wagon Industry Private Limited." (SRBWIPL), Kulti (Distt. Bardhman) W.B from eligible bidders by themselves or through their authorized agents, meeting qualification criteria stated in the Bid documents for design, manufacture, supply, delivery and installation & commissioning of following Electrically Operated Overhead Cranes Qty 2 Nos. as per the detailed specifications. The tender particulars are given under:

Tender No.	Item No.	Location of Erection	Brief Item description & Qty Reqd.	Qty	Completion Period	EMD/ Bid Security (Rs).
RITES/RW&IE/ SRBWIPL/M&P-17/ 2011	1	New gantry in SPP-2	5 T EOT Crane span 18 Mtrs.	2 Nos.	7 months from the approval of GA drawings.	Rs. 2,16,000/- (Two Lakh sixteen thousand only)

2.0 Interested bidders may obtain further information and inspect the bidding documents at the office of RITES at the address given below and at RITES website www.rites.com for reference
General Manager (RW&IE)
Technical Service Division,
RITES LTD, RITES Bhawan, 2nd Floor (central Wing)
No.1 Sector, 29, Gurgaon -122001 (Haryana), India
(Telephone No 0124-2818227, Fax No. 0124-2571627)

3.0 Eligible interested bidders may purchase the Tender Documents on any working day between 1000 hrs to 1600 hrs w.e.f 24/08/2011 to 23/09/2011 from the office mentioned above on submission of written application along with the non-refundable cost of Tender document indicated above in the form of Demand Draft/Bankers Cheque favouring "RITES Ltd", payable at Gurgaon.

4.0 The tenders must be submitted in the above office on or before 1400 hours on 26/09/2011 accompanied with Earnest Money Deposit/ Bid Security as indicated in the Bid document. Bids not accompanied with the Earnest Money Deposit/Bid Security will be summarily rejected.

5.0 Bids will be opened in presence of the Bidders' representatives who chose to attend at 1430 hours on 26/09/2011 at the office mentioned above. In case of unscheduled holiday on the closing/opening day of the tender, the next working day will be treated as scheduled prescribed day for closing and opening of the tender, the time notified remaining the same.

6.0 Bids submitted by the bidders who do not meet the qualification requirements as required or whose bids (both commercial and price) are not valid and open for acceptance for a period mentioned in the bid document from the date of opening of tender, will be rejected.

7.0 Issue of tender document to bidder will not automatically mean that the bidder is qualified for the Award of contract. The bidders will be required to fulfill the qualification criteria given in the tender document before being considered eligible for award of contract. No condition/deviation which is either additional or in modifications of the tender conditions shall be included in the bid submitted by the bidder. If the bid contains any such conditions or deviations from the tender conditions, the bid shall be rejected.

8.0 In case of any discrepancies, the provisions of this Invitation for Bids shall take precedence over all the bidding documents.

9.0 The tender document is not transferable.

10.0 Bidders are required to put their sealed tender in the Tender Box personally or through their authorized representative. Bids in sealed condition shall also be received by post/ courier provided that the bid is received before the stipulated date and time, in the receipt section of RITES Office Ground Floor, RITES Bhawan, Plot No.1, Sector-29, Gurgaon – 122001, Haryana, India. RITES Ltd shall not be held responsible for the delay/non-receipt of the bid.

11.0 The Tender No. and Title shall be super scribed on the sealed envelopes.

12.0 RITES Limited does not bind themselves to accept the lowest or any offer or to give reasons for their decision. RITES Limited also reserves the right to reject or accept or divide the offer between more than one tenderer without assigning any reason.

For and on behalf of SRBWIPL
M/s. RITES Ltd.,

TENDER NO: RITES/RW&IE/ SRBWIPL/M&P-17/2011

TENDER DOCUMENT
FOR

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, ERECTION, TESTING & COMMISSIONING INTO SERVICE
OF
ELECTRICALLY OPERATED OVERHEAD CRANES

SECTION – II

INSTRUCTIONS TO TENDERER

SECTION – II

INSTRUCTIONS TO TENDERER

A. INTRODUCTION

1.0 GENERAL INSTRUCTIONS

1.1 RITES Limited (a Govt. of India Enterprise) has been engaged by "SAIL-RITES Bengal Wagon Industry Private Limited." (SRBWIPL), Kulti, as a Project Management Consultant for Turnkey Execution of Enhancement of Wagon Production capacity project. Under the terms of the contract between RITES Ltd. And SRBWIPL, Rites Ltd. Have to produce and install various Machinery & Plant besides execution of Civil and Electrical works.

1.2 In this connection RITES Ltd. (hereinafter referred as **Purchaser**), invites sealed tenders/bids for and on behalf of SRBWIPL (hereinafter referred as **Owner**) from reputed manufacturers or their authorized agents for design, manufacture, supply, delivery, erection, testing and commissioning into service of 2 (Two) nos. of Electric Overhead Traveling (EOT) Crane(s) -5T capacity as per the specification enclosed at **Section –V** of the bid document..

1.3 All information in the offer must be in English or Hindi. Offer in a language other than English or Hindi must be accompanied by its authenticated translation in English, failure to comply with this may render the offer liable to be rejected. In the event of any discrepancy between the offer in a language other than English and its English translation, the English translation will prevail.

2.0 COST OF BIDDING

2.1 The Bidder shall bear all costs associated with the preparation and submission of his bid, and Purchaser will in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

3.0 SITE VISIT

3.1 The Bidder is advised to visit and examine the Site of works and its surroundings and obtain for himself on his own responsibility and cost, all information that may be necessary for preparing the bid and entering into a contract execution.

B. THE BIDDING DOCUMENTS

4.0 CONTENT OF BIDDING DOCUMENTS

4.1 The Scope of work, bidding procedures and contract terms are stipulated in the Bidding Documents and shall include along with its enclosed Annexures:-

i) Invitation for Tenders

ii) Instructions to Tenderer

iii) Conditions of Contract

iv) Technical Specifications, Drawings.

v) Bid form and Price Schedules

vi) Annexures & proforma

4.2 The bidder should examine all instructions, terms and specifications in the Bidding documents. Failure to furnish all information required by the Bidding Documents or submission of a bid not substantially responsive to the Bidding Documents in every respect will be at the Bidder's risk and may result in rejection of his bid.

5.0 CLARIFICATION OF BIDDING DOCUMENTS

5.1 A prospective Bidder requiring any clarification of the Bidding Documents may contact by writing or fax to the Purchaser no later than 15 days prior to dead line for submission of bids.

6.0 AMENDEMENT TO BIDDING DOCUMENTS

6.1 At any time prior to the last date for submission of bids, the Purchaser may for any reason modify the bidding documents by an amendment. The amendment in the form of an addendum will be sent to all prospective Bidders, in writing by fax and will be binding upon them. The Bidders should promptly acknowledge receipt thereof by fax to the Purchaser.

6.2 In order to afford prospective bidders reasonable time in which to take the amendment into account in preparing their tenders, the Purchaser may at his discretion extend the last date for the submission of tender.

C. PREPARATION OF BIDS

7.0 QUALIFYING REQUIREMENT OF TENDERERS

7.1 Bidder must fulfill the following pre-qualification criteria, without which the offer is liable to be rejected.

7.2 **FINANCIAL ELIGIBILITY CRITERIA**

7.2.1 The average annual turnover of the bidder should not be less than Rs. 5 crores. The average turnover shall be calculated for the best 3 years out of last 5 years period ending 31.3.2011, Copy of audited annual reports/Balance sheet for last 5 years shall be submitted along with the bid (Financial Turnover will be taken as under the head “income” in audited P/L statement and excluding nonrecurring income from other sources and stock etc. only).

7.2.2. In case OEM authrorise its dealer to quote on its behalf with a specific proviso to fulfill contractual liability in case of default by the dealer, then turnover of OEM shall be reckoned with. Bidder shall enclose Annexure-2 of the tender duly signed & stamped in their offer. In case of more than 01 OEM, every OEM must fulfill financial criteria independently.

7.3 **TECHNICAL/ OTHER ELIGIBLE CRITERIA**

7.3.1 The tenderer should provide satisfactory evidence, acceptable to the purchasers that he is a regular licensed manufacturer of EOT cranes and has adequate plant and manufacturing capacity.

7.3.2 Bidder must have sold and commissioned not less than 10 (Ten) Nos. of 5 T or high capacity cranes during the last 3 years within India. Certificates indicating the date of supply and commissioning from at least four clients and list of supplies made in last 3 years as per annexure- I must be enclosed with the offer.

7.3.3 At least 5 nos. EOT cranes manufactured/supplied and commissioned by the bidder should have been in satisfactory service for at least one year prior to the opening date of this tender. Performance Certificates issued by at least two such clients from the list provided by the bidder in this tender should be enclosed along with offer which must not be older than six months form the opening date of this tender.

8.0 DOCUMENTS FOR SUBMISSION

8.1 Following documents will be submitted along with the Bid:

i) Original Tender document duly signed and stamped on each page by the Authorized representative of the firm.
ii) Bid security / Earnest Money Deposit.
iii) Payment of Rs.5000/- (Rupees five thousand only) (non- refundable) in the form of DD/ Bankers cheque favoring RITES Limited payable at Gurgaon. (in case of document downloaded by bidder).
The small scale industries units recognized by NSIC (National Small Industries Corporation Limited, India) are exempted from depositing the cost of tender document subject to submission of necessary proof that bidder are registered for the item/items tendered for
iv) Reference list of Purchasers of similar of higher capacity equipment in India as per **Annexure -1.**
v) Annual Report of last five years.
vi) Bid Form and Price Schedule as per Section V for each item 1 to 6.
vii) Authorization letter form manufacturer, incase of Agents **Annexure -2**.
viii) **Annexure- 3, Annexure- 4 and Annexure- 5** regarding Commercial details and deviation statements
ix) All formats and statements duly filled in.

9.0 EARNEST MONEY DEPOSIT (EMD) / BID SECURITY

9.1 The Bidder shall provide Bid Security/ Earnest Money Deposit for the amount indicated in Section-I: **Invitation for Tender** in the form of crossed Banker's Cheque/ Demand Draft drawn in favor of RITES Ltd, payable at Gurgaon from a Nationalized/ Scheduled Bank in India.

9.2 If the bidder withdraws / amends his bid for any reason during its validity, the bid security shall be forfeited. Failure to submit bid security would lead to rejection of offer.

9.3 The small scale industries units recognized by NSIC (National Small Industries Corporation Limited, India) are exempted from depositing the Earnest Money subject to submission of necessary proof. Exemption of NSIC units is however subject to the monetary limit shown in the certificate and their being registered for the item/items tendered for.

9.4 No interest will be payable by the Purchaser on the Bid Security/ EMD submitted by the Bidder.

9.5 The EMD of successful Bidder will be returned after the Contract Performance cum Warranty Guarantee is furnished as per the contract. In event of contract being awarded to NSIC registered firm seeking exemption from Performance cum Warranty Guarantee Bond, they should submit necessary proof for items and monetary limit of their registration with NSIC.

9.6 The EMD of unsuccessful Tenderers shall be returned by the Purchaser immediately after finalization of the contract.

9.7 The Earnest Money/Bid Guarantee shall remain deposited with the Purchaser for the period of 180 days from the date of opening of Tenders. If the validity of the offer is extended, the Earnest Money Deposit/Bid Guarantee duly extended shall also be furnished, failing which the offer after the expiry of the aforesaid period shall not be considered by the Purchaser.

9.8 Any tender not accompanied by earnest money in one of the approved forms is liable to be summarily rejected.

10.0 CURRENCY

10.1 Prices shall be quoted and paid in Indian Rupees (INR) only.

11.0 PRICES

11.1 Prices quoted shall be CIP (KULTI, Distt: Bardhman.West Bengal, India) including all handling, loading & unloading, sea & inland transportation, transit insurance, foundation, installation, testing and commissioning, first fill of lubricants and other consumables and training.

11.2 **Prices shall be inclusive of temporary permit, freight, insurance and all such costs. Prices shall remain firm and no escalation shall be permissible. All statutory taxes and duties, any other charges as applicable, within India shall be included in the offered price.**

11.3 **Excise duty and CST/ VAT shall be paid by the Purchaser as per actual on production of documentary evidence**.

12.0 VALIDITY OF OFFER

12.1 The offer shall be kept valid for acceptance for a minimum period of one Hundred and Eight days (180), Calendar days from the date set for opening of tenders.

13.0 FORMAT AND SIGNING OF BIDS

13.1 Each page of the original tender document shall be duly signed and stamped by Bidders' authorized representative.

13.2 All changes/ alterations/ corrections in the tender shall be signed in full by the Bidders' authorized representative signing the bid with date. **NO ERASING AND/OR OVER WRITING IS PERMISSIBLE.**

13.3 The Tenderer should avoid ambiguity in his offer e.g., if his offer is to his standard sizes/lengths/dimensions, he should specifically state them in details without any ambiguity. Brief descriptions such as "standard lengths" etc. should be avoided in the offer.

D. SUBMISSION OF BIDS

14.0 BID SUBMISSION

14.1 All Amendments/Revisions to the tender document issued by Purchaser subsequently, if any, must be signed and submitted along with the tender. The tender submitted by the Tenderer shall take into account all such amendments/revisions.

14.2 Bids shall be submitted in sealed SINGLE ENVELOP containing documents specified in 8.1 above.

14.3 The envelop shall super scribed " TENDER NO., OPENING DATE AND TIME, BIDDERS NAME AND ADDRESS".

14.4 Complete sealed bids shall be addressed to Group General Manager (Mech), RITES Ltd.,2nd Floor, Central Wing, RITES Bhawan, No. 1-Sector-29, Gurgaon, Haryana – 122 001. INDIA.

14.5 **DEADLINE FOR SUBMISSION OF BIDS**

14.5.1 Bids must be received by the Purchaser at the address mentioned above, within the date and time of bid submission indicated in the Section-I: Invitation for tender.

14.5.2 Any bid received after the deadline for submission of bids, will be rejected and returned unopened.

14.5.3 E-mail or facsimile bids will be summarily rejected.

15.0 MODIFICATION AND WITHDRAWAL OF BIDS

15.1 The bidder may modify or withdraw its bid after the bid's submission, provided that written notice of the modification or withdrawal is received prior to the deadline prescribed for submission of bids. A withdrawal notice may also be sent by fax but followed by a signed confirmation copy, post marked not later than the deadlines for submission of bids.

15.2 No bid may be modified subsequent to the deadline for submission of bids.

15.3 No bid may be withdrawn in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Tenderer. Withdrawal of a bid during this interval shall result in forfeiture of its Earnest Money Deposit/ Bid Security.

16.0 OPENING OF BIDS BY PURCHASER

16.1 Purchaser will open the bids, in the presence of Bidders' representatives who choose to attend, at the place, date and time specified in the Section-I: Invitation for tender. The Bidders' representatives who are present shall sign a register evidencing their attendance.

16.2 The Bidders' names, bid modifications or withdrawals, bid prices, discounts, and the presence or absence of requisite bid security and such other details as the Purchaser, at its discretion, may consider appropriate, will be announced at the opening.

E. EVALUATION AND COMPARISON OF BIDS

17.0 PRELIMINARY EXAMINATION

17.1 The Purchaser will examine the bids to determine whether they are complete in all respects, having any computational errors, documents have been properly signed, and bids are generally in order.

17.2 The Purchaser may waive any minor informality, non-conformity, or irregularity in a bid which does not constitute a material deviation, provided such waiver does not prejudice or effect the relative ranking of any bidder.

17.3 Prior to the detailed evaluation, the Purchaser will determine the substantial responsiveness of each bid to the bidding documents. The Purchaser's determination of bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

17.4 If a bid is not substantially responsive it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by corrections of non-conformity.

18.0 CORRECTION OF ERRORS

18.1 Tenders will be checked and corrected for any arithmetical errors in computation and summation as follows:

18.1.1 Where there is a discrepancy between amounts in figures and in words, the amount in words will prevail. Where there is a discrepancy between the unit price and the total amount derived from the multiplication of the unit price and the quantity, the unit price will prevail.

18.1.2 If a bidder does not accept the correction of errors as outlined above, his bid shall be rejected.

19.0 EVALUATION OF THE OFFERS

19.1 Bids meeting Technical /other eligible criteria as per Cl.7.2 & 7.3 will only be considered. The tenders received will be evaluated to ascertain the best and lowest acceptable tender in the interest of the Purchaser, as specified in the specifications and tender documents.

19.2 The comparison shall be between total cost and all other charges of the equipment offered at destination, SRBWIPL/Kulti covering complete scope of services.

19.3 The **COMMERCIAL EVALUATION of bids fulfilling the technical /other eligible criteria (clause 7.3) will only be considered and** will take into consideration the following:

i) Ex works cost of basic equipment plus ED, VAT/ST, Freight, Insurance, Service tax etc.

ii) Cost of concomitant accessories plus taxes as applicable

iii) Cost of foundation, installation and commissioning plus applicable taxes

iv) Cost of training.

