

**BHEL-ELECTRONICS DIVISION, BENGALURU  
COMMON CONTRACTING DEPARTMENT**

**NOTICE INVITING TENDER**

1.	Tender Ref No:	BHEL-EDN/ CCD/PACKING -EDN/ NIC-RET4/23-24
2.	Tender Type	Open Tender -Two part ( e-Tender)
3.	Name of works	RATE CONTRACT FOR SUPPLY OF PACKING MATERIALS AND PACKING OF CE PRODUCTS, TRACTION EQUIPMENTS AT BHEL-EDN & BHEL-ESD, BANGALORE FOR TWO YEARS DURING 2023-25.
4.	Location of work	BHEL-EDN & ESD, BANGALORE
5.	Period of contract	Twenty four months from the date of award of contract.
6.	Estimate value of Works	₹1801.84 Lakh ( Excluding GST )
7.	Earnest Money Deposit Amount	As per B: Pre-qualification criteria : Earnest money deposit( EMD)
8.	Contents of Tender Document.	A] Part-I Technical Bid <span style="float:right">Pages</span>
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ANNEX -II (Price bid)( For Reference only)	05	
9.	Submission of offer	To be submitted electronically by logging to e-Procurement portal <a href="https://eprocurebhel.co.in/nicgep/app">https://eprocurebhel.co.in/nicgep/app</a>
10.	Due date and time for submission of offer	11.04.2023/ 14:00 Hr.
11.	Due date and time for opening of Technical bid	11.04.2023/ 14:30 Hr.
12.	Contact details for queries related to tender	Shri. Satya Prakash, Manager / CCD, BHEL-EDN, Bengaluru. Contact No:080 2699 8040 / 7598217987; e-mail: <a href="mailto:ccd.edn@bhel.in">ccd.edn@bhel.in</a> ;
13.	Address of Tender Inviting Authority	Shri. Vishal Singh, SDGM/ CCD Common Contracting Department ( CCD) 2 <sup>nd</sup> Floor, New Engineering Building BHEL-Electronics Division, Mysore Road Bengaluru-560026

**PART-I (TECHNO COMMERCIAL BID)****INSTRUCTIONS TO THE TENDERER**

- The bidder shall submit the bid online by logging in to user account of bidder on e-procurement portal of BHEL as specified in NIT. Offer submitted by any other mode is not acceptable.
- The bidder has to upload the scanned copy of all the mentioned original documents (in colour) during online bid-submission. It is advised that all the documents to be submitted are kept scanned or converted to PDF format in a separate folder in their computer before starting online submission.
- Bidder shall ensure that the total size of the scanned documents to be uploaded remains minimum. If required, documents may be scanned at lower resolutions say at 150 dpi. However, it shall be sole responsibility of bidder that the uploaded documents remain legible.
- The tender documents must be signed digitally / physically by Partner/ Director of the Firm or by the person holding the Power of Attorney on behalf of the Firm concerned for having accepted the conditions and upload in e-procurement portal. In the latter case, a copy of Power of Attorney, duly attested by a Notary Public must accompany the offer.
- Bidder are advised not to wait till the last minutes or last few seconds w.r.t tender closing time to submit their offer to avoid complications related with internet connectivity / network problem/ power failure etc.
- Tenderer should arrange for the EMD as specified in the tender. EMD should be submitted as per Part-I(A)/Prequalification Bid/EMD (including EMD waiver, if any).
- In case EMD is paid through offline payment mode, the original should be posted/couriered/given in person in a sealed cover super scribing 'Tender number/date/Part-I(A)/EMD' to the Tender Inviting Authority, within the bid submission date and time for the tender.
- Techno-commercial bid will be considered only, if the Part-I(A)/Prequalification Bid/EMD is valid. EMD in any other form or tender without EMD will be summarily rejected.
- In case of offline payments, the hardcopies of Earnest Money Deposit (EMD) document/ DD submitted to CCD/BHEL-EDN, Bengaluru and the soft-copies uploaded at the time of online bid submission should be the same, otherwise the tender will be summarily rejected.
- Any deviation to this tender terms & conditions, and schedules of this tender will lead to rejection of the offer.
- Tenderer who have been suspended or black listed or issued with "Show Cause Notice" by **BHEL-EDN, Bengaluru** or any other unit of BHEL or GOI will not be allowed to participate in the tender and bidder should declare the same in the tender. Even during the course of evaluation/ finalization of tender if it is found that the tenderer is black listed/ barred from business transaction/ under business hold, BHEL will not consider them for further participation in the tender.
- Should a tenderer find discrepancies or omissions in the tender documents, or should there be any doubt as to their meaning, he should at once address the authority inviting the tender, for clarification well before the due date, so as to submit his tender in time. No extension of time shall be given for submission of the tender on any account.
- Rates should be quoted as per the Work / Rate schedule (Price bid/Part –II). Rates quoted in any other form will not be accepted and will be rejected.
- If a tenderer deliberately gives wrong information in his tender or creates conditions favourable for the acceptance of his tender, the BHEL will reject such offer at any stage.
- Words imparting singular number shall be deemed to include plural number and vice-versa where the context so requires.
- Canvassing in any form in connection with tenders is strictly prohibited and the tenders submitted by the Contractors who resort to canvassing will be liable for rejection.
- Should a Tenderer's or a Contractor's or in the case of a firm or company of contractors/any of its shareholder's or shareholder's relative is employed in BHEL, the authority inviting the tenders shall be informed in writing of this fact at the time of submission of the tender, failing which the tender may be disqualified, or if such fact subsequently comes to light, the contract may be cancelled.
- The tender schedule, and the tender shall be deemed to form an integral part of the contract to be entered into for this work.
- BHEL reserves the right to cancel the tender at any stage without assigning any reason.

- Before submission of offer, the Tenderer is advised to inspect the site of work and its environment and be well acquainted with the actual working and other prevailing conditions including various best practices adopted by BHEL with respect to position of the materials and labour.

**Check list for submission of offer**

<p>Bidder shall submit the offer in two parts as Part-I (Techno-commercial Bid) and Part-II (Price Bid)</p> <p><b>Part –I (Techno commercial bid)</b> shall contain following documents:</p> <p><b>a) EMD related documents   b) Pre-qualification related documents   c) Signed Tender document.</b></p> <p>The documents to be contained in Techno commercial bid are as follows:</p> <p>a) EMD related documents to meet EMD Criteria.</p> <p>b) Pre-qualification related documents to meet Technical Competency Criteria, Financial Soundness Criteria and Statutory registration criteria.</p> <p>c) Signed Tender document and duly filled and signed ANNEXUREs (As applicable) for unconditional acceptance to tender Scope of work and Terms &amp; Conditions.</p> <p>Part-II (Price Bid) comprises of single cover</p> <p>a) Price bid Cover</p> <p>Price bid cover shall contain rates quoted as per price bid format available in e-Procurement portal.</p>		
Sl. No	Description	Remarks
1	<b>Check list for Part-I: Techno commercial Bid ( EMD related documents )</b>	
1.1	<p>Documentary evidence to meet EMD Criteria:</p> <p>1. Copy of Payment Receipt for EMD amount as per tender. (As applicable)</p> <p>2. Bank Guarantee in lieu of remaining EMD amount above ₹ 2 Lakhs, ( As applicable )</p>	<input type="checkbox"/> uploaded / <input type="checkbox"/> Not uploaded
	<p><b>a.</b> EMD may be submitted in the form of Cash deposit (Before tender opening) / Bankers Cheque / Pay order / DD / FDR drawn in favour of BHEL-EDN, Bengaluru (Along with offer)/ EFT payment details vide SBI Collect as EMD / NEFT (Before tender opening).( Details for making online payment as per ANNEXURE-C</p> <p><b>b. EMD is not waived off for MSE bidders.</b></p> <p><b>c.</b>In addition to the above, If EMD amount is more than ₹2 lakhs, first part of EMD of ₹2 Lakhs can be submitted in the form of Cash deposit /DD/ FDR/ Bankers cheque / Pay order /EFT / online payment and remaining amount over and above ₹2 Lakhs by the way of Bank Guarantee from scheduled bank / Nationalized Bank / Consortium bank. The bank guarantee in such cases shall be valid for at least six months. (BG Format attached as ANNEXURE-E). List of Consortium banks attached as ANNEXURE-F.</p>	
2	<b>Check list for Part-I: Techno Commercial Bid ( Pre-Qualification related documents )</b>	

2.1	<p>Documentary evidence in support of <b>Organization / Firm Registration</b> as registered / licensed companies / firms / proprietors / partnerships</p> <p>Duly signed and sealed copy of</p> <p>1) Trade License / GST registration / Auditor's letter / PAN</p> <p>or</p> <p>2) Partnership Deed Copy of Extract from Register of Firms showing latest constitution of Firm (Form A /G/any other form as the case may be) Trade License / GST Certificate and PAN</p> <p>or</p> <p>3) Partnership Deed, Notarised Declaration as to the constitution of Firm signed by all the Partners and Trade License, GST Certificate and PAN</p> <p>or</p> <p>4) Certificate of Incorporation / Memorandum of Association &amp; Articles of Association</p>	<p>1.Applicable Document</p> <p><input type="checkbox"/> Uploaded / <input type="checkbox"/> Not uploaded</p>
2.2	<p>Self-attested copy of the <b>Power of Attorney</b>, in case an individual/authorized signatory other than the sole proprietor signs the tender.</p>	<p>1.Copy of Power of Attorney</p> <p><input type="checkbox"/> Uploaded / <input type="checkbox"/> Not uploaded</p>
2.3	<p>Documentary evidence to meet <b>Technical Competency</b> Criteria as per C.3 of C: Pre-qualification Criteria: Technical competency &amp; financial soundness</p> <p>1) Duly signed and sealed copy of WO / PO / Agreement / Completion certificate.</p> <p>2) Form 26AS / TDS certificate with customer name as name of deductor for financial year in which work was carried out or Bank statement showing transaction with customer during execution of contract</p>	<p>1. WO / PO / Agreement copy / Completion Certificate</p> <p><input type="checkbox"/> uploaded / <input type="checkbox"/> Not uploaded</p> <p>2.Form 26AS / TDS Certificate / Bank Statement</p> <p><input type="checkbox"/> uploaded / <input type="checkbox"/> Not uploaded</p>

2.4	<p>Documentary evidence to meet <b>Financial Soundness Criteria as per C.4 of C: Pre-qualification Criteria: Technical competency &amp; financial soundness.</b></p> <p>Duly signed and sealed copy of</p> <ol style="list-style-type: none"> <li>1) Income Tax Return (ITR)</li> <li>2) Balance Sheet &amp; Profit and loss Statement. (For last three consecutive years ending on <b>31st March 2021</b> (2018-19,2019-20 and 2020-21)</li> <li>3) Income Tax Registration (PAN)</li> <li>4) GST Registration.</li> <li>5) <b>Solvency Certificate</b></li> </ol>	<p>1.Income Tax Returns</p> <p><input type="checkbox"/> Uploaded / <input type="checkbox"/> Not uploaded for 1year / 2 years / 3 years</p> <p>2.Balance Sheet &amp; profit and loss Statement (Audited)</p> <p><input type="checkbox"/> Uploaded / <input type="checkbox"/> Not uploaded for 1year / 2 years / 3 years</p>
3	<b>Check list for Part-I: Techno commercial Bid (Tender Scope and Terms &amp; conditions related document)</b>	
3.1	<p>Documentary evidence for unconditional acceptance to Tender Scope of work and Terms &amp; Conditions.</p> <p>Duly filled, signed and Sealed copy of</p> <ol style="list-style-type: none"> <li>1. Complete Tender Document.</li> <li>2. "No Deviation Certificate "as per ANNEXURE-A in letter head.</li> <li>3. "Declaration" as per ANNEXURE -B in letter head.</li> <li>4. <b>Integrity Pact.</b></li> <li>5. GFR Declaration</li> <li>6. Make in India Local content Declaration</li> </ol>	<p>1. Duly filled and Signed "Tender Document"</p> <p>2. Duly filled and Signed "Declaration"</p> <p>3. Duly filled and Signed "No Deviation Certificate"</p> <p>4. <b>Integrity Pact.</b></p> <p>5. GFR Declaration</p> <p>6. Make in India Local content Declaration</p> <p><input type="checkbox"/> uploaded / <input type="checkbox"/> Not uploaded</p>
4	Rates quoted as per Price bid format available on NIC portal.	<p><input type="checkbox"/> Quoted as per tender format</p> <p><input type="checkbox"/> Not Quoted as per tender format.</p>
5	All the information and relevant documents as asked in tender.	<input type="checkbox"/> Provided / <input type="checkbox"/> Not Provided
<p>Bidders are kindly requested to submit their offer as follows</p> <ol style="list-style-type: none"> <li>1) Documents pertaining to each cover shall be uploaded as single pdf containing all relevant documents as stated above.</li> <li>2) No additional documents other than above shall be uploaded as no weightage or preference will be given for additional documents.</li> </ol>		

**ANNEXURE-1A****PART-I (TECHNO COMMERCIAL BID)****A: (Bidders Profile)**

1.	Name of the Enterprise/ Company/ Firm.	
2.	Name of Directors / Partners / proprietor of Enterprise/ Company/ Firm	
3.	Registered Address of Enterprise/ Company/ Firm	
4.	Contact Details: Landline /Mobile number:	
5.	E-mail Address for communication w.r.t tender	E-mail ID: .....
6.	Name and Contact details of person for communication related to Tender	Name: .....  Mobile No: .....
8.	Status of Firm as MSME / Start up recognized by DPIIT	<input type="checkbox"/> Micro <input type="checkbox"/> Small <input type="checkbox"/> Medium  <input type="checkbox"/> Start-up recognized by DPIIT <input type="checkbox"/> None of the above ( Supporting document to be enclosed )
9.	BHEL Vendor Code (If any)	

**B: Pre- qualification Criteria: Earnest Money Deposit (EMD)**

<b>B.1</b>	<b>Earnest Money Deposit ( EMD )</b>		
	Bidder shall submit Earnest Money Deposit (EMD)		
	<b>SL NO</b>	<b>QUALIFYING PARAMETER</b>	<b>QUALIFYING VALUE</b>
	1	<b>EMD ( Earnest Money Deposit ):</b>	<b>₹14,41,474/-</b>
	Details of EMD payment by Bidder		<b>1. DD/ FDR / PAY ORDER / RTGS</b> <b>DETAILS:</b> AMOUNT: ₹14,41,474.00/- INST. NO: INST. DATE: ISSUING BANK:
			<b>2.DD/ FDR/PAY ORDER /RTGS DETAILS:</b> AMOUNT: ₹ 2,00,000/- RECEIPT NO: RECEIPT DATE: BANK DETAILS:  <b>AND</b> <b>BANK GUARANTEE DETAILS:</b> AMOUNT: ₹12,41,474.00/- BG NO: BG DATE: BANK DETAILS: BG VALIDITY: Six months  <b>(BG for full value of EMD amount is not acceptable and will lead to rejection of offer)</b>
	<b>Documents to be submitted</b>		
	EMD may be submitted in following ways: i) Electronic fund transfer credited in BHEL account (Before Tender Opening). (Refer <b>Annexure –C</b> for making EMD payment through SBI-E collect) ii) In the form of Cash deposit (Done before tender opening) / Bankers Cheque / Pay order / DD / FDR (Along with offer) drawn in favour of BHEL-EDn Bengaluru, payable at Bengaluru issued by		

	<p>Scheduled Bank / Nationalized bank / Consortium banks.</p> <p>iii) In addition to the above, If EMD amount is more than ₹2 lakhs, first part of EMD of ₹2 Lakhs can be submitted in the form of Cash deposit / DD/ FDR/ Bankers cheque / Pay order / EFT / online payment and remaining amount over and above ₹2 Lakhs by the way of Bank Guarantee from scheduled bank / Nationalized Bank / Consortium bank. The bank guarantee in such cases shall be valid for at least six months. (BG Format attached as ANNEXURE-E). List of Consortium banks attached as ANNEXURE-F.</p> <p>iv) <b>EMD is not waived off for MSE bidders.</b></p> <p>EMD in any other form (One Time EMD, BG for full amount of EMD etc.) is not acceptable.</p>
<b><i>Duly filled copy of the above along with supporting document to be uploaded in e-procurement portal.</i></b>	

**C: Pre- qualification Criteria: Technical competency & financial soundness**

C.1 ORGANIZATION / FIRM REGISTRATION			
1	Registered / licensed companies / firms / proprietors / partnerships are eligible for participating in this Tendering Process. Wherever “Companies Act 2013”is applicable the Company shall be registered in line with “Companies Act 2013”.		
	Organization / Firm Business Entity	<div><input type="checkbox"/> Sole proprietorship / <input type="checkbox"/> Partnership</div> <div><input type="checkbox"/> Private Limited Company / <input type="checkbox"/> Public Limited Company</div> <div><input type="checkbox"/> Public Sector / <input type="checkbox"/> Govt. Org /</div> <div><input type="checkbox"/> Others (Pl. Specify .....)</div> <div>( Supporting document to be enclosed )</div>	
	Details of Organization / Firm Registration	Registration Details :.....	
	The details of the registration Documents to be submitted are below:		
	1	Sole Proprietorship	Trade License / GST registration / Auditor’s letter / PAN
	2	Partnership	Partnership Deed Copy of Extract from Register of Firms showing latest constitution of Firm (Form A /G/any other form as the case may be) , Trade License / GST Certificate and PAN
	3	Unregistered Partnership	Partnership Deed, Notarized Declaration as to the constitution of Firm signed by all the Partners and Trade License , GST Certificate and PAN

	4	Private Limited Company	Certificate of Incorporation / Memorandum of Association & Articles of Association
	5	Public Limited Company	Certificate of Incorporation / Memorandum of Association & Articles of Association
	6	Public Sector / Govt. org.	Certificate of Incorporation / Memorandum of Association & Articles of Association
<b>C.2</b>	<b>POWER OF ATTORNEY:</b>		
	<p>The tender documents should be signed by authorized signatory. Authorized signatory shall be the person holding 'power of attorney' on behalf of the firm/company/bidder-concerned authorized/empowered to act on behalf for the specific purpose.</p> <p>BHEL will not be bound by any other Power of Attorney granted or the change in the composition of the firm made, subsequent to the execution of the Contract agreement. They may however recognize such Power of Attorney or change in status after obtaining legal advice and the cost involved in that connection shall be chargeable to the bidder concerned.</p> <p>Documents to be submitted:</p> <p>A self-attested copy of the Power of Attorney, in case an individual/ authorized signatory other than the sole proprietor signs the tender shall be submitted along with the tender.</p>		
<b>C.3</b>	<b>TECHNICAL COMPETENCY</b>		
<b>C.3.1</b>	<p>Bidder shall have experience of execution of works in any Central / State Govt. / PSU / Private company /establishment /reputed organization / institution executed after 31st March, 2015 as per following details:</p>		
	<b>SL NO</b>	<b>QUALIFYING PARAMETER</b>	<b>QUALIFYING VALUE</b>
	1	<p><b>"Works related to supply of PLYWOOD / WOOD as packing material and Packing of material using PLYWOOD / WOOD".</b> (The above work need not be executed under same contract. In case of separate contract,( algebraic sum of two orders shall be taken for qualifying purpose).</p>	<p>Three work orders each with value of <b>₹360.36 Lakh</b> or Two Work orders each with value of <b>₹450.46 Lakh</b> or One Work order with value of <b>₹720.74 Lakh.</b></p>

	Details of Works executed by Bidder	WO/ PO Ref No:: .....  Name of the work:  .....  .....  WO /PO Value: .....  WO /PO Contract Period: .....  Name of Customer:.....
	Details of Works executed by Bidder	WO/ PO Ref No:: .....  Name of the work:  .....  .....  WO /PO Value: .....  WO /PO Contract Period: .....  Name of Customer:.....
	Details of Works executed by Bidder	WO/ PO Ref No:: .....  Name of the work:  .....  .....  WO /PO Value: .....  WO /PO Contract Period: .....  Name of Customer:.....

	<b>Documents to be submitted by bidder</b>		
	<b>WO / PO / Agreement Copy relevant to above mentioned work :</b> <input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed <p style="text-align: center;">OR</p> <b>Performance /Completion Certificate for satisfactory execution of above mentioned work:</b> <input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed <p style="text-align: center;">AND</p> <b>Form 26AS/ TDS certificate / Bank statement for payment received from customer against the above contract:</b> <input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed		
<b>C.4</b>	<b>FINANCIAL SOUNDNESS</b>		
<b>C.4.1</b>	The Average annual turnover for last three consecutive financial year ending on 31st March 2021 ( 2018-19, 2019-20, 2020-21) shall be equal to or more than the following:		
	<b>SL NO</b>	<b>FINANCIAL PARAMETER</b>	<b>QUALIFYING VALUE</b>
	<b>1</b>	Average Annual Turn over	<b>₹270.28 Lakh.</b>
<b>C.4.1.1</b>	Details of Annual Turnover of Bidder for last three consecutive financial year ending on 31st March 2021 (2018-19, 2019-20 and 2020-21 )		
<b>C.4.1.2</b>	Details of Annual Turnover for last three consecutive years ending on <b>31st March 2021</b> (2018-19, 2019-20 and 2020-21)	Financial Year	Annual Turnover ( Sales )
		2018-19	₹.....Lakh
		2019-20	₹.....Lakh
		2020-21	₹.....Lakh
		Average Annual Turnover of three consecutive year	₹.....Lakh
<b>C.4.1.3</b>	Profit and Loss account statement & Balance Sheet for last three consecutive years ending on <b>31st March 2021</b> (2018-19, 2019-20 and 2020-21) duly certified by chartered accountant with CA membership number.	<b>Financial year</b>	<b>Please Tick (✓) in the appropriate box</b>
		2018-19	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed
		2019-20	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed
		2020-21	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed

		<b>Assessment year</b>	<b>Please Tick (✓) in the appropriate box</b>
<b>C.4.1.4</b>	Income Tax Return Acknowledgment for last three consecutive years ending on <b>31st March 2021</b> (2018-19, 2019-20 and 2020-21) or assessment years 2019-20, 2020-21, and 2021-22.	2019-20	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed
		2020-21	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed
		2021-22	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed
<b>C.4.1.5</b>	Permanent Account Number (PAN)	.....	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed
<b>C.4.1.6</b>	Goods and Services Tax Registration ( GST )	.....	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not Enclosed
<b>C.4.1.7</b>	<b>Documents to be submitted</b>		
	<p>1. Auditor certificate indicating annual turnover for three consecutive Financial Years ending on <b>31st March 2021</b> (2018-19, 2019-20 and 2020-21) duly signed by Chartered Accountant registered with Institute of Chartered Accountants of India. The auditors' certificate should bear valid membership number of the Chartered Accountant.</p> <p>Income Tax Return Acknowledgment for last three consecutive years ending on <b>31st March 2021</b> (2018-19, 2019-20 and 2020-21) or assessment years 2019-20, 2020-21, and 2021-22.</p> <p>2. If the company did not exist for 3 financial years, the average turnover will be calculated from the year of existence (not before three years) of the company in the past.</p> <p>3. Permanent Account Number (PAN): Bidder should have valid Permanent Account Number (PAN) and Self-Attested copy of PAN Card shall be enclosed.</p> <p>4. GST registration Number: The bidder shall have GST registration, copy of GST certificate shall be enclosed</p>		
<b>C.4.2</b>	<b>SOLVENCY</b>		
	<b>Bidder shall submit Solvency certificate</b> along with the bidder.		
	<b>SL NO</b>	<b>FINANCIAL PARAMETER</b>	<b>QUALIFYING VALUE</b>
	<b>1</b>	<b>Solvency Certificate</b>	<b>₹60 Lakh</b>
	<b>Solvency certificate</b> issued by Nationalized Bank within 6 months from date of issue of Tender notification.		
<b>Duly filled copy of the above along with supporting document to be uploaded in e-procurement portal.</b>			

**D: Pre- qualification Criteria: Statutory requirements & acceptance to tender terms & conditions**

<b>D.1</b>	<b>ACCEPTANCE TO TENDER TERMS AND CONDITIONS</b>	
	<b>The bidder shall unconditionally accept all terms and conditions of tender.</b>	
<b>D.1.1</b>	<b>Details of documents submitted by Bidder</b>	
	Duly filled, Signed and sealed copy of <b>Tender document.</b>	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not enclosed
	Duly signed and Sealed copy of <b>"No Deviation Certificate" as per ANNEXURE-A</b>	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not enclosed
	Duly signed and Sealed copy of <b>"Declaration" as per enclosed ANNEXURE-B</b>	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not enclosed
	Duly signed and Sealed copy of <b>"Integrity Pact" as per enclosed ANNEXURE-G</b>	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not enclosed
	Duly signed and Sealed copy of <b>"GFR Declaration" as per enclosed ANNEXURE-I</b>	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not enclosed
	Duly signed and Sealed copy of <b>"Make in India local content declaration" as per enclosed ANNEXURE-J</b>	<input type="checkbox"/> Enclosed / <input type="checkbox"/> Not enclosed
<b>D.2</b>	Applicable GST % against the scope of work	_____% GST ( Vendor to confirm )
<b><i>Duly filled copy of the above along with supporting document to be uploaded in e-procurement portal.</i></b>		

**ANNEXURE-IB****PART-I (TECHNO COMMERCIAL BID)****SCOPE OF WORK AND TECHNICAL TERMS & CONDITIONS****A. BILL OF QUANTITY**

SL NO	DESCRIPTION OF WORKS	ITEM TO BE PACKED	SCOPE OF WORK	UOM	APPROX QTY
<b>SCHEDULE-A: Supply of packing material and Packing of Cubicles with Plywood, plywood support batten and other materials as per PLANT STANDARD ED 0490092 Rev 10 )</b>					
A.1	Supply of <b>12 mm thick Comml Plywood - MR Grade IS:303 , Plywood support batten</b> ,other packing materials and packing of C&I <b>CUBICALS</b> as per scope of work	C&I CUBICALS	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	SQ. MTR OF PLYWOOD	60000
A.2	Supply of <b>12 mm thick Comml Plywood - Marine Grade IS:710 , Plywood support batten</b> ,other packing materials and packing of C&I <b>CUBICALS</b> as per scope of work	C&I CUBICALS	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	SQ. MTR OF PLYWOOD	1500
<b>SCHEDULE-B: Supply of packing material and Packing of (TRACTION EQUIPMENTS) Cubicles like Railways and equivalent bigger / heavier size panels with Plywood along with plywood support batten , mechanical latching unit or suitable nut &amp; bolt and other materials as per PLANT STANDARD ED 0490092 Rev 10</b>					
B.1	Supply of <b>12 mm thick Comml Plywood - MR Grade IS:303 , Plywood support batten</b> ,other packing materials and packing of <b>TRACTION EQUIPMENTS</b> as per scope of work	TRACTION EQUIPMENTS	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	SQ. MTR OF PLYWOOD	35000
<b>SCHEDULE-C: Supply of packing material and Packing of [SPARES &amp; MAIN EQUIP] Loose items / spares / Railway VCU / and other items with Plywood along with plywood support batten and other materials as per PLANT STANDARD ED 0490092 Rev 10 ]</b>					
C.1	Supply of <b>12 mm thick Comml Plywood - MR Grade IS:303 , Plywood support batten</b> ,other packing materials and packing of <b>LOOSE ITEMS</b> as per scope of work	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	SQ. MTR OF PLYWOOD	40000
C.2	Supply of <b>12 mm thick Comml Plywood - Marine Grade IS:710 , Plywood support batten</b> ,other packing materials and packing of <b>LOOSE ITEMS</b> as per scope of work	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	SQ. MTR OF PLYWOOD	1000

<b>SCHEDULE-D: Supply of packing material and Packing of [SPARES &amp; MAIN EQUIPMENT LOOSE ITEMS] items suitable for SPEEDPOST using all sides with 12 mm Thick Commercial Plywood [MR Grade] general purpose with other following pkg materials: Silica gel, Polythene Cover for items, PVC strappings and markings. [ No rubber wood supporting battens] as per Drawing Number: .805 - RPP - BOX - 001</b>					
D.1	Supply of <b>12 mm thick Comml Plywood - MR Grade IS:303</b> and other packing materials and packing of <b>LOOSE ITEMS SUITABLE FOR SPEEDPOST</b> as per scope of work	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES SUITABLE FOR SPEEDPOST	<b>SUPPLY OF PACKING MATERIAL EXCEPT SUPPORT BATTENS AND PACKING</b> USING THE SUPPLIED MATERIAL	SQ. MTR OF PLYWOOD	6000
<b>SCHEDULE-E: Supply of packing material and Packing of Cubicles with Rubber Wood and other packing materials as per PLANT STANDARD ED 049 0099 Rev 14</b>					
E.1	Supply of <b>RUBBERWOOD</b> and other packing materials and packing of <b>PANELS</b> as per scope of work.	PANELS FOR EXPORT	<b>SUPPLY OF PACKING MATERIAL AND PACKING</b> USING THE SUPPLIED MATERIAL	CUBIC METER OF WOOD	40
<b>SCHEDULE-I: Supply of packing material and Packing of Cubicles with Silver Oak / Pine wood and other packing materials as as per PLANT STANDARD ED 049 0099 Rev 14</b>					
F.1	Supply of <b>SILVER OAK / PINE WOOD</b> ,other packing materials and packing of <b>PANELS ( FOR EXPORT )</b> as per scope of work.	PANELS FOR EXPORT	<b>SUPPLY OF PACKING MATERIAL AND PACKING</b> USING THE SUPPLIED MATERIAL	CUBIC METER OF WOOD	50
<b>SCHEDULE-J:SCHEDULE-L: Supply of packing material and Packing of Loose Items with Rubber Wood and other packing materials as per PLANT STANDARD ED 049 0099 Rev 14</b>					
G.1	Supply of <b>RUBBERWOOD</b> , other packing materials and packing of <b>LOOSE ITEMS</b> as per scope of work.	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES	<b>SUPPLY OF PACKING MATERIAL AND PACKING</b> USING THE SUPPLIED MATERIAL	CUBIC METER OF WOOD	50
<b>SCHEDULE-K: Supply of packing material and Packing of Loose Items with Silver Oak / Pine wood and other packing materials as per PLANT STANDARD ED 049 0099 Rev 14</b>					
H.1	Supply of <b>SILVER OAK / PINE WOOD</b> ,other packing materials and packing of <b>LOOSE ITEMS ( FOR EXPORT )</b> as per scope of work.	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES FOR EXPORT	<b>SUPPLY OF PACKING MATERIAL AND PACKING</b> USING THE SUPPLIED MATERIAL	CUBIC METER OF WOOD	50

<b>SCHEDULE-L: Supply and Packing with Bitumen Coated Hessein Cloth etc., as per PLANT STANDARD ED 049 0099 Rev 14</b>					
I.1	Supply of <b>BITUMEN COATED HESSEIN CLOTH</b> , other packing materials and packing of <b>LOOSE ITEMS</b> as per scope of work.	LOOSE ITEMS	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	SQUARE METER	50
<b>SCHEDULE-J: Supply and Packing of panels with Galvanised Iron Sheet of Thickness 0.3 mm + /- 0.05mm tolerance with suitable Nails &amp; Wooden batten for covering packed cases as per PLANT STANDARD ED 049 0099 Rev 14</b>					
J.1	Supply of <b>GALVANIZED IRON SHEET OF THICKNESS 0.3MM +-0.05MM</b> with suitable Nails & Wooden batten and covering of <b>PACKED CASES</b> as per scope of work.	PACKED CASES	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	SQUARE METER OF GI SHEET	15000
<b>SCHEDULE-K: LABOUR CHARGE for packing of materials in plywood using all other materials except plywood/pine /Silver Oak. [Plywood supplied by BHEL.] PACKING CHARGE ONLY</b>					
K.1	<b>LABOUR CHARGE</b> for packing of materials in plywood using all other materials except plywood. [ Plywood supplied by BHEL.] <b>(PACKING CHARGE ONLY)</b>	CUBICLE, TRACTION PANEL , SPEED POST, LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS, SPARES, TRACTION	<b>SUPPLY OF PACKING MATERIAL EXCEPT PLYWOOD AND PACKING USING THE SUPPLIED MATERIAL</b>	PER SQUORE METER	4000
K.2	<b>LABOUR CHARGE</b> for packing of materials (Railway Module) in Carton Box using all other materials except Carton Box and filling material. [ Carton Box with filling material supplied by BHEL.] <b>PACKING CHARGE ONLY</b>	MATERIALS ( RAILWAY MODULES )	<b>PACKING USING BHEL SUPPLIED MATERIAL</b>	NOS.	3000

SCHEDULE-O:SUPPLY OF PACKING MATERIAL					
L.1	SILICAGEL	Not Applicable	SUPPLY OF MATERIAL	KG	100
L.2	POLYETHENE SHEET ( 175 MICRON)	Not Applicable	SUPPLY OF MATERIAL	KG	100
L.3	POLYETHENE SHEET ( 200 MICRON)	Not Applicable	SUPPLY OF MATERIAL	KG	100
L.4	IRON CLAMPS	Not Applicable	SUPPLY OF MATERIAL	NOS.	50
L.5	HOOP IRON(0.6 mm Thick)	Not Applicable	SUPPLY OF MATERIAL	KG	50
L.6	RUBBERISED COIR	Not Applicable	SUPPLY OF MATERIAL	KG	100
L.7	TARFELT	Not Applicable	SUPPLY OF MATERIAL	SQUARE METER	500
L.8	NAILS ( 2' AND 2-1/2')	Not Applicable	SUPPLY OF MATERIAL	KG	50
L.9	PACKING NOTE HOLDER	Not Applicable	SUPPLY OF MATERIAL	NOS.	400
L.10	NAME PLATE	Not Applicable	SUPPLY OF MATERIAL	NOS.	400
L.11	BITUMINOUS WATERPROOF KRAFT PAPER	Not Applicable	SUPPLY OF MATERIAL	SQUARE METER	300
L.12	PLY BOARD 12MM THICK MR 303 GRADE	Not Applicable	SUPPLY OF MATERIAL	SQUARE METER	100
L.13	AIR BUBBLE ROLL OF 1.5M WIDE X100 METERS LONG OR EQUIVALENT QTY HAVING DIA OF AIR BUBBLE:9.5MMOR MORE AND 450 GAUGE	Not Applicable	SUPPLY OF MATERIAL	ROLL	10
L.14	2 PLY CORRUGATED PAPER ROLL [ NON VERGIN ] OF 100 GSM SIZE : 1 M X 100 M LONG	Not Applicable	SUPPLY OF MATERIAL	ROLL	10
L.15	EP FOAM SHEETS OF SIZE : 1000 MM X 500 MM X 50 MM THICK WITH NORMAL DENSITY	Not Applicable	SUPPLY OF MATERIAL	NOS.	100

L16	EXPANDED POLYETHYLENE FOAM PACKING BOX FOR LEG MODULE PACKING AS PER DRAWING 3-688-04-10022 VER 02	Not Applicable	SUPPLY OF MATERIAL	NOS.	50
L17	EXPANDED POLYETHYLENE FOAM CORNER BLOCK AS PER DRAWING HAVING SIZE : 250 X 250 X 200 MM WITH WALL THICKNESS OF 50 MM	Not Applicable	SUPPLY OF MATERIAL	NOS.	50
L18	THERMOCOLE SHEETS SIZE : 1M X 0.5 METRE WIDTH X 15 MM THICK OF NORMAL DENSITY	Not Applicable	SUPPLY OF MATERIAL	NOS.	100
L19	NAILS SUITABLE FOR SPEEDPOST PARCELS SIZE : 14 G X 1.25 INCH LONG	Not Applicable	SUPPLY OF MATERIAL	KG	25
L20	GUM - UTILITY BRAND SUITABLE FOR SPEED POST PARCEL PACKING , QTY : 700 ML BOTTLE	Not Applicable	SUPPLY OF MATERIAL	NOS.	50
L21	BOPP GUM TAPES [ SELF ADHESIVE] SIZE: 2" X 65 METRE LONG ROLL HEAVY GUAGE	Not Applicable	SUPPLY OF MATERIAL	ROLL	100
L22	BOPP GUM TAPES [ SELF ADHESIVE] SIZE: 3" X 65 METRE LONG ROLL HEAVY GUAGE	Not Applicable	SUPPLY OF MATERIAL	ROLL	100
L23	LABELS - VINYL(STICKERS)	Not Applicable	SUPPLY OF MATERIAL	SQUARE FEET	300
L24	LABELS - FLEX	Not Applicable	SUPPLY OF MATERIAL	SQUARE FEET	300
L25	"S" LABELS OF SIZE 75MM X 75MM FOR INITIAL SPARES	Not Applicable	SUPPLY OF MATERIAL	NOS.	250
L26	"S" LABELS OF SIZE 150MM X 150MM FOR INITIAL SPARES	Not Applicable	SUPPLY OF MATERIAL	NOS.	250
L27	"BHEL" MONOGRAM LABEL OF SIZE 150MM X 200MM	Not Applicable	SUPPLY OF MATERIAL	NOS.	500
L28	MARKER PEN (BLACK)	Not Applicable	SUPPLY OF MATERIAL	SET ( 12NOS.)	25
L29	PLY WOOD 18 MM THICK OF MR GRADE IS 303	Not Applicable	SUPPLY OF MATERIAL	SQR METER	100

**B. SCOPE OF WORK, CONTRACT PERIOD AND TERMS & CONDITIONS OF CONTRACT**

B.1.1: Details of Material to be supplied and used for packing of consignment:

DETAILS OF PACKING MATERIAL TO BE SUPPLIED AND USED FOR PACKING					
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	BOX / CASING MATERIAL SPECIFICATION	SUPPORT BATTEN MATERIAL SPECIFICATION	OTHER PACKING ITEMS
1	A.1 TO A.2	<b>CUBICALS</b> 01 Single suite cubicle OD- 900 MM x 950 MM x 2400/2500/2700MM 02 Two suite cubicle OD- 1650MM x 950MM x 2400/2500/2700MM 03. Three suite cubicle OD- 2400MM x 950MM x 2400/2500/2700MM 04. Four suite cubicle OD- 3150MM x 950MM x 2400/2500/2700MM 05.Five Suite cubicle OD- 4950X1050X2700MM 06. Regulation cub OD- 1300MM x 1350MM x 2400/2500/2700MM 07. Thy cub OD - 2870MM x 1350MM x 2500MM 08. VFD Cub OD - 3800MM x 1550MM x 2500MM	<b>PLYWOOD</b> <b>12 mm thick Comm1 Plywood - MR Grade</b> and termite , fungus proof as per IS:303  OR <b>12mm thick Plywood of Marine grade as per IS: 710</b>  Chemical Preservation of plywood Not required. <b>( The specification of plywood shall be as per Clause-3 and acceptance criteria for Plywood shall be as per Clause -7. of PLANT STANDARD ED 049 00 92 REV NO 10)</b>	<b>PLYWOOD</b> For nailing Plywood sheet of cross section 18 mm thk x 100 to 150 mm width. For Nut and Bolt Plywood sheet of cross section 45 Thickness x 45 mm width  <b>( The specification of support batten shall be as per clause-3 of PLANT STANDARD ED 049 00 92 REV NO 10)</b> <b>Chemical Preservation of plywood Not required.</b>	1.POLYETHENE SHEET( 175 / 200 MICRONS) 2.BITUMINIZED WATER PROOF KRAFT PAPER 3.BITUMEN COATED HESSIAN POLYETENE KRAFT PAPER 4. RUBBERIZED COIRS 5.SILICA GEL 6.FASTENERS ,NAILS ,L clamp, Nut & Bolts Etc 7.MARKING PLATE, PACKING SLIP HOLDER, FLEX / VINYL DIGITAL PRINT MEDIA FOR LABELLING <b>( The specification of above items shall be as per clause-3 of PLANT STANDARD ED 049 00 92 REV NO 10)</b>
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	BOX / CASING MATERIAL SPECIFICATION	SUPPORT BATTEN MATERIAL SPECIFICATION	OTHER PACKING ITEMS & LABELS
2	B.1	<b>TRACTION EQUIPMENT CUBICALS OR HEAVIER SIZE PANEL</b> SAMPLE SIZES: OD-3200x1400x2500MM OD- 3950X1400X2500MM OD- 3200X1600X2000MM	<b>PLYWOOD</b> <b>12 mm thick Comm1 Plywood - MR Grade</b> and termite , fungus proof as per IS:303  Chemical Preservation of plywood Not required.  <b>( The specification of plywood shall be as per Clause-3 and acceptance criteria for Plywood shall be as per Clause -7. of PLANT STANDARD ED 049 00 92 REV NO 10)</b>	<b>PLYWOOD</b>  For Nut and Bolt Plywood sheet of cross section 54 Thickness18mmX3Nos) x 75 mm width.  <b>( The specification of support batten shall be as per clause-3 of PLANT STANDARD ED 049 00 92 REV NO 10)</b> <b>Chemical Preservation of plywood Not required.</b>	1.POLYETHENE SHEET( 175 / 200 MICRONS) 2.BITUMINIZED WATER PROOF KRAFT PAPER 3.BITUMEN COATED HESSIAN POLYETENE KRAFT PAPER 4. RUBBERIZED COIRS 5.SILICA GEL 6.FASTENERS ,NAILS ,L clamp, Nut & Bolts Etc 7.MARKING PLATE, PACKING SLIP HOLDER, FLEX / VINYL DIGITAL PRINT MEDIA FOR LABELLING <b>( The specification of above items shall be as per clause-3 of PLANT STANDARD ED 049 00 92 REV NO 10)</b>

SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	BOX / CASING MATERIAL SPECIFICATION	SUPPORT BATTEN MATERIAL SPECIFICATION	OTHER PACKING ITEMS & LABELS
3	C.1 TO C.2	<b>LOOSE ITEMS ( SPARES &amp; MAIN EQUIPMENT )</b> 400 x400x 400MM /500 X500 X500MM 600X 600 X500MM /800 X800X 500MM 870X 870 X 600MM /670 X720X 1300MM 1350X 1050X 1800MM /950X 900X 600MM 1000 X1000 X1000MM /670X 720X 1300MM 680X720 X1500MM /1350X 1050 X1000MM 1350X 1050 X1200MM /1350 X1050X 1400MM 1350X 1050 X1600MM /1350 X1050 X1800MM	<b>PLYWOOD</b> <b>12 mm thick Comm'l Plywood - MR Grade</b> and termite , fungus proof as per IS:303  OR <b>12mm thick Plywood of Marine grade as per IS: 710</b>  Chemical Preservation of plywood Not required.  <b>( The specification of plywood shall be as per Clause-3 and acceptance criteria for Plywood shall be as per Clause -7. of PLANT STANDARD ED 049 00 92 REV NO 10)</b>	<b>PLYWOOD</b> For nailing Plywood sheet of cross section 18 mm thk x 100 to 150 mm width. For Nut and Bolt Plywood sheet of cross section 45 Thickness x 45 mm width.  <b>( The specification of support batten shall be as per clause-3 of PLANT STANDARD ED 049 00 92 REV NO 10)</b> <b>Chemical Preservation of plywood Not required.</b>	1.POLYETHENE SHEET( 175 / 200 MICRONS) 2.BITUMINIZED WATER PROOF KRAFT PAPER 3.BITUMEN COATED HESSIAN POLYETENE KRAFT PAPER 4. RUBBERIZED COIRS 5.SILICA GEL 6.FASTENERS ,NAILS ,L clamp, Nut & Bolts Etc 7.MARKING PLATE, PACKING SLIP HOLDER, FLEX / VINYL DIGITAL PRINT MEDIA FOR LABELLING <b>( The specification of above items shall be as per clause-3 of PLANT STANDARD ED 049 00 92 REV NO 10)</b>
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	BOX / CASING MATERIAL SPECIFICATION	SUPPORT BATTEN MATERIAL SPECIFICATION	OTHER PACKING ITEMS & LABELS
4	D.1	<b>LOOSE ITEM SUITABLE FOR SPEEDPOST</b>  SAMPLE SIZE OF BOX OD-300 300 150MM /OD-300 300 200MM OD-300 300 300MM /OD-400 350 150MM OD-400 350 200MM / OD-400 350 250MM OD-450 450 250MM /OD-400 400 300MM OD-400 400 400MM / OD-500 300 150MM OD-500 400 300MM /OD-500 500 400MM OD-500 400 400MM / OD-500 500 500MM OD-600 400 300MM /OD-600 600 500MM OD-850 200 200MM /OD-600 400 300MM OD-600 600 500MM / OD-500 400 200MM OD-600 300 250MM	<b>PLYWOOD</b> 1.12 mm thick Comm'l Plywood - MR Grade and termite , fungus proof as per IS:303  <b>Chemical Preservation of plywood Not required.</b>  <b>( The specification of plywood shall be as per Clause-3 and acceptance criteria for Plywood shall be as per Clause -7. of PLANT STANDARD ED 049 00 92 REV NO 10)</b>	NOT REQUIRED	1.POLYETHENE SHEET ( 175 / 200 MICRONS)  2.SILICA GEL  3.Plastic bel strip/PVC Patti  4. NAILS , as required etc

5	E.1	<b>HEAVY PANELS (CUBICALS)</b> SAMPLE SIZE 01 Single suite cubicle OD- 900 MM x 950 MM x 2400/2500/2700MM 02 Two suite cubicle OD- 1650MM x 950MM x 2400/2500/2700MM 03. Three suite cubicle OD- 2400MM x 950MM x 2400/2500/2700MM 04. Four suite cubicle OD- 3150MM x 950MM x 2400/2500/2700MM 05.Five Suite 4950X1050X2700MM 05. Regulation cub OD- 1300MM x 1350MM x 2400/2500/2700MM 06. Thy cub OD - 2870MM x 1350MM x 2500MM 07. VFD Cub OD - 3800MM x 1550MM x 2500MM	<b>RUBBER WOOD</b> Thickness of plank ( Front, rear, top ,sides ) : 25+2/-3 mm Width of all planks : More than 125mm and after planning minimum 100mm.  <b>Chemical Treatment: With ASCU/ CCA solution required</b>  <b>( The specification of wood shall be as per Clause-2.1.1 and dimension of plank shall be as per clause 2.2 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>	<b>RUBBER WOOD</b> Thickness of plank (binding, Jointing battens) : 25+2/-3 mm Width of binding planks: Minimum 100 mm (Horizontal, vertical and diagonal planks shall be given for binding)  <b>(Chemical Treatment: With ASCU/ CCA solution required)</b>  <b>( The dimension of planks shall be as per clause-2.2 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>	1.BITUMINISED WATER PROOF KRAFT PAPER 2.BITUMEN COATED HESSIAN POLYETHYLENE KRAFT PAPER 3.RUBBERISED COIR 4.FOAM RUBBER / 'U' FOAM 5.THERMOCOL (EXPANDED POLYSTYERENE) SHEETS) 6.SILICA GEL 7.FASTNERS, NAILS, BRACKETS, CLIPS ETC 8.ALUMINIUM FOIL FOR PACKING, POLYETENE BAG, HESSIAN CLOTH  <b>( The specification of above items shall be as per clause-2.5 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	BOX / CASING MATERIAL SPECIFICATION	SUPPORT BATTEN MATERIAL SPECIFICATION	OTHER PACKING ITEMS & LABELS
6	F.1	<b>PANELS (FOR EXPORT)</b> SAMPLE SIZE 01 Single suite cubicle OD- 900 MM x 950 MM x 2400/2500/2700MM 02 Two suite cubicle OD- 1650MM x 950MM x 2400/2500/2700MM 03. Three suite cubicle OD- 2400MM x 950MM x 2400/2500/2700MM 04. Four suite cubicle OD- 3150MM x 950MM x 2400/2500/2700MM 05.Five Suite 4950X1050X2700MM 05. Regulation cub OD- 1300MM x 1350MM x 2400/2500/2700MM 06. Thy cub OD - 2870MM x 1350MM x 2500MM 07. VFD Cub OD - 3800MM x 1550MM x 2500MM	<b>SILVER OAK WOOD / PINE WOOD</b> Thickness of plank ( Front, rear, top ,sides ) : 25+2/-3 mm Width of all planks : More than 125mm and after planning minimum 100mm.  <b>Chemical Treatment: With ASCU/ CCA solution for Silver oak wood only</b>  <b>( The specification of wood shall be as per Clause-2.1.2 and dimension of plank shall be as per clause 2.2 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>	<b>SILVER OAK WOOD / PINE WOOD</b> Thickness of plank (binding, Jointing battens) : 25+2/-3 mm Width of binding planks: Minimum 100 mm (Horizontal, vertical and diagonal planks shall be given for binding)  <b>Chemical Treatment: With ASCU/ CCA solution for Silver oak wood only</b>  <b>( The dimension of planks shall be as per clause-2.2 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>	1.BITUMINISED WATER PROOF KRAFT PAPER 2.BITUMEN COATED HESSIAN POLYETHYLENE KRAFT PAPER 3.RUBBERISED COIR 4.FOAM RUBBER / 'U' FOAM 5.THERMOCOL (EXPANDED POLYSTYERENE) SHEETS) 6.SILICA GEL 7.FASTNERS, NAILS, BRACKETS, CLIPS ETC 8.ALUMINIUM FOIL FOR PACKING, POLYETENE BAG, HESSIAN CLOTH  <b>( The specification of above items shall be as per clause-2.5 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>

7	G.1	<b>LOOSE ITEMS (SPARES &amp; MAIN EQUIPMENT)</b>  ( SAMPLE SIZE) 500 X500 X500MM /600X 600 X500MM 800 X800X 500MM /870X 870 X 600MM 670 X720X 1300MM /1350X 1050X 1800MM 950X 900X 600MM /1000 X1000 X1000MM 670X 720X 1300MM /680X720 X1500MM 1350X 1050 X1000MM /1350X 1050 X1200MM 1350 X1050X 1400MM /1350X 1050 X1600MM 1350 X1050 X1800MM	<b>RUBBER WOOD</b> Thickness of plank ( Front, rear, top ,sides ) : 25+2/-3 mm Width of all planks : More than 125mm and after planning minimum 100mm.  <b>Chemical Treatment: With ASCU/ CCA solution required</b>  ( The specification of wood shall be as per Clause-2.1.1 and dimension of plank shall be as per clause 2.2 of PLANT STANDARD ED 049 00 99 REV NO 13)	<b>RUBBER WOOD</b> Thickness of plank (binding, Jointing battens) : 25+2/-3 mm Width of binding planks: Minimum 100 mm (Horizontal, vertical and diagonal planks shall be given for binding)  <b>Chemical Treatment: With ASCU/ CCA solution required</b>  <b>( The dimension of planks shall be as per clause-2.2 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>	1.BITUMINISED WATER PROOF KRAFT PAPER 2.BITUMEN COATED HESSIAN POLYETHYLENE KRAFT PAPER 3.RUBBERISED COIR 4.FOAM RUBBER / 'U' FOAM 5.THERMOCOL (EXPANDED POLYSTYERENE) SHEETS) 6.SILICA GEL 7.FASTNERS, NAILS, BRACKETS, CLIPS ETC 8.ALUMINIUM FOIL FOR PACKING, POLYETENE BAG, HESSIAN CLOTH <b>( The specification of above items shall be as per clause-2.5 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	BOX / CASING MATERIAL SPECIFICATION	SUPPORT BATTEN MATERIAL SPECIFICATION	OTHER PACKING ITEMS & LABELS
8	H.1	<b>LOOSE ITEMS (SPARES &amp; MAIN EQUIPMENT) (FOR EXPORT)</b>  ( SAMPLE SIZE) 500 X500 X500MM /600X 600 X500MM 800 X800X 500MM /870X 870 X 600MM 670 X720X 1300MM /1350X 1050X 1800MM 950X 900X 600MM /1000 X1000 X1000MM 670X 720X 1300MM /680X720 X1500MM 1350X 1050 X1000MM /1350X 1050 X1200MM 1350 X1050X 1400MM /1350X 1050 X1600MM 1350 X1050 X1800MM	<b>SILVER OAK WOOD / PINE WOOD</b> Thickness of plank ( Front, rear, top ,sides ) : 25+2/-3 mm Width of all planks : More than 125mm and after planning minimum 100mm.  <b>Chemical Treatment: With ASCU/ CCA solution for Silver oak wood only</b>  <b>( The specification of wood shall be as per Clause-2.1.2 and dimension of plank shall be as per clause 2.2 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>	<b>SILVER OAK WOOD / PINE WOOD</b> Thickness of plank (binding, Jointing battens) : 25+2/-3 mm Width of binding planks: Minimum 100 mm (Horizontal, vertical and diagonal planks shall be given for binding)  <b>Chemical Treatment: With ASCU/ CCA solution for Silver oak wood only</b>  <b>( The dimension of planks shall be as per clause-2.2 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>	1.BITUMINISED WATER PROOF KRAFT PAPER 2.BITUMEN COATED HESSIAN POLYETHYLENE KRAFT PAPER 3.RUBBERISED COIR 4.FOAM RUBBER / 'U' FOAM 5.THERMOCOL (EXPANDED POLYSTYERENE) SHEETS) 6.SILICA GEL 7.FASTNERS, NAILS, BRACKETS, CLIPS ETC 8.ALUMINIUM FOIL FOR PACKING, POLYETENE BAG, HESSIAN CLOTH <b>( The specification of above items shall be as per clause-2.5 of PLANT STANDARD ED 049 00 99 REV NO 14)</b>

9	I.1	<b>PACKED CASINGS</b> ( SAMPLE SIZE) OD-600 600 500 MM /OD-700 700 500 MM OD-800 800 500 MM /OD-1700 1050 2400 MM OD-2100 1450 2700 MM /OD-2720 1450 2700 MM OD-2850 1450 2700 MM /OD-2100 1050 2700 MM OD-3200 1050 2700 MM /OD-1350 1050 1800 MM	GALVANIZED IRON SHEET OF THICKNESS 0.3MM +-0.05MM	NOT REQUIRED ( Overlapping to be taken care )	SUITABLE NAILS
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	BOX / CASING MATERIAL SPECIFICATION	SUPPORT BATTEN MATERIAL SPECIFICATION	OTHER PACKING ITEMS & LABELS
10	J.1	<b>PACKING CHARGES</b> ( MAIN EQUIPMENT, LOOSE Items , SPARES & Traction ) 500 X500 X500MM / 600X 600 X500MM 800 X800X 500MM /870X 870 X 600MM 1350X 1050 X1000MM /1350 X1050 X1800MM 01 Single suite cubicle OD- 900 MM x 950 MM x 2400/2500/2700MM 02 Two suite cubicle OD- 1650MM x 950MM x 2400/2500/2700MM 03. Three suite cubicle OD- 2400MM x 950MM x2400/2500/2700MM 04. Four suite cubicle OD- 3150MM x 950MM x 2400/2500/2700MM 05.Five Suite 4950X1050X2700MM 05. Regulation cub OD- 1300MM x 1350MM x 2400/2500/2700MM 06. Thy cub OD - 2870MM x 1350MM x 2500MM 07. VFD Cub OD - 3800MM x 1550MM x 2500MM Traction OD- 3200x1400x2500MM	Wood Supplied by BHEL	Wood Supplied by BHEL	1.POLYETHENE SHEET( 175 / 200 MICRONS) 2.BITUMINIZED WATER PROOF KRAFT PAPER 3.BITUMEN COATED HESSIAN POLYETENE KRAFT PAPER 4. RUBBERIZED COIRS 5.SILICA GEL 6.FASTENERS , NAILS , L clamp, Nut & Bolts Etc as required  <b>( The specification of above items shall be as per clause-3 of PLANT STANDARD ED 049 00 92 REV NO 10)</b>

11	J.2	Labour charges for Packing Carton Box Railway Module  Carton Box Sample Sizes 550x500x550 / 650x550x450	Carton Box with filling material Supplied by BHEL	Not Applicable	1.Sealing tape 2. PVC strip/ PVC Patting  <b>( The specification of above items shall be as per clause-3 of PLANT STANDARD ED 049 00 92 REV NO 10)</b>
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**B.1.2: Details of Procedure for packing of consignment**

DETAILS OF PROCEDURE TO BE FOLLOWED FOR PACKING					
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	PACKING PROCEDURE	REMARKS	AREA CALCULATION FOR PAYMENT
1	A.1 TO A.2	<b>C&amp;I CUBICALS</b> 01 Single suite cubicle OD- 900 MM x 950 MM x 2400/2500/2700MM 02 Two suite cubicle OD- 1650MM x 950MM x 2400/2500/2700MM 03. Three suite cubicle OD- 2400MM x 950MM x2400/2500/2700MM 04. Four suite cubicle OD- 3150MM x 950MM x 2400/2500/2700MM 05.Five Suite cubicle OD- 4950X1050X2700MM 06. Regulation cub OD- 1300MM x 1350MM x 2400/2500/2700MM 07. Thy cub OD - 2870MM x 1350MM x 2500MM 08. VFD Cub OD - 3800MM x 1550MM x 2500MM	AS PER CLAUSE 6.0 OF PLANT STANDARD ED 049 00 92 REV NO 10	WOODEN PALLET AVAILABLE WITH THE ITEM TO BE PACKED	Cubicle OD (Outer Dimension) after packing =LXWXH  BHEL Supplied Pallet Average Height 125mm  Area Calculation for Billing = (L*(H-0.125)) *2+ (W*(H-0.125)) *2) +L*W
2	B.1	<b>TRACTION EQUIPMENT CUBICALS OR HEAVIER SIZE PANEL</b> SAMPLE SIZES: OD-3200x1400x2500MM OD-3950X1400X2500MM OD-3200X1600X2000MM	AS PER PLANT STANDARD ED 049 00 92 REV NO 10	WOODEN PALLET AVAILABLE WITH THE ITEM TO BE PACKED	Cubicle OD (Outer Dimension) after packing =LXWXH  BHEL Supplied Pallet Average Height 175mm  Area Calculation for Billing = (L*(H-0.175)) *2+ (W*(H-0.175)) *2) +L*W
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	PACKING PROCEDURE	REMARKS	AREA CALCULATION FOR PAYMENT
3	C.1 TO C.2	<b>LOOSE ITEMS (SPARES &amp; MAIN EQUIPMENT)</b>  400 x400x 400MM /500 X500 X500MM 600X 600 X500MM /800 X800X 500MM 870X 870 X 600MM /670 X720X 1300MM 1350X 1050X 1800MM /950X 900X 600MM 1000 X1000 X1000MM /670X 720X 1300MM 680X720 X1500MM /1350X 1050 X1000MM 1350X 1050 X1200MM /1350 X1050X 1400MM 1350X 1050 X1600MM /1350 X1050 X1800MM	AS PER PLANT STANDARD ED 049 00 92 REV NO 10	BOTTOM OF CASING / BOX TO BE MADE WITH PLYWOOD AND SUPPORT BATTEN	Boxes OD (Outer Dimension) after packing= LXWXH  Area Calculation for Billing = (L*H*2) + (W*H*2) +(L*W*2)

4	D.1	<b>LOOSE ITEM SUITABLE FOR SPEEDPOST</b>  SAMPLE SIZE OF BOX OD-300 300 150MM /OD-300 300 200MM OD-300 300 300MM /OD-400 350 150MM OD-400 350 200MM / OD-400 350 250MM OD-450 450 250MM /OD-400 400 300MM OD-400 400 400MM / OD-500 300 150MM OD-500 400 300MM /OD-500 500 400MM OD-500 400 400MM / OD-500 500 500MM OD-600 400 300MM /OD-600 600 500MM OD-850 200 200MM /OD-600 400 300MM OD-600 600 500MM / OD-500 400 200MM OD-600 300 250MM	AS PER DRAWING NO: 805 RPP BOX 001	BOTTOM OF CASING / BOX TO BE MADE WITH PLYWOOD	Boxes OD (Outer Dimension) after packing= LXWXH  Area Calculation for Billing = (L*H*2) + (W*H*2) +(L*W*2)
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	PACKING PROCEDURE	REMARKS	VOLUME CALCULATION FOR PAYMENT
5	E.1	<b>HEAVY PANELS (CUBICALS )</b> SAMPLE SIZE 01 Single suite cubicle OD- 900 MM x 950 MM x 2400/2500/2700MM 02 Two suite cubicle OD- 1650MM x 950MM x 2400/2500/2700MM 03. Three suite cubicle OD- 2400MM x 950MM x2400/2500/2700MM 04. Four suite cubicle OD- 3150MM x 950MM x 2400/2500/2700MM 05.Five Suite 4950X1050X2700MM 05. Regulation cub OD- 1300MM x 1350MM x 2400/2500/2700MM 06. Thy cub OD - 2870MM x 1350MM x 2500MM 07. VFD Cub OD - 3800MM x 1550MM x 2500MM	AS PER CLAUSE- 3.2 OF PLANT STANDARD ED 049 00 99 REV NO 14	PALLET WILL BE AVAILABLE WITH THE CUBICAL	For Cubicles and Panels using Rubber wood, Silver oak wood and Pine wood,  Length X Breadth X Thickness of FRONT, REAR, TWO SIDES & TOP PLANKS only will be calculated as bare volume, for panels without pallet.  The Volume of wood of Reinforcing battens, Support battens, Beams given to the bottom side / pallet etc will be considered while calculating total wood volume.
6	F.1	<b>PANELS (FOR EXPORT)</b> SAMPLE SIZE 01 Single suite cubicle OD- 900 MM x 950 MM x 2400/2500/2700MM 02 Two suite cubicle OD- 1650MM x 950MM x 2400/2500/2700MM 03. Three suite cubicle OD- 2400MM x 950MM x2400/2500/2700MM 04. Four suite cubicle OD- 3150MM x 950MM x 2400/2500/2700MM 05.Five Suite 4950X1050X2700MM 05. Regulation cub OD- 1300MM x 1350MM x 2400/2500/2700MM 06. Thy cub OD - 2870MM x 1350MM x 2500MM 07. VFD Cub OD - 3800MM x 1550MM x 2500MM	AS PER CLAUSE- 3.4 OF PLANT STANDARD ED 049 00 99 REV NO 14	PALLET WILL BE AVAILABLE WITH THE CUBICAL	Length x Breadth x Thickness of Bottom Pallet will be Considered as bare volume if it is supplied by the Contractor.
7	G.1	<b>LOOSE ITEMS (SPARES &amp; MAIN EQUIPMENT)</b>  ( SAMPLE SIZE) 500 X500 X500MM /600X 600 X500MM 800 X800X 500MM /870X 870 X 600MM 670 X720X 1300MM /1350X 1050X 1800MM 950X 900X 600MM /1000 X1000 X1000MM 670X 720X 1300MM /680X720 X1500MM 1350X 1050 X1000MM /1350X 1050 X1200MM 1350 X1050X 1400MM /1350X 1050 X1600MM 1350 X1050 X1800MM	AS PER CLAUSE- 3.5 OF PLANT STANDARD ED 049 00 99 REV NO 14	BOTTOM OF CASING / BOX TO BE MADE WITH RUBBERWOOD AND SUPPORT BATTEN	In case of loose items packed in boxes including bottom pallet, all Six side Planks / shooks will be considered for calculation of bare volume. The Volume of wood of Reinforcing battens, Support battens, Beams given to the bottom side / pallet etc will be considered while calculating

8	H.1	<b>LOOSE ITEMS (SPARES &amp; MAIN EQUIPMENT) (FOR EXPORT)</b> ( SAMPLE SIZE) 500 X500 X500MM /600X 600 X500MM 800 X800X 500MM /870X 870 X 600MM 670 X720X 1300MM /1350X 1050X 1800MM 950X 900X 600MM /1000 X1000 X1000MM 670X 720X 1300MM /680X720 X1500MM 1350X 1050 X1000MM /1350X 1050 X1200MM 1350 X1050X 1400MM /1350X 1050 X1600MM 1350 X1050 X1800MM	AS PER CLAUSE-3.7 OF PLANT STANDARD ED 049 00 99 REV NO 14	BOTTOM OF CASING / BOX TO BE MADE WITH SILVEROAK/PINE AND SUPPORT BATTEN	total wood volume.
SL NO	BOQ SL NO	ITEMS TO BE PACKED (SAMPLE SIZE)	PACKING PROCEDURE	REMARKS	AREA CALCULATION FOR PAYMENT
9	I.1	<b>LOOSE ITEMS</b>	AS PER CLAUSE 6.0 OF PLANT STANDARD ED 049 00 92 REV NO 10		Payment based on area of BITUMEN COATED HESSEIN CLOTH used
10	J.1	<b>PACKED CASINGS</b> ( SAMPLE SIZE) OD-600 600 500 MM /OD-700 700 500 MM OD-800 800 500 MM /OD-1700 1050 2400 MM OD-2100 1450 2700 MM /OD-2720 1450 2700 MM OD-2850 1450 2700 MM /OD-2100 1050 2700 MM OD-3200 1050 2700 MM /OD-1350 1050 1800 MM	AS PER PLANT STANDARD ED 049 00 92 REV NO 10	WOODEN PALLET AVAILABLE WITH THE ITEM TO BE PACKED	Boxes OD (Outer Dimension) after packing= LXWXH  Area Calculation for Billing = $((L*H*2) + (W*H*2) + (L*W*1))$ without pallet Covering  Area Calculation for Billing = $((L*H*2) + (W*H*2) + (L*W*2))$ with pallet covering
11	K.1	<b>PACKING CHARGES</b> ( MAIN EQUIPMENT, LOOSE Items , SPARES & Traction ) 500 X500 X500MM / 600X 600 X500MM 800 X800X 500MM /870X 870 X 600MM 1350X 1050 X1000MM /1350 X1050 X1800MM 01 Single suite cubicle OD- 900 MM x 950 MM x 2400/2500/2700MM 02 Two suite cubicle OD- 1650MM x 950MM x 2400/2500/2700MM 03. Three suite cubicle OD- 2400MM x 950MM x2400/2500/2700MM 04. Four suite cubicle OD- 3150MM x 950MM x 2400/2500/2700MM 05.Five Suite 4950X1050X2700MM 05. Regulation cub OD- 1300MM x 1350MM x 2400/2500/2700MM 06. Thy cub OD - 2870MM x 1350MM x 2500MM 07. VFD Cub OD - 3800MM x 1550MM x 2500MM Traction OD-3200x1400x2500MM	AS PER PLANT STANDARD ED 049 00 92 REV NO 10	WOODEN PALLET AVAILABLE WITH THE ITEM TO BE PACKED	Boxes OD (Outer Dimension) after packing= LXWXH  Area Calculation for Billing = $(L*H*2) + (W*H*2) + (L*W*2)$
12	L.2	Labour charges for Packing Carton Box Railway Module Carton Box Sample Sizes 550x500x550 / 650x550x450	AS PER PLANT STANDARD ED 049 00 92 REV NO 10	Carton Box With Filling material Supplied by BHEL	Payment based on Numbers of cartoon packed

**B.1.3: Reference documents for Packing:**

- 1) PLANT STANDARD ED 049 00 92 REV NO 10 (Applicable for packing of item with **plywood and wood**)
- 2) PLANT STANDARD ED 049 00 99 REV NO 14 (Applicable for packing of items **with wood**)
- 3) DRAWING NO:805 RPP BOX 001 (Applicable for packing of loose item **suitable for Speed post**)
- 4) DRAWING NO:3 688 04 10022 (Applicable for packing of loose items of **SPARES & MAIN EQUIPMENT**)

**B.1.4: Manpower Deployment Schedule**

The contractor shall deploy manpower as per below mentioned schedule based on award of work value:

Sl No.	% of work awarded	No. of manpower to be deployed on daily basis	% of work awarded	No. of manpower to be deployed on daily basis	% of work awarded	No. of manpower to be deployed on daily basis	% of work awarded	No. of manpower to be deployed on daily basis
1	40%	7 Nos	50%	10 Nos	60%	11 Nos	100%	21 Nos.
2	30%	6 Nos	30%	6 Nos	40%	10 Nos	NA	NA
3	20%	4 Nos.	20%	5 Nos	NA	NA	NA	NA
4	10%	4 Nos	NA	NA	NA	NA	NA	NA

The manpower deployment schedule is **tentative and is subject to change based on packing requirement**. Vendor shall arrange additional manpower to meet packing requirement if required.