19.4 **OPTIONAL ITEMS – Not for commercial evaluation –** to be quoted separately

i) Item-wise cost of any optional accessories, spares and wire ropes & slings as specified in Technical Specification; Section –IV to be quoted separately

ii) Tenderers are required to quote for a comprehensive Annual Maintenance Contract for 5 years after expiry of warranty for machine supplied against this specification, which will be inclusive of all spares, material and labour costs. The duties and taxes as applicable should be indicated separately. All consumables except Diesel/ fuel, lubricating oils or coolant shall form a part of the scope of comprehensive AMC.

iii) Any other items of spares considered essential by the tenderers for two years of normal maintenance, to cover the complete range of mechanical, hydraulic and electrical equipment, to be quoted separately.

20.0 CLARIFICATION OF BIDS

20.1 During evaluation of the Bids, Purchaser may at his discretion ask the Bidder for clarification of his bid. The request for clarification and response shall be in writing and no change in price or substance of the bid shall be sought, or permitted.

21.0 ACCEPTANCE OF TENDER AND SIGNING OF CONTRACT

21.1 The Purchaser may accept a tender for a part or whole of the quantity offered, reject any tender without assigning any reason and may not accept the lowest tender or any tender.

21.2 Acceptance of tender will be communicated by Fax, Express Letter for formal acceptance of tender. In case where acceptance is indicated by Fax or Express Letter, the formal acceptance of tender will be forwarded to the Contractor as soon as possible, but the Fax, or Express Letter should be deemed to conclude the contract.

21.3 Within Fifteen (15) days of receipt of Acceptance advice, the successful bidder shall sign and date the contract and return it to the Purchaser.

22.0 EFFECT AND VALIDITY OF OFFER

22.1 The submission of any offer connected with these specifications and documents shall constitute an agreement that the Tenderer shall have no cause of action or claim, against the Purchaser for rejection of his offer. The Purchaser shall always be at liberty to reject or accept any offer or offers at his sole discretion and any such action will not be called into question and the Tenderer shall have no claim in that regard against the Purchaser.

22.2 Offers shall be deemed to be under consideration immediately after they are opened and until such time the official intimation of award is made by the Purchaser to the Tenderer. While the offers are under consideration, Tenderers and/or their representatives or other interested parties are advised to refrain from contacting the Purchaser by any means. If necessary, the Purchaser will obtain clarifications on the offers by requesting for such information from any or all the Tenderers, either in writing or through personal contact, as may be considered necessary. Tenderers will not be permitted to change the substance of their offers

after the offers have been opened.

23.0 GENERAL

23.1 The Tenderers must ensure that the conditions laid down for submission of offers detailed in the preceding paras, are completely and correctly fulfilled. Tenders, which are not complete in all respects as stipulated above, may be summarily rejected.

23.2 The Tenderer shall also submit "Statement of Deviations" from Tender Conditions and Technical Specification as per **Annexure - 4 and 5** along with the offer.

24.0 CHECK LIST

24.1 A check list has been included in Section – VI of the bid document. This has been designed to help the Tenderers in submitting their offer in completeness. An incomplete offer is liable to be rejected. The Tenderers must fill this Check List and submit along with their offer in their own interest.

TENDER NO: RITES/RW&IE/ SRBWIPL/M&P-12/2011

TENDER DOCUMENT

FOR

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, ERECTION, TESTING & COMMISSIONING INTO SERVICE

OF

ELECTRICALLY OPERATED OVERHEAD CRANES

SECTION – III

CONDITIONS OF CONTRACT

SECTION – III

TENDER NO: RITES/RW&IE/SRBWIPL/M&P-12/2011

FOR

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, ERCTION, TESTING AND COMMISSIONING OF ELECTRIC OVERHEAD TRAVELLING CRANES

CONDITIONS OF CONTRACT

1.0 DEFINITIONS

1.1 "**Purchaser**" means RITES Limited, Gurgaon (A Government of India Enterprise) having its Registered Office at SCOPE Minar, Laxmi Nagar, New Delhi-110092 and Corporate Office at RITES Bhawan, No 1, Sector-29, Gurgaon – 122001, acting through the Group General Manager , RITES Bhawan, 2nd Floor (Central Wing), No 1, Sector-29, Gurgaon – 122001 and shall include their legal representatives, successors and permitted assignees for and on behalf of "SAIL-RITES Bengal Wagon Industry Private Limited." (SRBWIPL), Kulti, Distt. Bardhman, WB.

1.2 "**Owner'** shall mean "SAIL-RITES Bengal Wagon Industry Private Limited." (SRBWIPL), Kulti, Distt. Bardhman, WB, India and shall include their legal representatives, successors and permitted assignees.

1.3 '**Contractor/Supplier'** shall mean the Bidder/ Tenderer whose bid has been accepted by the Purchaser for the supply of stores/ Plant & Equipment (PE) and award of work is placed and shall include his legal representatives, successors and permitted assigns unless excluded by the terms of the contract.

1.4 '**Contract'** means Contract entered into between the **Purchaser** & the **Supplier** through Letter of Award, together with the contract documents referred to therein, they shall include Letter of Award, Bid Invitation, Instructions to Tenderers, Conditions of Contract, Technical Specification, and the other conditions specified in the Advance Acceptance & Letter of Award (LOA) and a formal agreement, if executed.

2.0 SCOPE OF WORK

2.1 SUPPLY

2.1.1 The Plant and Equipment (PE) to be supplied shall be new and as per specifications given in Section –IV**.** PE offered must be of proven design and capacity. It must be capable of continuous operation for long periods in temperatures ranging from 0^{O} to 50^{O} C and humidity upto 98%.

2.2 INSTALLATION AND COMMISSIONING

2.2.1 The Bidder shall also install, test and commission the equipment at place of delivery as per Delivery Schedule including schedule for making foundations, erection and commissioning and prove out the same. All facilities required for the above such as, road mobile cranes, lifting tools & tackles, welding or cutting machine, first fill of all lubricants/oils and consumables etc shall also be as per the Technical Specification IV.

2.2.2 RITES /SRBWIPL shall provide the site required for erection. Also required electricity, water, shop compressed air and EOT crane facilities (wherever available) for erection, testing and commissioning shall be provided by SRBWIPL free of cost, to the extent feasible. Clear covered space for storage of material required for working, construction of foundation and installation of the machine will be provided by SRBWIPL.

2.2.3 Detailed foundation drawings (four copies) along with other civil works (if any) and related diagrams, electrical and mechanical, electrical load and circuit diagrams required should be submitted as specified in the Technical Specification Section IV.

3.0 DELIVERY

3.1 The equipment shall be delivered at SRBWIPL, Kulti Distt. Bardhman, West Bengal, India within the delivery period mentioned in Invitation for Bids; Section –I and the Delivery schedule indicated in Cl.50 Technical Specification; Section – IV,

3.2 Bidder should submit their delivery schedule of equipment at SRBWIPL, Kulti, India including final commissioning and completion/ prove out along with the offer.

4.0 PAYMENT TERMS

4.1 Payment of equipment shall be made as per the payment terms given below subject to recoveries, if any, by way of Liquidated Damages, TDS and any other taxes, as per the Government of India guidelines:

4.1.1 80% of CIP site value of supplies portion including 100% of taxes and duties on receipt of equipment at SRBWIPL, Kulti and on production of Inspection Clearance Certificate, proof of receipt in good condition at site by RITES along with bill.

4.1.2 Balance 20% of supply portion on completion of installation, commissioning and training and issue of Proving out Test Certificate *and on* providing Performance cum Warrantee Guarantee as per the contract. Where, however, the installation and commissioning of the machine is delayed or put off beyond 90 days of the receipt of the goods at the ultimate destination due to express written instructions of the Purchaser / Consignee, the balance 20% payment shall be released to the supplier on his furnishing an additional Bank Guarantee to cover this 20% value.

4.1.3 The bank guarantee as mentioned above should be from a Nationalized Indian Bank as per acceptable format of RITES/ Purchaser.

4.2 100% payment of installation / commissioning and training charges and services shall be made on issue of Commissioning Certificate.

4.3 All payments shall be made in Indian Rupees. The payments shall be made by Cheque/ Electronic Clearance System (ECS) on a Bank in India.

5.0 INSURANCE

5.1 The equipment covered under the contract shall be fully insured against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery for an amount equal to 110 percent (%) of total contract price of the equipment from "warehouse to warehouse" on "All Risks" basis including War Risks and Strike.

6.0 PACKING & MARKING

6.1 PACKING

6.1.1 Contractor shall pack at his own cost the equipment sufficiently and properly for transit by rail/road/air as provided in the contract so as to ensure their being free from loss or damage on arrival at their destination. He shall decide the packing for the equipment by taking into account the fact that the equipment will have to undergo arduous transportation before reaching the destination and will have to be stored and handled in tropical climatic conditions (including monsoons) before being put to actual use. It is, therefore, imperative that packing for every item is decided by taking into consideration, inter-alia, the above vital factors, so as to eliminate damage/deterioration of items in transit/transshipment/handling or during storage.

6.1.2 Each package shall contain a packing note specifying the name & address of the Contractor, the number and date of the Letter of Award (LOA), mark as indicated in LOA and the description of the stores and the quantity contained therein.

6.1.3 The packing advices should bring out the weight, dimensions and size of each bundle/ package. Where it is not possible to give weight of the bundles/packages, the Contractor must indicate the volume of the bundles/packages, the details of contents of each bundle/package, number of bundles/packages and total weight of the items supplied.

6.2 MARKING

6.2.1 The following particulars should be stenciled with indelible paint on all the materials/packages or as mentioned in the contract :

(i) LOA/Contract No.
(ii) Item Description
(iii) Abbreviated Owner/Purchaser marks.
(iv) Box/Package No
(v) Gross/Net weight in Kgs
(vi) Dimensions (L x W x H) in Cms

7.0 TRANSPORTATION

7.1 Where the Contractor is required under the Contract to transport the equipment to a specified place of destination defined as the Project Site, transport to such place of destination in the Purchaser's country, including insurance and storage, as shall

be specified in the Contract, shall be arranged by the Contractor, and the related cost shall be included in the Contract price.

8.0 **PERFORMANCE GUARANTEE (PG BOND)**

8.1 The successful bidder is expected to submit within 15 days of signing of Letter of Acceptance (Award Letter) an unconditional, irrevocable, Performance Bank Guarantee from a Nationalized Indian bank or Scheduled Bank established in India and acceptable to RITES Ltd as per Proforma enclosed at **Annexure 6** for an amount equivalent to 10% of the contract value.

8.2 Non submission of above performance guarantee within stipulated time should lead to forfeiture of Bid Security/ EMD.

8.3 In event of contract being awarded to NSIC registered firm seeking exemption from Performance Guarantee Bond, they should submit necessary proof for items and monetary limit of their registration with NSIC.

8.4 The performance guarantee shall be released on completion of the above period and satisfactory performance of the contract.

8.5 The purchaser shall be entitled and it shall be lawful on his part to forfeit the amount of the Performance Guarantee Bond in whole or in part in the event of any default, failure or neglect on the part of the Contractor in the fulfillment or performance in all respects of the contract under reference or any other contract with the Purchaser or any part thereof to the satisfaction of the Purchaser and the Purchaser shall also be entitled to deduct from the amount of the PG Bond any loss or damage which the purchaser may suffer or be put by reason of or due to any act or the default, recoverable by the Purchaser from the Contractor in of the contract under reference or any other contract and in either of the events aforesaid to call upon the contractor to maintain the amount of PG Bond at its original limit by furnishing fresh Bank Guarantee of additional amount, provided further that the Purchaser shall be entitled to recover any such claim from any sum then due or which at any time thereafter may become due to the contractor under this or any other Contracts with the Purchaser.

8.6 The PG Bond shall remain in force and effect during the period that would be taken for satisfactory performance and fulfillment in all respects of the contract, i.e. till satisfactory commissioning of the equipment and consignee's works, and shall in the first instance be valid upto 12 (twelve) months after the last date of delivery of goods contracted to be purchased provided that before the expiry of the date of validity of the P.G. Bond, the contractor on being called upon by the Purchaser from time to time, shall obtain from the Guarantor Bank, extension of time for validity thereof for a period of six months on each occasion. The extension(s) aforesaid, executed on non-judicial stamp paper of appropriate value must reach the Purchaser at least thirty (30) days before the expiry of P.G. Bond on each occasion.

8.7 As and when the amendment is issued to the contract, the contractor shall within fifteen days of receipt of such amendment furnish to the Purchaser an amendment to the PG Bond rendering the same valid for the contract as amended and up to twelve months beyond the extended date of delivery or commissioning.

8.8 The PG Bond or any amendment thereto shall be executed on a stamped paper of requisite money value in accordance with law. All expenses to be borne by the Contractor.

9.0 **INSPECTION**

9.1 RITES/ Purchaser reserves its right for pre-shipment / pre-dispatch inspection which may be carried out at manufacturer's / supplier's work by authorized representative of RITES to ensure that the material/ equipment, being supplied conform to the contractual specifications. Traveling, lodging and boarding expense of RITES' representative(s) shall be borne by RITES, but necessary facilities to carry out tests/ witness inspection shall be provided by the manufacturer/Supplier free of cost.

9.2 Manufacturer/ supplier shall give in writing, at least 10 days notice to RITES nominated inspection agency to enable it to depute its authorized representative to witness the inspection of the material/ equipment.

9.3 In case equipment fails or is found defective during inspection, as well as in those cases where equipment is not ready for inspection at the appointed time and dates, total cost of re-inspection including travel, lodging and boarding of the inspection officials shall be to manufacturer's / supplier's account.

10.0 **WARRANTY**

10.1 Contractor shall provide complete warranty against any manufacturing defects, design and such other defects for a period of 24 months from the date of Commissioning or 30 months from the date of supply whichever is later. To this effect, the contractor shall provide a Warranty Bond from a Nationalized Indian bank or Scheduled Bank established in India and acceptable to RITES Ltd as per Proforma enclosed at **Annexure 7** for an amount equivalent to 10% of the contract value.

10.2 All the defects during the warranty period shall be removed by the Contractor at his own cost within reasonable period of time as agreed with RITES representative.

10.3 All replacement and repairs the Purchaser shall call upon the Contractor to deliver or perform under this warranty shall be delivered and performed by the Contractor within 15 days, promptly and satisfactorily. The warranty period shall be extended by the number of days the machine remains under breakdown during the warranty period, the warranty period of such part(s) replaced and/or repairs and parts immediately connected there to shall also be extended for a period of 24 months from the date of such replacement and/or repair.

10.4 The warranty herein contained shall not apply to any material which shall have been repaired or altered by the Purchaser, or on his behalf in any way without the consent of the Contractor, so as to effect the strength, performance or reliability or to any defects to any part due to misuse, negligence or accident. The decision of the Purchaser in regard to Contractor's liability and the amount, if any, payable under this warranty shall be conclusive and final.

11.0 **AFTER SALES SERVICE AND SUPPORT**

11.1 Tenderers are required to quote for a comprehensive Annual Maintenance Contract for 5 years after expiry of warranty for machine supplied against this specification, which will be inclusive of all spares, material and labour costs. The duties and taxes as applicable should be indicated separately. All consumables except Diesel/ fuel, lubricating oils or coolant shall form a part of the scope of comprehensive AMC.

11.2 Bidder should indicate clearly "after sales service and support" network available in India indicating the facilities available and response time for Kulti, Distt. Bardhman/West Bengal.

11.3 Offer for such equipment which do quote for AMC as per clause 11.1 above and not have repair and maintenance base/ authorized agent for repairs within India are likely to be rejected.

12.0 **SPARE PARTS**

12.1 The bidder shall guarantee availability of all spare parts for a period of at least 10 years from the date of purchase order.

13.0 **INDEMNITIES**

13.1 The supplier shall indemnify and keep the Purchaser indemnified against all actions, proceedings claims, damages, costs and expenses arising from the incorporation in or use of work of any such articles, processes or supplies made under this agreement. Supplier shall at all times indemnify the Purchaser against all claims which may be made in respect of Stores for infringement or any right protected by patent, registration of design or trade mark and shall take all risk accidents or damages which may cause a failure or the supply of the whatever cause arising and the entire responsibility for the sufficiency of all the means used by the supplier for the fulfillment of the contracts provided always that in the event of any claim in respect of alleged break of letter patent, registered design or trade marks being made against the Purchaser the Purchaser shall notify the supplier of the same and the Supplier should at his own expenses settle and dispute or conduct any litigation that arise there from and the Purchaser will stand absolved of all responsibilities in that connections.

14.0 **LIQUIDATED DAMAGES**

14.1 If the bidder fails to supply the material / equipment or complete the work given under this contract within the agreed delivery schedules mentioned herein or any extension thereof authorized by the Purchaser and/or fails to fulfill their obligations under this contract, the Bidder shall be liable to pay liquidated damages and not by way of penalty, a sum equal to ½ (half) percent per week of delay in supply of complete equipment subject to maximum of 10 (Ten) percent of the contract value. The compensation shall be payable by the Bidder without prejudice to the rights and remedies available to the Purchaser in respect of any fault/ default by the Bidder.

15.0 **PENALTY FOR DELAY IN COMMISSIONING**

15.1 The successful bidder or his agent shall install and commission the machine/ equipment within the stipulated time as shown in the tender / contract. This time will be applicable from the date of intimation from RITES in respect of readiness for installation of the machine. The time schedule includes the time for installation in cases where installation is also to be undertaken by the Supplier.