The Packing work entrusted to each contractor will depends on the following criteria, during the execution of the contract:

- (i) The Number of Workmen employed.
- (ii) Stock of Packing Materials supplied and kept at our works,  
by the Contractor at any point of time.
- (iii) Performance of the Contractor and timely completion of the work.
- (iv) Readiness of the Contractor to take-up the job at short notice and to meet our monthly schedule that will be issued periodically.
- (v) Raising to the occasion, during peak loads, in such occasion vendor has to deploy additional manpower to complete the packing works.

**B.2.1: SAFETY CODE**

RESPONSIBILITIES OF THE CONTRACTOR IN RESPECT OF SAFETY OF MEN, EQUIPMENT, MATERIAL AND ENVIRONMENT

1. Before commencing the work, contractor submit a "SAFETY PLAN" to the authorized BHEL Official. The 'SAFETY PLAN' shall indicate in detail the measure that would be taken by the contractor to ensure safety of men, equipment, material and environment during execution of the work. The plan shall take care to satisfy all requirements specified hereunder. The contractor shall submit Safety Plan along with his offer. During negotiations before placing of work order and during execution of the contract BHEL shall have right to review and suggest modification in the Safety Plan. Contractor shall abide by BHEL decision in this respect.
2. The contractor shall take all necessary safety precautions and arrange for appropriate appliances as per direction of BHEL or its authorized officials to prevent loss of human lives, injuries to personnel engaged, and damage to property and environment.
3. The contractor shall provide to its work force and ensure the use of the following personal protective equipment as found necessary and as directed by the authorized BHEL officials:
  - (i) Safety Helmets conforming to IS-2925: 1984.
  - (ii) Safety Belts conforming to IS-3521: 1983.
  - (iii) Safety Shoes conforming to IS-1989: 1978
  - (iv) Eye and Face protection devices conforming to IS – 8520: 1977 and IS-8940: 1978 (v) Hand and body protection devices conforming to:
    - IS-2573: 1975
    - IS-6994: 1973
    - IS-8807: 1978
    - IS-8519: 1977

All tools, tackles, lifting appliances, material handling equipment scaffolds, cradles, safety nets, ladders, equipment's etc. used by the contractor shall be of safe design and construction. These shall be tested and certificate of fitness obtained before putting them to use and from time to time as instructed by authorized BHEL official who shall have the right to ban the use of any item.

All electrical equipment's, connections and wiring for constructions power, its distribution and use shall conform to the requirement of the Indian Electricity Act and Rules. Only electricians licensed by the appropriate statutory authority shall be employed by the contractor to carry out all types of electrical works. All electrical appliances including portable electric tools used by the contractor shall have safe plugging system to source of power and be appropriately earthed. The contractor shall not use any hand lamp energized by electric power with supply voltage of more than 24 volts. For work in confined space lighting shall be arranged with power sources of not more than 24 volts.

The Contractor shall adopt all fire safety measures as laid down in the "Code for fire Safety at Construction Sites" issued by the Safety Department of the Construction Management(HQ) of BHEL and as per directions of the authorized BHEL official. A copy of the above referred "Code of Fire Safety at the Construction Sites" shall be made available by BHEL to the contractor for reference, on demand by the contractor, during tendering stage itself.

Where it becomes necessary to provide and/or store petroleum Products, explosives, chemicals and liquid or gaseous fuel or any other substance that may cause fire or explosion, the contractor shall be responsible for carrying out such provisions and/or storage in accordance with the rules and regulations laid down in the relevant government acts, such as Petroleum Act, Explosives Act, Petroleum and Carbides of Calcium

Manual of the Chief Controller of Explosives, Govt. of India. etc., prior approval to the authorized BHEL official at the site shall also be taken by the contractor in all such matters.

The contractor shall arrange at his cost (wherever not specified) appropriate illumination at all work spots for safe working when natural daylight may not be adequate for clear visibility.

The contractor shall be held responsible for any violation of statutory regulations local, state or central and BHEL instructions, that may endanger safety of men, equipment, material and environment in his scope of work or another contractor's or agencies. Cost of damages if any, to life and property arising out of such violation of statutory regulations and BHEL instructions shall be borne by the contractor.

In case of a fatal or disabling injury accident to any person at construction sites due to the lapses by the contractor, the victim and/or his/her dependents shall be compensated by the contractor as per statutory requirements. However, if considered necessary, BHEL shall have the right to impose appropriate financial penalty on the contractor and recover the same from payments due to the contractor for suitably compensating the victim and/or his/her dependents. Before imposing any such penalty, appropriate enquiry shall be held by BHEL giving opportunity to the contractor to present his case.

In case of any damage to property by the contractor, BHEL shall have the right to recover cost of such damages from payments due to the contractor after holding an appropriate enquiry.

In case of any delay in the completion of a work due to mishaps attributable to lapses by the contractor, BHEL shall have to recover cost of such delay from payments due to the contractor, after notifying suitably and giving him opportunity to present his case.

If the contractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given a reasonable opportunity to do so; and/or if the contractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions regarding safety issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the contractor after giving a notice of not less than seven days indicating the steps that would be taken by BHEL.

The contractor shall submit report of all accidents, fires and property damage, dangerous occurrence to the authorized BHEL official immediately after such occurrence, but in any case not later than twelve hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. In addition, the contractor to the authorized BHEL official shall also submit periodic reports on safety from time to time as prescribed.

Before commencing the work, the contractor shall appoint/nominate a responsible officer to supervise implementation of all safety measures and liaison with his counterpart of BHEL.

If safety record of the contractor in execution of the awarded work is to the satisfaction of Safety Department of BHEL, issue of an appropriate certificate to recognize the safety performance of the contractor may be considered by BHEL after completion of the work.

#### **B.2.2: HEALTH, SAFETY & ENVIRONMENTAL POLICY**

The Management is committed to be an environmentally sound company in its activities, products, services and to provide safe and healthy working environment covering its employees, products & services as an integral part of business performance through:

- Compliance with applicable Legislation and Regulation

- Setting objectives and targets to eliminate/control/minimize environmental pollution, risks due to Occupational Health and Safety Hazards.
- Promotion of activities for conservation of resources by environmental management with focus on oil, electrical energy and chemicals.
- Enhancement of Environmental, Safety and Occupational Health awareness amongst employees, customers, suppliers, contractors by proactive communication.
- Regular evaluation and pro-active measures for prevention & control of environmental pollution/accidents/occupational diseases.
- Appropriate training of employees and interested parties on Health, Safety & Environmental (HSE) aspects.
- Formulation and maintenance of HSE Management Programs for continual improvement.
- Periodic review & audit of HSE Management System to ensure its continuing suitability, adequacy and effectiveness
- Communication of HSE Policy to all employees and interested parties.
- Co-operation with concerned agencies/regulatory bodies engaged in HSE activities.

### **B.2.3: CONTRACTOR'S OBLIGATIONS**

Contractor shall deploy the required nos. of workmen for execution of the work awarded to him and he or his authorized representative will be solely entitled to instruct such workers about the manner in which the awarded work is to be carried out as per the prescribed specifications and as directed by Engineer-in-charge. The contractor shall be fully responsible for the work awarded to him and fulfil following obligations.

Contractor shall depute his workmen as per the details given in scope of work. The work shall be executed as per work instructions and to the satisfaction of Engineer-in-charge.

Contractor shall ensure that the employees deployed in the premises of BHEL are physically and mentally fit and do not have any criminal records. Such employees should possess requisite skill, proficiency, experience etc. to carry out the work.

Contractor shall maintain appropriate records of his employees deployed to carry out the work.

**"The contractor shall issue Employment Card in Form No.XIV to each Worker engaged by him within 3 days of the employment of the Worker as prescribed under Rule No.76 of the Contract Labour (Regulation & Abolition) Central Rules, 1971. The Card shall be maintained up-to-date and any change in the particulars shall be entered therein".**

Contractor shall provide employment card/identity card with photograph duly verified and attested by the contractor to his employees deployed to execute the work. Contractor shall also indicate the name of the proprietary/partnership firm/company, place of work, contact number and duration of validity of the card etc. in such identity card.

Contractor will be fully responsible for the good conduct of his employees deployed to execute the work. In case of any misconduct/misbehaviour by any employee, the contractor will replace such employee(s) immediately.

Contractor will ensure that the work is executed through his employees on his rolls only and under no circumstances the contractor will deploy any casual employees to carry out the work; nor shall sub-contract the work without prior written permission from BHEL.

Contractor will keep watch on his employees and he will be liable for any pilferage /loss to BHEL due to Acts of omission and commission by his employees. Similarly, for any compensation to outsiders and his employees on account of any act of omission and commission by the employees deployed by the contractor shall lie exclusively with contractor.

The contractor shall be responsible for enforcing all safety regulations as applicable inside the factory, while undertaking the work tendered. Notwithstanding that BHEL may provide consumables, cleaning and material handling equipment etc. wherever required, the contractor shall be responsible for issue and wearing of the safety equipment's/gadgets.

The contractor has to provide his workmen uniform distinct different from BHEL employees, mandatorily after commencement of contract. The uniform should have logo of the contractor's firm/company. The uniform shall be always ensured to be in neat, tidy and wearable condition.

In the event of termination of contract for any reason whatsoever, the contractor shall withdraw all his employees and his equipment, if any from the establishment of BHEL.

**The Contractor should follow and comply with Minimum Wages, ESI, PF, Bonus, Group Insurance and other statutory regulations as stipulated in Factories Act and other applicable State / Central Governments' rules & regulations. In addition to that the contractor shall pay BHEL Additional wage (Rs.123.08 per man day for USW, Rs.142.31 per man day for SSW, Rs.157.69 per man day for SW, Rs.173.08 per man day for HSW), make payment for holidays (12 days per year), EL encashment (15 days per year), washing allowance @125/- per month.**

Contractor shall take necessary insurance policy for his workmen to cover workmen's compensation and accidental cover as may be applicable. Provided if the contractor has or proposes to obtain ESI registration prior to the commencement of the contract, this insurance policy will not be insisted upon.

BHEL will provide materials for repairs and maintenance wherever applicable and agreeable. However, it will be the responsibility of the contractor to inform concerned Engineer-in-charge to ensure the materials/equipment for assigned jobs.

The age of the contract workers deployed at BHEL EDN should be between 18 to 60 years.

The contractor shall maintain regular contact with the designated Engineer-in-charge of BHEL and will interact on matters relating to the work awarded under this contract.

In case the contractor does not carry out the contractual / statutory obligations or the services rendered by him are found to be unsatisfactory, BHEL shall bring the same to his notice and he will be obliged to discharge the obligations and rectify the deficiency / anomaly within a month's time and in continuation of such deficiencies/ failure to compliances limited to a maximum of 03 such notices from BHEL, failing which BHEL reserves the right to terminate the contract without assigning any reason what so ever. In such an

event, no damages will be payable for short closure of the contract and the contractor shall be liable to pay BHEL for any loss or hardships it may suffer, such termination shall be for the contractor's default and any money including deposits or bills available with BHEL will be forfeited and any further claim on the contractor may be made by BHEL for recovery of any loss.

The decision of BHEL regarding interpretation of any terms and conditions set forth in this agreement shall be final and binding on the contractor.

Notwithstanding anything contained in this tender document, the contract may be terminated by BHEL without assigning any reason thereof by giving a notice of 30 days to the contractor.

**"Payment of Gratuity under The Payment of Gratuity Act, 1972 and Retrenchment Compensation under The Industrial Disputes Act, 1947, wherever applicable, shall be the sole responsibility of the Contractor".**

Based on the State annual average consumer price index number for Industrial workers for the year 2021, the enhanced Consumer price index points for 2022 (with effect from 01.04.2022 to 31.03.2023), the variable Dearness allowance / Cost of living Allowance as given below shall be paid to the contract labour engaged by contractors in the establishment of BHEL-EDN and BHEL-ESD, Bangalore w.e.f 01.04.2022.

Category of Manpower	Basic Wage (₹)	Variable Dearness Allowance w.e.f 01.04.2022 (₹)	Total Minimum Wages inclusive of VDA (₹)
Unskilled	445.69	85.89	531.58
Semi- Skilled	490.25	85.89	576.14
Skilled	539.28	85.89	625.17
Highly Skilled	593.21	85.89	679.10

The minimum wage as notified by Govt. /competent authority from time to time shall be payable.

## **C.CONTRACT PERIOD AND PLACE OF WORK:**

### **C.1: Mobilization period:**

The work shall start within seven days of issue of LOA or as indicated in LOA whichever is earlier.

### **C.2: Contract Period:**

**The contract shall remain valid for Twenty-four months from the date of award of contract.**

BHEL-EDN may extend the contract by 3 months at same Rate and Terms and Conditions based on mutual consent.

### **Time Schedule for completion of Packing works:**

SL NO	DESCRIPTION OF PACKING MATERIAL	COMPLETION PERIOD
1	Supply of packing Material and Packing of consignment using Plywood of surface area <b>up to 15 Square metre</b> as per scope of work.	Within 4 days of intimation through e-mail / over phone .

2	Supply of packing Material and Packing of consignment using Plywood of surface area <b>more than 15 Square metre</b> as per scope of work.	Within 7 days of intimation through e-mail / over phone .
3	Supply of packing Material and Packing of Cubicles / Traction equipment / Heavy Panels using Plywood / Silver oak wood / Rubber wood / Pine wood as per scope of work.	Within 10 days of intimation through e-mail / over phone .
4	Packing of Packed cases with GI sheet as per scope of work.	Within 7 days of intimation through e-mail / over phone .
5	Supply of packing materials as per scope of work.	Within 7 days of intimation through e-mail / over phone .

**Delay in packing beyond the above mentioned schedule will lead to penalty as per clause -F.2 of Techno commercial bid (Annexure-IB).**

### **C.3: Place of Work:**

**The work shall be carried out at BHEL-EDN, Bangalore and BHEL-ESD, Bangalore Factory premises.**

### **D.PAYMENT TERMS**

1. Payment will be made after completion of work on pro-rata basis based on actual Services provided as per BOQ after acceptance and certification of Area in charge (BHEL Executive). Payment shall be made within 45 days for MSE bidder / 60 days for Medium Enterprises and 90 days for Non MSE bidder of submission of bill complete in all respect.
2. The Contractor shall submit the bill within a week after the end of each month / after completion of work in triplicate copies detailing the various items of work done during the month supported by the requisitions issued from time to time along with any other relevant document which is required from time to time as per BHEL requirement.
3. The Contractor shall, once in every month, submit to the respective area HOD separately details of their claims for the work done by them up to and including the previous. He should in addition furnish a clear certificate to the effect that the claims submitted by him as aforesaid cover all his claims and that no further claims shall be raised by him in respect of the work done up to and including the period under report. Payment will be at the sole discretion of BHEL.
4. The proof of execution of work should be submitted along with each bill (printed form with covering letter and proof for execution of work).
5. If the Contractor is not registered for any statutory obligation and not liable thereto, then a declaration shall be submitted along with offer that they are within the threshold limit.
6. No advance will be paid for operational or any other expenses.

7. Goods and Services tax will be payable extra by BHEL at prevailing rates and corresponding TDS will be made as per Government norms.
8. All payments to be made to the Contractor shall be done only through NEFT (National Electronic Fund Transfer / RTGS (Real Time Gross Settlement). No other forms or mode of payment is made by BHEL If there is any delay in making payment, no interest will be paid.

**E. PRICE VARIATION CLAUSE:**

The rates shall remain firm during entire contract period.

**F. LIQUIDATED DAMAGES (LD)/PENALTY:****1. LIQUIDATED DAMAGES (LD):**

If the contractor fails to start the work within the initial mobilization period (7 days) fixed in the tender as indicated in Work Order or at any time repudiates the contract then BHEL, without prejudice to any other right or remedy available to it under the contract, may at its discretion shall have right to

- a. Recover from the contractor, liquidated damages and not by way of penalty, a sum of 0.5% (Half percentage) of total value of the contract (excluding taxes) per day of delay in mobilization beyond initial mobilization period of 7 days, subject to a maximum of 15 days. In such a case, BHEL may also terminate the contract and forfeit security deposit if delay extends beyond 15 days.
- b. Recover from the contractor, liquidated damages and not by way of penalty an amount of ₹1000/- per day in the event of any delay in making the payment of any wages or dues to the all contractual workers by the tenderer i.e. after 07th of subsequent month.

**2. PENALTY:**

Penalty @ 1% of (amount payable towards packing and supply of material associated with packing) per day of delay beyond the time schedule specified in scope of work

**3. MAXIMUM VALUE OF LD/ PENALTY:**

- a) The total recoveries under aforesaid clauses shall be limited to maximum 10% of the contract value.
- b) In case of any change of order value, LD / PENALTY shall be subject to a maximum of 10% of the revised order value.
- c) The decision of BHEL on the question whether the contractor(s) have committed such default or have failed to perform any such service efficiently and are liable to pay compensation and as to quantum of such compensation shall be final and binding on the contractor(s).

**G. TERMS & CONDITIONS FOR EXECUTION OF THE CONTRACT:**

1. The contractor should bring their manpower to BHEL premises at his/her own cost, risk and execute the work allotted to him inside BHEL premises.
2. The contractor should follow and comply with Minimum wages, ESI, PF, Bonus, Group Insurance and other statutory regulations as stipulated in Factories Act and other applicable State/Central Governments' rules and regulations.
3. Attendance register should be maintained by the contractor and should be duly signed by contractor's manpower.
4. All safety equipment's are to be arranged for the workmen and safety rules & regulations are to be followed as per BHEL's Safety Rules and Regulations.
5. The contractor or his/her crew should handle the machinery and other equipment's entrusted to them by BHEL with utmost care and return them safely after execution of stipulated work. The cost of

damage, repair due to improper handling of machinery and equipment will be recovered from the contractor.

6. Contractor shall supervise the work carried out by his/her employees.
7. Contractor shall ensure that the employees deployed in the premises of BHEL are physically and mentally fit and do not have any criminal record. Such employees should possess requisite skill, proficiency, qualification, experience etc.
8. Contractor shall maintain appropriate records of his/her employees deployed along with their attendance to carry out the job(s).
9. Contractor will be responsible for the good conduct of his/her employees. In case of any misconduct/misbehaviour by any employee, the contractor will replace such employee(s) immediately.
10. Contractor will ensure that the job is executed through his/her employees on and under no circumstances, the contractor will not deploy any casual employee to carry out the job nor shall subcontract the job without prior written permission.
11. Contractor shall be solely responsible for non-payment, delayed payment of minimum contributions under EPF & MP Act, ESI Act, Bonus, etc.
12. In case, the contractor fails to make payment of wages to his/her employees or remittance of contribution to the concerned authorities, the security deposit, other dues/running bills under the contract can be utilized by BHEL to discharge the liability of the contractor.
13. Contractor shall observe provisions of the Factories Act, 1948 in respect of working hours, holidays, rest intervals, leave and overtime to his/her employee. No work shall be done on second/third shift, overtime, Sundays or on other declared holidays without written permission.
14. The contractor should maintain a 'Work Diary containing the details of work executed by him from time to time on Shift/Daily basis and obtain the signature from official concerned nominated for this/her purpose for having executed the work correctly and satisfactorily.
15. Necessary gate entry pass will be issued by BHEL Security department for Contract Workmen based on your application duly forwarded by the Contract Executing Department and approved by HR/Welfare/Contract Cell on fulfilment of the Statutory Obligation by the Contractor.
16. In the event of termination of contract for any reason whatsoever, the contractor shall withdraw all his/her employees from the establishment of BHEL. In case, contractor decides to terminate services of his/her employees, he should settle all terminal dues including retrenchment compensation.
17. BHEL reserves the right to cancel/short close and terminate the contract at any point of time after giving intimation to the vendor.
18. BHEL will have nothing to do or be concerned with the employment of employees working for the contractor. The relationship between BHEL and the contractor will be that of independent entities and nothing herein contained will amount to joint venture, partnership or on employer-employee relationship. Supervision of work shall be done by the contractor / his authorized Supervisor exclusive for this work only.
19. National & festival holidays (i.e. 12 days per year) is paid holidays & Earned leave of 15 days per year for all employees engaged for this contract shall be paid as per Minimum wage.

**PART-I (TECHNO COMMERCIAL BID)****ANNEXURE-IC****GENERAL TERMS & CONDITIONS OF CONTRACT****1. DEFINITION**

In these General Conditions of Contract, the following terms shall have meaning hereby assigned to them, except where the context otherwise requires:

- a) The "Contract" means, the documents forming the tender and acceptance thereof, together with all the documents referred to therein including general and special conditions to contract. All these documents as applicable taken together shall be deemed to form one contract and shall be complementary to one another.
- b) The "Work" means, the work described in the tender documents in individual work orders as may be issued from time to time to the contractor by the Officer-In charge within the power conferred upon him including all notified or additional items of works and obligations to be carried out as required for the performance of contract.
- c) The "contractor" means, the individual Firm or Company whether incorporated or not, undertaking the work and shall include the legal personal representatives of such individuals or the persons composing the firm or Company or the successors of the firm or company and the permitted assigns of such individual or firm or Company.
- d) "The Officer-In charge" means, the Officer deputed by the BHEL to supervise the work or part of the work.
- e) "Approved" and "Directed" means, the approval or direction of the respective area **HOD** or person deputed by him for the particular purposes.
- f) "BHARAT HEAVY ELECTRICALS LIMITED" (hereinafter referred to as BHEL) shall mean the Board of Directors, Chairman, Executive Director, General Manager or, other Administrative Officer of the said Company including **AGM / CCD** authorised to invite tenders and enter into contract for works on behalf of the Company.
- g) The "Contract sum" means, the sum accepted or the sum calculated in accordance with the prices accepted in tender and / or the contract rates as payable to the contractor for the execution of the work during the currency of the contract.
- h) A "week" means, Seven Days, without regard to the number of hours worked or not worked in any day in that week.
- i) A "day" means, the day of 24 hours (TWENTY-FOUR) irrespective of the number of hours worked or not worked in that day.

**2. HEADING TO THE CONTRACT**

The heading to these conditions shall not affect the interpretations thereof.

**3. DEVIATIONS**

The contractor shall not carry out any work not covered by schedule except in pursuance of the written instructions of the respective area HOD. No such work shall be valid unless the same has been specifically confirmed and accepted by BHEL in writing and incorporated in the Contract.

**4. WORKS TO BE CARRIED OUT**

The Contract shall include all labour materials, tools, plant, equipment and transport which may be required for the execution of the work.

The Contractor will be deemed to have satisfied himself as to the nature of the site, local facilities of access and all matters affecting the execution of the work. No. extra charges consequent on any misunderstanding in these respects or otherwise will be allowed.

#### **5. ASSIGNMENT OF TRANSFER OF CONTRACT**

The Contractor shall not, assign or transfer the contract or any part thereof, or any share, or interest thereon to any other persons.

#### **6. SUB CONTRACT**

The Contractor shall not sublet any portion of the contract.

#### **7. COMPLIANCE TO REGULATIONS AND BYE -LAWS**

The Contractor shall confirm to the provisions of any statute relating to the work and regulations and Bye-laws of any local authority. The Contractor shall be bound to give all notices required by statutory regulations or by-laws as aforesaid and to pay all fees and taxes payable to any authority in respect thereof.

#### **8. EARNEST MONEY DEPOSIT (EMD) & SECURITY DEPOSIT (SD):**

##### **Earnest Money Deposit (EMD):**

Tender must be accompanied by Earnest Money for the amount mentioned in tender notice, pledged to BHEL- EDN, BANGALORE in any of the forms mentioned below.

##### **Modes of Deposit:**

The EMD shall be accepted only in the following forms:

- a) Cash deposit as permissible under the extant Income Tax Act (before tender opening)
- b) Electronic Fund Transfer credited in BHEL account (before tender opening)
- c) Banker's cheque/ Pay order/ Demand draft, in favour of BHEL (along with offer)
- d) FDR issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL)
- e) In addition to the above, the EMD amount in excess of ₹2, 00, 000 /- (₹ Two Lakh) also acceptable in the form of Bank guarantee from scheduled banks. The bank guarantee in such cases shall be valid for at least six months. (BG Format attached as Annexure-J)

##### **Forfeiture of EMD:**

EMD by the tenderer will be forfeited as per tender documents if

- i) After opening the Tender, the Tenderer revokes his tender within the validity period or increases his earlier quoted rates.
- ii) If only, a part of the work included in the tender has been awarded to the tenderer and the tenderer refuses to take up the work the amount of Earnest Money to be forfeited will be based on the value of the contract so awarded.
- iii) The Tenderer does not commence the work within the period as per LOI / Contract. In case the LOI / Contract is silent in this regard then within 7 days after award of Contract.

##### **General Terms related to EMD:**

Earnest Money Deposit (EMD) will not carry any interest.

Earnest Money Deposit (EMD) of the successful tenderer will be retained as part of Security deposit. The Earnest Money Deposit (EMD) will be refunded to the unsuccessful tenderers within 15 days of acceptance of the award of work by successful tenderer / expiry of offer validity period.

**Non Start of work within seven days of issue of LOA / WO or date indicated in LOA whichever is later will lead to forfeiture of EMD and may also attract the provision of “Suspension of Business dealings with Suppliers/Contractors”.**

**Security Deposit (SD):**

The contractor whose tender has been accepted shall, within seven days of receipt of the notification of acceptance of his tender **or before start of work (whichever is earlier)**, deposit Security deposit @ 5 % of Contract value.

EMD of the successful tenderer shall be converted and adjusted towards the required amount of **Security deposit (SD):**

**Modes of Deposit:**

The balance amount to make up the required Security Deposit of 5% of the contract value may be accepted in the following forms:

- i) Cash (as permissible under the extant Income Tax Act) ii) Local cheques of Scheduled Banks (subject to realization)/ Pay Order/ Demand Draft/ Electronic Fund Transfer in favour of BHEL iii) Bank Guarantee from Scheduled Banks/ Public Financial Institutions as defined in the Companies Act. The Bank Guarantee format should have the approval of BHEL
- iv) Fixed Deposit Receipt issued by Scheduled Banks/ Public Financial Institutions as defined in the Companies Act (FDR should be in the name of the Contractor, a/c BHEL)
- v) Securities available from Indian Post offices such as National Savings Certificates, Kisan Vikas Patras etc. (held in the name of Contractor furnishing the security and duly endorsed/ hypothecated/ pledged, as applicable, in favour of BHEL)

**General Terms related to SD:**

The security Deposit will not carry any interest.

Security Deposit shall be released to the contractor upon fulfilment of Contractual obligations as per terms of contract.

BHEL, shall not be responsible for any loss of securities due to liquidation or any other reason whatsoever or any depreciation in the value of the Securities while in their charge or for any loss of interest thereon.

NOTE: Acceptance of Security Deposit against Sl. No. (iii),(iv) and (v) above will be subject to hypothecation or endorsement on the documents (Signature of the Branch Manager must be present ) in favour of BHEL. However, BHEL will not be liable or responsible in any manner for the collection of interest or renewal of the documents or in any other matter connected therewith.

All compensation or other sums of money payable by the contractor to BHEL under the terms of this contract or under any other contract with BHEL, may be deducted from the Security Deposit or realized by the sale of the securities, from the interest arising there from or from any sums which may be due or may become due to the contractor payable by BHEL, on any account whatsoever against this contract of any other contract with BHEL and in the event of his Security Deposit being reduced by reason of such deductions or sale as aforesaid, the Contractor shall within seven days thereafter make good in cash or in securities endorsed as aforesaid, any sum or sums by which the security Deposit has been so reduced.

In case of an Award of a Contract and if the Contractor fails to perform or does not comply with the Performance Evaluation Criteria, the Security Deposit will not be refunded / Bank Guarantee encashed.

**The claim period for Bank Guarantee shall be kept three months after the contract end date. Security Deposit has to be deposited within seven days of issue of LOA / WO or date indicated in LOA whichever is later.**

***“Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance***

***security which would include interest (SBI rate +6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered from the bills along with the interest"***

#### **9. GOODS & SERVICE TAX (GST) REGISTRATION & COMPLIANCE**

1. Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration No (GSTIN) which should be clearly mentioned in the offer. If the dealer is exempted from GST registration, a declaration with due supporting documents need to be furnished for considering the offer. Dealers under composition scheme should declare that he is a composition dealer supported by the screen shot taken from GST portal. The dealer has to submit necessary documents if there is any change in status under GST.
2. Supplier shall mention their GSTIN in all their invoices (incl. credit Notes, Debit Notes) and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No. which is linked/uploaded in GSTN network shall be clearly indicated), Billed to party (with GSTIN) & Shipped to party details, item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, Place of Supply etc.
3. All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).
4. Invoices will be processed only upon completion of statutory requirement and further subject to following:
  - a) Vendor declaring such invoice in Form GST ANX-1
  - b) Receipt of Goods or Services and Tax invoice by BHEL
5. As the continuous uploading of tax invoices in GSTN portal (in GST ANX-1) is available for all (i.e. both Small & Large) tax payers under proposed new GST Return System, all invoices raised on BHEL may be uploaded immediately in GST portal on dispatch of material /rendering of services. The supplier shall ensure availability of Invoice in GST portal before submission of invoice to BHEL. Invoices will be admitted by BHEL only if the invoices are available in GSTN portal (in BHEL's GST ANX-2).
6. In case of discrepancy in the data uploaded by the supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims, within the calendar month informed by BHEL.
7. In cases where invoice details have been uploaded by the vendor but failed to remit the GST amount to GST Department (Form PMT-08 or Form GST RET-01 to be submitted) within stipulated time, then GST paid on the invoices pertaining to the month for which GST return not filed by the vendor will be recovered from the vendor along with the applicable interest (currently 24% p.a) and all subsequent bills of the vendor will not be processed till filing of the GST return by the vendor
8. In case GST credit is denied to BHEL due to non-receipt or delayed receipt of goods and/ or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, GST amount claimed in the invoice shall be disallowed to the vendor.
9. Where any GST liability arising on BHEL under Reverse Charge (RCM), the vendor has to submit the invoices to BHEL well within the timeline prescribed in GST Law, to enable BHEL to discharge the GST liability. If there is a delay in submission of invoice by the vendor resulting in delayed payment of GST by BHEL along with Interest, then such Interest payable or paid shall be recovered from the vendor.
10. Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contracts. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Tax Invoice will be issued by BHEL indicating the respective supply invoice number.

11. GST TDS will be deducted as per Section 51 of CGST Act 2017 and in line with Notification 50/2018 – Central Tax dated 13.09.2018. GST TDS certificate which will be generated in GST portal subsequent to vendor accepting the TDS deduction in the GST portal, will be issued to the vendor.

#### **10. ORDERS UNDER THE CONTRACT**

All orders, notices etc. to be given under the contract shall be in writing, typescript or printed and if sent by registered post to the address given in the tender of the Contract, shall be deemed to have been served on the date, when in the ordinary course they would have been delivered to him. The Contractor shall carry out without delay all orders given to him.

#### **11. CONTRACTOR'S SUPERVISION**

- 1.The Contractor shall either himself supervise the execution of the contract or shall appoint a competent agent acceptable to BHEL Officials.
- 2.Orders given to the Contractor's agent shall be considered to have the same force as if they have been given to the Contractor himself.
- 3.The Contractor or his accredited agent shall attend when required without making any claim for doing so to the OFFICER-INCHARGE, to receive instructions.
- 4.The respective area HOD shall have full powers and without assigning any reason, requires the Contractor to immediately cease to employ in connection with this contract, any agent, servant or employee where continued employment is, in his opinion undesirable. The Contractor shall not be allowed any compensation on this account.

#### **12. PAYMENT TO EMPLOYEES ENGAGED BY CONTRACTOR**

1. The Contractor shall remain liable for the payment of all wages and other payments in connection with the employees engaged by him and with regard to the work.
2. The Contractor shall comply with the applicable provisions of Payment of Wages Act-1936, Minimum Wages Act-1948, Employees' Liability Act-1938, Employees' Compensation Act-1923, Payment of Bonus, EPF and Miscellaneous Provisions Act-1952, Employees' State Insurance Act-1948 and other relevant Acts and rules framed, there under from time to time.
3. Contractor shall be responsible for making payment of wages within 7days from the last day of wage period and shall obtain the signature at the end of entries in the wage register from area in-charge of contract operating department.
4. Contractor should ensure that at least the prevailing minimum wages, as per the rules of **State/Central Minimum wage**, which are applicable are paid to his employees only in their respective nationalized bank accounts by means of NEFT/ RTGS/ IMPS.
5. The contractor should remit the salary/wages of their workmen only through nationalized Bank, directly to the salary/savings account of the employee concerned. Monthly clearance will be given in respect of those contractors, only if the salary/wages to the workmen concerned has been remitted in the nationalized bank account of the workmen. The relevant Bank statement/proof for Bank payment should be produced along with PF and ESI challans every month.
6. No other mode of payment (hand payment / account transfer other than salary or any other) is acceptable as salary.