15.2 The time allowed for installation and commissioning of the machine by the successful bidder or his agent shall deemed to be the essence of the contract. In case of delay in commissioning of the machine on the part of the successful Bidder, the Purchaser shall be entitled to recover liquidated damages and the successful Bidder shall be liable to pay liquidated damage at the rate of ½% per

week of the total contract value. Provided always that the entire liquidated damages to be paid under the provision of this clause shall not exceed 10%(ten percent) of the total contract value. After expiry of 5 months period from the date of default i.e. from the date of call for commissioning by RITES, Purchaser will be at liberty to invoke the Performance cum Warranty guarantee bond submitted by the supplier.

15.3 Continuance of commissioning work after expiry of stipulated time will also not absolve the penalty as stated above.

15.4 The decision of the Purchaser, whether the delay in commissioning has taken place on account of reasons attributed to the successful bidder shall be final.

16.0 TERMINATION

16.1 TERMINATION FOR DEFAULT:

16.1.1 Purchaser may, without prejudice for breach of contract, after 10 days from written notice of default sent to Supplier, terminate this contract in whole or in parts;

i) If he fails to deliver full or part consignment within the time period specified in the contract or any extension thereof granted by Purchaser

ii) If he fails to perform, any other obligations under the contract; or

iii) If he, in either of the above circumstances, does not rectify his failure within a period of 30 days (or longer period as specified by the Purchaser) after receipt of the default notice from Purchaser.

16.1.2 In the event RITES terminates the contract in whole or in part, pursuant to above, RITES may procure, upon such terms and in such manner as it deemed appropriate, equipment/ plant similar to those undelivered, and Supplier shall liable to RITES for any excess costs for such similar equipment/plant.

16.2 TERMINATION FOR INSOLVENCY

16.2.1 RITES may at any time terminate the contract by giving written notice to Supplier without any compensation, if the supplier becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right to action or remedy which has accrued or will be accrued thereafter to RITES.

17.0 ARBITRATION/ SETTLEMENT OF DISPUTES

17.1 MUTUAL SETTLEMENT OF DISPUTES

17.1.1 Except where otherwise provided for in the contract, all questions and dispute relating to any matter directly or indirectly connected with this agreement shall in the first place be resolved through mutual discussions, negotiations, deliberations and consultation between both the parties.

17.2 CONCILIATIONS

17.2.1 If the efforts to resolve all or any of the disputes through mutual settlement fail, such dispute shall be referred to the sole conciliator to be appointed by General Manager (Mech), RITES Ltd.

17.2.2 The conciliator shall make the settlement agreement after the parties reach agreement and shall give an authenticated copy thereof to each parties.

17.2.3 The settlement agreement shall be final and binding on the parties. The settlement agreement shall have the same status and effect of an arbitration award.

17.3 **ARBITRATION**

17.3.1 If the efforts to resolve all or any of the disputes through conciliation fails, such disputes shall be referred to the sole arbitrator to be appointed by, General Manager (Mech), RITES Ltd.

17.4 **GENERAL**

17.4.1 Subject to aforesaid conditions the provisions of the **Arbitration and Conciliation Act 1996** or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the conciliation and arbitration proceedings under this clause.

18.0 JURISDICTION

18.1 The contract shall in all respect to construe and operative in conformity with Indian Law and subject to the Jurisdiction of Gurgaon Courts, India.

19.0 FORCE MAJEURE

19.1 If at any time, during the continuance of the contract, the performance in whole or in part by either party of any obligation under this contract shall be prevented or delayed by reason of any war, hostility, acts of public enemy, epidemics, civil commotion, sabotage, fires, floods, explosions, quarantine restrictions, strikes, lockouts or act of God (hereinafter referred to "event") provided notice of happening of any such event is given by one party to the other within 21 days from the date of occurrence thereof, 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 of delay in performance, and deliveries under the contarct shall be resumed as soon as practicable after such has come to an end or ceased to exist, and the decision of the Engineer- in- charge as to whether the deliveries have been so resumed or not, shall be final and conclusive, PROVIDED FURTHER that if the performance in whole or part or any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, either party may at its option terminate the contract provided also that the purchaser shall be at liberty to take over from the contractor at a price to be fixed by the Engineer- in – Charge, which shall be final, all unused, undamaged and acceptable materials, bought out components and stores in course of manufacture in the possession of the contarctor at the time of such termination or such portion thereof as the purchaser may deem fit accepting such material, bought out components and stores as the contactor may with the concurrence of the purchaser elect to retain.

20.0 REMOVAL OF REJECTED STORES

20.1 On rejection of any stores submitted for inspection at a place other than the premises of the Contractor, such stores shall be removed by the Contractor at his own cost subject as herein after stipulated, within 21 days of the date of intimation of such rejection.

20.2 All rejected stores shall in any event and circumstances remain and always be at the risk of the Contractor immediately on such rejection. If such stores are not removed by the Contractor within the period aforementioned, the Inspector/Inspecting Agency may remove the rejected stores and either return the same to the Contractor at his risk and cost by such mode of transport as the Purchaser or Inspector may decide, or dispose of such stores at the Contractor's risk and on his account and retain such portion of the proceeds, if any, from such disposal as may be necessary to recover any expense incurred in connection with such disposals (or any price refundable as a consequence of such rejection). The Purchaser shall, in addition, be entitled to recover from the Contractor handling and storage charges on the rejected stores after the expiry of the time-limit.

21.0 QUANTITY VARIATION

21.1 The Purchaser reserves the right to increase or decrease the quantity upto 30% of the quantity offered by the successful tenderers at the rates & other terms and conditions offered by them. The tenderers are bound to accept the increase or decrease in the quantity under this clause at the time of placement of contract or during the currency of the contract. While operating this clause the quantity shall be rounded off to the nearest whole number. However, if the tendered quantity is 1 No, Purchaser reserves the right to increase the quantity under this clause to 2 Nos.

TENDER NO: RITES/RW&IE/SRBWIPL/M&P-17/2011

TENDER DOCUMENT

FOR

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, ERECTION, TESTING & COMMISSIONING INTO SERVICE

OF

ELECTRICALLY OPERATED OVERHEAD CRANES

SECTION – IV

TECHNICAL SPECIFICATION

SECTION - IV

TECHNICAL SPECIFICATION FOR ELECTRIC OVERHEAD TRAVELING CRANES

SPECIFICATION NO. RITES/RW&IE/SRBWIPL/EOT/2011

IMPORTANT NOTES AND INSTRUCTIONS TO BIDDERS

I) The tenderers are required to give confirmation for compliance of the clauses of these specifications and deviations if any with reasons, advantages and disadvantages to avoid back reference in proforma as per **Annexure- 4 and 5.**. Offers will be ignored in absence of the proforma duly signed.

ii) General Arrangement Drawings will be sent to RITES/Consignee by the "Contractor" within FOUR weeks of the issue of Letter of Acceptance. The "Contractor" should ensure that drawing sent to RITES/ Consignee (CEO/SRBWIPL) is complete in all respects. RITES/ Consignee (CEO/SRBWIPL), on receipt of these GA drawings will inform the contractor or approve if there are no shortcomings within 2 weeks of receipt of GA drawings. These defects/ deficiencies/ shortcomings should be removed by the contractor and revised GA drawings re-submitted within one-week. The changes in GA drawings should be undertaken by contractor by deputing his representative at the Consignee's place, if required.

iii) The delivery period shall commence from the date of approval of General Arrangement Drawings by RITES/Consignee. If the contractor fails to deliver the stores of any installation thereof within this period fixed for such delivery in the contract or as extended, the action for failure will be considered by way of recovery of LD etc.

iv) The bidder in his offer submitted against the tender should clearly indicate his capacity for supply of tendered cranes within stipulated delivery period.

v) If an order is placed on the firm, the firm will have to advise the RITES/Consignee well in advance regarding requirement of road permit and assistance required from RITES/ Consignee, if any, so that delay in delivery on this account is avoided.

vi) Bidders should furnish information on **Appendix- I** and **Appendix - II** In case of any discrepancy in the information submitted against **Appendix – I** and **Appendix – II** and that mentioned in clauses, the information submitted against **Appendix –I & Appendix II** shall be binding.

vii) The bidders are required to submit the quotation of cranes considering classifications and designed wherever duty factors are involved as per IS-3177-1977. The mention of IS-3177-1977 elsewhere in technical specifications should be considered for general mechanism and components as applicable where duty factor as per old classification are not valid.

viii) Tenderers shall quote separately for cranes, DSL and charges for its erection & commissioning at premises of the Consignee, separately. Tenderers shall also quote separately for all the lifting chain and wire ropes as per enclosed Price Schedule. Tenderers are also to quote for a comprehensive Annual Maintenance Contract for 5 years for the after expiry of warranty for machine supplied against this

specification, which will be inclusive of all spares, material and labour costs. The duties and taxes as applicable should be indicated separately. All consumables except Diesel/ fuel, lubricating oils or coolant shall form a part of the scope of comprehensive AMC

1.0 SCOPE OF SUPPLY

1.1 The specifications cover the design, manufacture, supply, installation, testing and Commissioning of Electric Overhead Traveling cranes of Capacity and class of duty shown in **Schedule-I.**

1.2 The Scope of supply shall include but not be limited to the following along with necessary fittings, fixtures and ancillaries.

i) Bridge structure with platform and hand railing

ii) Track wheels for longitudinal and cross travel

iii) Traveling mechanism for longitudinal and cross travel

iv) Hoisting mechanism.

v) Brake Mechanism separately for long travel, cross travel and hoisting.

vi) Trolley

vii) Service Platform

viii) Pendant or combination as per details at **Schedule-I**.

ix) Electrical motors, control gear and equipment.

x) Gantry Rails supply, laying and fixing on the existing fabricated steel structures as per the **GA drawing of shed enclosed at appendix-III.**

1.3 **Tenderers shall quote separately for individual cranes, including charges for erection &commissioning at premises. Item-wise cost of spares as indicated in Schedule-II shall be separately quoted.**

1.4 **Any other items of spares considered essential by the tenderers for two years normal maintenance, to cover the complete range of mechanical, hydraulic and electrical equipment, shall also be quoted for separately.**

1.5 **Tenderer shall quote for wire ropes and slings required for each EOT crane separately as per Schedule-IV.**

2.0 DESIGN

2.1 The cranes shall be designed, manufactured, erected and tested generally in accordance with the following specifications:

- IS:3177-1999 (latest) - Indian Standard Code of Practice for electric overhead traveling Cranes.
- IS:807-1976 (or latest) - Indian Standard Code of Practice for design, manufacture, erection and testing (structural portion) of cranes and hoists.
- IS:800 -1984 (or latest) – Indian Standard code of practice for General Construction in steel.

2.2 The design of the crane structure as well as all the component parts of the crane mechanism shall conform to class of duty indicated in **Schedule-I.** The class of duty is based on design parameters stipulated in IS:807-1976 (or latest).

2.3 The stipulations in these specifications are complementary to those set out in the Indian Standards Specifications - 3177, 807 & 3938. If any of the conditions mentioned in these specifications is at variance with that of the ISS, the technical specifications here under shall prevail.

2.4 The cranes shall be supplied complete in all respects. The tenderer shall furnish complete details regarding type, material of construction, specifications and special features, if any, for the main items. Any variations from the specifications shall be brought out with reasons for the same. Any variations involving lower standards of design, performance and rating are not acceptable.

2.5 Necessary information regarding the conditions under which the crane is to be used, together with other particulars necessary for manufacture and erection of the crane, are given in **Schedule-I.** The bidders should visit the actual site to assess local conditions that often affect manufacturer's programmes for commissioning and installation and to ensure that various structural requirements are incorporated in the final design of the crane. Unfamiliarity with, or ignorance of, local conditions, will not be accepted later as adequate reason for delays in commissioning by successful bidder.

2.6 Manufacturer should supply with the offer information regarding the construction of the crane according to the proforma laid down in **Appendix-I & II and GA drawing as per Appendix III.** Separate **Appendix I & II** should be submitted for each crane.

3.0 PURPOSE FOR WHICH REQUIRED

3.1 The crane should be capable of :

i) Hoisting, i.e lifting and lowering of all loads upto the maximum specified working load at different specified speeds

ii) Traveling and traversing at specified speeds in both loaded and unloaded conditions.

iii) Working in the hot, humid and dusty atmosphere of Railway Workshops, Sheds and Depots, with environmental temperature ranging from 0 to 50 ^{O} C and relative humidity upto 98%.

4.0 RIGIDITY CONTROL SAFETY

4.1 The crane should be rigid, robust and of sturdy construction.

4.2 Crane controls should be conveniently located. The various controls should be suitably interlocked to prevent accidental movement of the crane.

4.3 Suitable limit switches, one each for long and cross travel and two each for main and auxiliary hoists, should be provided to stop the crane and prevent over-travel of various moving parts of the crane.

4.4 Electrical interlocks should be so provided that the two operations of traversing and traveling can be performed simultaneously, but while hoisting it is not possible to undertake either traversing or traveling.

4.5 Suitable buffers should be provided to prevent over travel of the crane mechanism in both longitudinal and cross traverse directions.

4.6 Suitable guards or enclosures should be provided on the crane to prevent inadvertent contact with down shop leads, or any other exposed electrical conductors and cables.

4.7 Suitable isolation switches and stop buttons should be provided to isolate the electric supply for maintenance, or in the event of an emergency.

4.8 A safety hand railing of tubular construction should be provided on bridge foot-walks, end carriages, staircases, the landing in the cabin, trolley and any other places where access has been provided. Railings should not be less than 1000 mm high with an intermediate member at a height of around 500mm.

4.9 Sheaves shall be provided with rigid guards to retain the wire ropes in the grooves. The guards shall fit close to the flange having a clearance not more than one-fourth of the diameter of the wire rope between the sheave and the inside of the guard. Bottom block sheaves shall be enclosed except for wire rope openings.

4.10 For outdoor cranes all electrical and mechanical equipment should be protected from the weather. All weather-proof covers should be easily removable. Details of protection provided should be indicated in the offer.

5.0 MAINTAINABILITY

5.1 Safe accesses of maintenance and removal of all mechanical, electrical and structural components must be ensured. All parts requiring replacement, inspection and lubrication should be easily accessible without the need of dismantling other equipment or structures. Arrangements for access to important components must include a cradle for inspection and maintenance of DSL, such cradle being conveniently accessible from the cabin or, for pendant operated cranes, by step ladder attached to the gantry at one end of the bay.

5.2 All electrical cables should be so laid that they are not liable to damage and can be easily inspected and maintained. The cables should be weatherproof. All weatherproof cables shall be either of LAP/SIEMENS/INDRAMAT, makes only.

5.3 All components for cranes of identical capacity and duty shall be interchangeable unless otherwise required.

5.4 In order to have access to the operator's cabin (if provided), long travel drive, current collectors, trolleys, etc., full length chequered plate platforms should be provided alongside both bridge girders. Access to the cabin from the bridge girder platform should be via a staircase. Minimum width of such staircase should be 600mm. Foot-walks should be of sufficient width to give at least 500mm clear passage at all points except between railing and bridge drive, where this clearance may be reduced to not less than 400mm.

5.5 Materials used for equipment and structural should be free from cracks, blow holes, laminations, pitting etc. Except for areas where a superior grade of materials is required, steel Grade 'B' quality shall be used throughout shall be to IS:2062 (latest). The supplier should submit material test certificates for structural

steel and mechanical component such as couplings, gears, gear boxes, rope drums, brake drums, shafts, wheels etc.

5.6 A tool box containing all tools required for the maintenance of the crane should be supplied with the crane as per enclosed list at **Schedule-III**.

5.7 Fasteners for pedestal blocks, gear boxes, etc., should be easily removable from the top of the platform.

5.8 Standardization and unification shall be carried out to the maximum extent for the various sub-assemblies constituting the mechanism of various cranes. Units shall be designed such that they can be dismantled quickly without disturbing the installation of the neighboring units with which they are connected. Units as a whole, such as wheel assembly gear box, brake, rope drum assembly, etc., shall be replaceable and interchangeable with other identical units. In design, care shall be taken to see that inventory is kept low and up time of 95% will have to be guaranteed.

6.0 STRUCTURAL DETAILS

6.1 The crane bridge should comprise of double girders of the plate box type.

6.2 In the main bridge girders, in addition to the required full length diaphragms, short diaphragms should be inserted wherever required to transmit the trolley wheel load to the web plates and to limit the maximum stress in the trolley rail to safe permissible limits. All diaphragms must bear against the top flange. Steel plates used for bridge girders and diaphragms should be Grade 'B' to IS:2062(latest).

6.3 Connections in general should be as per Clause 26 of IS-800(latest). Black bolts should not be used in the main structure of the crane, only bright bolts with ground stems being permissible. Bolts used in shear should be fitted into reamed holes.

6.4 The bridge girders should be connected to the end carriages by large gusset plates. Ground tight fit bolts in reamed holes should be used for bolted connections.

6.5 The calculated strength of riveted joints, or joints made by High Strength Friction Grip (HSFG) bolts should not be less than calculated net strength of the member. The calculated strength of other bolted joints in structural members should not be less than the net strength of the member plus 25%.

6.6 The supplier should have sound infrastructural facilities, good working system and practice for fabrication and machining of various structural components of EOT cranes. Some of the important requirements are listed below ;

6.6.1 All welding shall be carried out under the overall supervision of a welding Engineer/Supervisor specially trained in welding. The welding engineer/supervisor shall prepare the welding procedure in accordance with IS 9595-1980 "Recommendation for Metal Arc welding of Carbon and Carbon Manganese steels". In addition, the exact welding sequence should be followed for typical locations. The welding engineer/supervisor shall obtain design engineer's approval to the same. The welding Engineer/Supervisor shall also be responsible for actual implementation of the above mentioned approved welding procedure.

6.6.2 Welding Supervisor shall have received formal training from recognized institutions having specialized courses for Supervisor.

6.6.3 Details of edge preparation for welding shall be in accordance with IS 9595-1980 "Recommendation for Metal Arc welding of carbon steel and carbon manganese steels.

6.6.4 Automatic/Semi Automatic submerged Arc/Gas shielding shall be carried out according to IS or other International Specification.

6.6.5 Welders engaged in fabrication shall be subjected to approval tests in accordance with IS specification no. 7318 (part –I) "Approval tests for welders when welding procedure approval is not required- Part I fusion welding of steel"

6.6.6 All welding equipment and accessories should meet the requirements of the corresponding Indian Standard specification (or International Specifications where IS specification do not exist). The contractor shall be responsible for satisfying the Inspecting officer that all welding equipments and accessories being used meet these requirements.

6.6.7 Electrodes and wire flux combination used for fabrication should be from reputed makes of ESAB, Advani Oerlikon, Philips and Modi,etc.

6.6.8 Welding shall be performed in an approved and workman like manner. All welds shall be homogenous and show physical properties similar to those of parent metal. Finished welds shall be perfectly free from all defects such as porosity, burnt metal, inclusion etc. and shall present a smooth appearance.

6.6.9 When the welded joints are inspected no defects specially due to use of equipment and /or filler material shall be accepted. After welding the welded parts or assemblies should correspond to the dimensions required as mentioned in drawings.

6.7 All butt welds on structural members subject to tension should be radiographically tested. All other welds should be subjected to Magnaflux or Dye Penetration Test.

6.8 The box girders should be so constructed as to eliminate any possibility of accumulation of water or oil inside them. Special care should be taken with cranes for outdoor use to eliminate depressed areas or openings where water may accumulate and lead to corrosion.

7.0 END CARRIAGES

7.1 The crane bridge should be carried on end trolleys with double flanged solid forged wheels. The minimum end clearance on each side of the long travel wheels should be 10mm. The wheels should be mounted on fixed axle or suitable anti-friction spherical roller bearings which can be conveniently removed for maintenance.

7.2 End carriages should be designed to be strong enough to resist all stresses likely to be imposed upon them under varied service conditions, including collision with other cranes or stops. The length of the end carriages should be such that no other part of the crane is damaged in the event of a collision.

7.3 End carriages should be fabricated from rolled steel sections or plates, welded together to form a box. Suitable stiffening diaphragms should be provided wherever required. The material used should be steel Grade 'B' quality to IS:2062(latest). If more than two wheels are required, either compensating end carriage or suitable link and pin arrangement should be provided for connecting the two bogies.

7.4 Suitable jacking pads should be provided on each end carriage for jacking up the crane while changing track wheels. These jacking pads should not interfere with replacement of track wheels.

7.5 The end carriages should be fitted with suitable safety stops to prevent the crane from falling more than 25mm in the event of breakage of track wheel, bogie or axle. These safety stops should not interfere with the removal of track wheels.

8.0 BRIDGE RAILS (TROLLEY RUNWAY RAILS)

8.1 Bridge rails made of rail steel and should be fastened by suitable clamps spaced not more than 1000mm apart, with welded alignment blocks between every two clamps such that the distance of a clamp from any adjacent alignment block is not more than 500mm. Rail stops riveted or bolted or welded should be provided to prevent creep in the longitudinal direction. Square/Rectangular solid bars of appropriate steel which can be directly welded are also accepted as an alternative. Bidder should indicate size of standard rails or square or rectangular bars in the offer.

9.0 TROLLEY FRAME

9.1 The trolley frame should be welded rolled steel box section, designed to transmit the load to the bridge rails without undue deflection. It should be made rigid by providing suitable diaphragms. The material used should be steel Grade 'B' quality to IS: 2062(latest)

9.2 The drum bearings and supports for upper sheaves should be located so as to equalize the load on the trolley wheels as nearly as possible.

9.3 The trolley wheels should be double flanged. The axle bearings should be of spherical roller type. The bearing housing should be designed for easy removal of wheels and bearings for maintenance.

9.4 The top of the trolley frame should be plated all over, either at the top or bottom, except for opening(s) required for the ropes to pass through. The opening in the trolley frame should be such as to keep the ropes at a safe distance from any part of the trolley frame or equipment, to prevent damage at all positions of the bottom block.

9.5 All the mechanical and electrical equipment should be placed above the trolley top plate as far as practicable. For any parts placed below the trolley top plate, access for maintenance, repairs and replacement should be provided. Where the clearance between bottom member of trolley frame and the CT rail is over 25mm. the trolley should be fitted with substantial safety stops to prevent the trolley from falling more than 25mm in the event of breakage of track wheel, bogie or axle. These

safety stops should not interfere with the removal of wheel. Details of the arrangement should be explained in the offer.

10.0 RAIL WHEELS

10.1 The rail wheels shall be double-flanged with straight tread. They shall be capable of taking misalignments in span.

10.2 The wheels shall be of material $C_{55}Mn_{75}$, and shall be solid forged and heat treated to have minimum hardness of 300 to 350 BHN on the tread and flanges to minimum depth of 10 mm. The method of heat treatment shall be described in the offer.

10.3 The wheels should be shrink-fit on the axles, rather than being keyed on.

11.0 GENERAL MECHANICAL DESIGN

11.1 The general design of the crane mechanism shall be as per IS:3177-1999 (latest) & ISS:807-1976 (or latest). The various components of the mechanism are dealt with in detail in subsequent paragraphs.

11.2 Preferred number series should be used, as far as possible, at all stages of the design process. In particular, the hoisting and travel speeds as indicated at **Schedule-I**, if not already so indicated, should be rounded off while making the offer to the nearest figure in the R-10 Preferred Number Series, as given below for ready reference:

approx. 1.00, 1.25, 1.60, 2.00, 3.15, 4.00, 5.00, 6.30, 8.00 and 10.00.

12.0 ROPE DRUMS

12.1 The rope drum shall be designed to withstand the compressive stresses caused by the wound on rope and the bending stress due to beam action of the drum.

12.2 Pipes will be an acceptable alternative. The steel used shall be to IS:2062-1984(or latest) quality. The rope drum shall be stress relieved after fabrication. T-joints shall be radio graphically checked.

12.3 The drum shall be designed to take the entire length of the rope in a single layer. Free extra turns as specified in IS:3177 shall also be provided. The drum shall be flanged at both ends.

12.4 Cranes shall be designed with 4 rope falls upto 10.0 Tonnes capacity.

13.0 WIRE ROPES

13.1 Hoisting ropes, if of the conventional type, should be of 6x36 constructions and made out of the best plough steel having tensile strength of 180 Kg/sq.mm. Ropes should be parallel right hand lay as per IS;2266-1976(or latest). The wire rope

shall comply to clause 8.3 of IS:3177-1999. Tenderers should offer wire ropes of Usha Martin/Bombay wire rope makes only.

14.0 GEARING

14.1 The gearing in all motions should be of suitable case-carburising low carbon alloy steels and should conform to relevant Indian/International standards. They shall generally be in accordance with AGMA or IS:4460-1967(or latest). All gears and pinions must be made from forged blanks only. All gears should be hardened and profile ground for longer life and silent operation. The minimum surface hardness of pinions shall be between 266 to 300 BHN and that for gears shall be between 217 to 255 BHN. The difference in hardness of pinion and gear must not be less than 20 BHN.

14.2 Worm wheels and bevel gears must not be used. At all stages only helical gears should be used, except in planetary gear-boxes which can be spur type. Overhung or split gears and pinions should not be used.

15.0 GEAR BOXES

15.1 General : All gear boxes shall be of completely enclosed splash lubricated type. All gear boxes shall be of oil tight and sealed with compound or gasket. All gear shafts shall be supported in antifriction bearings mounted in the gear boxes. Gear boxes shall be cast, wrought or forged from low/medium carbon alloy steel and suitably heat treated. The fabricated gear boxes shall be stress relieved before machining and the method of doing so shall be explained in details in the offer. The internal surfaces of the gear box shall be painted with oil resisting paint. Gear boxes shall be provided with breather vents, easily accessible drain plugs, and a suitable oil level indicator such as a dip stick. Adequate radial clearances between the gear box inner surface and outside diameter of the gears shall be ensured and clearance proposed to be provided shall be indicated in the offer. The facial clearance between the inner surface of the gear box and the face of the nearest gear/pinions shall be at least 10mm.

15.2 **MH/AH LT and CT Gear boxes** : The motors shall be foot mounted and shall have split type gear boxes. These shall be of the conventional split type, designed to split horizontally at the shaft center line and fitted, so that the top half can be removed for inspection and repair without disturbing the bottom half.

16.0 DRIVES

16.1 The wheels of each end carriage should be driven by independent synchronized drive motors mounted near each end carriage.

16.2 A separate cross traverse motor should be used for cross traverse drive through a suitable gear box.

17.0 BRAKES

17.1 The hoisting, LT and CT motions shall be provided with fail safe Electro Hydraulic Thrustor brakes. For creep motion of hoist wherever this is specified as per **Schedule –I** an independent brake must be provided.

17.2 Any crane working outdoors should be provided with an additional brake for anchoring when it is left unattended or under stormy conditions. The storm brake together with the service brakes should be capable of holding the crane in position during stormy conditions. Wherever crane is working outdoor, the storm brake should be electro hydraulic thruster type.

17.3 The maximum braking torque to arrest long travel and cross traverse motions should not less than 100% of full load torque for each brake. For hoist motion, two brakes should be used and the braking torque for each brake should not be less than 125% of full load torque. One of the two hoist brakes shall be applied with a time lag of 3 seconds in relation to the first.

17.4 Double shoe brakes should be used for each drive. Brakes should be mounted on the input pinion shaft of all gear boxes. The brake shoe should be of hinged type. Brake levers should be forged and hinge pins should be provided with steel bushes at the bearing points.

17.5 Brake drums should be of forged or cast steel and should be completely machined. Brake drum diameter should be selected from preferred number series. Width of brake drum should be about 10mm more than the width of brake shoe on each side.

18.0 COUPLINGS

18.1 Motor shafts for MH/AH shall be connected to gear box input extension shaft through flexible gear coupling of low GD2 value. For driving the hoist drum gear type flexible coupling shall be used between the rope drum and hoist gear box, where the hub should not be integral with the output shaft, so as to avoid replacement of the whole shaft whenever there is wear and tear in the coupling.

18.2 Solid couplings should not be used.

18.3 All couplings shall be of medium carbon steel and shall be designed to suit the maximum torque that can be developed. Hardness of geared portion in the gear coupling shall be more than 250 BHN. Bolted connections shall be easily accessible for inspection and tightening.

19.0 ROPE SHEAVES

19.1 All sheaves should be of cast/forged steel or Blackheart malleable iron castings. They should be identical, with the exception of the equalizer sheave. The equalizer sheave should be mounted above the trolley floor and should be easily accessible and removable from the trolley floor level. The equalizer sheave should be arranged to turn and swivel in order to maintain rope alignment under all circumstances. Sheave grooves should be smooth finished for getting increased rope life. The supplier should further ensure that wire ropes are parallel with each other.

20.0 BEARINGS

20.1 Ball and roller anti-friction bearings shall be of reputed make. The acceptable makes will be NBC, SKF, FAG, NORMA, NRB, NTN and KOYO. In view of widespread use of spurious and reconditioned bearings, tenderers should confirm that they will submit, to the inspection agency, invoices from OEMs' or their authorized representative as proof of the use of genuine material.

20.2 For long and cross traverse wheels, spherical roller bearings shall be used. Bush bearings should not be used at any location.

20.3 Rated life of ball and roller bearings should not be less than the total life in working hours given in the IS Specification for a particular class of duty. Life of bearings should be calculated in accordance with manufacturer's recommendations.

20.4 Independent bearing housings on long shafts be split on the shaft center line to permit easy removal of the shaft. The bottom surface of all bearing pedestals should be machined, and should bear upon a machined surface.

21.0 LIFTING HOOK

21.1 Standard plain shank type trapezoidal section hooks should be used unless otherwise specified. These hooks should conform to the relevant Indian Standard Specifications IS: 15560 (latest). They shall be sourced from reputed manufacturers and source(s) should be mentioned in the bid.

21.2 Hooks should be mounted on grease lubricated anti-friction thrust bearings and a protective skirt should be fitted to prevent rotation of the hook. Proof load test as per Indian Standard Specification shall be conducted, either in-house or from a recognized test house. The certificate of proof load test with date of next due shall be furnished.

22.0 BUFFERS

22.1 Spring loaded or other suitable buffers should be fitted on the four corners of the crane also at the four ends of the bridge girders. Buffers should be rigidly bolted in place, preferably along the center line of the crane rail or trolley rail as the case may be. All buffers should have sufficient energy absorbing capacity to stop the bridge or trolley in either direction when traveling at a speed of least 40% full load rated speed. Bridge buffers should have a contact surface of not less than 125mm diameter.

23.0 LUBRICATION

23.1 Group lubrication, one for each of the end carriage and one for the trolley platform, should be provided for all grease lubricated bearings, parts of the hoist, cross traverse and long travel. The grease battery nipples should be located to facilitate regular greasing by the operator with standard equipment.

23.2 Bottom blocks and pedestal bearings should have independent greasing points. All lubricating pipe work should be securely fixed and protected from damage, and be accessible throughout.

23.3 A lubricating chart should be provided in the manual, indicating all lubrication points, the type of lubricants required and the recommended frequency of lubrication. These details should be repeated, and amplified if necessary, in the Maintenance Manual, which is to be supplied as per requirement indicated elsewhere in the specification.

24.0 DIMENSIONAL TOLERANCES

24.1 The contractor should ensure that the crane manufactured and erected to the tolerances specified below:

(i) Variation in Span	± 6mm
(ii) Diagonal on wheels	± 5mm
(iii) Long travel wheel alignment	± 1mm
(iv) Tilt of wheels or Balance Axle (Horizontal & Vertical)	+ 1mm/1000mm
(v) Trolley wheel gauge	± 3mm
(vi) Trolley track gauge	± 3mm

(vii) Difference in height between trolley rails[H] for different trolley track gauges(S) shall be within the following limits;

'S' (mm)	'H' (mm)
Upto 2500	4
2500 to 4500	6
Above 4500	8

24.2 Successful bidder should check the alignment of crane gantry before installation /erection of crane at site.

ELECTRICAL DETAILS

25.0 SCOPE OF SUPPLY

25.1 The scope of supply relating to electrical portion shall cover the following components;

i) Down shop leads(wherever required see clause 11 of **Schedule - I** to technical specification)

ii) Main current Collection

iii) Power disconnecting switch on the crane bridge walk way, to be provided, immediately after the main current collection gears.

iv) Motors

v) Protective Switch gears

vi) Motor control panels.

vii) Resistors (For slip ring motors only)

viii) Brakes

ix) Limit Switches

x) Socket outlets

xi) Power and control cables

xii) Lighting distribution panels.

xiii) Lighting fixtures and lamps

xiv) Cross traverse trailing flexible unarmored cables mounted on roller clamps and traveling over bottom flange of R.S.Joist should be provided, for movement of the pendent and drag link cable system. This shall be of reputed make like IGUS/RS Components & Control and shall be required for CT cable.

xv) Indicating lamps

xvi) Push Buttons

xvii) Two step jockey switches or push button (ref clause 33.2)

xviii) Earth wire on crane portion.

xix) Dead Man's Handle

xx) Alarms.

25.2 All related erection material required for installation and connecting up of electrical equipment with cable laying and fixing accessories shall be included in the price of the crane.

26.0 STANDARDS

26.1 All equipment and material shall comply with appropriate Indian standards (latest) The equipment shall also comply with latest Indian Electricity Rules, as regards safety requirement and other essential provisions of the act applicable to the installation and operation of EOT cranes. All latest standards indicated in Annexure-F of IS:3177-1999 shall be applicable in general.

26.2 The equipment shall be designed and selected to facilitate inspection, cleaning replacement and repair and for use where continuity of operation and safety are important considerations.

27.0 POWER SUPPLY CONDITIONS

27.1 Power shall be available at 400 volts, 3 phase, 50 Hz

27.2 The following voltages shall be used in the crane

i) 415 + 10% volts. 3 phase 50 +3%Hz, A.C For drive motors and hand lamp socket outlets

ii) 230 + 10% volts. single phase 50 +3% Hz, A.C For lighting

iii) 110 volts + 10% single phase 50Hz +3% A.C For control circuit and for floor operated crane as required by the consignee.

27.3 The voltage 2 & 3 above shall be obtained through individual separate transformer units connected to 3 phase, 415 volts A.C. supply.