7. The contractor should pay the previous month salary in full to their employees before 7<sup>th</sup> of every month and will not adjust with any advance/ loan /training cost / accommodation cost / repayment due by the employee.
8. If the Contractor employs more than twenty employees, he has to obtain License to this effect from the Factory Inspectorate and renew the same periodically.
9. The Contractor should follow and comply with Minimum Wages, ESI, PF, Bonus, Group Insurance and other statutory regulations as stipulated in Factories Act and other applicable State / Central Governments' rules & regulations.
10. Each contract employees must have his own PF and ESI Codes and comply with the relevant Acts.
11. **"The contractor shall issue Employment Card in Form No.XIV to each Worker engaged by him within 3 days of the employment of the Worker as prescribed under Rule No.76 of the Contract Labour (Regulation & Abolition) Central Rules, 1971. The Card shall be maintained up-to-date and any change in the particulars shall be entered therein".**
12. ***"Payment of Gratuity under The Payment of Gratuity Act, 1972 and Retrenchment Compensation under The Industrial Disputes Act, 1947, wherever applicable, shall be the sole responsibility of the Contractor".***

### **13 PRECAUTIONS AGAINST RISK**

The Contractor shall be responsible for providing at his own expense for all precautions to prevent loss or damage from any and all risks and to minimize the amount of any such loss or damage and for the necessary steps to be taken for the said purpose.

### **14 DAMAGE / LOSS TO PROPERTY & INJURY TO WORKMEN**

The Contractor shall at his own expense reinstate and make good to the satisfaction of the respective area **HOD** and pay compensation for any injury, loss or damage occurred to any property or rights whatever including property and rights of BHEL (or agents) servants or employee of BHEL, the injury loss or damage arising out of or in any way in connection with the execution or purported execution of the contract and further the contractor shall indemnify BHEL against all claims enforceable against BHEL (or any agent, servant or employee of BHEL) or which would be so enforceable against BHEL, in respect of any such injury (including injury resulting in death) loss or damage to any person whomsoever or property including all claims which may arise under the Employees Compensation Act or otherwise.

### **15 LAWS GOVERNING THE CONTRACT**

The contract shall be governed by the Indian Laws for the time being in force.

### **16. CANCELLATION OF CONTRACT FOR CORRUPT ACTS**

BHEL, whose decision shall be final and conclusive, shall without prejudice to any other right or remedy which shall have accrued, shall accrue thereafter to BHEL cancel the contract in any of the following cases and the Contractor shall be liable to make payment to BHEL for any loss or damage resulting from any such cancellation to the same extent as provided in the case of cancellation for default.

If the Contractor shall:

- a) Offer or give or agree to give to any person in BHEL service any gift or consideration of any kind, as an inducement or reward for doing or for bearing to do or for having done or for having borne to do any act, in relation to the obtaining or execution of this or any other contract for BHEL service,  
OR
- b) enter into a contract or understanding with any person in BHEL in connection with which commission has been paid or agreed to be paid by him or with his knowledge, unless the particulars

of any such commission and the terms of payment thereof have previously been disclosed in writing to BHEL,

OR

- c) To obtain' a contract with BHEL as a result of ring tendering or by non-bonafide methods of competitive tendering, without first disclosing the fact in writing to BHEL.

#### **17. CANCELLATION OF CONTRACT FOR INSOLVANCY ASSIGNMENT OR SUBLETTING OF CONTRACT**

BHEL, without prejudice to any other right or remedy, which shall have accrued or shall accrue thereafter to BHEL, shall cancel the contract in any of the following cases:

If the Contractor,

- a) Being an individual or if a firm any partner thereof shall at any time be adjudged bankrupt or have a receiving order for administration of his estate, made against him or shall take any proceedings for liquidation or composition under any bankruptcy Act or assignment of his effects of composition or arrangement for the benefit of his creditors or purport to do so, or if any application made under any Bankruptcy Act for the time being in force for the sequestration of his estate or if a trust deed be granted by him on behalf of his creditors.

OR

- b) Being a Company, shall pass a resolution or Court shall make an order for the liquidation of its assets, or a receiver or Manager on behalf of the debenture holders shall be appointed or circumstances shall arise which entitle the Court or debenture holders to appoint a receiver or Manager.

OR

- c) Assigns, Transfers, Sublets or attempts to assign, transfer or sublet any portion of the work.
- d) Whenever BHEL exercises the authority to cancel the contract under these conditions, BHEL may have the work done by any means at the Contractor's risks and expenses provided always that in the event of the cost of the work so done (as certified by the respective area **HOD**) being less than the contract cost, the advantage shall accrue to BHEL and if the cost exceeds the money due to Contractor under the contract, the Contractor shall either pay the excess amount ordered by the respective area **HOD** or the same shall be recovered from the Contractor by other means.
- e) In case BHEL carries out the work under the provisions of this condition, the cost to be taken into account in determining the excess cost to be charged to the Contractor under this condition shall consist of the cost of the materials, hire charges of tools and plants and / or labour provided by BHEL with an addition of such percentage to cover superintendence and establishment charges as may be decided by the respective area **HOD** whose decision shall be final and conclusive.
- f) Labour engaged by the contractor should be disciplined & exhibit good behaviour in dealing with employees of BHEL. Any misbehaviour or undesirable conduct of any person engaged by the contractor is reported, contractor shall change that person immediately or else it may even lead to termination of the contract & in such case security deposit will be forfeited as penalty.

#### **18. CANCELLATION OF CONTRACT IN PART OR FULL ON CONTRACTOR'S DEFAULT**

If the contractor:

- a) makes default in carrying out the work as directed and continues in that state after a reasonable notice from the respective area **HOD** or his authorized representative:
- b) fails to comply with any of the terms & conditions of the contract or failure to comply orders after reasonable notice in writing with orders properly issued thereunder:  
BHEL may without prejudice to any other right or remedy which shall have accrued or shall accrue thereafter to BHEL CANCEL the contract as whole or in part thereof or only such work order or items

of work in default from the contract. Whenever BHEL exercises the authority to cancel the contract as a whole or part under this condition, BHEL may complete the work at the contractor's risk and cost (as certified by the respective area **HOD** which is final and conclusive) being less than the contract cost, the advantage shall accrue to BHEL. If the cost exceeds the money due to the Contractor under this contract, the Contractor shall either pay the excess amount ordered by the respective area **HOD** or the same shall be recovered from the Contractor by other means. In case BHEL carries out the work or any part thereof under the provisions of the conditions the cost to be taken into account in determining the excess cost to be charged to the Contractor under this condition shall consist of the cost of the materials, hire charges of tools and plant and/or labour provided by BHEL with an addition of such percentage to cover the superintendence and establishment charges as may be decided by the respective area **HOD** whose decision shall be final and conclusive.

#### **19. TERMINATION OF CONTRACT ON DEATH OF CONTRACTOR**

Without prejudice to any of the rights or remedies under this contract, if the Contractor dies, or if the firm is dissolved or the company is liquidated, BHEL shall have the option of terminating the contract without compensation to the Contractor.

#### **20. SPECIAL POWER TO TERMINATION**

If at any time after the award of contract, BHEL shall for any reason whatsoever not require whole or any part of the work to be carried out the respective area **HOD** shall give notice in writing of the fact to the Contractor who shall have no claim to any payment of compensation or otherwise howsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not derive in consequence of the foreclosing of the work.

#### **21. RECOVERY FROM CONTRACTOR**

Whenever under the contract, any sum of money, shall be recoverable from or payable by the Contractor, the same may be deducted from or any sum then due or which at any time thereafter may become due to Contractor under the contract or under any other contract with BHEL or from his Security Deposit unless the contractor pays the claim on demand.

#### **22. POST TECHNICAL AUDIT OF WORK AND BILLS**

BHEL reserves the right to carry out the post-payment Audit and technical examination of the work and final bill including all supporting vouchers, abstracts etc., and enforce recovery of any sum becoming due as a result thereof in the manner provided in the presiding sub- paragraphs. However, no such recovery shall be enforced after three years of passing the final bill.

#### **23. REFUND OF SECURITY DEPOSIT**

The Security Deposit may be refunded to the Contractor after completion of the contract provided, after the Contractor shall first have been paid the last and final bill and have rendered a "NO DEMAND CERTIFICATE".

#### **24. FORCE MAJEURE CLAUSE**

If, at any time during the continuance of this Contract the performance in whole or in part by either party of any obligations under this Contract shall be prevented or delayed by reason of any War, Hostile acts of the public enemy Civil Commotion, Epidemics, or Acts of God (Floods, Storm/Cyclone, Hurricane, Earthquake etc. ) then provided notice of happening of any such event is given by either party to other within 7 days from the date of occurrence thereof neither of the parties shall by reason of such event be entitled to terminate this Contract or claim for damages against the other in respect of such non-performance or delay for such period. Performance under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist. If the performance in whole or part of any obligation under this Contract is prevented or delayed by reason of any such event, claims for

extension of time may be granted for periods considered reasonable by the respective area **HOD** at his discretion subject to prompt notification by the contractor.

## **25. ARBITRATION**

Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference to the sole arbitration of an arbitrator appointed by Head of the **BHEL-EDN, Bengaluru**.

The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or statutory modifications or re-enactments thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be **Bengaluru** (the place from where the contract is issued)

The cost of arbitration shall be borne as per the award of the Arbitrator. Subject to the arbitration in terms of Clause above, the Courts at **Bengaluru** (PI incorporate the name of the place where the Principal Civil Court having ordinary original civil jurisdiction to decide questions forming subject matter of the arbitration is located) shall have exclusive jurisdiction over any matter arising out of or in connection with this Contract.

Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the contract has been terminated by either party in terms of this contract.

### **In case of contract with Public Sector Enterprises (PSE) or a Government Department, the following shall be applicable**

In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred by either Party for arbitration to the sole arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the Parties to the dispute, provided, however, any Party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the Parties hereto finally and conclusively. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

## **26. JURISDICTION:**

In case of any suit or other legal proceedings arising under or relating to this Contract, the courts at **Bengaluru, Karnataka** only shall have the Jurisdiction and is only after exhausting the, Arbitration, Clause 25.

## **27. SECRACY OF CONFIDENTIAL INFORMATION:**

The Contractor undertakes and agrees that he/it will not disclose or reveal in part or full the proprietary/confidential information, which terms shall mean and include patents, trademarks, service marks, registered designs, copyright, design rights, know-how, confidential information, trade and

business names and any other similar protected information of BHEL received during negotiation or currency of the contract to any third party or governmental authorities without written permission from BHEL. In the event of termination or expiry of the contract, the contractor shall return all proprietary/confidential information to BHEL. This clause shall survive termination or expiry of the contract.

BHEL reserves the right to initiate appropriate action including legal proceeds / termination of contract, recovery of damages, penalties etc., if the contractor is found guilty / wrong usage of the documents given by BHEL for any unauthorised activity.

## **28. SIGNING OF CONTRACT**

Each contract document shall be signed by the Contractor with his usual signature. Contract by partnership or Hindu Joint Family firm, may be signed in the FIRM'S name by the Managing Partner or all /one of the Partners on behalf of the firm or the Karta or Manager for HUF as the case may be. Contract by a Company shall be signed with the name of the Company from a person authorised in this behalf and a Resolution or power of attorney or other satisfactory proof, showing that the person signing the Contract documents on behalf of the Company is duly authorised to do so, shall accompany the contract.

## **29. FRAUD PREVENTION POLICY**

The Bidder along with its associate / collaborators / sub – vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about fraud or suspected fraud as soon as it comes to their notice”.

Fraud Prevention policy and List of Nodal Officers shall be hosted on BHEL website, vendor portals of Units / Regions intranet.

## **30. SUSPENSION OF BUSINESS DEALINGS WITH SUPPLIERS / CONTRACTORS:**

Penal action can be initiated on the suppliers / Contractors in line with extant ‘Guidelines for Suspension of Business Dealings with Suppliers/ Contractors. The abridged version of extant ‘Guidelines for suspension of business dealings with suppliers/ contractors’ has been uploaded on <http://www.bhel.com> on “supplier registration page”.

## **31. RISK PURCHASE:**

a) In the event of any successful Tenderer's failure to fulfil any of the tender / Contract obligations as per Contract / Agreement, BHEL may entrust the job to alternate vendor and get it completed to meet the BHEL requirement and additional expenditure, if any, including consequential cost viz., demurrage etc., will be fully recovered from the Contractor who failed to complete the job in line with the Contract.

b) The decision of BHEL with regard to the actual losses / consequential expenditure incurred by BHEL shall be final and binding on the Contractor.

The value under Risk purchase clause shall be calculates as follows:

$$\text{Risk \& Cost Amount} = [(A-B) + (A \times H/100)]$$

Where,

A= Value of Balance scope of Work/ Supply (\*) as per rates of new contract

B= Value of Balance scope of Work/ Supply (\*) as per rates of old contract being paid to the contractor/ supplier at the time of termination of contract i.e. inclusive of PVC & ORC, if any.

H = Overhead Factor shall be taken as 5

In case (A-B) is less than 0 (zero), value of (A-B) shall be taken as 0 (zero).

\*(Balance scope of work/ supply)

Difference of Contract Quantities and Executed Quantities as on the date of issue of Letter for ‘Termination of Contract’, shall be taken as balance scope of Work/ Supply for calculating risk & cost amount.

c) In case vendor fails to fulfil any of the tender / Contract obligations as per Contract / Agreement, contract shall be cancelled and SD shall be forfeited.

### **32. NOTICES OF ACCIDENTS**

In the event of an accident the Contractor shall be required to fill injury report and submit to the Engineer in charge immediately and ensure compliance of ESI / Workmen's Compensation of accident as per the Act. The Contractor shall get the Contract personnel engaged by him insured under workmen's compensation policy from any Insurance company in India before actually starting the work. The Insurance Coverage should be for the entire period of Contract. The Contractor shall comply with the provisions of the Workmen's Compensation Act 1923. (This should be read in connection with the provisions of ESI Act.)

### **33. DAMAGE / LOSS TO PROPERTY & INJURY TO WORKMEN**

The Contractor shall at his own expense reinstate and make good to the satisfaction of the respective area **HOD** and pay compensation for any injury, loss or damage occurred to any property or rights whatever including property and rights of BHEL (or agents) servants or employee of BHEL, the injury loss or damage arising out of or in any way in connection with the execution or purported execution of the contract and further the contractor shall indemnify BHEL against all claims enforceable against BHEL (or any agent, servant or employee of BHEL) or which would be so enforceable against BHEL, in respect of any such injury (including injury resulting in death) loss or damage to any person whomsoever or property including all claims which may arise under the Employees Compensation Act or otherwise.

“BHEL shall recover the amount of compensation paid to victim(s) by BHEL towards loss of life / permanent disability due to an accident which is attributable to the negligence of contractor, agency or firm or any of its employees as detailed below.

- A. Victim: Any person who suffers permanent disablement or dies in an accident as defined below.
- B. Accident: Any death or permanent disability resulting solely and directly from any unintended and unforeseen injurious occurrence caused during the manufacturing/operation and works incidental thereto at BHEL factories/offices and precincts thereof, project execution, erection and commissioning, services, repairs and maintenance, trouble shooting, serving, overhaul, renovation and retrofitting, trial operation, performance guarantee testing undertaken by the company or during any works/during working at BHEL Units/Officers/townships and premises/Project sites.
- C. Compensation in respect of each of the victims:
  - a. In the event of death or **permanent disability** resulting from **Loss of both limbs**: ₹ 10, 00,000/- (₹ Ten Lakh)
  - b. In the event of **others permanent disability**: ₹7,00,000/- (₹ Seven Lakh)
- D. Permanent Disablement: A disablement that is classified as a permanent total disablement under the proviso to section 2 (I) of the Employee's Compensation Act,1923”

### **34. PREFERENCE TO MAKE IN INDIA**

“For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent Orders issued by the respective Nodal Ministry shall be applicable even if it is issued after this NIT but before finalization of contract / PO / WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and / or local content in respect of this procurement, same shall be applicable.

**PART-I (TECHNO COMMERCIAL BID)****ANNEXURE-ID****SPECIAL TERMS & CONDITIONS OF CONTRACT****1. PARTICIPATION.**

The Parties who have been suspended or black listed or issued with "Show Cause Notice" by BHEL, EDN Bengaluru or any other BHEL Unit will not be allowed to participate in the Tender.

Other than the bidder, none of its group concerns or affiliates etc. shall participate in the tender either directly or indirectly through any other agency under same proprietor / common director(s) / common partner(s). The bidder should declare the same in the Tender. Even during the course of evaluation / finalization of Tender if it is found that some of the parties are not fulfilling the above clauses, BHEL will not consider them for further participation in the Tender.

**2. EVALUATION CRITERIA:**

a. Technical Bids of tenderers will be evaluated for the Pre-Qualification/Technical Eligibility Criteria on the basis of supporting documents and track record of the bidder.

b. Price Bids of only those tenderers who are found to meet the Pre-Qualification/Technical Eligibility Criteria will be opened. Price Bids will be opened with prior information to the eligible bidders to facilitate the presence of the bidders or their authorized representatives to witness the Price Bid opening.

**3. CRITERIA FOR AWARD OF WORK:**

1. The evaluation of offer for award of work shall be on the basis of "Total Cost to BHEL/ **Net Cash outflow to BHEL after taking into account applicable Taxes and Duties.**

2. **The work will be awarded on Package Wise L1 basis.**

3. In case there are more than one L1 bidders, BHEL will invite fresh revised price bids from all such L1 bidders & ranking will be decided based on these revised bids. The new rates quoted should be lower than their previous L1 rates. In case if the revised bids submitted by L1 bidders is also same and none of the bidders are ready for further reduction in their rates, then L1 bidder will be selected based on draw of lots.

4. The quantity mentioned in BOQ / Price bid is tentative. BHEL reserves the right to increase or decrease the quantity during award of work or issue work order in phase manner as per requirement of BHEL.

**4. METHOD OF EVALUATION OF PRICES****Priority / Ranking**

1. Net cash outflow to BHEL including all charges, incidentals etc., inclusive of Goods & Service tax.

**5. RATE FINALIZATION**

1. Lowest prices received against BHEL Tender need not be the acceptable to BHEL and in that case BHEL would not consider the same for award of Contract. BHEL would negotiate or re-float the Tender opened if L1 price is not the lowest acceptable price to BHEL inter-alia other reasons.

2. Tenderers are requested to give their best prices at the first instant itself.

3. In the event of the final L1 prices are not reasonable / acceptable to BHEL, BHEL may resort to short closure of this Tender.

**7. INTEGRITY PACT (IP)**

- (a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SI	IEM	Email
1.	Shri Otem Dai, IAS (Retd.)	iem1@bhel.in
2.	Shri Bishwamitra Pandey, IRAS (Retd.)	iem2@bhel.in
3.	Shri Mukesh Mittal, IRS (Retd.)	iem3@bhel.in

- (b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.

- (c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

**Note:**

No routine correspondence shall be addressed to the /EM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below:

1. Name : Satya Prakash, Manager  
Dept. : Common Contracts Department  
Address : New Engineering Building, 2<sup>nd</sup> floor, BHEL- Electronics Division, Bengaluru-560026  
Phone : 080 2699 8040  
e-mail : satyaprakash@bhel.in
2. Name : Vishal Singh, DGM  
Dept. : Common Contracts Department  
Address : New Engineering Building, 2<sup>nd</sup> floor, BHEL- Electronics Division, Bengaluru-560026  
Phone : 080 2699 8858  
e-mail : vishal.singh@bhel.in

**8. Splitting of contract:**

The contract shall be divided amongst L1 bidder and the bidder accepting the arrived L1 price so counter offered as proposed below:

The proposed splitting is as follows:					
Sl No:	No. of vendors accepting L1 rates	% of Contract Value to be awarded to L1	% of Contract Value to be awarded to L2	% of Contract Value to be awarded to L3	% of Contract Value to be awarded to L4
Case-1	3	40%	30%	20%	10%
Case-2	2	50%	30%	20%	NA
Case-3	1	60%	40%	NA	NA
Case-4	0	100%	NA	NA	NA

The arrived L1 price shall be counter offered to bidders in order of tender priority ie, L2, L3, ... till the counter offer is accepted. But **H1 bidder will not be considered for counter offering**. In case, none of the other bidders ie, L2, L3, accepts the counter offered L1 rates, BHEL reserves the right to give entire business to L1 bidder or go for re-tendering. In case Non MSE bidder is L1 and MSE vendor / vendors offer price is / are within L1+ 15 %, preference will to given to MSE vendor ( As per merit amongst MSE vendors) to enable them to get minimum 25 % of awarded value subject to acceptance of L1 rate.

# ANNEXURES

## PART-I (No Deviation certificate)

### ANNEXURE-A

**Note: The following Declaration to be typed on the contractor's Letter Head, duly signed & stamped and to be attached along with your Technical bid of the tender.**

-----

*I/ We, M/s. ....have read and clearly understood all the Terms and conditions in Tender Schedule of "RATE CONTRACT FOR SUPPLY OF PACKING MATERIALS AND PACKING OF CE PRODUCTS, TRACTION EQUIPMENTS AT BHEL-EDN & BHEL-ESD, BANGALORE FOR TWO YEARS DURING 2023-25." Tender Ref No: BHEL-EDN/CCD/PACKING -EDN/ NIC-RET4/23-24 /Date: 01.04.2023 and accordingly we accept the same without any deviation what so ever.*

- I/ We unconditionally agree to all the tender conditions and no new conditions are imposed by us in the technical / price bid. I understand in the event of imposing any condition in the technical / price bid, such condition would be ignored by BHEL and only the prices will be considered for the purpose of evaluation"*
- I/ We confirm that none of our group concern or affiliates etc., appears on the list of banned firms / companies by BHEL (list available on [www.bhel.com](http://www.bhel.com)) nor any of the Director / Partner / proprietor of bidder / such group concern or affiliate etc. are involved with such company.*
- I/ We also declare that, we have not been suspended or black listed or issued with Show Cause Notice by BHEL-Electronics Division, Bengaluru or any other BHEL Unit or any PSU/ Government organization.*
- I/ We confirm that other than us, none of our group concerns or affiliates etc. are participating in the tender either directly or indirectly through any other agency under same proprietor / common director(s) / common partner(s).*
- I/ We confirm that if any of the above statement / information furnished by us in this tender is found to be false/ fake at any stage of tender evaluation or during execution of contract, BHEL will have the right to initiate appropriate action including legal proceeds / termination of contract, recovery of damages, penalties etc. as deemed fit.*

(Contractor Signature with Seal)

**ANNEXURE-B****PART-I (Declaration)**

**Note: The following Declaration to be typed on the contractor's Letter Head, duly signed & stamped and to be attached along with your Technical bid of the tender.**

**Name of Works: "RATE CONTRACT FOR SUPPLY OF PACKING MATERIALS AND PACKING OF CE PRODUCTS, TRACTION EQUIPMENTS AT BHEL-EDN & BHEL-ESD, BANGALORE FOR TWO YEARS DURING 2023-25."**

**Tender Ref No: BHEL-EDN/ CCD/PACKING -EDN/ NIC-RET4/23-24 /Date: 01.04.2023**

**DECLARATION**

I / We M/s. ....  
do hereby confirm the following points with ref to the above works, if ordered on us.

1. We do hereby confirm that we will pay (i) at least the minimum wages (minimum basic wages + minimum DA) to all the persons engaged (Un Skilled / Semi Skilled / Skilled /Supervisor category) by us in the above contract as per the Karnataka Government Minimum Wages & also as per any revisions made by the State Govt. from time to time and (ii) Additional Wages as per HR / BHEL circular ref: BHE: HR: W: EW dt 08.04.2014 and (iii) Bonus as per the Bonus Act-1965 along with Wage.
2. We will also pay ESI, PF (both Employer and Employee contributions) & Bonus amounts for total wages to be paid as mentioned in (i) & (ii) of point 1 and challans/ payment proof shall be produced along with invoices for all the respective persons engaged in the above contract.
3. The rates quoted against service charge in this tender will remain firm throughout the entire Contract period and no extra payment against service charges will be claimed from BHEL under any circumstances from our end.
4. We, the contractor, will disburse the salary/wages to all the persons engaged in the contract ONLY through nationalized banking channel in their respective accounts & the relevant Bank statement / proof for Bank payment will also be produced along with PF and ESI challans to the Welfare Section every month for processing our invoices for payment.
5. We will pay the previous month salary in full to our employees before 7<sup>th</sup> of every month and will not adjust with any advance/ loan /training cost / accommodation cost / repayment due by the employee to us.
6. All the payments to the persons engaged in the contract will be paid only through nationalized bank. No other mode of payment (hand payment / account transfer as advance payment or any other) is acceptable as salary.
7. In case we fail to pay the minimum wages to all the persons engaged in the contract which includes Minimum wages and Additional wages with ESI and PF (both Employee and Employer contributions) for every month including Bonus, BHEL has the right to recover from the outstanding payments to us either under this Contract or in any other Contract(s) or from Security Deposit or from both. In case this amount is insufficient for such recoveries, we shall make good the balance amount by actual payment. In addition, BHEL- Electronics Division, Bengaluru may recover the said amounts through other running contracts from BHEL's sister units.
8. We will obtain and submit Labour License (As applicable), PF and ESI Registration within 30 days from award of work.

(Contractor Signature with Seal)

**ANNEXURE-C****A.EMD PAYMENT WIDE SBI-E COLLECT**

This explains how to make Payments to BHEL-EDN, Bengaluru through SBI-E collect. Vendors (EMD and SD Payments payable by others) can utilise this facility. Payments can be made using Internet Banking, Debit Cards/Credit Cards etc. SBI Charges a minimum amount (Service Charge) for every transaction. This may vary according to the MODE selected.

**STEP BY STEP PROCEDURE TO REMIT EMD / SD AGAINST TENDER NOTIFICATION:**

Login to <https://www.onlinesbi.com>

1. Select State Bank Collect available on the top (pre login page)
2. Accept the terms and conditions and click "PROCEED"
3. Select State of Corporation / Institution as "KARNATAKA "
4. Type of Corporate / Institution as "PSU-Public Sector undertaking "
4. Select PSU-Public Sector Undertaking Name as "BHARAT HEAVY ELECTRICALS LIMITED" and click "SUBMIT ".
5. In the next page, Select Payment Category as "OTHERS" and Sub Category as "EMD / SECURITY DEPOSIT" (As applicable), fill details correctly & click "SUBMIT".
6. If all details entered are correctly populated, click "CONFIRM "to proceed.
7. Make payment as per your convenience. (Options available are payment of fees through SBI Net Banking, State Bank ATM cum Debit Cards / Other Bank Debit / Credit Cards and through SBI Branches).
8. SAVE & Keep the copy of receipt for future reference.

**PROCEDURE TO TAKE RECEIPT FOR A PAYMENT MADE, EVEN ON A LATER DATE:**

(PLEASE CHECK THE STATUS BEFORE MAKING PAYMENT SECOND TIME)

1. Login to [www.onlinesbi.com](http://www.onlinesbi.com)
2. Select State Bank Collect available on the top (pre login page)
3. Accept the terms and conditions and click "PROCEED"
4. Select "PAYMENT HISTORY "option available on the left side of screen.
5. Using two options as mentioned below, you can get the receipt:
  - a. Type the same Date of Birth, Mobile Number which you have entered at the time of making payment through SB collect. Select the date range and submit.
  - b. If you know the payment reference number, then enter the Reference number (DU...) along with anyone information (Date of Birth / Mobile number, which you have entered at the time of making payment). Select the date range and submit.
6. In the next page, take print out of receipt.

**A.1: EMD / SD amount may be remitted through NEFT/ RTGS to BHEL account as per following detail:**

Name of Bank: State Bank of India  
Branch: Chandra Layout Branch, Bangalore 40  
IFSC code: SBIN0004051  
Account Number: 31467498356  
Account type: Current Account

**Annexure – D****ACCEPTANCE FOR ELECTRONIC FUND TRANSFER / RTGS TRANSFER**

To THE PURCHASE/CONTRACT EXECUTING AGENCY/BHEL

1	NAME & ADDRESS OF THE SUPPLIER / SUBCONTRACTOR	
2	VENDOR CODE assigned by BHEL	
	<b><u>Details of Bank Account:</u></b>	
3	NAME & ADDRESS OF THE BANK	
4	NAME OF THE BRANCH	
5	BRANCH CODE	
6	MICR CODE	
7	ACCOUNT NUMBER	
8	TYPE OF ACCOUNT	CURRENT A/C / OD / CASH CREDIT
9	BENEFICIERY'S NAME	
10	IFSC CODE OF THE BRANCH	
11	EMAIL ID	
12	TELEPHONE/MOBILE NO.	

**CERTIFICATE** I / We hereby agree to receive the payments due from BHARAT HEAVY ELECTRICALS LIMITED by the National Electronic Funds Transfer and/or RTGS Transfer mode by credit to my / our above mentioned Bank Account. I / We also agree that payments made to the above mentioned Account is a valid discharge of the liability of Bharat Heavy Electricals Limited. I / We also agree to bear the applicable Bank Charges for the above mode of transfer. **A copy of the cheque leaf/cancelled cheque leaf of the above account is sent herewith.**

AUTHORISED SIGNATORY WITH NAME SEAL

**Banker's Certification**

We confirm that we are enabled for receiving RTGS and NEFT credits and we further confirm that the account number of \_\_\_\_\_  
(name of account holder), the signature of the authorized signatory and the MICR and IFSC codes of our Branch mentioned above are correct.

PLACE: (Manager / Officer's)

DATE: Signature Under Bank stamp and Name Seal with Membership No.  
(Telephone / Mobile No. \_\_\_\_\_)

Forwarded to Accounts Dept. We confirm the above details are verified with the records available with us.

Signature of the BHEL Executive with Name Seal (Operating the Contract/Services)

**ANNEXURE-E****PROFORMA OF BANK GUARANTEE (in lieu of EARNEST MONEY)  
(On non-Judicial stamp paper of appropriate value)**

Bank Guarantee No.....

Date.....

To

**BHARAT HEAVT ELECTRICALS LIMITED  
ELECTRONICS DIVISION, BANGLAORE-560026**

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender Ref No: **BHEL-EDN/ CCD/PACKING -EDN/ NIC-RET4/23-24 /Date: 01.04.2023.**" (Clause B: Pre- qualification Criteria: Earnest Money Deposit (EMD)), M/s. .... having its registered office at ..... (hereinafter referred to as the 'Tenderer'), is submitting its bid **"RATE CONTRACT FOR SUPPLY OF PACKING MATERIALS AND PACKING OF CE PRODUCTS, TRACTION EQUIPMENTS AT BHEL-EDN & BHEL-ESD, BANGALORE FOR TWO YEARS DURING 2023-25."** invited by **BHARAT HEAVT ELECTRICALS LIMITED**, through its **ELECTRONICS DIVISION** Unit at **BANGALORE-560026**.

The Tender Conditions provide that the Tenderer shall pay a sum of **₹14,41,474/- (₹Fourteen Lakh Forty-one thousand four hundred seventy-four only)** as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of **₹12,41,474/- (₹Twelve Lakh Forty-one thousand four hundred seventy-four only)** is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,

we, the .....[Name & address of the Bank] ..... having our Registered Office at .....(hereinafter referred to as the Bank) being the Guarantor under this Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of **₹12,41,474/- (₹Twelve Lakh Forty-one thousand four hundred seventy-four only)** without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding of **₹12,41,474/- (₹Twelve Lakh Forty-one thousand four hundred seventy-four only)**

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/Contractor/Supplier in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We ..... Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force up to and including **31.08.2023** and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the **30.11.2023** we shall be discharged from all liabilities under this Guarantee.

We, ..... Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing. Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed of **₹12,41,474/- (₹Twelve Lakh Forty-one thousand four hundred seventy-four only)**
- b) This Guarantee shall be valid up to **31.08.2023**.
- c) Unless the Bank is served a written claim or demand on or before **30.11.2023** all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of  
(Name of the Bank)

Date.....  
Place of Issue.....