28.0 SHROUDED BUS BAR CONDUCTOR

28.1 Shrouded Bus Bar Conductor shall be of M/s.INSUL-8 UK make or Unipole insulated conductor system of VAHLE Elec. System, Germany and shall conform to the following:

28.1.1 The conductor system shall be finger safe to VDE 0470 Part I Protection code IP-23 & of rated voltage of 1000 volt min. with necessary supporting technical evidence of the same. The copper conduction shall be insulated by a high impact gloss finish VR 935/2 PVC compound, and its dielectric strength shall be equal to or above 30-40 KV/mm as per DIN 53481. It shall have a step/ groove shrouded all along its length for effective moulding of the conductor system. A single DSL of this type should be capable of carrying 250 Amps of current without overheating/ burning for 3 or more cranes of same capacity. Price should be quoted separately and in unit length also.

28.1.2 The conductor shall be in minimum 4 mtrs. length to be jointed with nyloc bolt arrangement. The bus bar hanger should be so designed to hold the same at its central portion and not at the bottom. The hangers for all the three phases shall have single bolt fixing arrangement.

28.1.3 The current collector arm should be aluminum die cast totally insulated and the connection cable shall be fully enclosed and double insulated within the collector arm with a proven performance supported by documentary evidence.

28.1.4 Shrouded system shall be covered under extended warranty for a period of 36 months from the date of supply or 24 months from the date of commissioning as against the standard warranty clause.

28.1.5 Necessary wearing components for maintenance shall also be quoted by the bidders.

28.1.6 Suitable safety catchers should be provided for safety of the staff working on the shop floor against falling of the DSL due to any reason.

29.0 MOTORS

29.1 FOR DOUBLE GIRDER CRANES:-

29.1.1 All crane motors should be of ABB, Crompton, BBL, GEC, Siemens Kirloskar make and totally enclosed fan cooled (TEFC) squirrel cage type and designed for 150 starts / hour. The motor shall be suitable for heavy duty crane hoisting service having cyclic duty factor not less than 40 % for class III and 60 % for class IV

cranes. The motors shall be suitable for 50 degree C ambient temperature and 400 +/- 10% 50 Hz +/- 3%, 3 phase, 3 wire AC supply. The motor shall be generally conform to IS 325 (latest) and shall be 6 or 4 pole type. However, where IS specification is at variance with this specification, the provision made in this specification shall prevail.

29.1.2 The winding shall be of copper wire specially insulated and impregnated to with stand moist tropical climate.

29.1.3 The motor shall be of adequate power, motor power requirement being computed as per Annexure 'C' of IS 3177-1999 (latest). Detailed motor power calculations shall be given in the offer. The motor should be rated for class S-4 duty. Derating factor for temperature and voltage variation if any shall be taken into consideration as per recommendations of the motor manufacturers. Technical details of motors along with control gear and electrical accessories shall be given as per **Appendix-II.**

29.1.4 Type and routine test chart of motor selected shall be submitted to the inspecting authority during inspection.

29.1.5 Forced cooling shall be arranged by mounting suitably continuously run fan on all the motors for all motions.

29.2 **HORSE POWER**

29.2.1 The torque factor of longitudinal travel and cross traverse motors should be of the range of 1.3 to 1.5. The frame size of motor should be indicated in the offer. For selection of LT & CT motor sizes, longitudinal and cross traverse acceleration will be taken as 15 cm/sec.^{2} and 8cm /sec^2 respectively.

29.2.1.1 All motors should be provided with insulation of class 'B'. The maximum permissible winding temperatures measured by thermometer and resistance method shall not exceed 120^O C and 130^O C respectively.

29.2.1.2 The pull out torque of the motors at rated voltage and frequency range shall be as per IS:3177-1999 (latest).

30.0 TERMINAL BOX

30.1 The terminal box shall be provided on the top or front of the motor for easy accessibility. The cable sizes should be decided after considering derating due to grouping and ambient temperature of 50^OC etc.

31.0 CRANE CONTROL

31.1 **FOR PENDANT CONTROL CRANES**:-

31.1.1 Pendant push button control for long travel, cross travel and hoist motions, for switching ON and OFF the motor of a particular motion, the supply voltage to the pendant control shall be 110V AC which shall be obtained through a suitable transformer. Necessary flexible multicore cable with sufficient length shall be supplied to enable the crane to be operated from floor level. Pendant shall be moving type and the movement of pendant will be independent of trolley.

Emergency off switch should be provided on top of the pendent. Nomenclature should be engraved below each push button.

31.1.2 On all the motions the circuit shall be so designed that brakes come into operation immediately in the event of tripping of motor main circuit breaker.

31.1.3 The pendant control shall be capable of with standing rough handling without being damaged. The cover shall be firmly secured.

31.1.4 The mass of the pendant shall be supported independently of the electric cable by means of suitable chain. The pendant shall be made of stainless steel sheet and it should be effectively earthed.

31.1.5 On all pendant cranes safety means shall be provided to prevent inadvertent operation from floor while maintenance work is being carried out on the crane.

31.1.6 Adequate guards shall be provided to prevent accidental contact of pendant ropes or holding wire rope/chain with cross traverse.

31.1.7 Suitable arrangements shall be provided for automatically cutting off the resistances after a pre-selected time. The bidders shall explain the details in the offer.

31.1.8 All controllers shall be designed that the contacts and terminal arrangements are readily accessible for inspection and maintenance purposes.

31.1.9 Each controller shall be fitted with;

31.1.9.1 Necessary steps for the forward and reverse motion to give smooth and stepless acceleration between each position.

31.1.9.2 Auxiliary contacts to provide an interlock between the controller and circuit breaker, so that the circuit breaker cannot be closed unless the controller is in off position.

31.1.9.3 Auxiliary contacts to provide an interlock with the limit switches, so that when the travel exceeds the safety limits, the motor circuit will be broken and the motor can only be allowed to reverse.

31.1.10 Controller in off position shall open all supply lines of the respective motors.

31.1.11 AC variable frequency control (VVVF) of adequate capacity for all the motions of Siemens, ABB, L&T, Allen Bradley, Schneider make and shall only be used. Independent AC variable frequency control for main hoist, Aux. hoist, CT & LT shall be used by using independent variable voltage variable frequency drives. However, common controller for both the motors of LT may be used. Synchronization of both LT motors shall be ensured to minimise skewness in traveling Tenderer shall submit necessary details of the offered model as well as make confirmation for compliance shall be submitted along with the bid.

31.1.12 While fixing safety guard for DSL, minimum clearance of 150 mm shall be maintained between DSL and the maintenance cabin.

31.1.13 Cable carriers for pendent shall be free of nut and bolt. If nut bolt are used, provision for passing through shall also be provided.

32.0 CONTACTORS

32.1 All contactors shall be of AC 4 Class of duty with rating sufficiently higher than the full load current of the respective motors at the specified duty cycle. The directional contactors of all motions shall be suitably interlocked for correct sequence of operation. Electrical & mechanical life of the contactors shall be indicated. For AC 4 Class of duty Electrical life shall be minimum 2,00,000 cycles of operations.

32.2 The contactors shall have high contact reliability with preferably double break parallel bridge contact and facility of time saving termination.

32.3 All contactors shall be of ABB, Siemens, Schneider and Cutler Hammer make.

Test certificate of the manufacturers shall be submitted in support of life and rating of the contactors.

33.0 CIRCUIT PROTECTIVE SWITCH GEAR

33.1 One triple pole manually operated moulded case circuit breaker (MCCB) make Schneider, Squares, Siemens, L&T, ABB, GE serving as main incoming protective device, fitted with no volt, short circuit and overload releases and rated to carry at least combined full load currents of the two motions of the crane having largest power should be provided. The circuit breaker shall have adequate rupturing capacity to withstand and clear fault current of the order of 30 KA. The circuit breaker shall have adequate rupturing capacity to withstand and clear fault near the protective panel, in such a way that adequate clearance is provided as per Indian Electricity Rules. In case of floor operated cranes instead of MCCB, push button operated contactor shall be provided, other provisions remaining unchanged.

33.2 The trip circuit of the circuit breaker shall be so designed such that it will prevent the circuit breaker from being enclosed when main contactor of any of the motions has failed to open, although the corresponding controller has been brought to OFF position. Suitable protective features to trip the circuit breaker with the operation of limit switches and emergency push buttons shall also be provided.

33.3 To indicate whether power and control sources are ON and whether any emergency switch has been operated, indicating lamps shall be provided in operator's cabin, in case of cabin operated cranes.

33.4 For protection of each drive motor against over loads adjustable inverse time lag manually reset electro-magnetic type relays shall be provided for each motor. Alternatively, electronic type relays shall be acceptable. These relays shall be mounted in respective contactor panels and shall be set to trip the circuit of motion being controlled when current exceeds 200% of normal value for more than 10 seconds. The control circuit of individual motions shall have off position interlock with respective master controllers.

33.5 Each motor feeder shall be protected with no volt trip device, MCCB against short circuit, and with instantaneous trip current sensitive type single phasing cum phase reversal preventor.

33.6 Suitable MCCB shall be provided for the following branch circuits:

i) Lighting and hand lamp socket outlets

ii) Control circuit.

33.7 Each control circuit branch to every contactor panel shall be provided with facility for isolation and protection against short circuits and sustained high overloads by means of appropriately rated miniature circuit breaker.

33.8 A triple pole isolating switch without fuse shall be provided on the long travel bridge walkway, as close as possible to the main current collectors. This shall isolate all the circuits except the crane lighting circuit.

33.9 Suitable MCB/MCCB shall be provided at all places instead of HRC fuses.

34.0 LIMIT SWITCHES

34.1 All hoist motions shall be provided with limit switches to prevent crane from over hoisting and over lowering. Two limit switches shall be provided for proper back up protection. The first limit switch shall act in the event of over hoisting and over lowering shall be of snap action/pin type self resetting feature and incorporated in the control circuit of respective drive motor. It can also be of Proximity non-contact type. The second one shall be of gravity operated hand resetting type switch connected in the trip circuit of main incoming breaker. The second limit switch connected in the main incoming circuit breaker's control circuit shall operate and trip the breaker.

34.2 Any other limit switches viz. for slewing, skewing of crane etc. shall be provided if required.

34.3 Limit switch for hoist cross and long travel motion shall be supplied installed and wired by the manufacturer.

34.4 An electromechanical device shall be provided to prevent overloading proportionate to speed. Tenderer to submit the details.

35.0 EMERGENCY STOP PUSH BUTTONS

35.1 Safety switches of sustained contact type shall be provided at each end of crane bridge so that under any emergency conditions, by operating anyone of the switches, the incoming circuit breaker is tripped thus cutting power to all motions. Further a mushroom head type of push button shall be provided in the operator's cabin in cabin operated crane so that the main incoming circuit breaker can be tripped under any emergency conditions by pressing the operating head. A pilot lamp incorporated in the control circuit shall glow when any of the switches is operated.

36.0 CONTROL PANEL

36.1 All power and aux. contactors, individual overload relay shall be mounted in a sheet steel cubical with lockable hinged doors. The door hinges shall be of such type that during the repair works inside the panel the entire door can be lifted out and placed away enabling better access inside the panel. Each motion shall have

its individual Panel and the provision shall be confirmed in the bid. However, common panel with separate compartment for each motion shall be acceptable. Interiors of panel shall be dust and vermin proof. For cranes working in open yards, all control panels shall be fully weather proof type. Height of each panel should restricted to 1200 mm maximum. Each panel should be suitable to fit the contactors and relays of atleast three reputed makes.

36.2 Panels shall be front wired with readily accessible terminal blocks for making connections in the external equipment. Panels shall be pre wired into terminal strip. Single core, copper conductor shall be used for control circuit wiring in the panel.

36.3 All contactors etc. shall be mounted securely in a vertical arrangement with the consideration of the vibrations encountered in the operation of cranes. The bottom most row of the equipment mounted inside the panel except terminals strips shall be at least 150 mm above the panel bottom cover to facilitate inspection and repairs. The actual clearance shall be indicated in the offer.

36.4 All the equipments shall be so mounted in panel as to enable its easy removal/replacement from the front.

36.5 The terminal strips shall be fixed inside the panel preferably in a horizontal manner leaving enough space underneath the strip for termination of cables in a convenient manner. Power and control terminals shall be segregated. Power terminals blocks shall be separated from each other by means of replaceable insulated spacers. Terminal block shall have adequate clearance to avoid tracking. A minimum of 20% spare terminals block shall be provided in terminals strips.

36.6 All equipments inside the panel shall have permanent identification labels in accordance with circuit diagram as also the power and control terminals. Terminal blocks shall be of robust and of such construction as to preclude possibility of cable connections getting loose during vibration on crane.

36.7 Sheet steel used for fabrication of panels shall have a minimum thickness of 2.0 mm. Panels shall be mounted such that bottom of panel is at least 150mm above the floor.

36.8 The electrical clearance in air between all live parts of different polarity and voltage and between live parts and earth shall be not less than 75mm.

36.9 Contactor panels shall be well braced to the crane structure and each panel shall be provided with adequate number of lifting lugs.

36.10 Use of wired fuses shall be avoided and in place single/ double / triple pole MCCBs, MCBs of appropriate capacity shall be provided.

36.11 Panel should be mounted on a fixed frame with back supports. Use of robber gaskets should be avoided. Nut bolt should be tack welded after providing 5mm thick M.S. flats as washers.

37.0 LIGHTING

37.1 Lighting shall be provided in the driver's cabin, staircase will be installed. Bulk head fittings with dust proof covers shall be used for the above areas. Four numbers of LED type cluster lights OR suitable lights like road vehicle lights as provided by reputed vehicle manufacturers like Maruti, TATA & Hyundai, shall be provided for uniform floor illumination. Lighting transformers shall have 50% reverse capacity.

37.2 Toggle Switches - Industrial toggle switches shall be used for lighting distribution

38.0 SOCKET OUTLETS

38.1 Minimum of one socket outlets for hand lamps shall be provided at each driver's cabin, long travel side and in the area where control panel, resistors and transformers shall be installed. Hand lamps shall operate at 230 volts AC supply. Industrial type metal clad plug and socket shall be provided.

39.0 CABLING

39.1 All wiring for power control & lighting circuit shall be carried out with 1.1 KV grade Flame Retardant Low Smoke (FRLS) PVC insulated copper cables as per IS 694 and IS 1554 Pt. I with smoke index and typical index corresponding to ASTM-2843 & IEC332-I.

39.2 Minimum size of power & control cables shall be 4 mm^2 & 2.5 mm^2 respectively.

39.3 All cables shall be systematically laid on G.I. trays & fixed with adequate number of G.I. clamps.CT cables should pass through suitable MS pipe fitted between the two main girders.

39.4 All cables shall be weather proof and shall be either of LAP/SIEMENS/INDRAMAT makes only. Steel wire armoured cables of the above make should be used for connecting controls panels with junction boxes and junction boxes with motors.

40.0 IDENTIFICATION OF CIRCUIT CABLES ETC.

40.1 Labels of permanent nature shall be provided on supports of all switches, fuses, contactors, relays etc, to facilitate identification of circuits and replacement. All panels, controllers, resistors etc. shall be properly marked for each motion. All power control cable, lighting and other cables shall be ferruled at both end as per cables numbers indicated in the supplier's drawing. All equipment terminals shall also to be marked likewise.

41.0 EARTHING

41.1 Earthing to the crane shall be effected through track rails crane structure. As such, all the electrical equipments mounted on crane shall be connected to the crane structure by means of earthing links. the crane structure in turn shall be made electrically continuous by providing jumpers over riveted or bolted joints.

Equipments fed by flexible cables shall be earthed by means of spare core provided in the flexible cable.

42.0 ALARMS

42.1 Sufficient provision shall be made for alarm during the crane working. A foot operated alarm bell shall be provided to caution to the workers in cabin operated cranes. A continuous ringing bell shall be provided for all motions of the crane. In case of pendent operated crane, alarm shall be provided for any of the motions operated from the pendant. Details of alarm system provided shall be explained in the offer.

43.0 SPARES

43.1 Maintenance spares as per **Schedule II.**

44.0 PAINTING & COLOUR

44.1 All parts of the crane shall be thoroughly cleaned of all loose mill scales, rust or foreign matter.

44.2 All parts inaccessible after assembly shall be painted before assembly.

44.3 All parts except motors, gears, thrusters etc. shall be painted with :

i) Two coats of red oxide zinc chromate primer to IS:2074 and over the second primer coat, two coats of paint finishing Golden yellow with black strips (Ready mixed oil based paints as per the relevant IS code) shall be given before dispatch by the firm.

ii) The contractor shall give touch-up paint wherever required, after erection and testing of crane at site.

44.4 The interior of all gear box housing shall be painted with two coats of oil resistant enamel paint.

44.5 All machined pads and bearings surfaces on structures or housing shall be painted with white lead.

45.0 ERECTION, COMMISSIONING AND PROVING OUT

45.1 The contractor shall arrange erection and commissioning of the cranes. Adequate number of teams of technical experts will be made available so that erection and commissioning delays are eliminated. Such personnel will be required to be present immediately as soon as the crane has been received. The Contractor or his agent would be required to inspect the consignment at the consignee's end before unpacking is done and carry out a joint check of the receipt of components to avoid subsequent complaints regarding short shipment or transit damages.

45.2 The packing of crane components shall be properly packed in wooden crates to avoid transit damages.. However structural parts viz box girder, platform, crab chassis, and carriages and maintenance cabin being voluminous in sizes may be

supplied without packing. While all other mechanical and electrical parts should be supplied suitably packed.

45.3 The contractor or his agent shall commission the crane within 30 days from the date of handing over of site/ receipt of material at site whichever is later..

45.4 Following items of work shall be performed by the Contractor

i) Checking of alignment of gantry rail at site. Any rectification required, however, will be done by the purchaser.

ii) Installing of the crane structure and associated machinery in position.

iii) Complete fitting and wiring of all electrical items

iv) Fixing of down shop leads wherever required

v) Commissioning of the equipment. The crane performance shall be demonstrated after successful commissioning.

vi) Ladder for going up the gantry rails.

45.5 Consignee's obligation with regards to erection & commissioning will be limited to the following:

i) Supply of the following free of cost at the site of work.

a. Electricity required for the purpose of erection/ lighting.

b. Supply of cables from mains to DSL (Down shop leads) shall be provided by RITES/ Consignee.

45.6 In the interest of early commissioning, the supplier shall ensure minimum amount of assembly is necessary at site. Site welding and riveting shall be avoided as far as possible. The supplier, before proceeding with design details, shall satisfy himself about the site conditions so as avoid any difficulty at the time of erection and also check the span of gantry rails.

45.7 The crane shall be inspected and tested with load by RITES or its authorised representative at the supplier's or his sub-supplier's works. Tenderer shall furnish the Quality Assurance programme within six weeks of issue of LOA to RITES. However, the purchaser or his authorised representative is free to conduct any further checks also, if he so desires.

45.8 Tenderer shall ensure that weights offered shall be as per information submitted vide **Appendix-II**. The bidder shall also ensure in its offer that range of variation in the total actual weight of the crane and quoted value in **Appendix-II** will be with in + 5 %. RITES reserves the right to verify the total weight of the crane offered by the bidder against information submitted under **Appendix- II.**

45.9 All electrical and mechanical equipment shall be tested in accordance with the appropriate Indian Standard at either the crane maker's or equipment manufacturer's works and test certificates provided if required by the Purchaser or his representative.

46.0 INFORMATION TO BE FURNISHED BY THE CONTRACTOR

46.1 The Contactor will be required to submit the following drawings in 1 copy to RITES and 2 copies to consignee within four weeks of issue of letter of acceptance of tender. **The Consignee (CEO/SRBWIPL)/ RITES shall approve the drawings within two weeks of the receipt of drawings.**

i) The general arrangement drawings containing all information as described in **Schedule -I**.

ii) General lay out drawing of the trolley and Hoist

46.2 The cranes supplied by bidder shall conform to the said approved drawings.

46.3 The supplier shall furnish to RITES five prints of all erection drawings showing the marked numbers with weights of various items to be assembled at site, schedule of site bolts, rivets and special welding electrodes, welding techniques and erection instructions.

46.4 Supplier shall give to RITES/ Consignee the breakup of weights of different consignments of crane for the purpose of unloading at site.

47.0 TEST ON CONSIGNEE'S PREMISES.

47.1 The contractor shall carry out the start up and trial operation tests (commissioning test) on receipt of authorisation from the RITES. In addition to tests indicated in IS:3177(latest), the following shall also be shown:

i) The earthing of the crane and control equipment, to be tested as per Indian Electricity Rules.

ii) The operation of brakes on long travel, cross traverse and hoisting motions.

iii) Inching control and creep speed as called for in technical specification.

iv) There is no skewness in crane during long travel and cross travel motions, presence of vibrations and unusual noise in operation.

47.2 The trials shall be carried out initially under no load conditions and on satisfactory completion of these, trials shall be repeated for various loads until the full rated load and operating range are covered.

47.3 During the trial operation, all necessary adjustments shall be made so as to ensure compliance with the operating characteristics for the complete equipment as stipulated in the technical specifications.

48.0 TRAINING

48.1 Technical experts of the manufacturer during erection & commissioning of cranes will fully and adequately train operators / maintenance staff nominated by the CEO/ SRBWIPL.

49.0 COMPLETION OF WORK

49.1 The supplier shall demonstrate the crane performance and prove out capability as per Clause 48.

49.2 RITES will issue commissioning certificate based on the joint note prepared between SRBWIPL, RITES and the Supplier after successful commissioning and completion of work.

49.3 Thereafter, the crane will be used by SRBWIPL for a period of 15 days before issue of Proving Test Certificate.

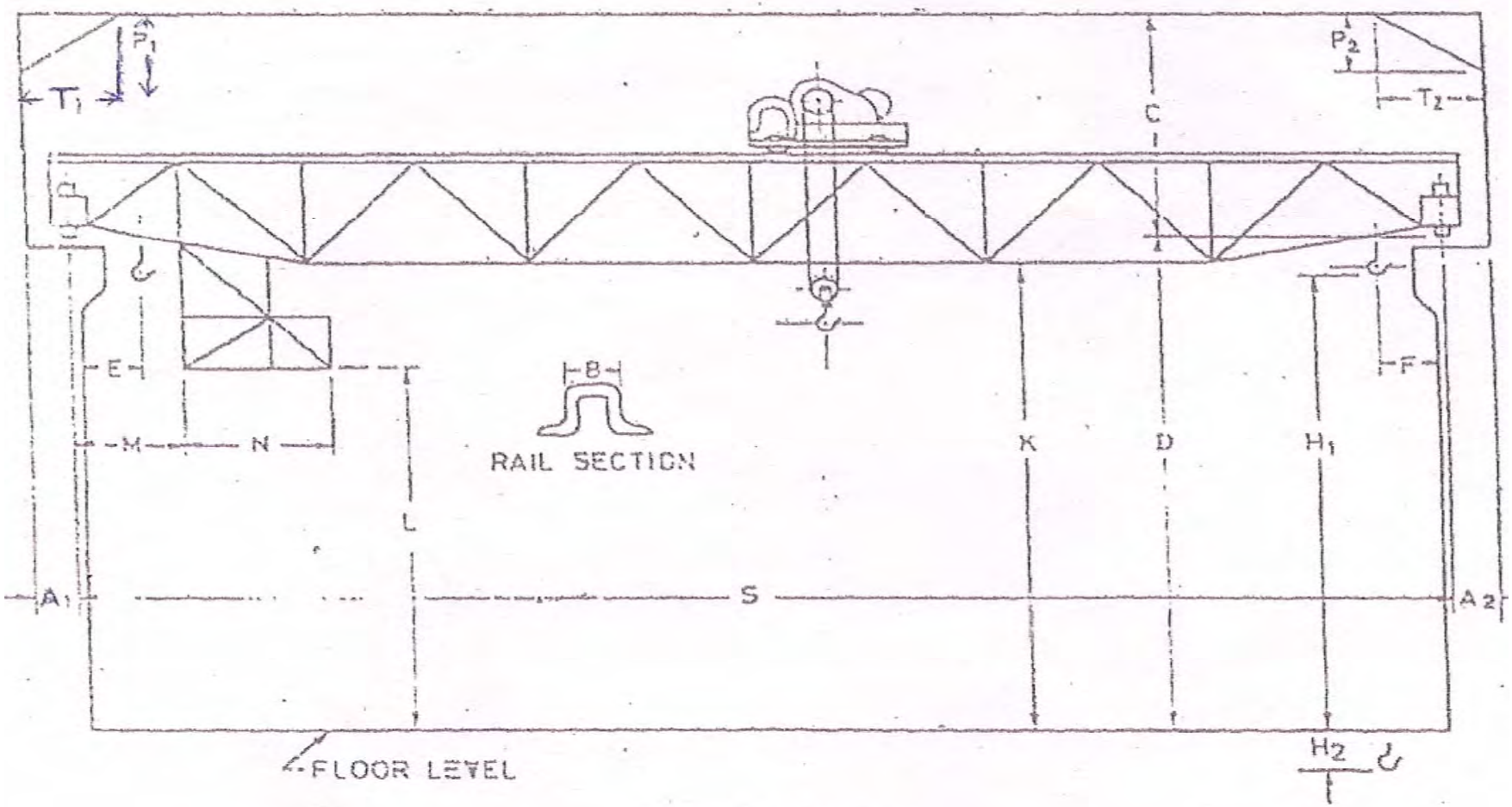
49.4 If an assembly/ sub-assembly requires to be taken back to the manufacturer's premises for repair/ replacement either before commissioning or during commissioning or during warranty, the manufacturer or his agent would be required o submit an indemnity bond. In case the entire crane has to be taken back, a bank Guarantee would have to be submitted. The indemnity bond/ bank guarantee should be adequate value so as to cover the cost of the assembly/ sub-assembly / paid up to the cost of the crane.

50.0 DELIVERY AND COMPLETION PERIOD

The bidder shall furnish the time schedule chart as per Schedule-VI for supply, delivery at site and commissioning of the cranes along with the bid.

51.0 The successful bidder shall check the dimension and span of items in **Schedule 1** at site before the submission of the General Arrangement Drawing.

Condition , Length of DSL and any other information which the successful bidder consider as necessary for design and manufacturing of EOT crane must be physically checked and verified by the tenderer at site.



Clearance Diagram
OVERHEAD TRAVELLING CRANE

Signature of Bidder with Seal

SCHEDULE-I

SPECIFICATION NO.: RITES/RW&IE/SRBWIPL/EOT/2011

(see clause 2.5 of specification)

LEADING PARAMETERS

NOTE : 1. ITEM 5, 6, 7, 8, 10.3, 10.11, 10.12, 12 AND 13 ARE MAJOR PARAMETERS IN RESPECT OF WHICH NO DEVIATIONS ARE ACCEPTABLE.

No.	Item No.		Details
1	**Consignee**	:	WM (production), SRBWIPL, Kulti
2	**No. of Cranes required**	:	2 Nos. (Two nos)
3	**Location (sub shop name with bay no.)**	:	New Gantry- SPP-2
4	**Type**	:	Conventional Double Girder type
5	**Capacity**		
5.1	Main Hoist (tones)	:	5 T
5.2	Auxiliary Hoist (tones)	:	2 T
6	Class of duty	:	III(Three)
7	Crane control from	:	Pendent
8	**Speeds** with max. workload (MPM)		
8.1	Main Hoist	:	6.0 m/min
8.2	Auxiliary hoist	:	10 m/min
8.3	Long travel	:	50 m/min
8.4	Cross travel	:	30 m/min
8.5	VVVF drive (stepless speed for all motions)	:	Required
9.	**Acceleration (Cm/ sec^2)**		
9.1	Long travel	:	15 Cm/ Sec.^{2}
9.2	Cross travel	:	8 Cm/ Sec.^{2}
10	**Structural**	:	All dimensions is metres unless otherwise indicated

10.1	Weight / unit length of rail	:	Minimum 60lbs/yd. Supplying gantry rail, laying and fixing is in the scope of supplier.
10.2	Rail head width (B)	:	Minimum 57 mm
10.3	Span (centre to centre of gantry rail) (S)	:	SPP-2 -18 m. *
10.4	Top of gantry rail to lowest overhead obstruction (C)	:	2.0 m
10.5	Top of gantry rail to floor level (D)	:	6.5 m
10.6	Lift of hook above floor level (MH) – H1 (MH)	:	6 m
10.7	Drop of hook below floor level (MH) – H2 (MH)	:	Nil
10.8	Lift of hook above floor level (AH) – H1 (AH)	:	6 m
10.9	Drop of hook below floor level (AH) – H2 (AH)	:	Nil
10.10	Centre distance between hooks MH & AH (R)	:	0.80 m
10.11	Side clearance from centre line of gantry rail to nearest side obstruction (A1)	:	0.35 m
10.12	Side clearance from centre of gantry rail to nearest side obstruction – (A2)	:	0.35 m
10.13	Vertical clearance from floor level to lowest structural member (K)	:	6 m
10.14	Vertical clearance from floor level to bottom of cabin (L)	:	
10.15	Hook approach to centre line of gantry rail (E)	:	1.0 m
10.16	Hook approach to centre line of gantry rail (other end) (F)	:	1.0 m

11	**Length of Bay & DSL**		
11.1	Length of gantry on which crane is to operate	:	SPP-2 -----95.8M. *
11.2	Type of DSL required	:	250 Amp.Shrouded type copper DSL with central holding arrangement of Insul-8/ Vahle as per clause 28 of technical specs to be supplied and erected by the supplier.
11.3	Length of DSL required (metres)	:	Length of gantry on which crane is to operate (To be paid on running meter basis as certified by RITES)
11.4	Type of existing DSL to be indicated	:	Shrouded type with copper conductor
12.	**Type of control station**	:	Pendent
13	**Crane has to work in**	:	Indoors & Out door
14	**Working environment**	:	General workshop, Dusty
15	**Other requirements**	:	
15.1	Type of Hook required	:	MH & AH = “C” type

Note: - * The Bidder must verify and crosscheck in terms of Para 51. Dimensions mentioned here are approximations.

SCHEDULE – II

SPECIFICATION NO.: RITES/RW&IE/SRBWIPL/EOT/2011

SPARES FOR EACH CRANE

(Refer to Clause 1.3 of Technical specification)

S. NO	**DESCRIPTION OF ITEMS**	**QTY./NOS**	**TOTAL QTY TO BE INDICATED BY THE BIDDER**	**Remarks**
1.	Fixed & moving contact tips for contactors.	1 no. of each size		
2	For Contactors coils	1 set consisting of 3 nos. of each size		
3	Limit switches	1 set of M.H		
		1 set of C.T.		
		1 set of L.T		
4	Current collectors	2 sets		
5	Fuse links	1 set of each size		
6	Thrustors	1 of each size		
7	Brake Liners with rivets	1 pair of each size		
8	Main spring for thrustor brakes used on crane	1 of each size		
9	Brakes shoes complete with lining	1 pair of each size		
10	Oil seals for gear cases	1 for each size of gear box and geared coupling on the crane.		
11	Spare card for variable AC drive for main hoisting	1 no.		
12	A set comprising of 2 nos. each of long travel and cross travel motion wheels duly machined without axle and bearings	1 set of 2 nos. each		
13	Any other items considered essential (Ref. Cl.1.4)			
14	VVVF drive	1 No each Crane		
15	Limit switch	6 Nos each crane		
16	Expansion gaps	6 nos each crane		
18	Current collector shoe	20 nos each crane		

SCHEDULE – III

SPECIFICATION NO.: RITES/RW&IE/SRBWIPL/EOT/2011

LIST OF MAINTENANCE TOOL for each item 1 to 4

S.NO.	DESCRIPTION	QTY/ crane
1	Tool Box	
2	D/E Spanners of required sizes	1 set
3	Grease Gun	1 No
4	Oil can	1 No
5	Screw driver of required sizes	1 set
6	Nose Plier	1 No.
7	Insulated Plier	1 No.
8	Hammer 2lbs	1 No.
9	Allen Key required sizes	1 Set
10	Hydraulic Jack	1 No.

Electrical maintenance tool/kits

S.NO.	DESCRIPTION	QTY/crane
11	Multimeter(Fluke)	1 No
12	Current clamp meter (Fluke)	1 No
13	Electric pliers	2 Nos
14	Screw driver set	2 Nos
15	Testers	2 Nos
16	Testers	2 Nos.
17	Test Lamp circuit	1 No.
18	Earthing rid clamp for maintenance	1 No.
19	DSL maintenance tool Kits	1 No
20	DSL jointing tool kit	1 No.

SCHEDULE – IV

SPECIFICATION NO.: RITES/RW&IE/SRBWIPL/EOT/2011

WIRE ROPES and SLINGS REQUIRED FOR EACH 5 TON EOT CRANES

(Refer to Clause 1.5 of Technical Specification)

1) Four legged chain with hook Grade 80 to IS:2760/1980, capacity 5.2 Tonnes, length 4m - Qty. 01 Nos.

2) Two legged chain with hook Grade 80 to IS:2760/1980, capacity 4 Tonnes, length 3.5m - Qty. 01 Nos.

3) Chain slings of 4 T capacity, 4 leg chain with 10mm effective length 2.5 mtrs, Grade 80 to IS 2760-1980- QTY.1 Nos.