**Note:**

1. BG should be valid for six months from the date of tender submission.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Vendor/Contractor/Supplier /Bank issuing the guarantee.
3. In Case of Bank Guarantees submitted by Foreign Vendors
  - a. From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
  - b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor Country's Bank)
    - B.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by any of the Consortium Banks only will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favor of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
    - B.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at sl.no. b.1 will required to be followed.
    - B.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

**ANNEXURE-F**

<b>LIST OF CONSORTIUM BANKS</b>			
<b>SL NO.</b>	<b>NATIONALIZED BANKS</b>	<b>SL NO.</b>	<b>PUBLIC SECTOR BANKS</b>
1	STATE BANK OF INDIA	18	18 IDBI
2	ALLAHABAD BANK		
3	ANDHRA BANK	<b>SL NO.</b>	<b>PRIVATE BANKS</b>
4	BANK OF BARODA	19	AXIS BANK
5	CANARA BANK	20	HDFC
6	CORPORATION BANK	21	ICICI
7	CENTRAL BANK	22	THE FEDERAL BANK LIMITED
8	INDIAN BANK	23	KOTAK MAHINDRA BANK
9	INDIAN OVERSEAS BANK	24	INDUSIND BANK
10	ORIENTAL BANK OF COMMERCE	25	YES BANK
11	PUNJAB NATIONAL BANK		
12	PUNJAB & SINDH BANK	<b>SL NO.</b>	<b>FOREIGN BANKS</b>
13	SYNDICATE BANK	26	CITI BANK N.A
14	UCO BANK	27	DEUTSCHE BANK AG
15	UNION BANK OF INDIA	28	HSBC
16	UNITED BANK OF INDIA	29	STANDARD CHARTERED BANK
17	VIJAYA BANK	30	J P MORGAN

**ANNEXURE-G**

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**INTEGRITY PACT**

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**Between**

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

**and**

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

**Preamble**

The Principal intends to award, under laid-down organizational procedures, Contract/s for **RATE CONTRACT FOR SUPPLY OF PACKING MATERIALS AND PACKING OF CE PRODUCTS, TRACTION EQUIPMENTS AT BHEL-EDN & BHEL-ESD, BANGALORE FOR TWO YEARS DURING 2023-25 ( Tender Ref No: BHEL-EDN/ CCD/PACKING -EDN/ NIC-RET4/22-23 /Date:01.04.2023)**. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

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

**Section 1- Commitments of the Principal**

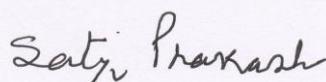
1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles: -

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

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

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

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



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

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

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

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

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

2.1.4 Foreign Bidder(s)/ Contractor (s) shall disclose the name and address of the agent and representative in India and Indian Bidder(s)/ Contractor (s) to disclose their foreign principle or associates. The Bidder(s)/ Contractor (s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.

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

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

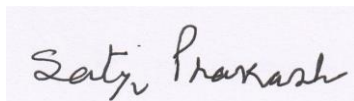
**Section 3 - Disqualification from Tender process and exclusion from future Contracts**

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

**Section 4 - Compensation for Damages**

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

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



**Section 5 - Previous Transgression**

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

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

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

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

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

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

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

**Section 8 -Independent External Monitor(s)**

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

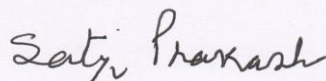
8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.

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

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

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

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



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

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

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

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

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

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

### **Section 9 - Pact Duration.**

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

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

### **Section 10 - Other Provisions**

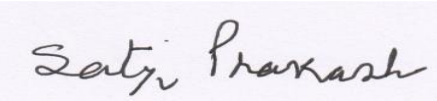
10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

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

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

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

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



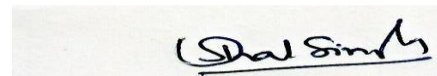
For & On behalf of the Principal

ಸತ್ಯ ಪ್ರಕಾಶ್, ವ್ಯವಸ್ಥಾಪಕರು/ಸಿ.ಸಿ.ಡಿ.  
**सत्य प्रकाश, प्रबंधक/सी.सी.डी.**  
**SATYA PRAKASH, MANAGER/CCD**  
**BHEL-EDN, MYSURU ROAD, BENGALURU-560026**

**Place: BHEL-EDN, Bangalore.**

**Date: 01.04.2023**

Witness:



Vishal Singh  
 Deputy General Manager / CCD  
 BHEL-EDN, Mysuru Road, Bengaluru-560026

For & On behalf of the Bidder/ Contractor

**(Office Seal)**

**Place:**

**Date:**

Witness:

Signature:

Name & Address:

**ANNEXURE-H**

**Solvency Certificate Format**

[To be issued by scheduled Banks as mentioned below (for instance) not later than 6 months]

Ref:

Date:

This is to certify that M/s. \_\_\_\_\_ having their Registered Office at \_\_\_\_\_ is solvent to the extent of ₹\_\_\_\_\_ [Amount in Words \_\_\_\_\_] as disclosed by the information and record which are available with the bank.

This certificate is issued at the request of M/s. \_\_\_\_\_ for a Tender Purpose.

This certificate is issued without any risk/liability or responsibility whatsoever on the part of the Bank or any of its officers.

For Bank\_\_\_\_\_

Name of Signatory

**ANNEXURE-I**

**On Bidder letter Head**

To,

M/s Bharat Heavy Electricals Ltd.  
Electronics Division, Mysore Road,  
Bangalore – 560026

**Sub:** Model Clause / Certificate as per Annex-III (transitional cases) of Restrictions Under Rule 144 (xi) of the General Financial Rules (GFRs) 2017, Dated 23.07.2020.

**Ref:** BHEL Tender / RFQ / NIT Number .....

I (authorized signatory for M/s ..... ) have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India , we M/s ..... [Vendor Name & Address] hereby certify that we are not from such a country and is eligible to be considered.

For M/s .....

Authorized Signatory  
(with company seal & Name)

**ANNEXURE-J**

**On Bidder letter Head**

**Date:**

To,

M/s Bharat Heavy Electricals Ltd.  
Electronics Division, Mysore Road,  
Bangalore – 560026

**Sub:** Model Clause / Certificate as per clause 9 (a) of Revised Public Procurement (Preference to Make in India Order, 2017 of DPIIT dated 13.06.2020.

**Ref:** BHEL Tender / RFQ / NIT Number .....

I (authorized signatory for M/s ..... ) a 'Class-I Local Supplier' / 'Class-II Local Supplier' at the time of tender, bidding or solicitation hereby confirm that the item meets the Local Content requirement for 'Class-I Local Supplier' / 'Class-II Local Supplier' (Tick appropriate option & cut the other one) and the Local Content percentage is .....

The address is as below, where the local content / value addition is made:

[Factory Address]

For M/s .....

Authorized Signatory  
(with company seal & Name)



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**PLANT STANDARD**

ED 049 00 92

REV NO 10

Page 0 of 25

**REVISION HISTORY SHEET**

REV NO.	DATE	NATURE OF CHANGE	REASONS	CHANGED BY	APPROVED BY
00	11/05/1995		-	VS, SHG	N J
01	05/06/1995	ANNEXURE ADDED	ACCEPTANCE CRITERIA INCLUDED FEED BACK FROM QUALITY	SHG	NJ
02	06/03/1997	CL.6.4.1 ALTERED	FEEDBACK FROM SHIPPING	SHG	NS
03	20/12/1999	IS YEAR OF ISSUE REMOVED	-	CCR	NS
04	15/12/2009	INCLUSION OF M R GRADE PLYWOOD SHEET FOR PACKING (Commercial Grade)	FEEDBACK FROM SHIPPING & GENERAL REVIEW	PGD / KPN	MSR
05	21/03/2013	Inclusion of recommendation pertaining to spares in page 12 and 26	Recommendation from Corp System and IT	HRN	MS
06	11/01/2016	Cl 3.1.1.5, 3.8, 3.9, and 3.22 revised	Feedback from Shipping and General Review	HRN / EK Prakash	BKD
07	19/02/2016	Page 21 deleted. No. of sheets revised to 25	Feedback from Shipping	HRN/EK Prakash	BKD
08	06/06/2018	Clause 3.22 revised by changing unit mm to cm	Feedback from Shipping	BKD	Sathyanarayana
09	13/08/2018	Reference to Corp Std: AA0490009 included	Feedback from CQA	BKD	Sathyanarayana
10	12/10/2021	Clause No. 3.1.1.2, 3.1.1.4, Fig.8 & Fig 9 revised.	Feedback from Shipping	JShukla	Bharat Arora

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Rev : 10

APPROVED: Bharat Arora

PREPARED: J Shukla      ISSUED: Engg Serv.      DATE: 12/10/2021

	<b>PLANT STANDARD</b>	ED 049 00 92 REV NO 10 Page 1 of 25
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## PROCEDURE FOR PACKING OF CONTROL EQUIPMENTS USING PLYWOOD.

1. **PURPOSE:** To describe the materials and procedure for Packing.
2. **SCOPE:** Applicable for packing of control cubicles, loose items, spares of Control Equipment and Transmission System Control products.
3. **MATERIALS**
  - 3.1. **WOOD**
    - 3.1.1 **For Inland contracts:**
      - 3.1.1.1 Plywood of Boiling Water Resistance (BWR) grade and termite, fungus proof as per IS: 303 of 12 mm thick for control cubicles, single and multi cubicles, loose items and spares cases. The plywood shall be bonded with high Quality Phenol Formaldehyde Synthetic Resin and specially treated with preservatives to repel termites and wood destroying organisms. The plywood shall with stand the stress caused by cyclic changes in weather conditions. It shall be durable and resistant to heat, sun and moisture. The sheets such procured shall have IS mark IS 303 and BWR grade stamped on it.
      - 3.1.1.2 Silver oak/Pine wood of cross section 45x45 mm as support battens with nut & bolt type to be used for Loose items, VCU's of Railways and single suit, two suit, three suit Cubicles and 54x75mm for longer sections to be used. These Silver oak wood battens shall be treated with ASCU solution as defined in 4.0. In the case of plywood, treatment with ASCU solution need not be done. Alternative to silver oak/pine wood battens, Plywood support battens of suitable cross section and combination of thickness can also be used as per clause 3.1.1.4.
      - 3.1.1.2.a) Silver oak/Pine wood of cross section 18x75 mm as support battens with nailing to be used for Loose items, and single suit, two suit, three suit Cubicles and 18x100mm for longer sections to be used. These Silver oak wood battens shall be treated with ASCU solution as defined in 4.0. In the case of plywood, treatment with ASCU solution need not be done. Alternative to silver oak/pine wood battens, Plywood support battens of suitable cross section and combination of thickness can also be used as per clause 3.1.1.4.

Rev : 10

APPROVED: Bharat Arora

**PREPARED:** J Shukla    **ISSUED:** Engg Serv.    **DATE:** 12/10/2021

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### 3.1.1.3

Plywood for general purposes i.e. moisture resistance or MR grade (Commercial ply wood) and termite, fungus proof as per IS: 303 of 9 mm / 12 mm thick for control cubicles, single and multi cubicles, loose items and spares cases. The plywood shall be bonded with high quality Phenol Formaldehyde Synthetic Resin and specially treated with preservatives to repel termites and wood destroying organisms. The plywood shall with stand the stress caused by cyclic changes in weather conditions. It shall be durable and resistant to heat, sun and moisture. The sheets such procured shall have IS mark IS 303 and MR grade stamped on it. 9 mm thick plywood can be used with additional plywood support/ reinforcement suitable battens both for small cases and also for panels. Support batten as indicated at 3.1.1.4 shall be used.

Sample drawings of panels & loose boxes are attached for ready reference.

[ Fig : 10 to 13 ]

### 3.1.1.4 Support Battens:

Ply wood sheet of cross section 18 mm x (100 mm) for support batten for loose items, spares, and plywood sheet of cross section 18 mm thk x 100 to 150 mm width as support batten for standard panels up to 2450 x 1350 x 2500 mm panels. Support batten of plywood cross section 12 thk x 75 to 100 mm can also be used for small cases apart from 18 mm x 100 mm cross section. These plywood support battens can also be used in place of silver oak support battens as referred in clause 3.1.1.2. Additional support battens/ cross battens of suitable sizes are to be provided on need basis.

Sample drawings of panel's .i.e. single suit, two suite and three suit cubicles are attached for ready reference [Fig: 10 to 13].

### Special support battens for Traction converters and similar panels:

Silver oak/Pine Wood of Cross section 54 mm x 75mm x 1 no's (Alternatively, Plywood of cross section of to be used in place of Silver Oak/pine wood as mentioned )at both bottom end and top end of front and back shook's , and also at top portion of both corner shook's for fixing with bolt and nut/ clamps, and 54 mm x 75 mm x 1 nos cross section as support batten/ slanting reinforcement batten on all sides. On need basis 18mm x 75 mm x 3 no's of plywood cross section can also be used additionally depending upon the size and weight of the panel. Plywood shook's can be fixed with both Bolts and mechanical latching clamps or combination of both as the case may be.

**OR**

Plywood of Cross section 18 mm x 75mm x 3 no's (Alternatively, Plywood of cross section to be used in place of Silver Oak wood )at both bottom end and top end of front and back shook's , and also at top portion of both corner shook's for fixing with bolt and nut/ clamps, and 18 mm x 75 mm x 3 nos cross section as support batten/ slanting reinforcement batten on all sides. On need basis 18mm x 75 mm x 3 no's of plywood cross section can also be used additionally depending upon the size and

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weight of the panel. Plywood shooks can be fixed with both Bolts and mechanical latching clamps or combination of both as the case may be.

Sample drawings of panels are attached for ready reference. [Fig :8 & 9]

- 3.1.1.5 Tolerance of ply wood thickness: Tolerance of plywood for inland packing shall be +/- 1 mm.

### 3.1.2 For Export Contracts

- 3.1.2.1 Plywood of Marine grade as per IS: 710 of 9 / 12 mm Thick for control cubicles of single / two / three suite for loose items and spare cases. For suit of four and longer cubicle sections, 19mm thick is to be used.

It shall be highly resistant to attacks from fungi, termites and wood destroying organisms including marine borers. The plywood shall withstand the stress caused by cyclic changes in weather conditions. It shall be durable and resistant to heat, sun and moisture. The sheet shall have IS: 710 and marine grade marking. **Treatment of wood as per ISPM-15**

### 3.1.2.2 Same as clause 3.1.1.2

- 3.1.3 BHEL\_EDN will be carrying out test on ISI marked ply Wood whenever required.

- 3.2 Fasteners: M8 x 130 mm and M8 x 150 long zinc plated Bolts and M8 zinc plated nuts for fixing, and spring Washers or suitable size can also be used.
- 3.3 Nails: Nails of dia 3.15 mm and about 40 mm for nailing of plywood and silver oak batten. Suitable smaller size is to be used for other nailing.
- 3.4 Polyethylene sheet: The polyethylene sheets are used to make covers for the jobs individually. The material shall have a minimum thickness of 0.175 mm (175 microns). The polyethylene sheet shall be clear and transparent manufactured out of virgin material. Reprocessed material shall not be used.
- 3.5 Bituminised water proof kraft paper - used for lining the inside of shooks of cubicles.
- 3.6 Bitumen coated Hessian polyethylene kraft paper used for lining the inside of top cover for cubicles and all inner and top sides for small boxes.
- 3.7 Rubberised Coirs- used for cushioning and to fill the gap inside packing boxes. The coir shall be about 100 mm wide and 25mm thick.
- 3.8 Foam rubber/U Foam - This is used for covering the delicate items. This material shall be provided by the vendor.
- 3.9 Thermocole (Expanded polystyrene) sheets - This is used for covering delicate items. This material shall be provided by vendor.
- 3.10 Silica gel - shall be of indication type to conform to IS: 3401/AA55619 shall be blue in colour while usage.

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- 3.11** Cotton bag - These are used for holding silica gel. The bags shall have the following matter indicated on them:

<b>BHEL-EDN</b>	<b>BANGALORE-560026</b>
<b>SILICA GEL INDICATING TYPE</b>	
<b>BLUE</b>	<b>: ACTIVE</b>
<b>ROSE</b>	<b>: REDUCED ACTIVITY</b>
<b>WHITE</b>	<b>: NO ACTIVITY. TO BE REPLACED WITH FRESH SILICA GEL</b>

- 3.12** Cotton / Plastic tape-This is used for tying small items and also to prevent vibrations of moving parts within the cubicles.
- 3.13** Polyethylene bags - These are to be used for keeping the packing slips. The bag shall be of size 70 mm X 100 mm (minimum).
- 3.14** Hessian cloth, twine thread, paint will have to be used in packing certain items.
- 3.15** Marking plate - This shall be of anodized aluminium sheet. Details and specifications are given in Fig-3.
- 3.16** Marking ink - Ink used shall be normally black in colour. The ink shall be indelible, non fading and non washable in water.
- 3.17** Packing Slip Holder - This shall be of galvanised iron tinned sheet / aluminium sheet.
- 3.18** Mechanical Latching clamps : For CLW Railway panels and similar Panels self locking clamps can also be used on need basis in conjunction with or apart from regular bolt and nut fixing arrangement. Sample drawing attached [refer Fig.7 ]. For reusable boxes, these clamps provides easy locking and unlocking arrangement. These clamps will be made available from BHEL in some cases.
- 3.19** Flex/Vinyl digital print media for labeling:  
Labels made out of Flex/Vinyl/ other digital media shall be used for export contracts & some prestigious domestic contracts on need basis apart from existing present marking/ labeling system.
- 3.20** Aluminium foil for packing:  
On need basis, suitable size & thickness of aluminium foil shall be used for packing of electronic panels and loose items for both indigenous & export contracts.
- 3.21** Pallets :  
All cubicles are mounted on the pallets by BHEL. For loose items, HMI items & small cabinets for which no pallets are available, suitable size pallets have to be arranged by the contractor.

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3.22 : STICKERS The following stickers to be put by the vendor on cubicles/Boxes after packing.

1. Case No sticker : 2 nos. Size 25 cm X 4.5 cm 2. BHEL Monogram sticker : 1 no . Size 17.5 cm X 23 cm 3. Address sticker : 2 nos. Size 38 cm X 30 cm 4. Direction sticker " Front " & " Back " - 4 nos. Size 20 cm X 7.5 cm 5. Chain Mark Sticker : 4 Nos. Size - 30 cm X 7.5 cm 6. "Fragile " sticker : 2 Nos Size. 21cm X 15 cm 7. "DO NOT STACK " sticker - 2 Nos. Size 30 cm x 22 cm

#### 4.0 Chemical treatment for silver oak preservation

4.1 The silver oak battens are to be treated with ASCU solution. For plywood wood treatment is not required.

4.2 The chemical used shall be ready mix ASCU paste. This consists of Arsenic, copper sulphate, sodium dichromate. This paste shall be mixed at the rate of 1 kg of paste per 10 liters of water. Alternate to this CCA can also be used as indicated at para 4.4

4.3 The chemical treatment shall be done at the premises of the contractor. A cement concrete tank of capacity to hold a minimum of 2000 liters of solution shall be constructed. The solution shall be prepared in the presence of BHEL- EDN's representative by contractor. The wooden battens shall be soaked in the solution for a minimum of 12 hours.

The solution shall be replenished after treating a maximum of 12 cubic meters of wood for 2000 liters of solution. A log book shall be maintained by the contractor to give the details of date of preparation of solution, quantity of solution prepared, quantity of chemicals used, quantity of wood treated and the details of replenishment.

Samples of solutions [ only paste before mixing ] shall be tested at the laboratories designated by BHEL. The testing fees to be paid to the laboratories will have to be borne by the contractor. The solution [paste] shall be tested as and when required.

4.4 Specifications for water soluble type wood preservatives:  
Copper - Chromium - Arsenic [ CCA]:

Copper - Chromium - Arsenic preservative formulation shall be as per IS : 10013 Part - II - 1981 shall consist of following active ingredients in nominal proportions by weight as shown below:

Arsenic Pentoxide	$As_2O_5 \cdot 2H_2O$	12.5
Copper Sulphate	$CuSO_4 \cdot 5H_2O$	37.5
Sodium Dichromate	$Na_2Cr_2O_7 \cdot 5H_2O$	50.0
Or		
Potassium Dichromate	$K_2Cr_2O_7$	

5.0 Jointing of plywood- to the extent possible, single plywood sheet shall be used in case of equipment of large size, jointing is allowed as bellow.

5.1 The joining shall be as close to the center of equipment as possible,

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but not less than 500 mm from one edge.

5.2 While joining (2 or more plywood sheets), care shall be taken to fix the sheets in the direction of the grain structure.

5.3a For joining Plywood and Silver oak wooden batten:  
While joining, 2 sheets shall be kept close to each other and treated silver oak batten of 100 mm width and 45 mm thick to be used and nailed to both plywood sheets alternately (2 numbers) in zig-zag manner.

5.3b For Joining plywood with plywood sheets :  
While joining, 2 sheets shall be kept close to each other and plywood sheet batten of minimum 100 to 200 mm width and 18 mm thick to be used depending upon the size of the box/ case and nailed to both plywood sheets alternately (2 numbers) in zig-zag manner. Suitable size nails to be used.

5.4 Jointing of silver oak batten : Only single length silver oak batten shall be used. In case of height or width of equipment is more than 2400 mm, jointing of batten is acceptable. The jointing of batten shall be such that two batten are kept together and one more batten of width & length of about 200 mm to be nailed on both the planks as in Clause 5.3 above.

5.5 The above jointing is to be done close to center of equipment.

## 6.0 Packing procedure

6.1 Packing of cubicles for inland contracts.

6.1.1 Packing to be done using materials given in clause 3.0.

6.1.2 The cubicles are fixed on wooden pallets. Hence the contractor need not arrange the bottom pallets.

6.1.3 Loose parts : All loose parts in the cubicles, shall be tied using cotton/ plastic tape. Wooden battens shall be provided wherever necessary.

6.1.4 Additional loose items which may be kept inside the cubicle.

- a. The components which are removed from cubicle for loose shipping, such as meters shall be kept inside the cubicle individually kept in wooden box and tied firmly to the bottom of cubicle.
- b. Other items which are given loose in addition to cubicle, shall be packed in separate boxes (like cables).
- c. For transformer cubicles loose items shall be packed in separate boxes and these boxes may be tied firmly in bottom of cubicles.
- d. Items which are bigger in size such as impulse tubes may be kept at the top of cubicles firmly bunched and tied.

6.1.5 Wooden batten : This batten shall be silver oak wood .In case of

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Cubicle which are not rectangular in shape like control desks, sufficient number of wooden rafters/ battens of proper size shall be provided to give strength to the package.

- 6.1.6 Silica gel: Silica gel (as in 3.10) packed in cotton bag (as in 3.11) shall be kept at different place inside the cubicle as per BHEL-EDN directions. The quantity of Silica Gel shall not be less than 1kg/1000 Litre [per cubic metre] volume of the packing box.
- 6.1.7 Polyethylene sheet covering: Cubicles shall be covered with polyethylene petticoat (sheet as in 3.4). This shall be tailor made to fit the cubicle. The sealing shall be such as not to allow any moisture to enter the cubicle. This sheet is to be folded to the bottom pallet with wooden planks on 2 larger sides.
- 6.1.8 After completion of this, the arrangement is as shown in Fig.1.
- 6.1.9 Rubberised coir: (as in 3.7) to be nailed from inner side of plywood after pasting kraft paper for full length with a pitch less than 500mm with a min. of 2 rows of cover is to be used.
- 6.1.10 Bituminised water proof kraft paper: (as in 3.5) to be pasted with glue on 4 inner sides of plywood. Whenever 2 pieces of kraft paper are used, the joint shall have an over lap of min 20 mm.
- 6.1.11 Bitumen coated Hessian polyethylene kraft paper (as in 3.6) to be nailed using nails (as in 3.3) on top cover inner surface. This sheet shall project outside on 4 sides by atleast 100 mm and shall be folded and nailed on to the sides. Joining of 2 sheets shall have an overlap of min 20 mm.
- 6.1.12 After completion of above steps, the arrangement shall be as given in Fig.2.
- 6.1.13 Marking Plate : One no (as in 3.15) shall be nailed to the front side of case, item as shown in Fig.3.
- 6.1.14 Case Marking : After complete packing, marking of various details and symbols as given by EDN shall be done using indelible ink (as in 3.16)
- 6.1.15 Packing Slip : Packing slip kept in polyethylene bag (as in 3.18) shall be placed inside the box at appropriate place before closing the top. in addition one more packing slip covered in polyethylene cover and packing slip holder (as in 3.17) shall be nailed to front or rear of shook.
- 6.1.16 At the end of this stage, the arrangement is as shown in Fig.4. Front and rear shook fixing arrangement to the bottom of the pallet is as shown in Fig.5
- 6.1.17 The lifting arrangement of the packed case is **shown in Fig.6**
- 6.2 Packing of cubicles for export contracts Procedure is same as that

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given in 6.1 except for the following changes:

- Two Polyethylene petticoat (as in 6.1.7) instead of one
- Fumigation may have to be done if required (BHEL Scope).

- 6.3 Packing of empty Cubicles Procedure is same as that given in 6.1 except For following changes
- Bituminised kraft paper, bitumen coated Hessian polyethylene paper, silica gel need not be used.
- 6.4 Packing of loose items/spares for inland contracts
- 6.4.1 All the materials and procedure are same as in 6.1 except that :
- No joining of plywood and silver oak batten
  - Inner sides of all 6 sides shall be nailed with bitumen coated Hessian polyethylene kraft paper (as in 3.6) using nails.
  - Kraft paper (as in 3.5) is not required
  - Silica gel quantity is 100 gm approx per box.
  - Rubberised coir is to be nailed to inner surfaces of bottom 4 sides of box.
  - Bottom plywood sheet / pallet shall be of 18 mm thick for all practical purposes and 12 mm thick for smaller boxes on need basis. Suitable bottom beams made out of plywood/ any other wood of suitable cross section 75x36 mm, 75x54 mm, 75x75 mm, 100x100 mm.
  - Support battens of cross section 12x75 mm, 12x100mm, 18x75 mm, 18x100 mm can be used depending upon the size of the boxes. Plywood support battens can be used in the place of silver oak battens.
  - Clause 6.1.10 is not applicable. Individual items to sealed with polyethylene sheet (as in 3.4) and one full cover of polyethylene sheet covering of all items is to be made.
- 6.4.2 In few cases gabled roof (single or double gable) may have to be made, details of which will be given by EDN.
- 6.4.3 Internal Packing: Items that go into the box shall be packed using polyethylene sheet/ U foam/ thermocol sheets/air bubbled sheets/ paper cartoons and cotton tape. Any space left between the job and the sides and the top of the box shall be filled with rubberised coir/air bubbled sheet /thermocol to get proper cushioning effect. Certain items like transformers, reactors, breakers, etc shall be bolted to the bottom of the box using bolts, nuts and washers.
- 6.5 Packing of Loose items/ Spares for Export Contracts: Procedure is same as that given in 6.4 except for following changes:
- Two polyethylene covers to be provided,
  - Fumigation may have to be done, if required, for which payment will be made by EDN. Treatment of wood as per ISPM-15.
- 6.6 Any other changes/ new methods/ alternative packing systems can be undertaken with prior information and approval from the dept. For other parameters and further details concerned agency may please be contacted.

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## 7.0 ACCEPTANCE CRITERIA OF PLYWOOD :

### PLYWOOD FOR GENERAL PURPOSE GRADE FOR PACKING - AS PER IS:303

1. Plywood sheets shall have IS:303 & BWR / MR grade stamped on each sheet.
2. Packing/contractor should give a certificate to this effect.
3. Contractor shall identify each sheet with their name/firm in suitable place.
4. Visual checks to be done by packing contractor and EDN-QC CE shipping.
5. For other parameters, testing will be done at authorised laboratories/institutions by EDN on sample basis.

## 7.1 FOR BWR GRADE : TABLE-1 QUALITY REQUIREMENTS OF PLYWOOD

S1 NO	Defect Category	Maximum Number of Defect Permitted on any one surface of panel (as applicable to Type A Surface of IS:303)
1.	Blister	Nil
2.	Check	Individual check not more than 50mm in length and the total length not more than 300mm/m <sup>2</sup>
3.	Discoloration	Nil
4.	Dote	5cm/m <sup>2</sup>
5.	Insect hole	Scattered up to 12 holes/m <sup>2</sup>
6.	Joints	One joint for every multiple of 200mm provided no individual piece is less than 100mm in width
7.	Knots(dead)	2 up to 12mm dia/m <sup>2</sup>
8.	Pin knots (dead)	2/m <sup>2</sup>
9.	Pin knots(live)	No restriction
10.	Knots(tight)	6 up to 25mm dia/m <sup>2</sup>
11.	Patches	4 patches/m sq provided they are all tight patches & do not mar the appearance
12.	Splits	2 splits each not more than 1mm wide

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and length not more than 100mm provided they are filled with suitable filler

13. Swirl Unlimited provided they do not mar the

## 7.2 FOR MR GRADE : TABLE -2 QUALITY REQUIREMENTS OF PLYWOOD

Sl NO	Defect Category	Maximum Number of Defect Permitted on any one surface of panel (as applicable to Type A Surface of IS:303)
1.	Blister	Nil
2.	Check	Individual check not more than 100mm in length and the total length not more than 1000mm/m <sup>2</sup>
3.	Discoloration	5 %
4.	Dote	15cm/m <sup>2</sup>
5.	Insect hole	Scattered up to 24 holes/m <sup>2</sup>
6.	Joints	: No restrictions
7.	Knots (dead)	4 up to 20mm dia/m <sup>2</sup>
8.	Pin knots (dead)	: 6/m <sup>2</sup>
9.	Pin knots (live)	No restriction
10.	Knots (tight)	: No Restrictions
11.	Patches	Any number provided they are all tight patches & do not mar the appearance
12.	Splits	3 splits each not more than 4 mm wide and length not more than 150 mm provided they are filled with suitable filler
13.	Swirl	NO restrictions

## 7.3 Thickness of Plywood sheets:

The plywood boards shall be of uniform thickness within specified tolerance limit specified. The faces of plywood boards shall be reasonably smooth.

## 7.4 PERMISSIBLE DEFECTS:

Gaps in cores and cross-bands may be permitted except for 3 ply plywood, provided the width of the gap does not exceed 1mm in case of and 2 mm in case of plywood of more than 5 ply and provided such gaps, if more than one, shall be spaces not less than 80mm away from each other and are staggered not less than 50mm away

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as between ply, the next ply having the same grain direction.

## 7.5 WORKMANSHIP AND FINISH:

The plywood boards shall be of uniform thickness.

The faces of plywood boards shall be reasonably smooth and face veneers shall be reasonably uniform thickness.

## 7.6 TESTS:

For testing any other mechanical property of general purpose plywood, Subject to agreement between the purchaser and the supplier, reference shall be made to the provisions of IS 1734 Part 1 and 20)

## 8.0 Procedure for handling of Components

Procedure for handling of components shall be as per Clause 12 (procedure for handling of components) of the Corporate Standard for Export Packing (AA0490009)

## 9.0 Details of Drawings / Figures attached:

Fig- 1	:	Packing of panel - Preparation
Fig- 2	:	Shookes preparation
Fig- 3	:	Marking Plate
Fig- 4	:	Packed panel with plywood and silveroak battens
Fig- 5	:	Detailed joining of pkg shookes with battens
Fig- 6	:	Lifting of packed case
Fig- 7	:	Mechanical Latching clamps
Fig 8 & 9	:	CLW Railway panel packing
Fig 10 to 13:		Packing of panels and spares packing cases.