SCHEDULE - V

SPECIFICATION NO.: RITES/RW&IE/SRBWIPL/EOT/2011

QUALITY ASSURANCE PLAN FOR EOT CRANE

S.No.	COMPONENT & OPERATION	TYPE OF CHECK	QUANTUM OF CHECK	ACCEPTANCE NORM	FORMAT OF RECORD	SOURCE	REMARK	OTHER REMARKS
1	2	3	4	5	6	7	8	9
01	RAW MATERIAL							
1.1	Structural material for Brdge girders, End carriages, Crab, platform	Chem & Mech	1 sample per size of plate and other structural	IS:2062	T.C	SAIL, TISCO, IISCO, ESSAR, RIN vendor appd. Lab	CHP	Identification AND Tests to be carried out in the absence of Mill T.C, and proper correlation with hot chalk mark
1.2	Rope Drum plate	Chem. & Mech	1 sample per size of plate	IS;2062	T.C & Inv.	- do-	CHP	- do-
	Seamless steel tubes of Gr. A106/ A53 of Gr. “A”, “B”, “C” ASTM Std.	Acid etching of end	100%	ASTM A – 106	IR	Vendor	CHP	Check whether welded or seamless
1.3	Brake Drum	Chem	1 sample	IS:1875 IS:1030 Gr.40	T.C	Manfr. Vendor	V	Forging or cast steel
1.4	Gears	Chem.	1 per size per lot	IS:1570 DIN 17210 BS:970	T.C.	Vendor apprd. Lab	CHP	Case carburising low carbon alloy steel
1.5	Pinions	Chem.	-do-	-do-	-do-	-do-	CHP	-do-

Signature of Bidder with Seal

1.6	Sheave / Pulleys	Chem	1/lot	IS:2062 Gr. BM:310 of IS:2108	T.C.	Venodr/ lab Appd.	V	
1.7	Wheels	Chem	1 sample	IS:1570 DIN:17210 BS:970	-do-	-do-	CHP	C_{55} Mn_{75}
1.8	Hooks	U.T	100%	IS:3664 ASTM A388	T.C and Inv.	Vendor / appd agency	CHP	U.T. on shank portion only

1	2	3	4	5	6	7	8	9
1.9	Wire rope	Examination of reports for breaking load	100%	IS:2266	T.C and Inv.	Manf./ Auth. Stockist	V	Wire ropes of USha Martin Fort Stockst Willams & South India Bombay wire rope to be used.
2.0	Rails	Visual	100%	BS 80 A/ C.R. Rail	Inv.	Manf./auth Stockist	V	
2.1	Bearings	Visual	100%	Mfrs. Standard	Inv.	- do -	CHP	For bearing mfd in country
02	IN PROCESS INSPECTION							
2.1	Welding Procedure / Welder Qualification	WPS PQR WQTR	TYPE test	AS per IS; 1181, IS:817, ASWD:14.1 ASME Sec. ix		Vendor	V	Proper welding/ welders records maintained as per ASME ix AWSD14.1. Inspecting Engineer to carry out the type test, if he is not satisfied.
2.2	Welding of Rope Drum	MPI/ DPT RT of joint	100%	ID;4853	I.R	Qualfied/ auth. Radiography agency	V	To be conducted by ISNT/ ASNT qualified personnels
a)	Rope drums (for seamless tube)	Flattening test	100%	ASTM0A-106 IS:2328	TC	Vendor	V	
2.3	Welding of Box girder, crab, End Carriage, etc.	Visual	100%	IS;822 AWSD 14.1 IS:3658	I.R	Vendor	CHP	Check of blow holes, size and waiviness

2.4	Welding (soundness)	R.T of Butt welds in tension	100%	IS:4853 ASME Sec. IX	I.R	Auth. Radiography agency	CHP	Review of RT films – Wels No to be given by Inspector
2.5	Gear and Pinions			ASTM A - 388				
a)	U.T	Ultrasonic testing	100%	IS:3664 when backwall echo set to 100% a)defect shall not exceed 20% (a) Backwall echo shall be minimum 80% in any area	I.R	IS:3664	CHP	For thickness>50mm
b)	Dimensional accuracy	Measurement	Random	IS:4059 (Gr.*8 Din 8)	I.R	Vendor	CHP	Min. 50% qty. to be witnessed & other 50% to be verified

1	2	3	4	5	6	7	8	9
c)	Harness	Hardness	100%	Gears 217-255 BHN Pinion 266-300 BHN	I.R	-do-	CHP	Difference in hardness of gears and pinion Must be less than 20 BHN
d)	MPI	Crack detection	Random	IS:3658 . No linear indication	I.R	-do-	V	
e)	Surface finish	Surface	Random	1.6 microns max.	I.R.	-do-	CHP	1.6 microns Max.
2.6	Gear Boxes							
a)	Sound level	Sound	100%	COFMOW Specs. Sound gear box practice	I.R	-do-	CHP	85 db at a distance of 1 meter from Gear box
b)	Temp. rise	-do-	100%	20 deg. C	I.R.	Vendor	CHP	20 deg. C above ambient
c)	Leakage	-do-	100%		I.R	Vendor	CHP	No leakage
d)	Backlash	Measurement	Random	DIN 8 Gr 8 IS:4509	I.R	Vendor	V	
2.7	Hooks	Proof Load	100%	IS:15560	T.C	Vendor/ Appd. Lab	CHP	
		DPT after Proof load	100%	IS:3685	I.R.	-do-	CHP	
03	FINAL INSPECTION							
3.1	Motors	Review of routine test certificate	100%	IS;325	T.C & Inv.	Manfr./ auth. Stockist	V	In case of purchase from suth. Stockist manufacturer's invoice to auth. Stockist should be available for verification by inspector.
3.2	Cables	Review of type test/ Routine test	100%	IS:694 IS:554 IS:9968	T.C &Inv.	-do-	V	- do -

1	2	3	4	5	6	7	8	9
3.3	Control panel & pendent wiring, marking, continuity Input, Output sequence operation	Visual check of fitting of components	100%	Electrical diagram	I.R.	Vendor	CHP	Component type/ routine test certificate to be reviewed.
3.4	Components	Visual/ rating	100%	- do -	I.R	Vendor	CHP	
3.5	Complete Assembled EOT	Visual & checking over-all dimensions alignment & completeness	100%	Appd. Drgs/ Sch. II	I.R.	Vendor	CHP	
		Load Test/ overload test, deflection test, hoisting speed measurements for LT & CT current measurement	100%	IS:3177 IS:800 IS;807	I.R.	Vendor	CHP	
3.6	Painting	Surface preparation	100%	Appd. Specs	I.R.	Vendor	V	Sand blasting will be preferred.
3.7	Lubrication		100%	- do-	I.R.	Vendor	V	Ease of lubrication without dismantling any component

V – Verification
CHP - Hold point to be got cleared before further processing
I.R. - Inspection Report
T.C. - Test Certificate
CR - Critical

M - Vendor
Vendor - Crane. Mfr.
Appd. Lab – Lab approved by Inspecting Engineer.
Cot.7 - If test facility is not available with Vendor test must be done in an approved lab.

SCHEDULE- VI

SPECIFICATION NO. RITES/RW&IE/SRBWIPL/EOT/2011

Format for Time Schedule Chart
(Reffer clause no.50 of technical specification)

S.N.	Activity	Activity Code	Time Schedule required by RITES	Time Schedule Offered by bidder	Remarks, if any
1	Issue of LOA	D1	D	D	
2	Submission of PBG By Successful Bidder	D2	D1+21	D1+_____	
3	Issue of AT By RITES after receipt of PBG	D3	D2+15	NA	
4	Opening of LC	D4	NA	NA	
5	Submission of GA drawings to consignee by Successful Bidder/Supplier	D5	D1 + 30	D1 + ___	
6	Approval of GA drawings by RITES (Max 4 weeks from date of receipt from supplier)	D6	D5+15	NA	
7	Handing over of clear site by consignee	D7	Latest D9-60	---	
8	Completion of foundation	D8	NA	NA	
9	Supply of machine at site.	D9	D6+150 days	D5+ _____	
10	Installation of machine	D10	45 days after receipt at site	D9 + ___	
11	Prove Out and commissioning of machine	D11	D10 + 15	D10 + ___	
12	Issue of PTC	D12	D11 + 30	---	
13	Warranty	D13	D11+2 years	D11+2 years	
14	AMC	D14	D13 + 3 years	D13 + 3 years	If applicable

NOTE: Not withstanding the delivery period indicated elsewhere in the tender document, the delivery indicated in this Annexure shall be taken as over riding and final.

Signature of the Bidder

Appendix- I

SPECIFICATION NO.: RITES/RW&IE/SRBWIPL/EOT/2011

(See clause 2.6 of Technical specifications)

INFORMATION TO BE SUPPLIED BY THE TENDERER FOR CRANE REQUIRED

S.No.	Item	Remarks
1.0	**Break up weights of the crane as mentioned below should be furnished** :	
1.1	Total weight of crane including electrical equipment	
1.2	Total weight of trolley, including electrical equipment.	
1.3	Weight of each bridge girder assembled and : ready for erection with and without mech. and electrical equipment.	
1.4	Weight of each end carriage assembled and ready for erection.	
1.5	Weight of maintenance cabin together with all equipments mounted in it.	
1.6	Weight / Unit length of gantry rail	
2.0	Type and class of crane and its mechanism :	
3.0	Safe working load in tonnes	
3.1	Main hoist :	
3.2	Aux. hoist :	
4.0	Speed steps and speed range in meter/min. at various steps. The remarks offered should be in accordance with single girder or double girder crane.	
4.1	Hoist Motion	

4.2	Cross traverse	
4.3	Long Travel	
5.0	Rope size and construction details :	
6.0	Number of rope falls supporting the load	
7.0	Diameter of drum	
8.0	Material of drum	
9.0	Material of all gear box in EOT crane	
10.0	Material and make of all types of gears used in EOT crane. (Indicate specifications)	
11.0	Material of sheaves	
12.0	Diameter of sheaves	
13.0	Brakes, type make, size & end use:	
14.0	Make, type of bearings & end use :	
15.0	Type of hook and its specification.	
16.0	**Trolley**	
16.1	Wheel span	
16.2	Wheel base	
16.3	Diameter of wheels, material and hardness	
16.4	Maximum wheel load	
16.5	Size of trolley runway rail	
17.0	**Bridge**	
17.1	Wheel base	
17.2	Diameter of wheel, material and	

	hardness	
17.3	No. of wheels on each end of crane	
17.4	Maximum wheel load	
17.5	Clear width of each foot walk	
18.0	**STRUCTURAL Details (Refer sketch No: RITES/IE/SRBWIPL/MECH/EOT)**	
18.1	Centre to centre of gantry/track rail span (S) meters	
18.2	Lift of Hook above floor level : (Exclusive of travel required to operate limit switch)	
18.3	Nearest position of hook to centre line of gantry rail	
	i) Main hoist cabin end (E) meters : other end (F) meters :	
	ii) Auxiliary Hoist cabin end (E) meters : other end (F) meters :	
18.4	Type of main girder Design drawings showing overall dimensions, Size of each section and location and depth of diaphragms should be submitted for the girders.	
19.0	Particulars of safety devices :	
20.0	General arrangement drawing showing to scale elevation, cross section and plan which shall indicate the following information:	
20.1	Clearance diagram of crane :	
20.2	Construction of bridge structure	

20.3	Hook approaches.	
20.4	Wheel base	
20.5	Wheel loads	
20.6	Wheel diameter	
20.7	Outer buffer dimension	
20.8	Wheel diameter for long travel and cross traverse travel	
21.0	Size and cross section of DSL offered.	
22.0	Other information offered along with the tender.	
23.0	Material and make of gantry Rail.	

Note: 1. If above clauses are found inadequate for furnishing all necessary information of the crane offer, the tenderer may append further information separately.

2. Tenderer should also furnish clausewise remarks on technical specifications.

3. Bidders should furnish information on **Appendix-I** & **Appendix-II** In case of any discrepancy in the information submitted against **Appendix-I** and **Appendix II** and that furnished in clausewise comments, the information submitted against **Appendix-I, & Appendix-II** shall over-ride that against the clauses.

APPENDIX - II

SPECIFICATION NO.: RITES/RW&IE/SRBWIPL/EOT/2011

ELECTRICAL DETAILS OF CRANES

INFORMATION TO BE SUPPLIED BY THE TENDERER

The under mentioned electrical details should be furnished for each motor separate alongwith the offer. The particulars indicated below should be offered for each motor/control separately.

1.0 **AC MOTORS** :

1.1. Manufacturer's Name :

1.2. Type and enclosure :

1.3. Type of duty (Ref. IS:325 latest)

1.4. Rating-continuous/intermittent :

1.5. Output (KW/BHP) :

1.6. AC Voltage across phases & frequency :

1.7. Speed in RPM

1.8. Class of Insulation of stator :

1.9. Frame size of motor :

1.10. Normal full load current :

1.11. Starting current :

1.12. End use of Motor type

2.0 CONTROL GEAR

2.1. Manufacturer's name

2.2. Type of control gear (Direct online/ Star Delta/ Auto-transformer etc)

2.3. Rating of AC 4 Contactors with minimum 2,00,000 cycles of operation.

2.4. Are the following provided for each motor.

2.4.1 Short circuits protection by HRC fuses.

2.4.2 No volt trip

2.4.3 Overload trip

2.4.4 Delayed action current sensitive single phasing preventor.

3.0 MAKE and type of following:

3.1. Motors.

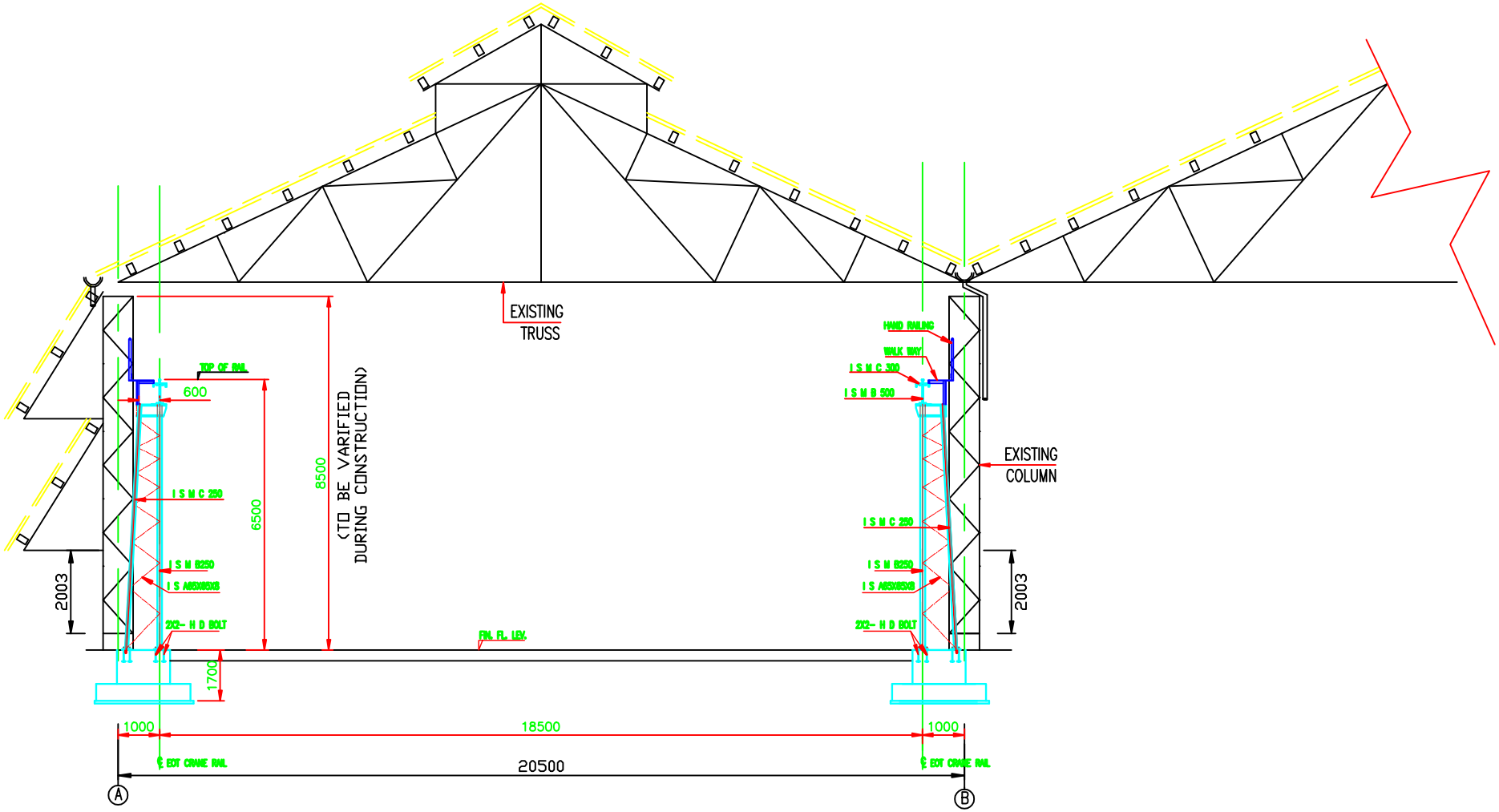
3.2. Cables

3.3. Contactors

3.4. Time relays.

3.5.	Limit Switches.
3.6.	Jockey switches / Push Buttons..
3.7.	Overload relays.
3.8.	Moulded case circuit breakers.
3.9.	Resistors.
3.10.	Control Panels.
3.11.	Safe shrouded DSL conductors & collectors.
3.12.	Thrustor brakes.
3.13.	Electrical isolators.
3.14.	Variable voltage variable frequency drive.
4.0	Standard specifications to which the motor control gear and its ancillary offered conform to
5.0	Any other special feature

APPENDIX - III



GA OF EXISTING BUILDING & NEW
EOT CRANE SUPPORTING STRUCTURES

TENDER NO: RITES/RW&IE/SRBWIPL/M&P-17/2011

TENDER DOCUMENT
FOR

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, ERECTION, TESTING & COMMISSIONING INTO SERVICE
OF
ELECTRICALLY OPERATED OVERHEAD CRANES

SECTION – V

BID FORM AND PRICE SCHEDULE

BID FORM AND PRICE SCHEDULE
(Ref Cl. 8.1 of Instruction to Tenderer)

(On letter head of the Manufacturer and should be signed by the Competent Authority)
To,
General Manager (RW & IE),
RITES Limited, RITES Bhawan,
Plot No. 1, Sector 29, Gurgaon – 122001 (Haryana), India.

RITES Ltd. Tender No …….. Due date of opening ……

1.0 We……hereby certify that we are established manufacturer / authorised agents of M/s ……. with factory at …… where the production methods, quality control and testing of the parts and materials manufactured or used by us are open to inspection by the representative of RITES Limited.
We hereby offer to supply and deliver (within the delivery period), prepare foundation, install/erect, commission, put into service and prove out as per schedule indicated below:

(All prices to be quoted only in Indian Rupees)

1	Item No	
2	Description	
3	Specification	
4	Unit	
5	Quantity	
6.1	*Ex factory price of crane including maintenance tools as per Schedule III (for indigenous machines) / Ex warehouse/showroom for (imported machines) **(Break up of quantity, unit cost of standard/ concomitant accessories to be furnished, separately).**	
6.1A	Cost of DSL to be indicated for each crane. **(Bidders to indicate cost of DSL per meter length also separately)**	
6.1B	Cost of Gantry rail with clamps to be indicated for each crane. **(Bidders to indicate cost of rail per meter gantry/Bay length also)**	
6.2	Excise Duty	
6.3	Other Levies	

Signature of Bidder with seal

6.4	Sales Tax	
6.5	Packing charges	
6.6	Forwarding Charges	
6.7	Freight to destination	
6.8	Insurance Charges (if any)	
6.9	Other Charges if any (should be specified clearly)	
6.10	CIP Destination Price (Total of 6.1 to 6.9)	
6.11	Discount if any	
6.11	Net Price after discount (both in figures and words)	

*At 6.1 above, tenderer should quote ex factory Price for equipment manufactured in India. Those who are quoting for equipment imported by them should quote their Ex Warehouse (India) price. The ex-factory/ex-warehouse price should include all charges of finished goods.

Note: 1 Please delete whichever is not applicable.

2. Tenderer should note that discount quoted by them other than in specified column/space will not be taken into consideration for comparison/ evaluation purpose.

The charges/rates as applicable towards foundation making, installation, Commissioning, Training etc shall be quoted for:

8.0	All inclusive Foundation Making Charges (wherever applicable) – (inclusive of material, tools, labour and supervision)	
9.0	Installation & Commissioning Charges of crane	
9.1	Installation & commissioning charges per metre for DSL	
9.2	Cost of laying and fixing Gantry rail (on column/pillar of steel structure) to be indicated for each crane. **(Bidders to indicate cost per meter gantry/Bay length also)**	
10.0	Training Charges (if any)	
11.0	Taxes, if any	
12.0	Total (both in figures and words)	

The CIP rates for optional accessories and mandatory and recommended spares should be quoted for:

13.0	Optional Accessories as per Schedule IV of Technical specifications (section V)	

Signature of Bidder with seal

	Unit price and qty to be furnished separately (These may or may not be ordered any or in part or full quantity).	
14.0	Mandatory and recommended Spares for 2 years period (As per Schedule II) **Unit price and qty to be furnished separately** (Recommended spares may or may not be ordered any or in part or full qty)	
15.0	Wire ropes and slings (As per Schedule IV) **Unit price and qty to be furnished separately**	
16.0	AMC for a period of 5 years inclusive of all spares, material and labour costs. All consumables except Diesel/ fuel, lubricating oils or coolant shall form a part of the scope of comprehensive AMC.(AMC charges will not considered for tender evaluation)	
16.1	The duties and taxes as applicable should be indicated separately	

The Delivery Period, Installation & Commissioning Period offered should be indicated as under as applicable:

17.0	Delivery Period at Destination/Site	
18.0	Foundation Making Period (if applicable)	
19.0	Installation & Commissioning Period	

2.0 It is hereby certified that we have understood the Instructions to Tenderers, Conditions of the Contract attached to the tender and have thoroughly examined the technical specifications and are fully aware of the nature of stores required and our offer is to supply stores strictly in accordance with the requirements and to the terms of the tender. We also agree to solely abide by all the tender conditions if the contract is awarded to us.

3.0 We hereby offer to supply the stores detailed above or as you may specify in the Letter of Award of the Contract at the price quoted and agree to hold this offer open for acceptance for a period of 180 days from date of opening of the tender.

4.0 Earnest Money for an amount equal to Rs……. is enclosed in form of Bankers Cheque / Demand Draft bearing No…….. issued by …….. in favour of RITES Ltd. Payable at Gurgaon.

5.0 We posses the necessary industrial license from the Government of India for manufacturing/ marketing of the item offered (Details enclosed)

OR

No industrial licence is required for manufacturing/ marketing of the item offered.

Signature of Bidder with seal

7.0 We are authorised agent of the manufacturer/principals M/s ……., whose item we have offered. Letter of current and valid authority is enclosed as per **Annexure – 2**.

8.0 We hereby declare that in quoting the above price, we have taken into account the entire credit on inputs available under MODVAT scheme introduced w.e.f 1st March 1986 and further extended on more items till date.

9.0 We further agree to pass on such additional duties become available in future in respect to all the inputs used in the manufacture of the final product on the date of supply under the MODVAT scheme by way of reduction of prices and advise the purchaser accordingly.

Date: …….

Signature and Seal of the Tenderer

Note:

1. Costs to be indicated for each crane/ schedule
2. The offer must be submitted as per the above format. The prices should be both in figures and words
3. In case of Turn Key basis contracts the desired rates should also be quoted.
4. No alterations or erasures in the offer are permitted. Any correction made in the offer must be initialed by the tenderer.

TENDER NO: RITES/RW&IE/SRBWIPL/M&P-17/2011

TENDER DOCUMENT

FOR

DESIGN, MANUFACTURE, SUPPLY, DELIVERY, ERECTION, TESTING & COMMISSIONING INTO SERVICE

OF

ELECTRICALLY OPERATED OVERHEAD CRANES

SECTION – VI

CHECK LIST

Signature of Bidder with seal

CHECK LIST
TENDER NO: RITES/RW&IE/SRBWIPL/M&P-17/2011

Note: The check list may be duly filled in and submitted with the offer.

S No	Document	Yes	No
1	Have you purchased the original Tender/Bid Documents OR Downloaded from RITES website.		
2	Have you submitted an Earnest Money Deposit (EMD)		
3	Have you submitted current and valid Letter of Authority from manufacturer (in case of authorized agents)		
4	Have you submitted Performance Statement as per the proforma along with the certificates.		
5	Credentials & Certificate are submitted duly self attested		
6	Have you submitted Statement of deviation from Tender Conditions (Instructions to Tenderer, Conditions of the contract) as per the proforma		
7	Have you submitted Statement of deviation from Tender Technical Specification as per the proforma		
8	All the pages of Tender Documents have been signed by the authorized person under seal of the firm		
9	Have you quoted in complete CIP destination price including the cost of Concomitant/Standard accessories in the price of the machine/equipment		
10	Have you quoted for mandatory and recommended spares for 2 years period		
11	Have you quoted for all the Optional items		
12	Have you quoted in the prescribed proforma		
13	Have you quoted the entire bid price in Indian Rupees		
14	Have you quoted the rates in both words and figures		
15	Have you indicated detailed delivery schedule		
16	Have you kept your offer valid for 180 days		
17	Have Turnover figures certified by the auditor.		

Signature and Seal of the Tenderer

TENDER NO: RITES/RW&IE/SRBWIPL/M&P-17/2011

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FOR

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OF
ELECTRICALLY OPERATED OVERHEAD CRANES

SECTION – VII

ANNEXURES & PROFORMA

Annexure – 1

(Please refer Clause 8.1 of Instructions to Tenderer)

PROFORMA FOR PERFORMANCE STATEMENT

(attach separate sheet)

S.No.	Full address of Purchaser with contact details	Name and contact details of actual user (Tel/ Fax/E-mail etc)	Order No. and Date	Description of Stores	Qty	Value of order	Date of delivery	Date of commissioning	Remarks
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

The information detail given above is correct and in case the information given is incorrect the offer is liable to be rejected.

Signature of Authorised Signatory
(Name/Designation & Seal)

Note:
1. Complete details should be given
2. The details should be in order of capacity-wise
3. The Performance Certificate from the consignee/end user with regard to EOT cranes of same or higher Capacity offered, Working Satisfactorily for more than two year should be enclosed, without which the offer is likely to be rejected.

ANNEXURE – 2

(On letter head of the Manufacturer and should be signed by the Competent Authority)

PROFRORMA FOR LETTER OF AUTHORIZATION FROM THE MANUFACTURERS

Ref. No:……
Date……..

To,
General Manager (Mech),
Technical Services Division,
RITES Limited,
RITES Bhawan,
Plot No. 1, Sector 29,
Gurgaon – 122001 (Haryana), India.

Dear Sir,
Sub: Tender No…….

We, ……., an established manufacturer of ……. having factory at…….. and office at …….. We authorise M/s ……..
(name and address of agents) to sell our products and can participate in above mentioned tender directly in accordance with their Terms of Business. We shall provide strong technical support to our authorize agent as well as to the final user.

No firm or individual other than M/s……. are authorized to represent us in regard to the business against this specific tender. In case of default of our authorised dealer, the contractual liability shall lie with us.

Yours faithfully

Signature
(Name)
For & on behalf of M/s……..(Manufacturer)

ANNEXURE - 3

COMMERCIAL DETAILS

Tender No..... Due date ate of opening.....

(i) Name of the firm

(ii) Address of firm with Telephone No(s), Fax No(s)

(iii) Is the firm a small scale unit registered with NSIC ?
If so, a copy of the registration certificate should be enclosed.

(iv) Name and address of the Banker.

(v) Last 5 years turn over.
(Documentary evidence should be enclosed)

(vi) A copy of PAN / TAN

(vii) Details of After sale & Service of the equipment offered

Signature
(Name/Designation)

ANNEXURE – 4

(Refer Clause 23.2, Instructions to Tenderer**)**

PERFORMA FOR STATEMENT OF DEVIATIONS
FROM
TENDER CONDITIONS

We hereby agree to comply with all the clauses of the Conditions of Contract as per Section III fully.

(Signature and Seal)
of the Tenderer
Date

Or

We offer the equipment complete with Conditions of Contract as Section III, except the following deviations:

S No	Section/ Clause No.	Details of Deviation	Reason / justification for giving deviations

Additional Sheets may be used, if Required

(Signature and Seal)
of the Tenderer

Date

NOTE: If there is no deviation, then the statement indicating "NO DEVIATION" should be submitted with the tender.

ANNEXURE – 5

(Refer Clause 23.2, Instructions to Tenderer**)**

PERFORMA FOR STATEMENT OF DEVIATIONS
FROM
TECHNICAL SPECIFICATIONS

We hereby agree to comply with all the clauses of the technical Specifications as per Section IV fully.

(Signature and Seal)
of the Tenderer)
Date

Or

We offer the equipment complete with technical specifications as per Section IV , except the following deviations:

S No	Section/ Clause No.	Details of Deviation	Reason / justification for giving deviations

Additional Sheets may be used, if Required

(Signature and Seal)
of the Tenderer)

Date

NOTE: If there is no deviation, then the statement indicating "NO DEVIATION" should be submitted with the tender.

Annexure-6
(*sheet 1/2*)
(Refer Clause 8.0 of Conditions of Contract)

PROFORMA OF BANK GUARANTEE BOND TOWARDS CONTRACT PERFORMANCE GUARANTEE
(For 10% of contract value)

Bank Guarantee No_____ Date_____

To,
_____(Name of Purchaser)

Against contract vide Letter of Acceptance No_____ dated_____ covering supply of _____ (hereinafter called the said 'contract') entered into between General Manager (Mech)/RW&IE, RITES Limited (A Govt. of India Enterprise), Gurgaon and _____ (hereinafter called the 'Contractor'), this is to certify that at the request of the Contractor we, _____ Bank Ltd., are holding in trust in favour of the General Manager (Mech)/RW&IE, RITES Limited an amount of Rs _____(write the sum here in figures as well as words) to indemnify and keep indemnified the General Manager (Mech)/RW&IE, RITES Limited against any loss or damage that may be caused or likely to be caused to or suffered by the General Manager (Mech)/RW&IE, RITES Limited by reason of any breach by the contractor of any of the terms and conditions of the said contract and/or the performance thereof.

We agree that the decision of the General Manager (Mech)/RW&IE, RITES Limited, whether any breach of any of the terms and conditions of the said contract and/or in the performance thereof has been committed by the contractor and the amount of loss or damage that has been caused or suffered by General Manager (Mech)/RW&IE, RITES Limited shall be final and binding on us and the amount of the said loss or damage shall be paid by us forth with on demand and without demur to the General Manager (Mech)/RW&IE, RITES Limited

We_____ Bank., further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for satisfactory performance and fulfillment in all respects of the said contract by the contractor i.e. till_____(viz. the date upto 12 months after the date of shipment/delivery of the goods ordered) hereinafter called the 'said date' and that if any claim accrues or arises against us, _____Bank., by virtue of this guarantee before the said date, the same shall be enforceable against us, _____ Bank., notwithstanding the fact that the same is enforced within six months after the said date. Payment under this letter of guarantee shall be made promptly upon our receipt of notice to that effect from the General Manager (Mech)/RW&IE, RITES Limited.

It is fully understood that this guarantee is effective from the date of the said contract and that we, _____ Bank., undertake not to revoke this guarantee during its currency without the consent in writing of the General Manager (Mech)/RW&IE, RITES Limited.

Signature of Bidder with seal

Annexure-6
(*sheet2/2*)

We, _____Bank, further agree that the General Manager (Mech)/RW&IE, RITES Limited shall have the fullest liberty, without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said contract or to extend time of performance by the contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the General Manager (Mech)/RW&IE, RITES Limited (against the said Contractor and to forbear or enforce any of the terms and conditions relating to the said contract and we, _____ Bank Ltd., shall not be released from our liability under this guarantee by reason of any such variation or extension being granted to the said Contractor or for any forbearance and or omission on the part of the General Manager (Mech) /RW&IE, RITES Limited or any indulgence by General Manager (Mech)/RW&IE, RITES Limited to the said Contractor or by any other matter or thing what-so-ever, which, under the law relating to sureties, would, but for this provision have the effect of so releasing us from our liability under this guarantee.

We_____ Bank., further agree that the guarantee herein contained shall not be affected by any change in the constitution of the said Contractor.

Date_____
Signature_____
Place_____
Name_____

(Designation)

Witness _____
_____

(Bank's Common Seal)

ANNEXURE – 7
(*sheet 1/2*)
(Refer clause-10.0 of Contract Conditions , Section III)

PROFORMA OF BANK GUARANTEE BOND FOR 10 (TEN) % CONTRACT VALUE
TOWARDS WARRANTY GUARANTEE

Bank Guarantee No_____ Date_____

To,

_____
(Name of Purchaser)

Sub: Guarantee No_____ for Rs _____ (Amount) Covering Machine(s) Serial No_____ supplied to SRBWIPL,KULTI (Consignee)

Ref: Contract (LOA) No_____ dated_____ placed on M/s _____

WHEREAS M/s_____ one of our constituents, (herinafter called the "Seller") have agreed to sell to you _____ Nos. of _____ (give description of machine/equipment) as per Contract (LOA) No_____ dated_____ (herin after called the "the said contract").

AND WHEREAS according to the terms of said contract, it has been stipulated that payment of 10 (ten) % of the value of the stores would be made, provided that the Sellers furnish to the Purchaser a Bank Guarantee from a recognized/schedule bank, acceptable to the Purchaser for 10% of the value of the said contract, valid for a period covering in full the Guarantee Period as per the warranty clause of the said conditions of the contract, being the conditions attached to and forming part of the said contract.

AND WHEREAS the Sellers have approached us to give the said Bank Guarantee on their behalf in your favour for an amount representing 10% of the value of the said contract which you have agreed to accept.

That in consideration of the promise and at the request of the said Sellers, we herby irrevocably undertake and guarantee to pay to the General Manager (Mech)/RW&IE), RITES Limited (A Govt. of India Enterprises) or at such other place as may be determined by you forthwith on demand and without any demur, any sum upto a maximum amount of Rs _____ (Rupees_____) representing 10% of the value of the stores delivered under the said contract in case the sellers make default in paying the said sum or make any default in the performance, observance or discharge of the guarantee contained in the said contract.

We agree that the decision of the General Manager (Mech)/RW&IE, RITES Limited whether any default has occurred or has been committed by the Sellers in the performance, observance or discharge of the guarantee aforesaid shall be conclusive and binding on us.

General Manager (Mech)/RW&IE, RITES Limited shall be at liberty, from time to time, to grant or allow extension of time or give other indulgence to the said Sellers or to modify the terms

ANNEXURE – 7
(*sheet 1/2*)

and conditions of the contract with the said Sellers without affecting or impairing this guarantee or our liability hereunder.

This bank guarantee comes into force when the balance 10% of the value of the stores, delivered under the said contract, has been paid and will remain in full force and effect upto _____ i.e., for _____ months counted from the date of placing the stores in service, and, shall continue to be enforceable for further six months i.e. upto _____ (date), hereinafter called the said date.

That no claim under this guarantee shall be entertained by us unless the same has been preferred by the General Manager (Mech)/RW&IE, RITES Limited within the said date.

Date_____
Signature_____
Place_____
Name_____

(Designation)

Witness _____
_____

(Bank's Common Seal)