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**Additional points to be taken care for:**

**Easy Spares (Initial and O & M) Traceability and Identification at units as well as at sites:**

**(Recommendations from Corporate Systems and IT)**

<b>S1 No</b>	<b>Activity</b>
1	All initial and O & M Spares preferably supplied on one lot to site and progressive inventory till all spares are accumulated could be kept at units
2	Spares (Initial and O&M) should be supplied in separate boxes/containers and not mixed in main supply boxes.
3	i) Initial Spares box/container to be labelled as "Initial Spares" in Red. Ref Fig: 14 ii) O & M Spares box/container to be labelled as "O & M Spares" in Green. Ref Fig : 14
4	iii) Initial spares box to have red colour strip as per the diagram Ref: Fig: 14 iv) Majority of spares (initial and O & M ) are for indoor storage at site v) O & M Spares box to have green colour strip as per diagram. Ref Fig: 14
5	vi) Spares (Initial and O & M) packing list kept inside the boxes and affixed securely outside the box to contain the following: a) Customer Name b) Project / Power Station Name c) Customer PO No and Date d) Quantity total and Dispatched e) Unit Work Order No f) All the above to be developed from Unit IT System.
6	vii) All the spares (Initial and O & M) items to have tags (WO NO, Item Customer Order No, Customer Item, Description)
7	viii) Supply of spares by vendor should also be instructed to follow the points 2,3,4,5 and 6 as mentioned above

**Action By: Sites on arrival of Spares (Initial and O & M) receipt**

1	Material utilized if any from initial spares and O & M spares, should have prior written approval of concerned MUs. Such MUs shall also confirm replacement dates which should be entered in the system for creation of repository.
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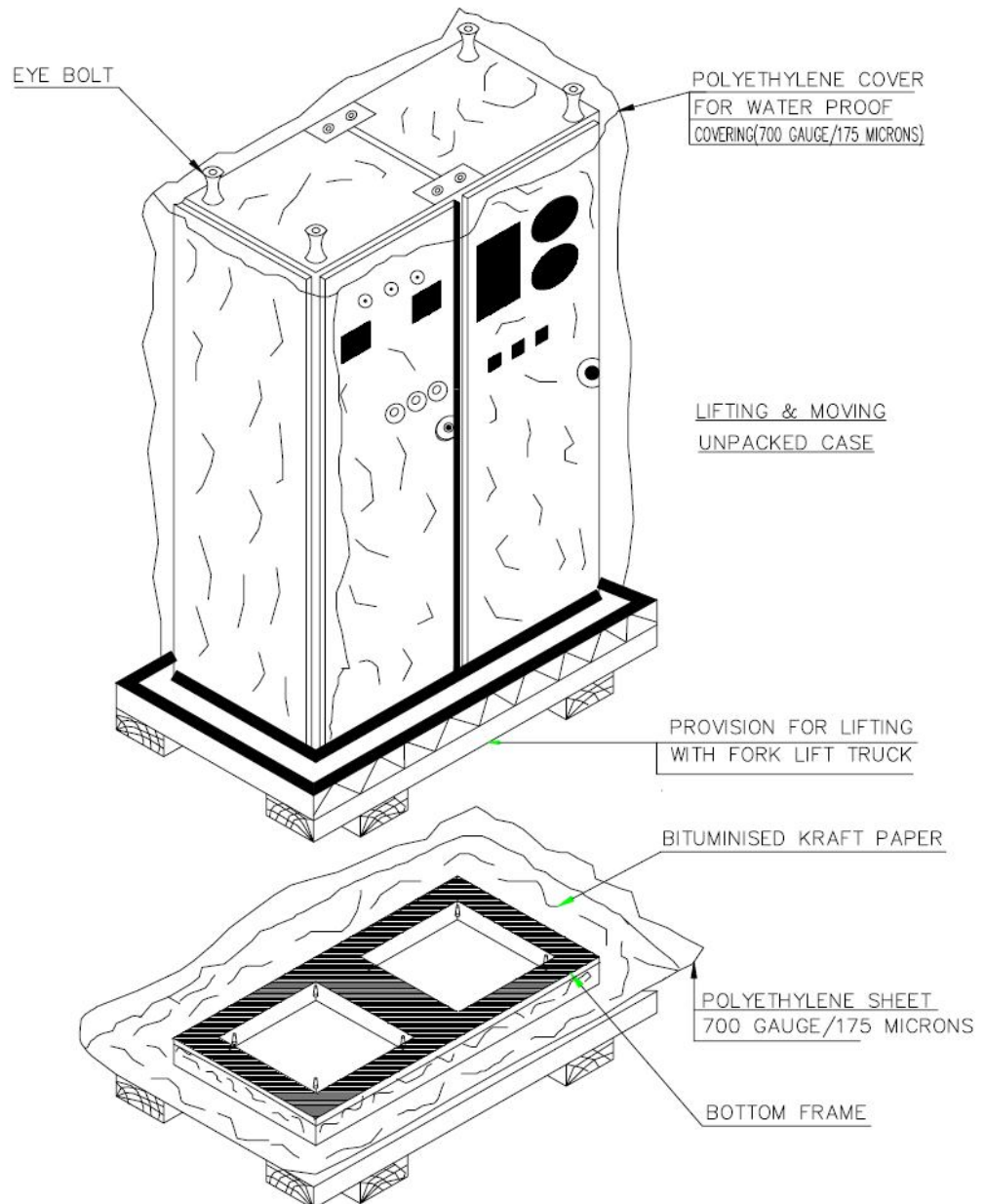


FIGURE-1



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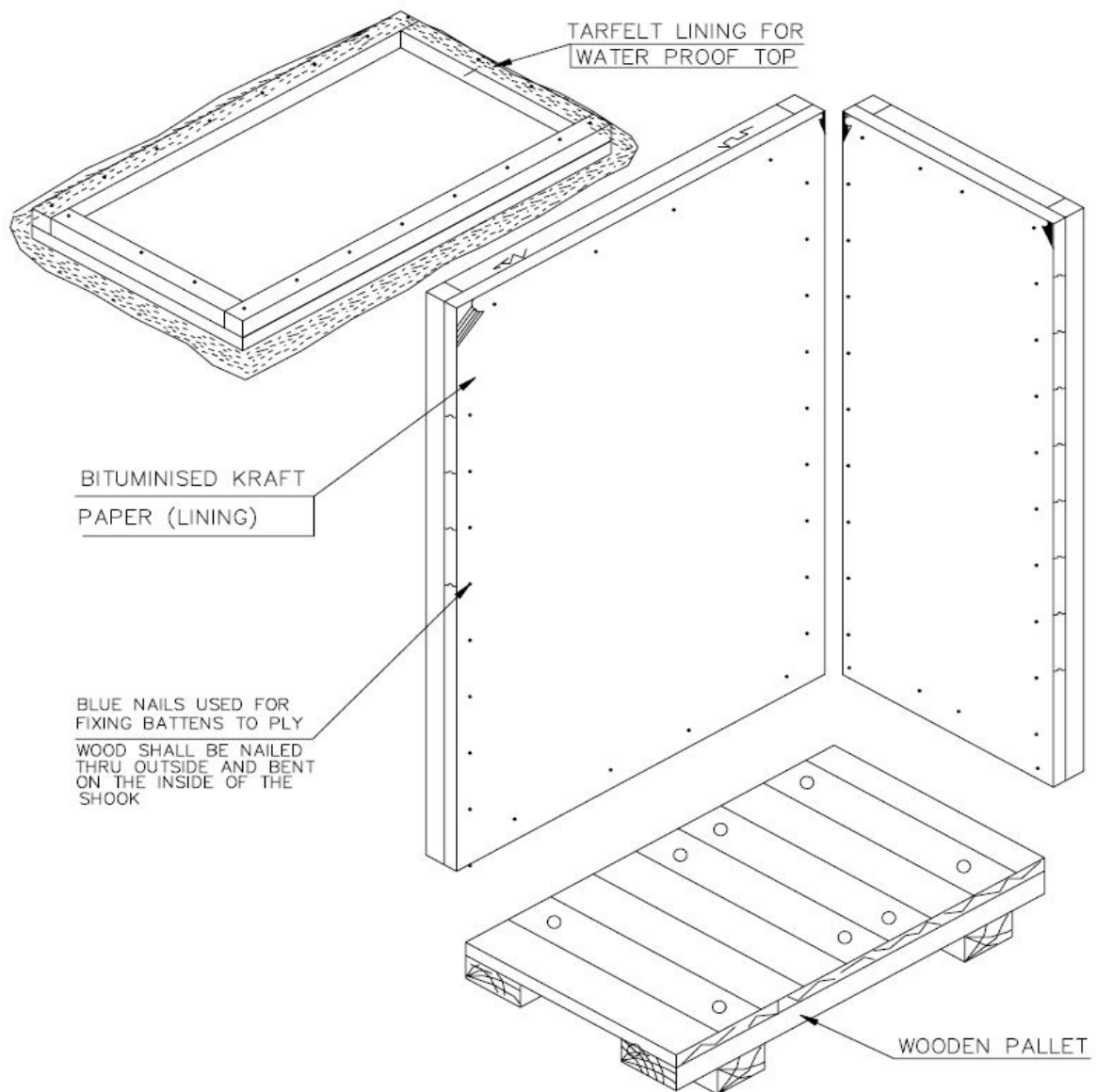


FIGURE-2



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225		170				
	BHEL-EDN-BANGALORE-26					
CONSIGNEE						
MATERIAL						
CUSTOMER REF.			MO. NO.			
DESPATCH ADVICE NOTE NO.			CASE NO.			
DIMENSIONS(MM) LXBXH				NET WT -KGS		GROSS WT -KGS
SPECIAL INSTRUCTIONS	HANDLE WITH CARE - KEEP DRY DO NOT DROP - DO NOT TILT					

FIG-3 : MARKING PLATE

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PLYWOOD SHOOKS BOLT TYPE WITH SILVER OAK BATTONS

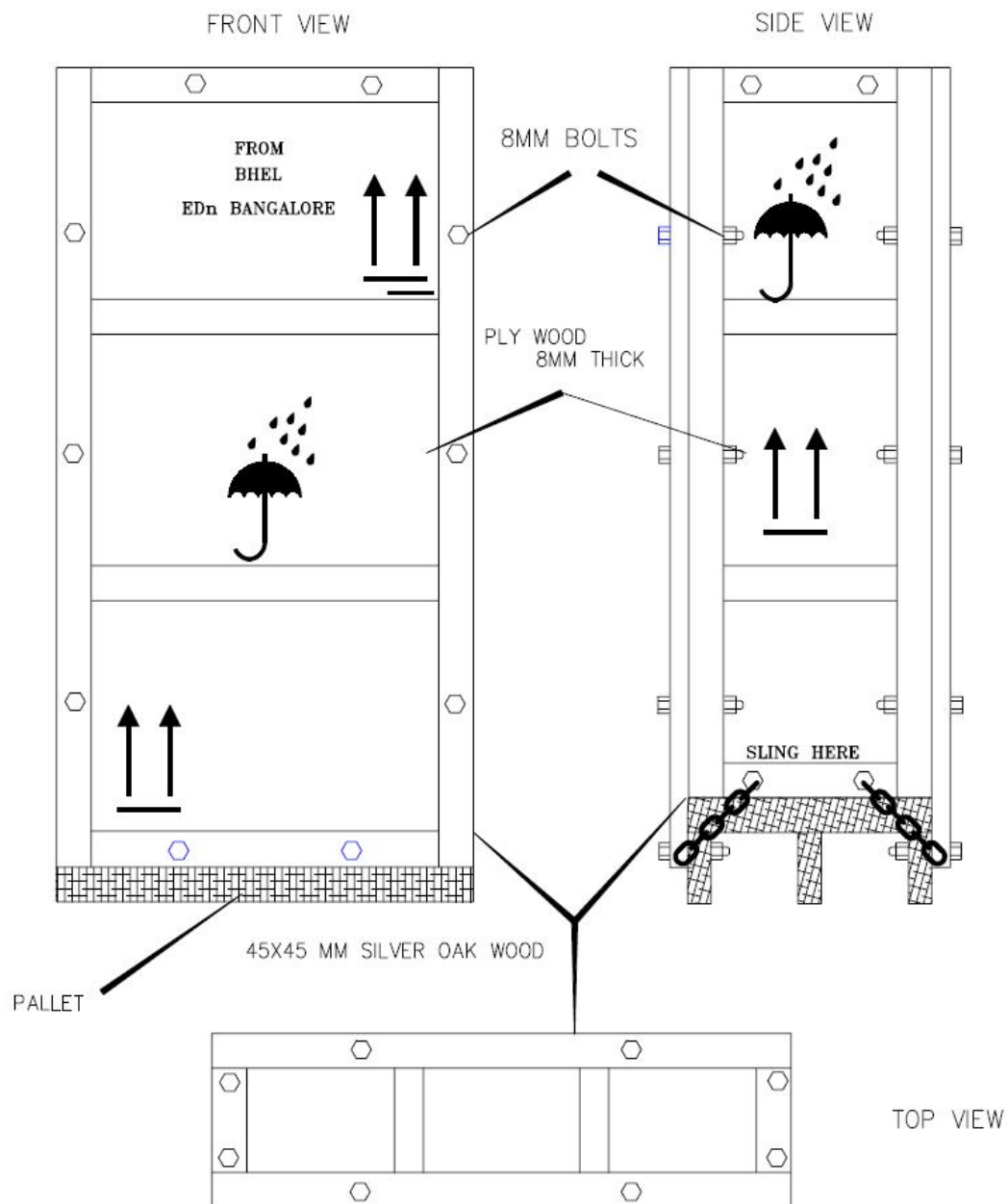


FIG-4



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LAP JOINTS

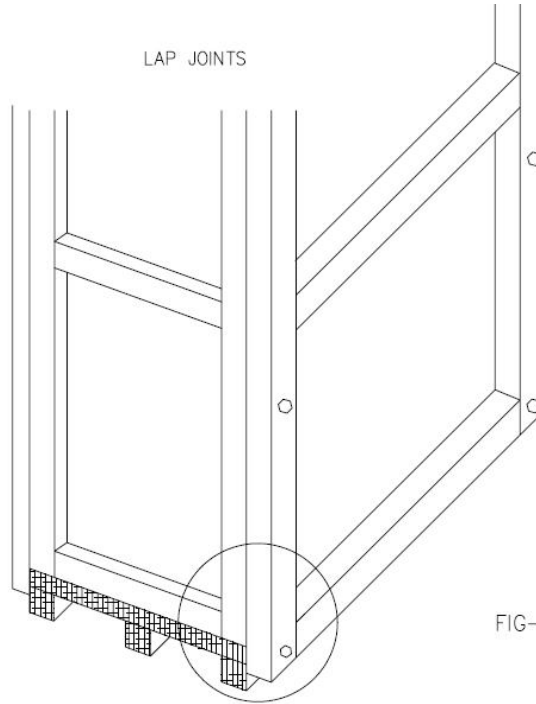
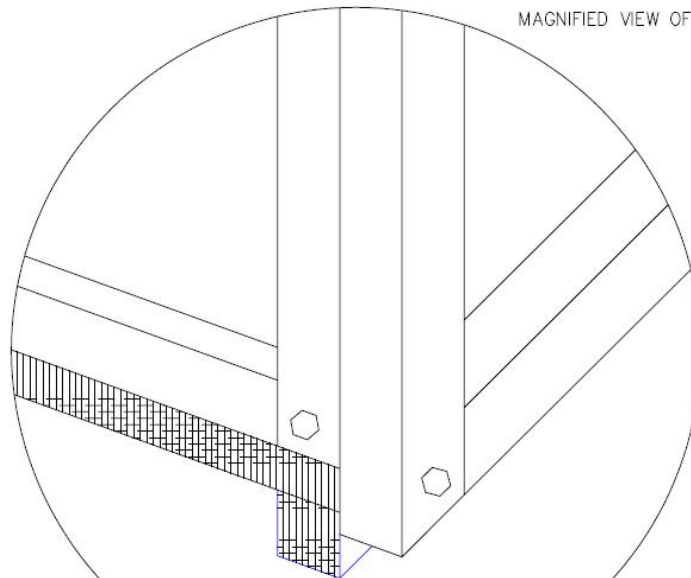


FIG-5

MAGNIFIED VIEW OF THE LAP JOINT





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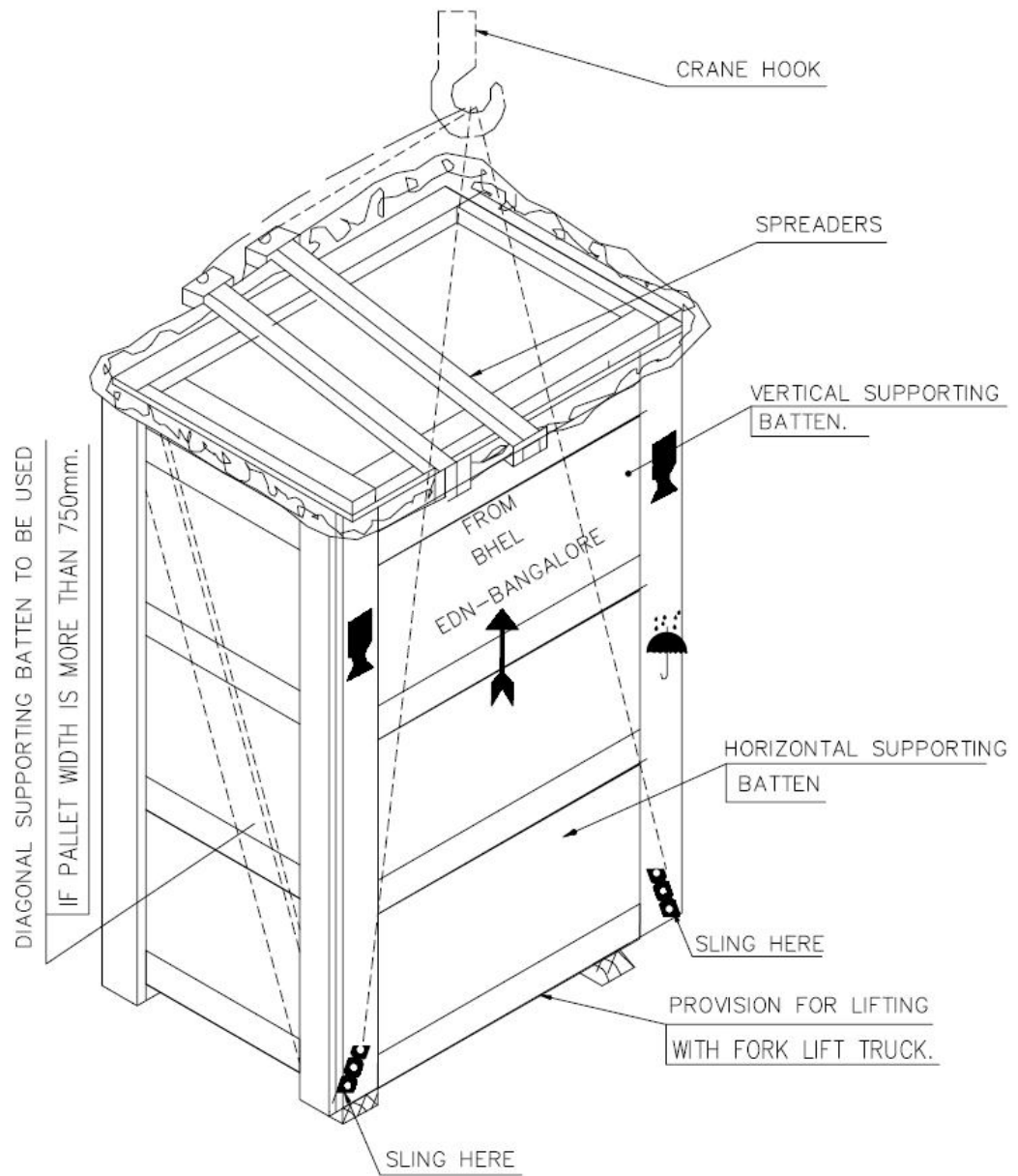


FIG-6 : LIFTING OF PACKED CASE





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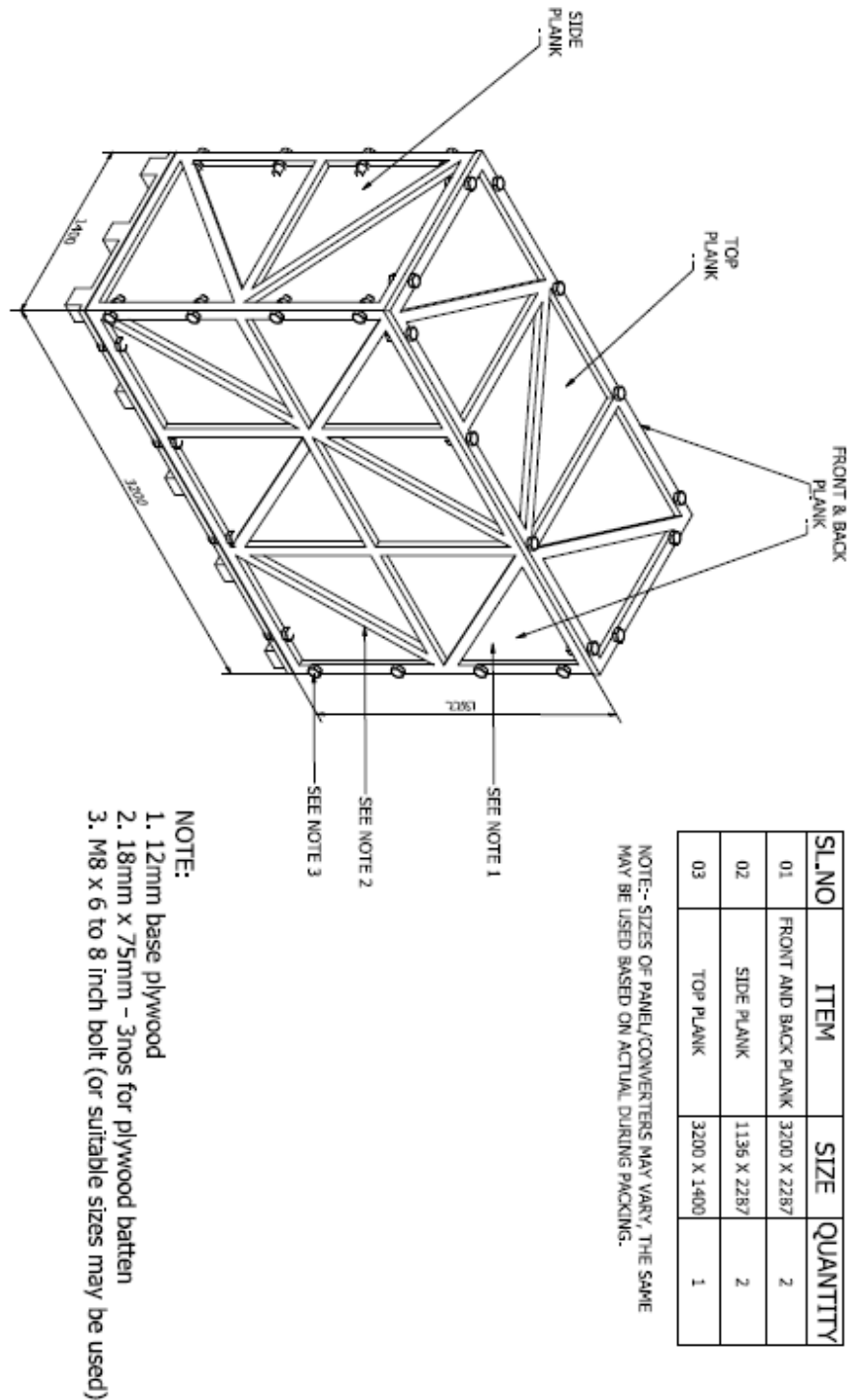


Fig 8:- Packing of Railway Converter Panels with Plywood & Plywood Battens.





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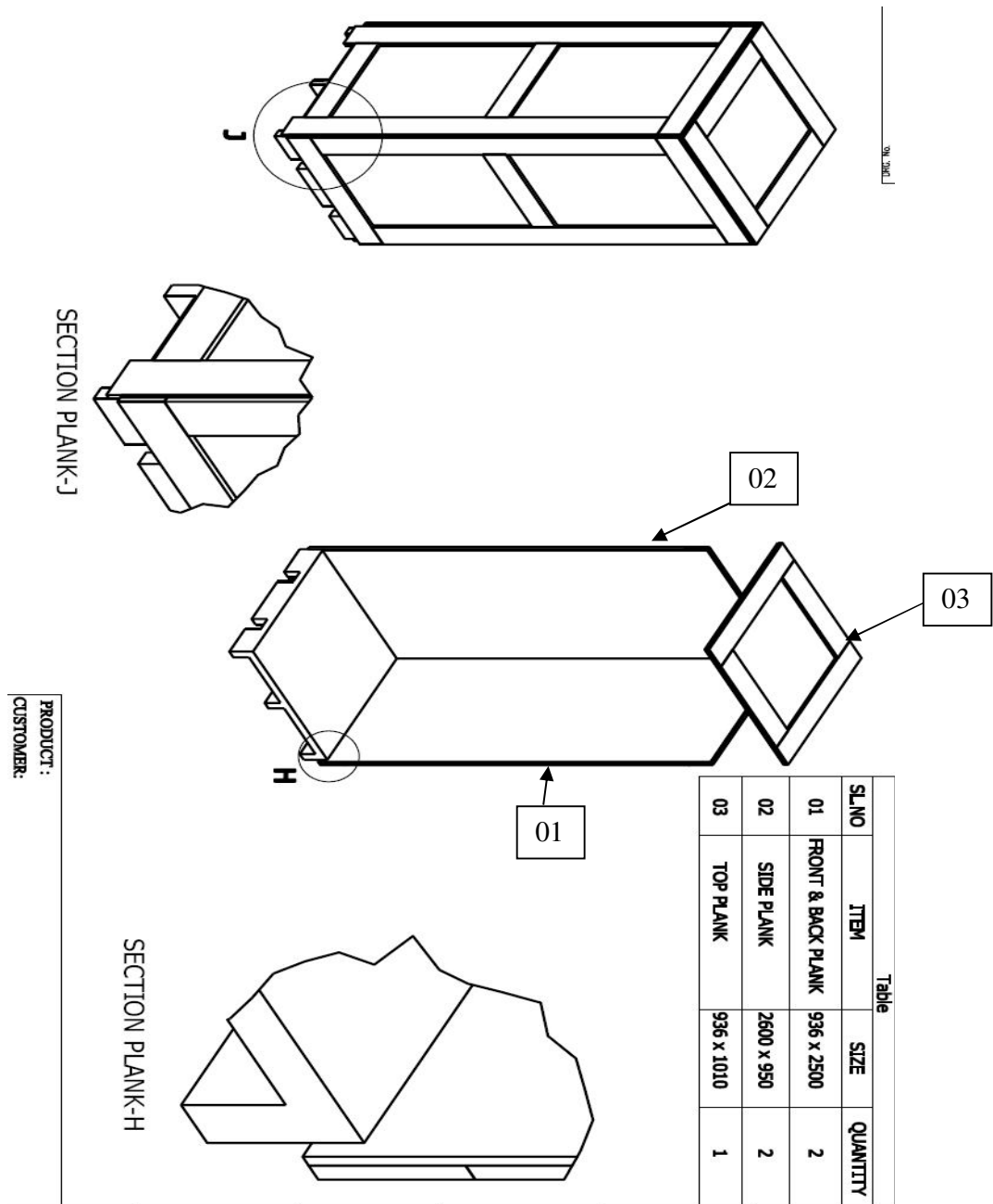


Fig-10 : Plywood Packing for Single Suit Panel.



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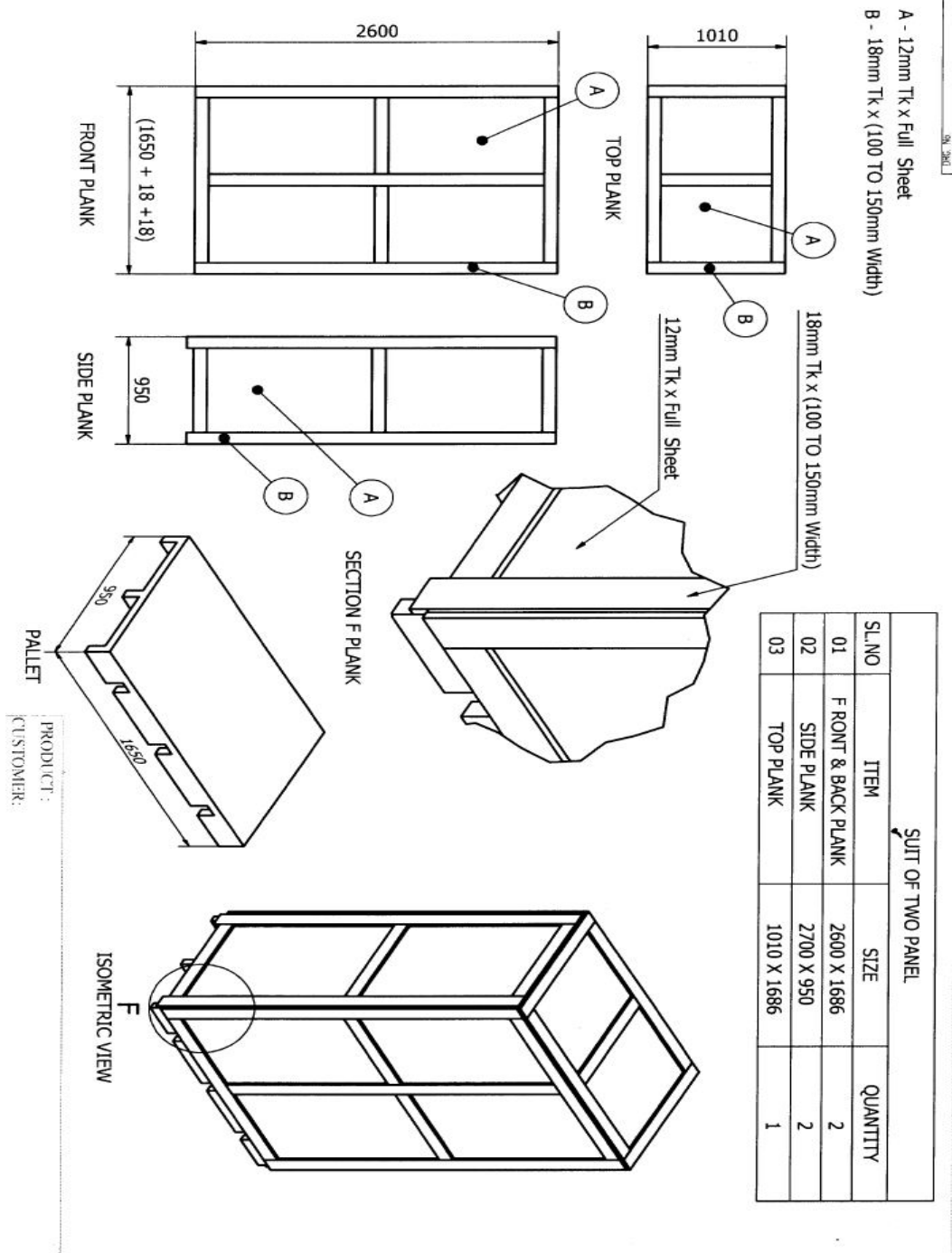


Fig - 11 : Plywood Packing for 2suit panel.



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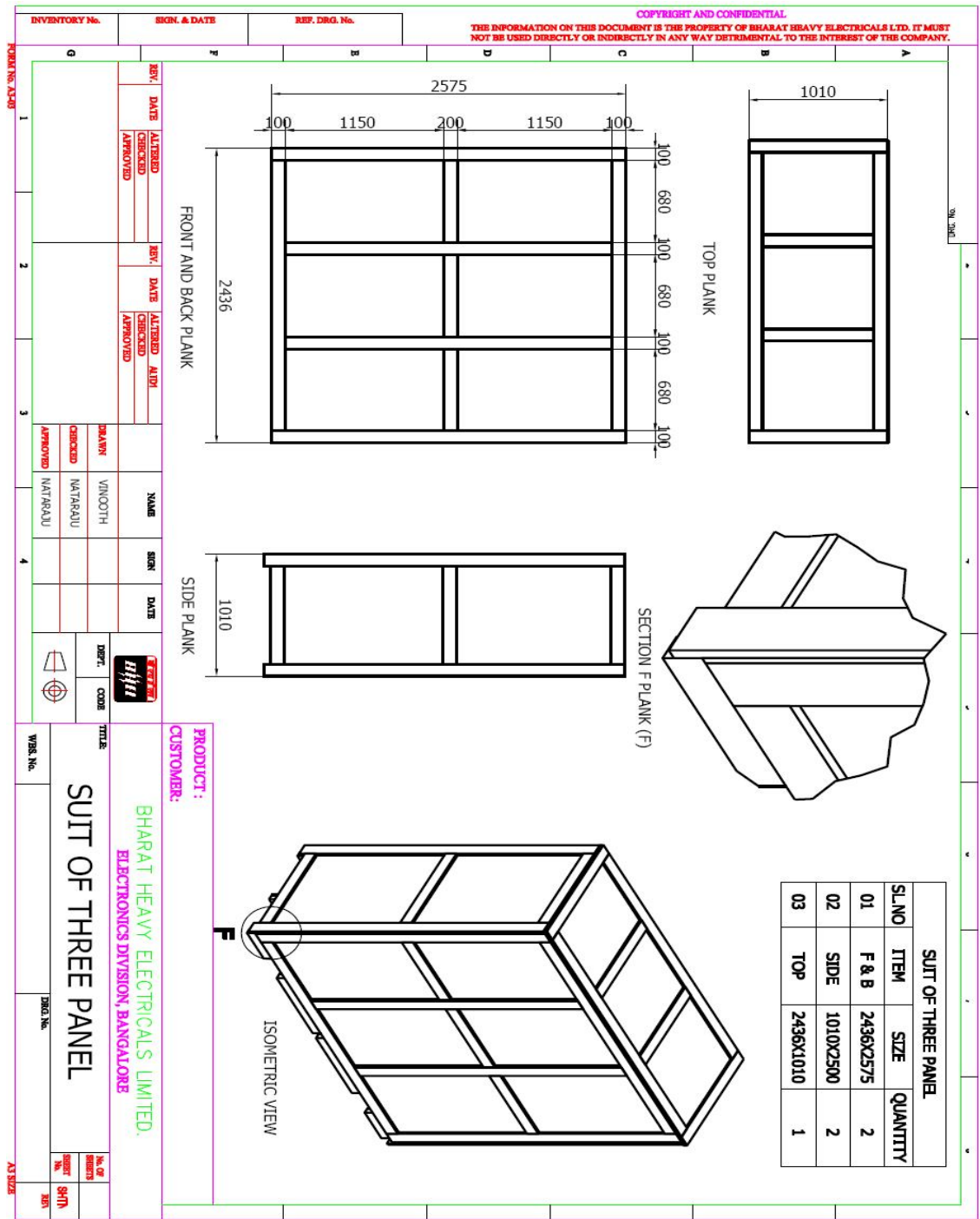


Fig - 12 : Three Suit Panel Packing



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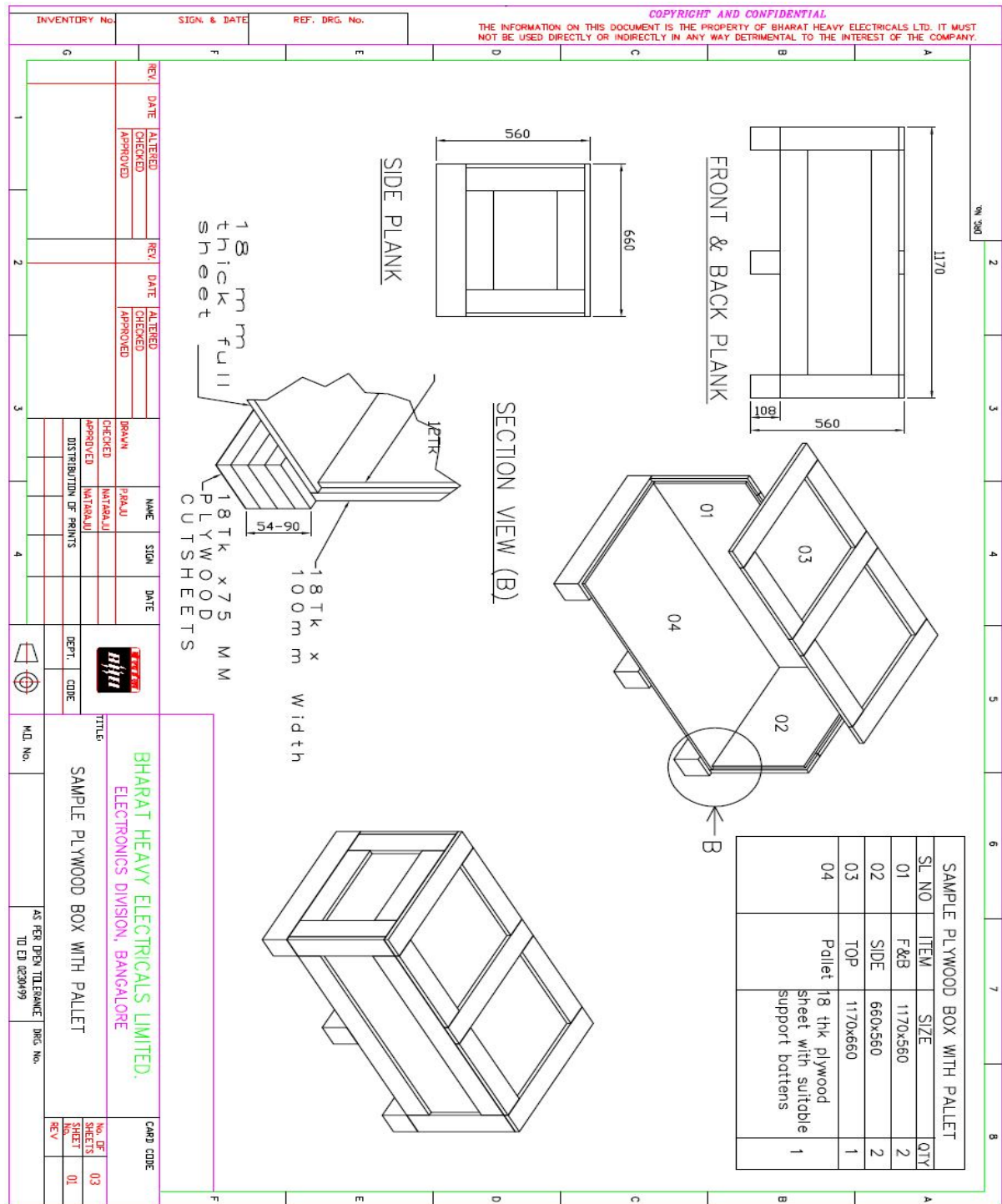


Fig - 13 : Plywood small case with Pallet



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**REVISION HISTORY SHEET**

REV NO.	DATE	NATURE OF CHANGE	REASONS	CHANGED BY	APPROVED BY
00	06/03/92	SUPERCEDES CN43000	-	VS MAS SHG	N.J
01	19/06/93	GENERAL	FEEDBACK FROM QUALITY	SHG	N.J
02	24/06/93	CL 3.4.10	FEEDBACK FROM QUALITY	SHG	N.J
03	01/07/93	SEMICONDUCTOR & PHTOVOLTAIC PANELS ADDED	FEEDBACK FROM DESPATCH	SHG	N.J
04	17/10/94	TOTALLY REVISED	FEEDBACK FROM QUALITY	SHG	N.J
05	08/06/95	ANNEXURE ADDED	FEEDBACK FROM QUALITY & ACCEPTANCE CRITERIA OF WOOD ADDED	SHG	N.J
06	17/11/95	CL 2.5.10 ALTERED	FEEDBACK FROM QUALITY & SHIPPING	SHG	N.J
07	05/03/97	UNDER CL 3.0 & 3.9.1 RPP ADDED ACCEPTANCE CRITERIA REMOVED	FEEDBACK FROM SHIPPING & QC	SHG	N.S
08	29/08/2001	CL 2.2.8 & 4.1 CHANGED	FEEDBACK FROM SHIPPING & QC	SHG	NS
09	15.12.2009	INCLUSION OF PINE WOOD AND SOME CLAUSES HAVE AMENDED	FEEDBACK FROM SHIPPING	PGD / KPN	MSS
10	21.06.2013	Inclusion of recommendations pertaining to spares in page-11&28	Recommendations from Corporate systems & IT	HRN	MSS
11	11.01.2016	CL 2.5.5,2.5.6,2.5.11,2.5.12, 2.5.22 REVISED.	Feedback from shipping and after general review	HRN /EKP	BKD
12	06.03.2018	Clause 2.2.2 changed and 2.2.4 removed	Feedback from shipping	BKD	NV
13	06.06.2018	2.5.22 revised from mm to cm	Feedback from Shipping	BKD	Sathyanarayana
14	14.08.2018	Reference to Corp Std: AA0490009 added	Feedback from CQA	BKD	Sathyanarayana

REV-14.

APPROVED: Sathyanarayana, AGM (T&amp;PD)

PREPARED: BKD

ISSUED: STDS GROUP

DATE: 13/08/18

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## PROCEDURE FOR PACKING OF CONTROL EQUIPMENTS PRODUCTS USING RUBBER WOOD, SILVER OAK WOOD, PINE WOOD AND CARTONS

**1.0 SCOPE:** This standard covers the guidelines for packing of Control Equipments, semiconductor devices and Photo voltaic panels/cells.

### **2.0 MATERIALS:**

#### **2.1 WOOD:**

**2.1.1 INLAND:** The wood shall be Rubber wood (*Havea Brasiliensis*) for packing of cubicles, loose items, spares and photovoltaic items meant for customers in India.

**2.1.2 EXPORT:** Silver Oak (*Grevillea Robusta*) / Pine wood shall be used for packing of cubicles and loose items meant for export.

#### **2.2 DIMENSIONS:**

**2.2.1** Thickness of planks for Front, rear, top and bottom sides and binding, jointing battens shall be 25 +2/-3 mm.

**2.2.2** Width of all planks including the tongue shall be more than 125 mm and after planning it shall be minimum 100 mm.

**2.2.3** Minimum number of planks shall be used for a shook.

**2.2.4** Horizontal, vertical, diagonal planks shall be given for binding (number of such planks depend on the dimension of panel, as given in Figure-2).

**2.2.5** External sides of front and rear planks to be planed to facilitate writing of address and other markings.

**2.2.6** Width of binding planks shall be minimum 100 mm.

**2.2.7** Distance between any 2 binding planks shall be less than 750 mm. As shown in Fig-3, diagonal planks shall be used in between vertical binding planks when distance between inner to inner of vertical planks is more than 750 mm

**2.2.8** Distance of the outer edges of these planks from the edge of case shall be less than 250 mm.

**2.2.9** Diagonal planks are not required for top planks and width side also, if the width of pallet is

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less than 750 mm.

**2.2.10 Jointing of planks:** Single length planks shall be used for cubicles whose overall length is less than 2400 mm. For cubicles of length more than 2400 mm, jointing is permitted. The jointing shall be done with one single or maximum of 2 planks of wood same as other planks of width 250 mm (minimum) with two rows of nails on either side of the joint in zigzag manner. From the joint along height side it shall be of lap joint with over lap of at least the width of plank.

**2.2.11 Tongue and Groove joints:** Two Consecutive planks shall be joined by tongue and groove joint. Depth of tongue shall be  $12 \pm 1$  mm, thickness of tongue shall be  $8 \pm 1$  mm. The groove dimensions shall be such that the tongue fits tightly into the groove to make a good joint.

**2.3 PERMISSIBLE DEFECTS:** - Wood shall be free from knots, bows, visible sign of infection and any kind of decay caused by insects, fungus, etc.

*End splits:* Longest end splits at each end shall be measured and lengths added together. The added length shall not exceed 60 mm per meter run of shook's. Wood pins shall be used to prevent further development of split.

*Surface cracks:* Surface cracks with a maximum depth of 3 mm are permissible. A continuous crack of any depth all along the length is not allowed.

## **2.4 .0 CHEMICAL TREATMENTS FOR PRESERVATION OF WOOD:-**

**2.4.1** This treatment provides protection to the packing wood against deterioration due to fungi and attack by termites, borers and marine organism and any kind of infections.

**2.4.2** The wooden planks, after making tongues / grooves shall be treated with chemicals. For pine wood, treatment with ASCU/ CCA solution need not be done.

**2.4.3** The chemical used shall be ready mix ASCU paste. This consists of Arsenic pent oxide, copper sulphate sodium dichromate. This Paste shall be mixed at the rate of 1 kg of paste per 10 liters of water to the extent of water used. Alternate this CCA paste as mentioned at Para 2.4.5 can also be used.

**2.4.4** The chemical treatment shall be done at the premises of the contractor. A cement concrete tank of capacity to hold a minimum of 2000 liters of solution shall be constructed. The solution shall be prepared in the presence of BHEL- EDN's Representative by contractor. The wooden planks shall be soaked in the solution for a minimum of 12 hours. The solution shall be replenished after treating a maximum of 12 cubic meters of wood. A log book shall be maintained by the contractor to give the details of date of preparation of solution, quantity of solution prepared, quantity of chemicals used, Quantity of wood treated and the details of replenishment. Samples of solutions before mixing will be got tested at the laboratories

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designated by BHEL. The testing fees to be paid to the laboratories will have to be borne by the contractor. The paste shall be tested as and when required.

#### 2.4.5 Specifications for water soluble type wood preservatives: Copper – Chromium – Arsenic [CCA]:

Copper – Chromium – Arsenic preservative formulation shall be as per IS : 10013 Part – II – 1981 shall consist of following active ingredients in nominal proportions by weight as shown below:

Arsenic Pent oxide	$\text{As}_2\text{O}_5 \cdot 2\text{H}_2\text{O}$	12.5
Copper Sulphate	$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$	37.5
Sodium Dichromate	$\text{Na}_2\text{Cr}_2\text{O}_7 \cdot 5\text{H}_2\text{O}$	50.0
Potassium Dichromate	$\text{K}_2\text{Cr}_2\text{O}_7$	

#### 2.5 OTHER MATERIALS:

2.5.1 NAILS: The dia. of the nails shall be 3.15 mm. The length of the nails shall be 65 mm wherever two planks of 25 mm thickness are joined and 75 mm wherever a 25 mm planks is joined to a 50 mm plank.

2.5.2 BLUE NAILS: These are used for nailing bituminized Kraft paper/hessian cloth to the planks. The length of the nails shall be 16 mm.

2.5.3 HOOP IRON STRIPS: These are used for strapping the boxes. The width of the strips shall be  $19 \pm 1$  mm and thickness  $0.6 \pm 0.01$  mm. The material shall be free from rust.

2.5.4 CLIPS: These shall be used for strapping the hoop iron strips on the boxes.

2.5.5 BRACKETS: These brackets are used for nailing to the corners of cubicle boxes. The brackets shall be of mild steel of thickness min 2 mm and width  $25 \pm 1$  mm. The brackets shall be of "L" shape, the length of each side being  $100 \pm 2$  mm. Two holes shall be provided towards the end of each side for screwing /nailing.

2.5.6 FASTENERS: Bolts, double nuts, spring washers will have to be used for packing of some special items like transformers, reactors, breakers, etc., to hold the job to the bottom plank of the box. The bolts, nuts, washers will be provided by the vendor. Drilling of holes will have to be done using contractor's tools.

2.5.7 POLYETHYLENE SHEET: The polyethylene sheets are used to make covers to the jobs individually. The material shall have a thickness of 0.175 mm (175 microns). The polyethylene sheet shall be clear and transparent.

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2.5.8 BITUMINISED WATER PROOF KRAFT PAPER: This is used for lining the inside of shoots of cubicles.

2.5.9 BITUMEN COATED HESSIAN POLYETHYLENE KRAFT PAPER: This is used for lining the inside of top planks of cubicles and for lining of all inner sides of boxes.

2.5.10 RUBBERISED COIR: The rubberized coir is used as cushioning material .For the packing of loose items, items are to be arrested by using rubberized coir. For the packing of cubicles rubberized coir of thickness 25mm and width 75mm shall be used.

2.5.11 FOAM RUBBER / 'U' FOAM: This is used for covering the delicate items. This material is provided by the vendor.

2.5.12 THERMOCOL (EXPANDED POLYSTYERENE) SHEETS): This is used for covering delicate items. This material shall be provided by the vendor.

2.5.13 MARKING PLATE: This shall be of anodized aluminum sheet. Details and specifications are given in Fig-5.

2.5.14 PACKING SLIP HOLDER: This shall be of galvanized iron /tinned

2.5.15 SILICA GEL: This shall be of indicating type to conform to IS:3401/AA55619

2.5.16 COTTON BAGS: These are used for holding silica gel. The bags shall have the following matter indicated them:

-----  
BHEL-EDN, BANGALORE - 5 60 026

SILICA GEL INDICATING TYPE

BLUE : ACTIVE

ROSE : REDUCED ACTIVITY

WHITE : NO ACTIVITY. TO BE REPLACED WITH FRESH SILICA GEL  
-----

2.5.17 COTTON/ PLASTIC TAPE: This is used for tying small items .And also to prevent vibrations of moving parts within the cubicles.

2.5.18 MARKING INK: The ink used normally is black in color. In some special cases other color also will have to be used. The ink shall be non-fading/indelible and non-washable by water.

2.5.19 POLYETHYLENE BAGS: These are to be used for keeping the, Packing slips. The bag shall be of size 70 mm X 100 mm (minimum).

2.5.20 Hessian cloth, twine thread, paint will have to be used in packing certain items.

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2.5.21 Mechanical Latching clamps: For CLW Railway panels and similar Panels self locking clamps can also be used on need basis in conjunction with or apart from regular bolt and nut fixing arrangement. [Refer Drawing Fig-7]. For reusable boxes, these clamps provide easy locking and unlocking arrangement. These clamps will be made available from BHEL in some cases.

2.5.22 STICKERS The following stickers to be put by the vendor on cubicles/Boxes after packing.  
1. Case No sticker : 2 nos. Size 25 cm X 4.5 cm 2. BHEL Monogram sticker : 1 no . Size 17.5 cm X 23 cm 3. Address sticker : 2 nos. Size 38 cm X 30 cm 4. Direction sticker " Front " & " Back " - 4 nos .Size 20 cm X 7.5 cm 5. Chain Mark Sticker : 4 Nos. Size - 30 cm X 7.5 cm 6. "Fragile " sticker : 2 Nos Size. 21cm X 15 cm 7. "DO NOT STACK " sticker - 2 Nos. Size 30 cm 22 cm

**3.0 PACKING SPECIFICATIONS:** Different types of packing are used as follows:

- 1) Packing of cubicles with rubber wood.
- 2) Packing of cubicles with Silver Oak wood / Pine wood
- 3) Packing of empty cubicles with rubber wood.
- 4) Packing of loose items/spares with rubber wood.
- 5) Packing of loose items /spares with Silver Oak wood.
- 6) Packing of Photo-voltaic items with rubber wood.
- 7) Packing using bitumen coated hessian polyethylene Kraft papers.
- 8) Supply of rubber wood pallets for empty cubicles.
- 9) Packing of semiconductor panels.
- 10) Packing of material covered under category of RPP (Registered Postal Parcel)
- 11] Packing of materials using PVC [sunspace] / corrugated Kraft paper cartons.
- 12] Packing of materials using heavy duty cartons

**3.1 PACKING OF CUBICLES WITH RUBBER WOOD:**

3.1.1 The packing is to be done as per clause 2.0 in all respects.

3.1.2 The cubicles are already fixed on wooden pallets. Hence the contractor need not arrange the bottom pallets normally.

3.1.3 The cubicles will be of different sizes both widthwise and lengthwise. The cubicles may be made up of single suite, 2 Suite, 3 Suite, 4 Suite, etc., The width of the cubicles generally varies from 400 mm to 1650mm. The length of the cubicle, generally varies from 1500 mm to 4800 mm. The height is normally 2430 mm. In some cases the height may be less/more.

3.1.4 BITUMINISED WATER PROOF KRAFT PAPER: The inner surface of 4 sides of shook's shall be nailed with Bituminized water proof Kraft paper (as per 2.5.8) using blue nails (as per 2.5.2) wherever 2 pieces of Kraft paper are used, the joint shall have an overlap of minimum 20 mm.

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**3.1.5 BITUMEN COATED HESSIAN POLYETHYLENE KRAFT PAPER:** The inner surface of top cover shall be nailed with Bitumen coated Hessian polyethylene Kraft paper (as in 2.5.9). This sheet shall project outside on 4 sides by at least 100 mm and shall be nailed properly on sides. Joining of sheets should have overlap of minimum 20 mm.

**3.1.6 POLYETHYLENE SHEET COVERING:** The cubicles shall be covered with a polyethylene petticoat (Polyethylene sheet as per 2.5.7). This shall be 'tailor made' to fit the cubicle. The sealing shall be such as not to allow any moisture to enter the cubicle.

**3.1.7 SILICA GEL:** Silica gel (as per 2.5.15) packed in cotton bags shall be kept at different places inside the cubicle as per EDN directions. The quantity of Silica Gel shall not be less than 1kg/1000 litre [per cubicle metre] volume of the packing box

**3.1.8 LOOSE PARTS:** Any loose parts in the cubicles shall be tied using cotton/ plastic tape. Wooden battens shall be provided wherever necessary.

**3.1.9 WOODEN BATTENS:** In case of cubicle which are not rectangular in shape like control desks, sufficient number of wooden rafters/battens of proper size shall be provided to give strength to the package.

**3.1.10 RUBBERISED COIR:** Gap between the cubicle and the case shall be filled with rubberized coir (as per 2.5.10) with distance between consecutive layers less than 500 mm.

**3.1.11 CLAMPING:** Packing shall be bound at edges by nailing M.S.clamps / Brackets (as per 2.5.5). Each vertical edge shall have minimum 3 clamps. Top horizontal edges will have one clamp for every meter length of package. However, minimum 4 clamps shall be nailed at the top for any cubicle.

**3.1.12 PACKING SLIP:** Packing slip kept in the polyethylene bag (As per 2.5.19) shall be placed in the box at appropriate place. In addition, one more packing slip covered in polyethylene cover and packing slip holder (as per 2.5.14) shall be nailed to front / rear of case.

**3.1.13 MARKING PLATE:** One no. (As per 2.5.13) shall be nailed to the front side of the case.

**3.1.14 CASE MOUNTING:** After complete packing, stencil marking of various details and marking of symbols shall be done as per BHEL instructions using indelible / non washable marking ink.

**3.2 PACKING OF CUBICLES WITH SILVER OAK / PINE WOOD:** Packing of cubicles for export shall be done exactly in same manner as described at 3.1 except for the following changes: -

- Wood shall be Silver oak/ Pine wood instead of rubber wood.
- Double polyethylene petticoat instead of one.
- Fumigation may have to be done if required ( BHEL Scope).
- Treatment of wood to be as per ISPM-15

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### 3.3 Different types of Cubicles with sizes for Packing

#### SL TYPE OF CUBICLE VARIANT DIMENSIONS [Internal sizes]

01 Single suite cubicle	- 900 x 950 x2500
02 Two suite cubicle	- 1650 x 950 x 2500
03. Three suite cubicle	- 2400 x 950 x2500
04. Four suite cubicle	- 3150 x 950 x 2500
05. Regulation cub	- 1300 x 1350 x 2500
06. Thy cub	- 2870 x 1350 x 2500
07. VFD Cub	- 3800 x 1550 x 2500

### 3.4 PACKING OF LOOSE ITEMS/SPARES USING RUBBER WOOD:

3.4.1 Shape of cases shall be square, rectangular with single gabled roof or with double gabled roof depending on the nature of the job to be packed. Construction shall be as per drawings enclosed. Only gable will be additional as required.

3.4.2 Wood shall be rubber wood with Tongue and Groove joint as per clause 2.2.12.

3.4.3 Chemical treatment as per clause 2.4 to be done.

3.4.4 Width of planks shall be at least 100 mm. Width of binding planks (battens) shall be at least 75mm.

3.4.5 External surface of planks on front and rear shall planed 100% (except bottom plank).

3.4.6 Inner surfaces of all 6 sides shall be lined with bitumen coated hessian polyethylene Kraft paper (as per clause 2.5.9) using blue nails.

3.4.7 Rubberized coir of minimum 25mm thickness and 100 mm width shall be nailed to inner surfaces of bottom and 4 sides of box.

3.4.8 Internal packing: Items that go into the box shall be packed using polyethylene sheet/ U foam/ thermocol sheets/ air bubbled sheets/ paper cartoons and cotton tape. Any space left. Between the job and the sides and the top of the box shall be filled with rubberized coir to get proper cushioning effect.

3.4.9 Certain items like transformers, reactors, breakers, etc., shall be bolted to the bottom of the box using bolts, nuts and washers.

3.4.10 Silica gel as per clause 2.5.15 held in cotton bags as per clause 2.5.16 shall be kept at proper places in the box.

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SL NO	BOX INNER DIMENSIONS (mm)	VOLUME (liters)	Minimum QUANTITY OF SILICA GEL (grams)
1	300X300X300	27	27
2	400X400X400	64	64
3	500X500X400	125	125
4	600X600X400	144	144
5	700X700X400	196	196
6	770X770X500	297	297

3.4.11. Packing slip kept in polyethylene bag (clause 2.5.19) shall be placed in the box.

3.4.12. Marking plate as per clause 2.5.13 shall be nailed to side of the box.

3.4.13. Two numbers of hoop iron strips as per clause 2.5.3 shall be strapped tightly on the case using clips.

3.4.14. Stencil marking of various details and marking of various symbols shall be done as per BHEL instructions using indelible/non-washable marking ink.

3.4.15 Loose items to be kept inside the cubicle

- The components which are removed from cubicle for shipping purpose only, such as meters shall be kept inside the cubicle individually kept in wooden box and tied firmly in bottom of Cubicle.
- Other items which are given loose in addition to cubicle shall be packed in separate boxes (like cables).
- For transformer cubicles loose items shall be packed in separate boxes and these boxes may be tied firmly in bottom of cubicles.
- Items which are bigger in size such as impulse tubes may be kept in top of cubicles firmly bunched and tied.

3.5. PACKING OF LOOSE ITEMS USING SILVER OAK / PINE WOOD: Packing of loose items for export shall be done in same manner as at clause.3.4 . except for the following changes:

- Wood shall be Silver oak/ Pine wood instead of rubber wood.
- Fumigation may have to be done.
- 2 polyethylene covers to be provided.

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### 3.6 PACKING OF PHOTO VOLTAIC PANELS, ETC.USING RUBBER WOOD:

Same as 3.4 above except for the following changes:

- Wood need not be treated with chemical solution.
- Tongue and groove jointing is not required. But planks shall be so joined as to not leave any gap at the joint. Bituminized Kraft paper and Bituminized Kraft sheet need not be used.
- Silica gel need not be used.
- Treatment of wood as per ISPM-15

### 3.7 PACKING USING BITUMEN COATED HESSIAN POLYETHYLENE KRAFT PAPER:

3.7.1. This method is adopted for packing of poles, frames, Empty boxes, etc.

3.7.2. Job shall be covered and stitched tightly with bitumen coated hessian polyethylene Kraft paper.

3.7.3. Marking has to be done as mentioned in CL 3.4.14.

### 3.8 SUPPLY OF RUBBER WOOD PALLETS FOR EMPTY CUBICLES:

3.8.1. The wood shall be rubber wood.

3.8.2. Thickness of planks shall be 25  $\pm$ 2 mm. The size of the supporting battens at bottom shall be 75  $\pm$ 2 mm (width) and 100 $\pm$ 2 mm (height).

3.8.3. If the width of the pallet is 1000 mm or less, only 2 supporting battens at the edges may be provided. In case of pallets having width of more than 1000 mm, one extra supporting batten shall be provided in the middle.

3.8.4. Jointing of top planks is not permitted for pallets of width less than 1000mm. For pallets of width more than 1000 mm, jointing of top plank is permitted. However, joint shall be at the center of the supporting batten.

3.8.5 The consecutive top planks shall be so nailed as to leave no gap. Tongue and groove joint is not required.

### 3.9 PACKING OF SEMICONDUCTOR DEVICES

Semiconductor devices shall be received in prepackaged condition as per the device type and packed in plywood boxes as per the following procedure,

- Provide thrmocole sheets/rubberized coir.

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- Stack the preplaced devices inside the case.
- Fill up gaps with thermocol sheets/rubberized coir.
- Close the top cover and nail.
- Provide suitable marking of the package details.

- 3.9.1 Packing of material for Registered Post Parcel (RPP) RPP packing boxes to be made in-house with 12mm (for sides) and 6mm thick (for top and bottom) commercial quality ply wood sheet. The size of the box should be decided on the material to be dispatched. Between material 10mm and 15mm thick thermocol sheets or rubberized coir/foam should be provided as cushion.
- 3.9.2. Packing of materials using sunpac cartons and corrugated Kraft paper cartons: Individual items can be packed using sunpac or polypropylene [PVC]/ corrugated Kraft paper cartons of suitable sizes and grammage depending upon the items to be packed. Heavy duty cartons can also be used for packing of loose items, manuals, repaired items and others.
- 3.9.3. Packing of materials using Heavy duty cartons: Panels can also be packed using Heavy duty carton with other required packing materials having 2000gsm corrugated board of 7 ply 15 thick. Loose items and spares can be packed using 5ply 2000gsm corrugated heavy board with other packing materials. Different sizes of cartons are required depending upon the sizes of the items being packed. Details are separately given.

#### **4.0 ADDITIONAL POINTS TO BE FOLLOWED FOR EXPORT ORDER SEAWORTHY PACKING:**

- 4.1 Packing to be done as per Fig - 6.  
Thickness of G.I.sheet 0.3 mm. plus or minus 0.05 [0.3-0.05]  
- Treatment of wood as per ISPM-15

#### **5.0 Procedure for handling of Components**

5.1 Procedure for handling of components shall be as per Clause 12 (procedure for handling of components) of the Corporate Standard for Export Packing (AA0490009)

5.2 Marking shall be as per clause 11 (Marking) of the Corporate Standard for Export Packing (AA0490009)

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**Additional points to be taken care for :**

**Easy spares [Initial and O&M ] Traceability and Identification at units and as well as at sites:**

(Recommendations from Corporate Systems & IT)

Sl	Activity
1	All Initial and O&M spares preferably supplied in one lot to site and progressive inventory till all spares are accumulated could be kept at units.
2	Spares (Initial and O&M) should be supplied in separate Boxes / Containers and not mixed in main supply boxes.
3	<b>i)</b> Initial spares Box / Container to be labeled as "INITIAL SPARES " in RED. Ref fig: 14 (Page-26). <b>ii)</b> O & M spares Box /Container to be labeled as" O&M SPARES " in GREEN. Ref fig: 14 (Page-26).
4	<b>iii)</b> Initial Spares Box to have red Color strip as per diagram. Ref fig: 14 (Page-26). <b>iv)</b> Majority of spares (initial and O&M) are for indoor storage at site. <b>v)</b> O&M spares box to have green Color strip as per diagram. Ref fig: 14 (Page-26).
5	<b>vi)</b> Spares (Initial and O&M ) Packing list kept inside the boxes and affixed securely outside the box to contain <b>vii)</b> Custom name <b>viii)</b> Project / Power station Name <b>ix)</b> Customer PO No and date <b>x)</b> Sl no of customer PO. <b>xi)</b> Quantity total & dispatched. <b>xii)</b> Unit work order number <b>xiii)</b> All above to be developed from Unit IT System
6	<b>xiv)</b> All spares (Initial and O&M) items to have tags (wono, item customer order no, customer item.description)

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7	<b>xv)</b> Supply of spares by Vendor should also be instructed for following point 2,3,4,5,6 mentioned above.
---	--

**Action By : Sites on arrival of spares (Initial and O&M)Receipt .**

	Activity
1	Material utilized if any from Initial and O&M spares , should have prior written approval of concerned MUs. Such MUs shall also confirm replacement dates which should be entered in the system for creation of repository.

## 6.0 DETAILS OF DRAWINGS/FIGURES ENCLOSED

FIG-1: Details Of Cubicle Packing Box

FIG-2: Binding Of Panel

FIG-3: Lifting Of Packed Case

NOTE: 1) Spreaders are to be used only for lifting the case.

2) Spreaders are wooden items & not nailed to the case.

3) Height between crane hook & spreaders to be kept Minimum to void rotation of case while lifting.

FIG-4: Lifting And Moving Un Packed Case

FIG-5: Marking Plate

FIG-6: Closed Packing Case With G.I. Sheet Showing Layers Of Packing Materials.

FIG-7: Mechanical Latching Clamp

FIG-8 to 15 : Sample Packing drawing of single/ double / triple & four suit panel



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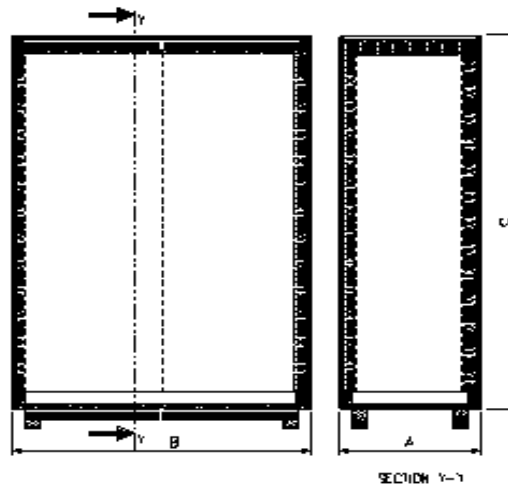
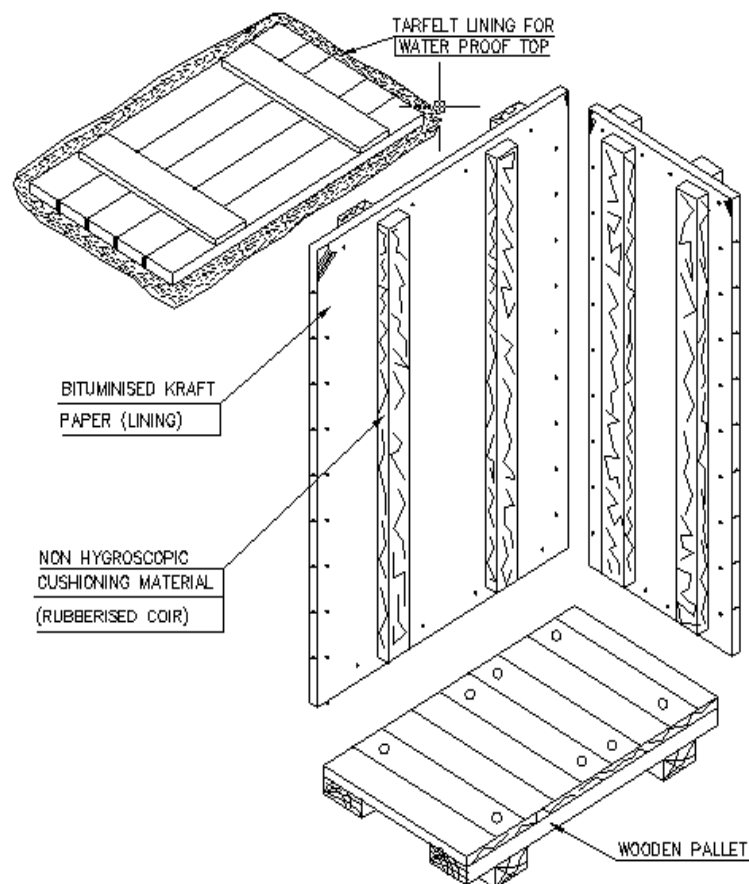


FIG-1 : DETAILS OF CUBICLE PACKING BOX.





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Fig. 2 : Binding of Panel

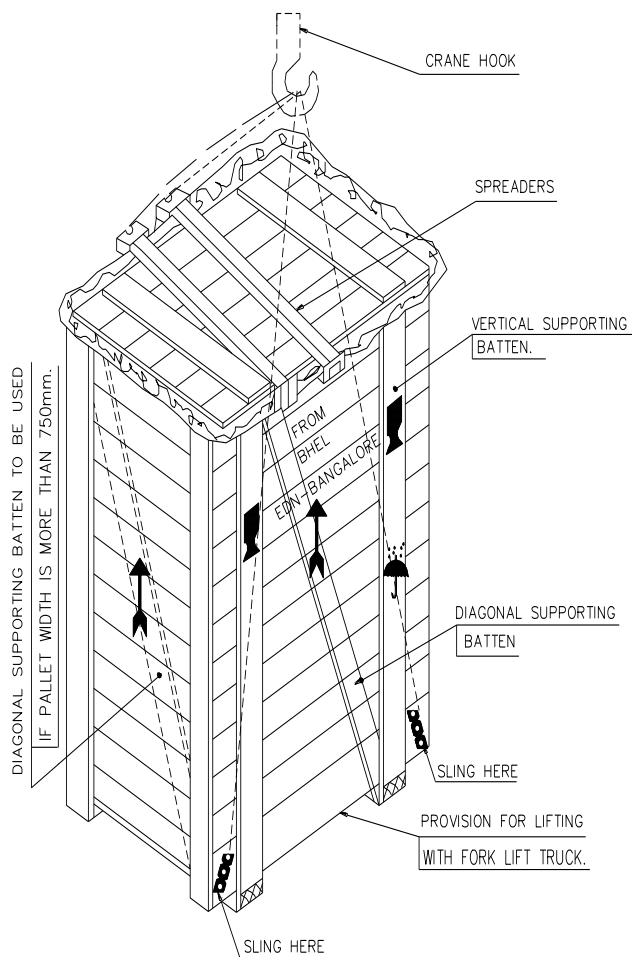


FIG-3 : LIFTING OF PACKED CASE.



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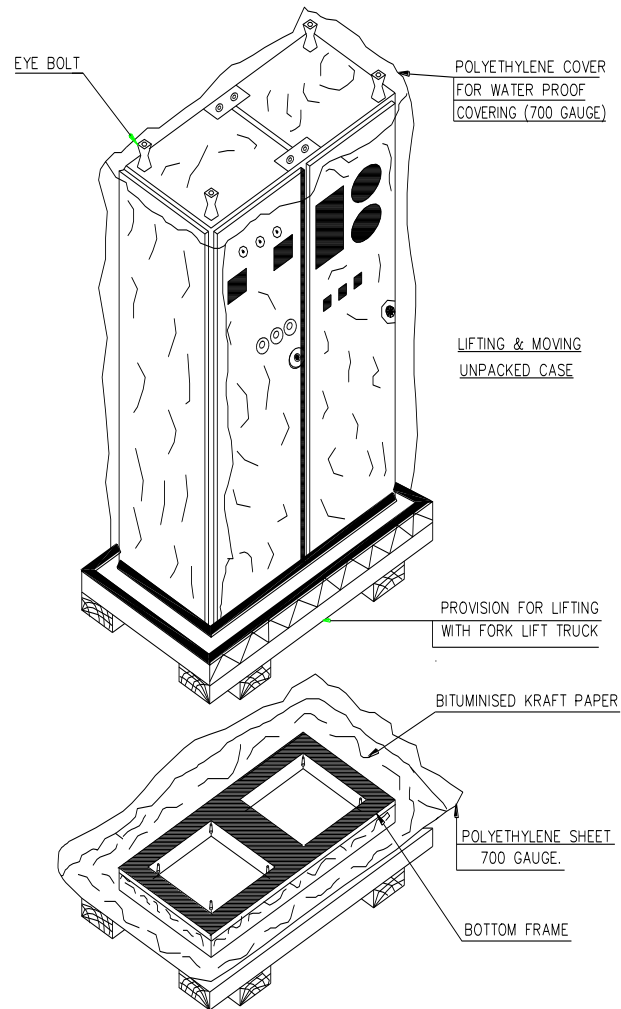


FIGURE-4



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BHEL-EDN-BANGALORE-26	
CONSIGNEE	
MATERIAL	
CUSTOMER REF.	MO. NO.
DESPATCH ADVICE NOTE NO.	CASE NO.
DIMENSIONS(MM) LXBXH	NET WT -KGS
	GROSS WT -KGS
SPECIAL INSTRUCTIONS	HANDLE WITH CARE - KEEP DRY DO NOT DROP - DO NOT TILT

FIG-5 : MARKING PLATE.



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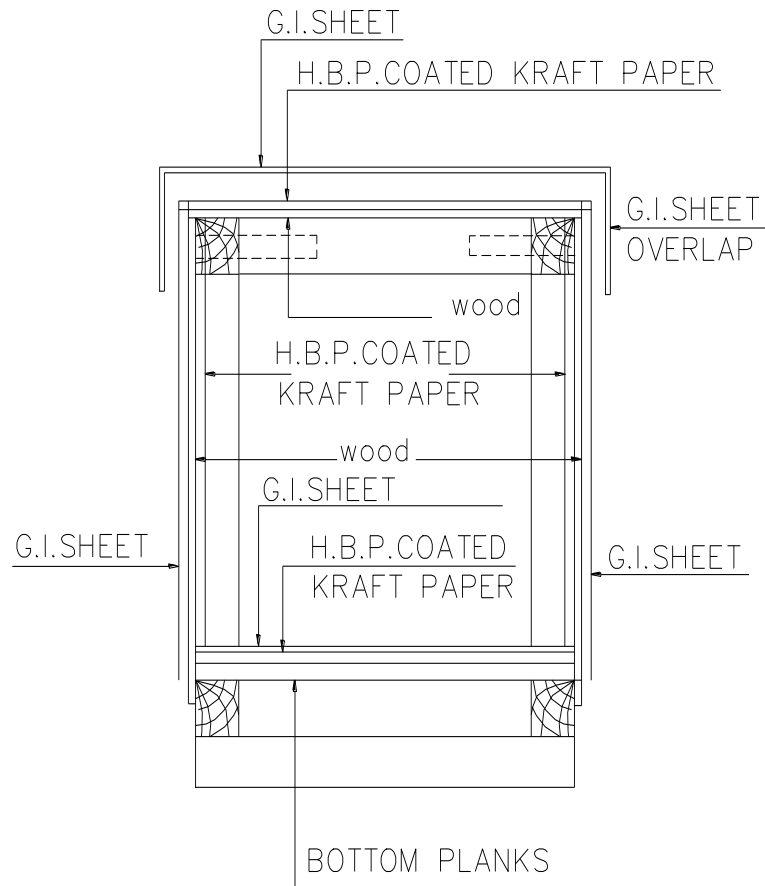
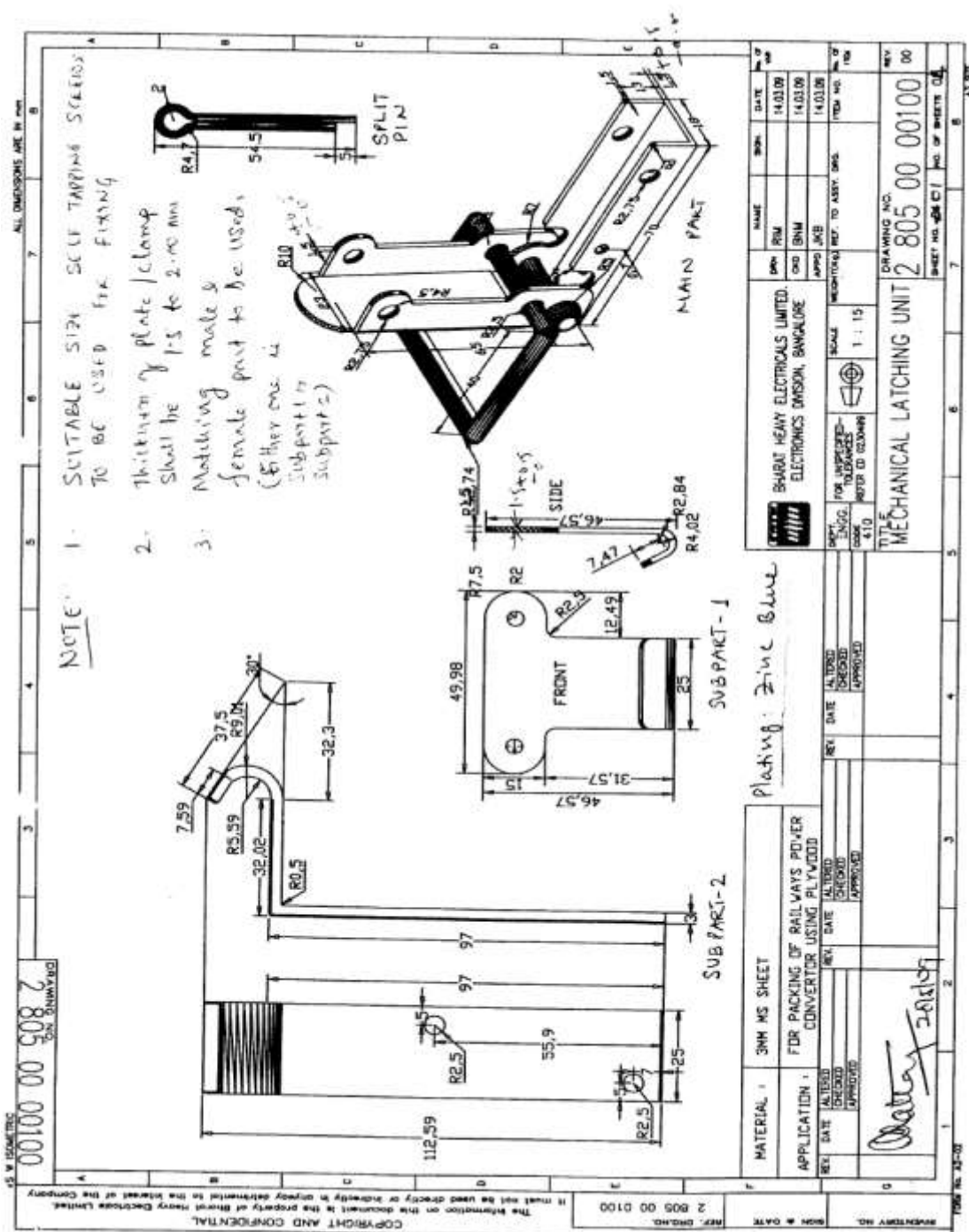


FIG-6 : CLOSED PACKING CASE WITH G.I.SHEET  
SHOWING LAYERS OF PACKING MATERIALS.

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**Fig – 7 : Mechanical Latching Clamp**



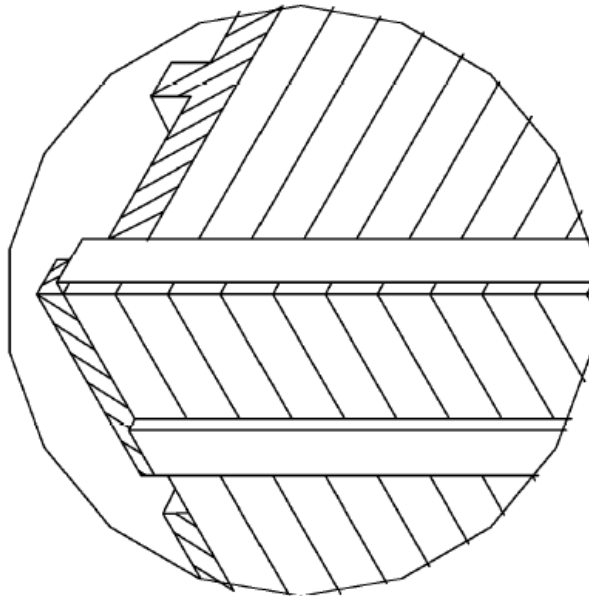
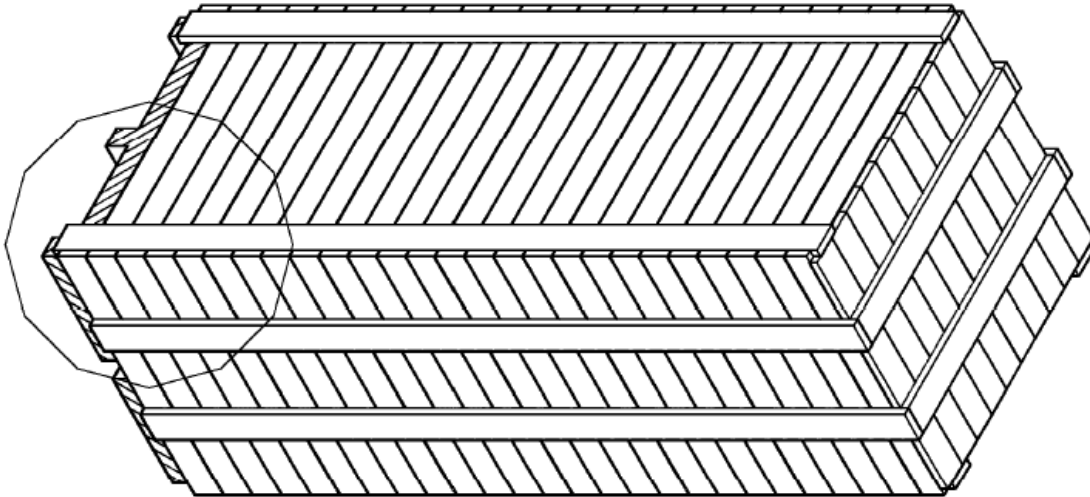
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**Fig – 8 : Single Suit Cubicle Packing View**



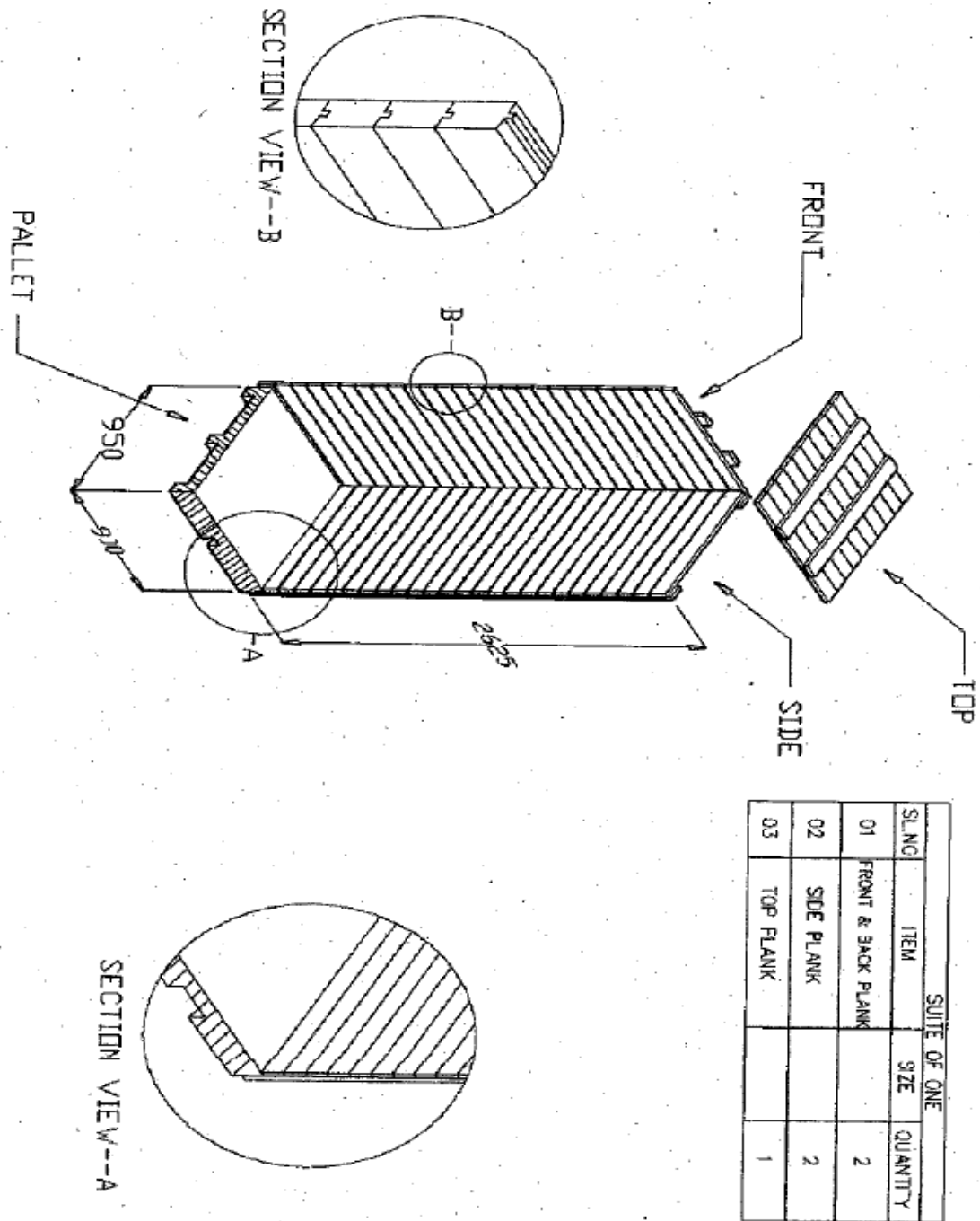
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**Fig – 9 : Single Suit Packing Assembly Drawing**



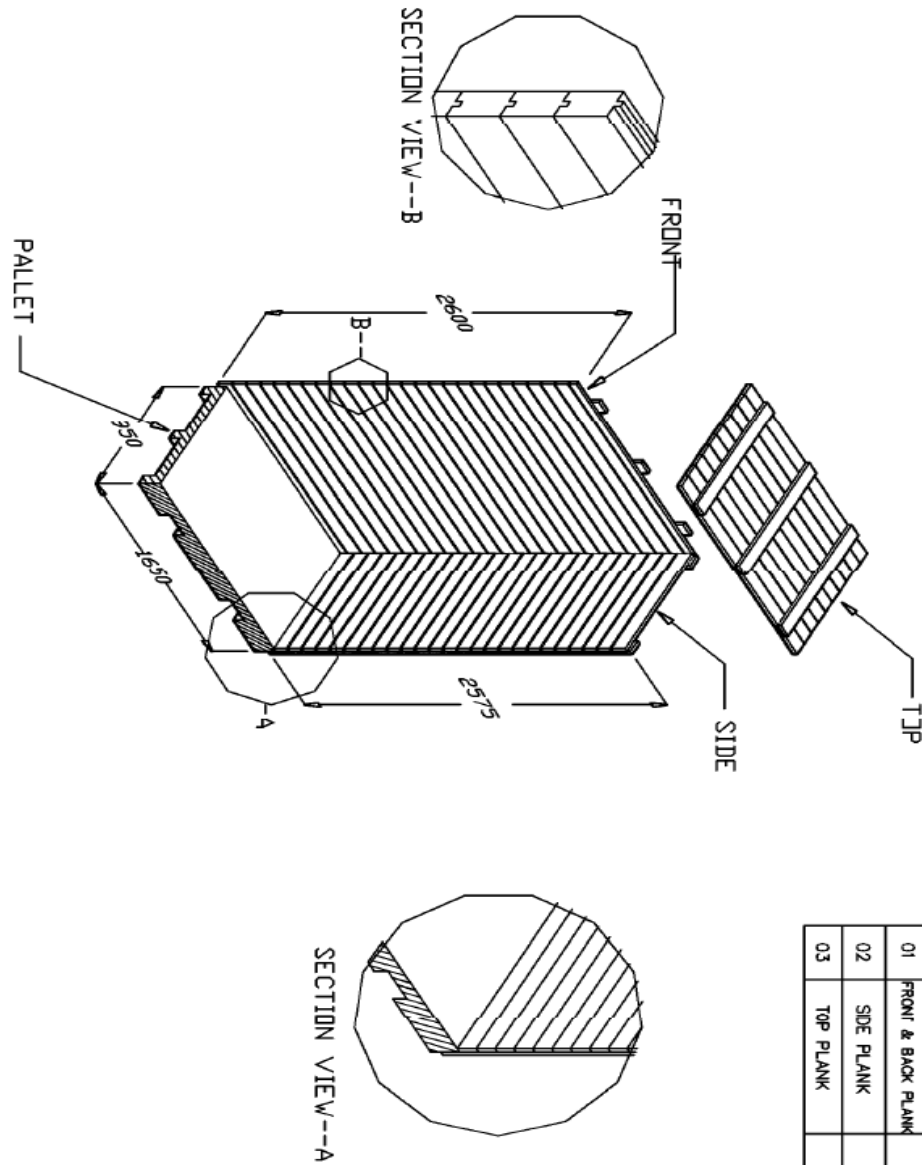
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SUITE OF ONE			
SL.NO	ITEM	SIZE	QUANTITY
01	FRONT & BACK PLANK		2
02	SIDE PLANK		2
03	TOP PLANK		1

**Fig – 10 : Two Suit Packing Assembly Details**



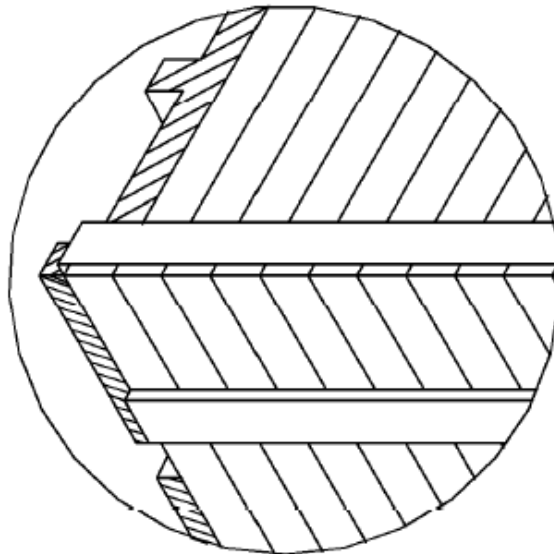
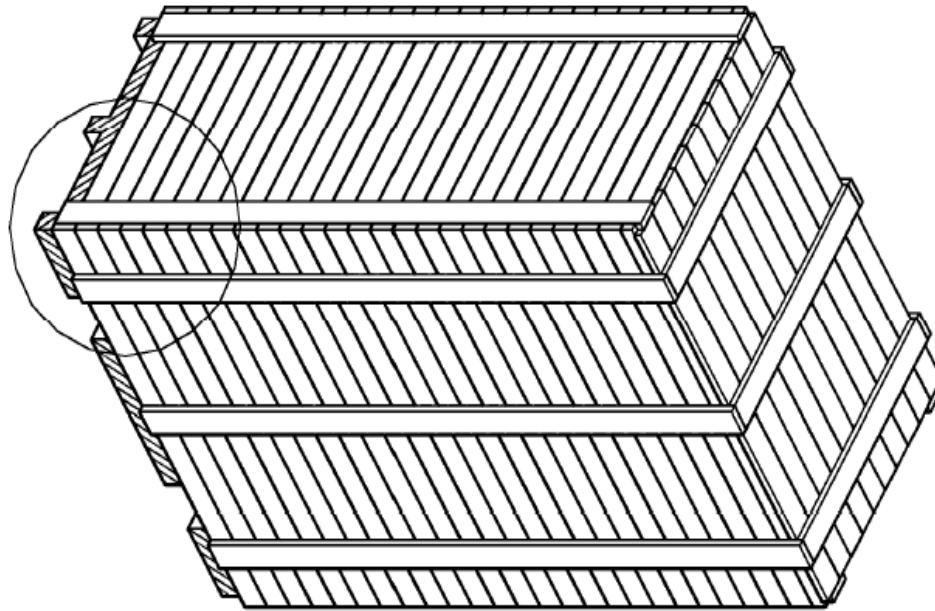
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**Fig – 11 : Two Suit Panel Packed view**



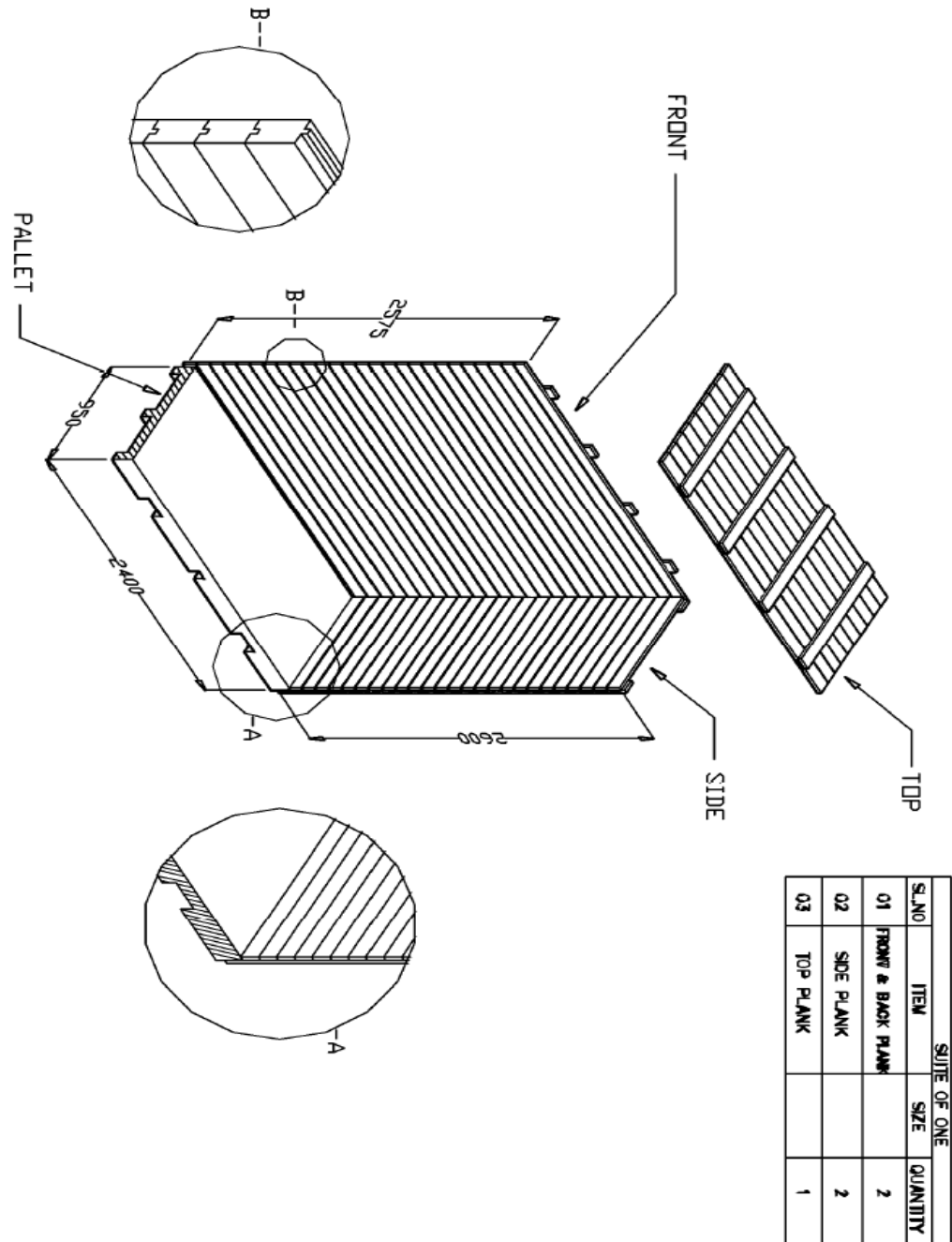
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**Fig – 12 : Three Suit Panel Packing Assembly View**



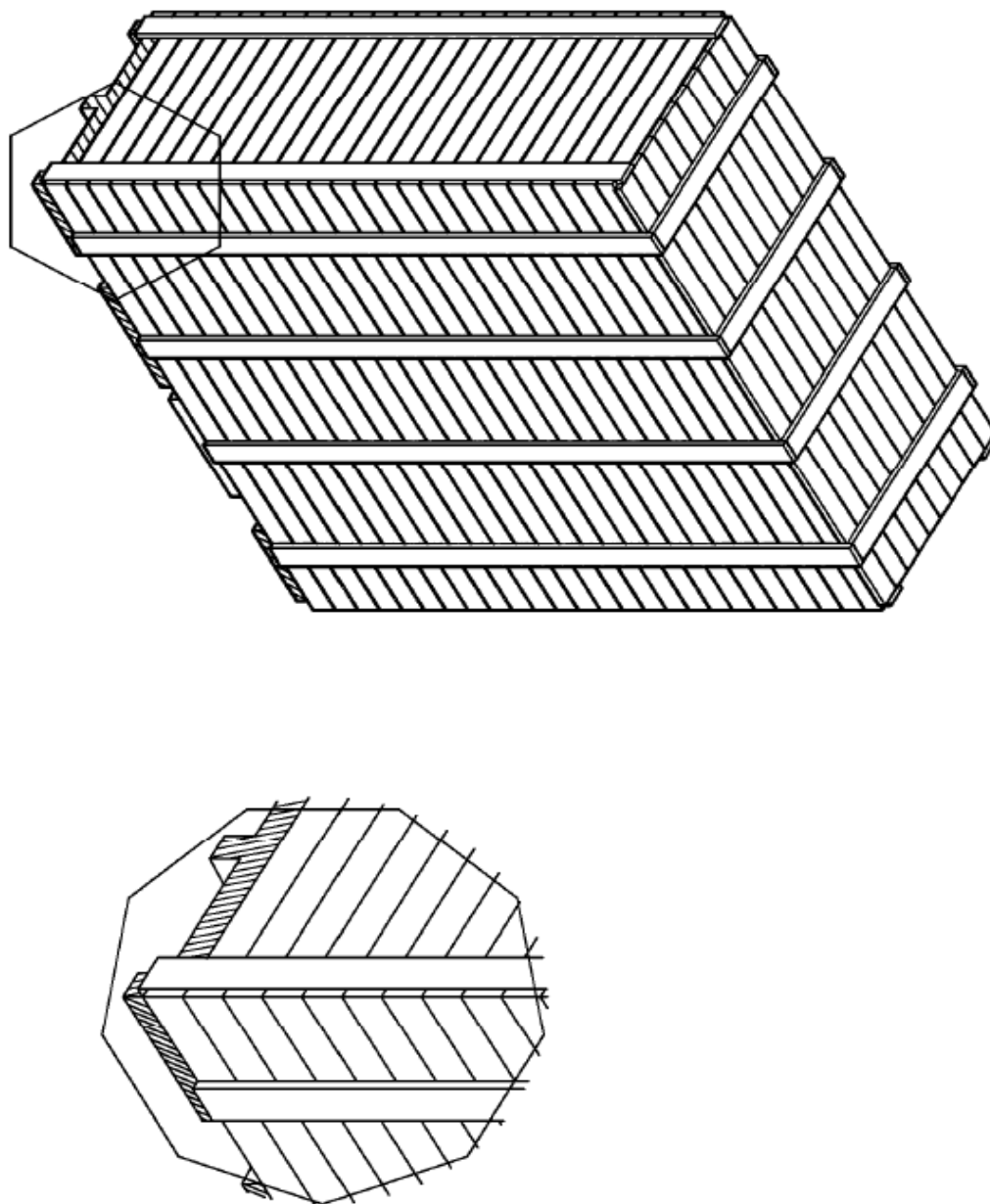
A4 - 14

## PLANT STANDARD

ED 049 00 99

REV NO 14

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**Fig -13 : Three Suit Panel Packed View**



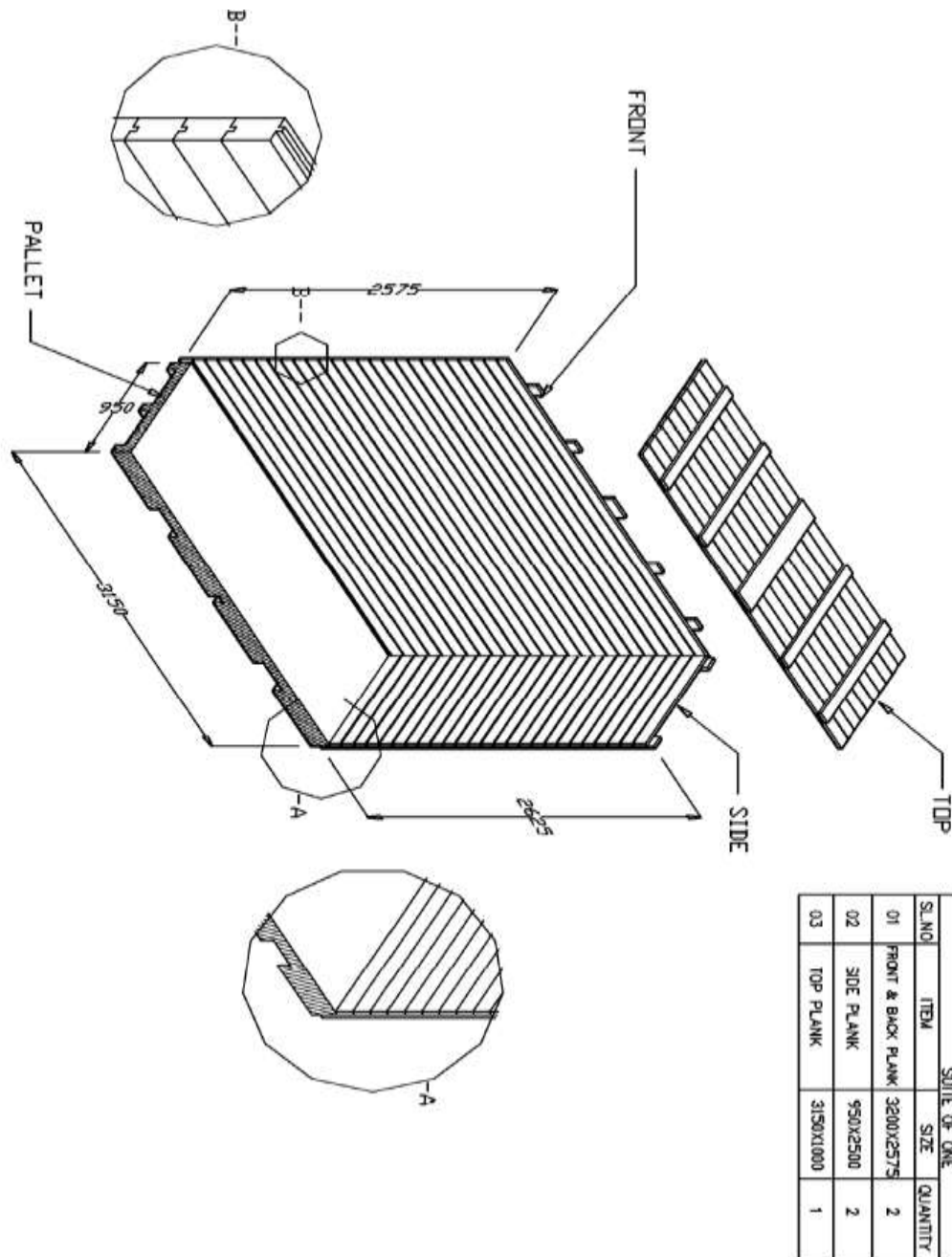
A4 - 14

## PLANT STANDARD

ED 049 00 99

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**Fig – 14 : Four Suit Panel Packing assembly Detail**



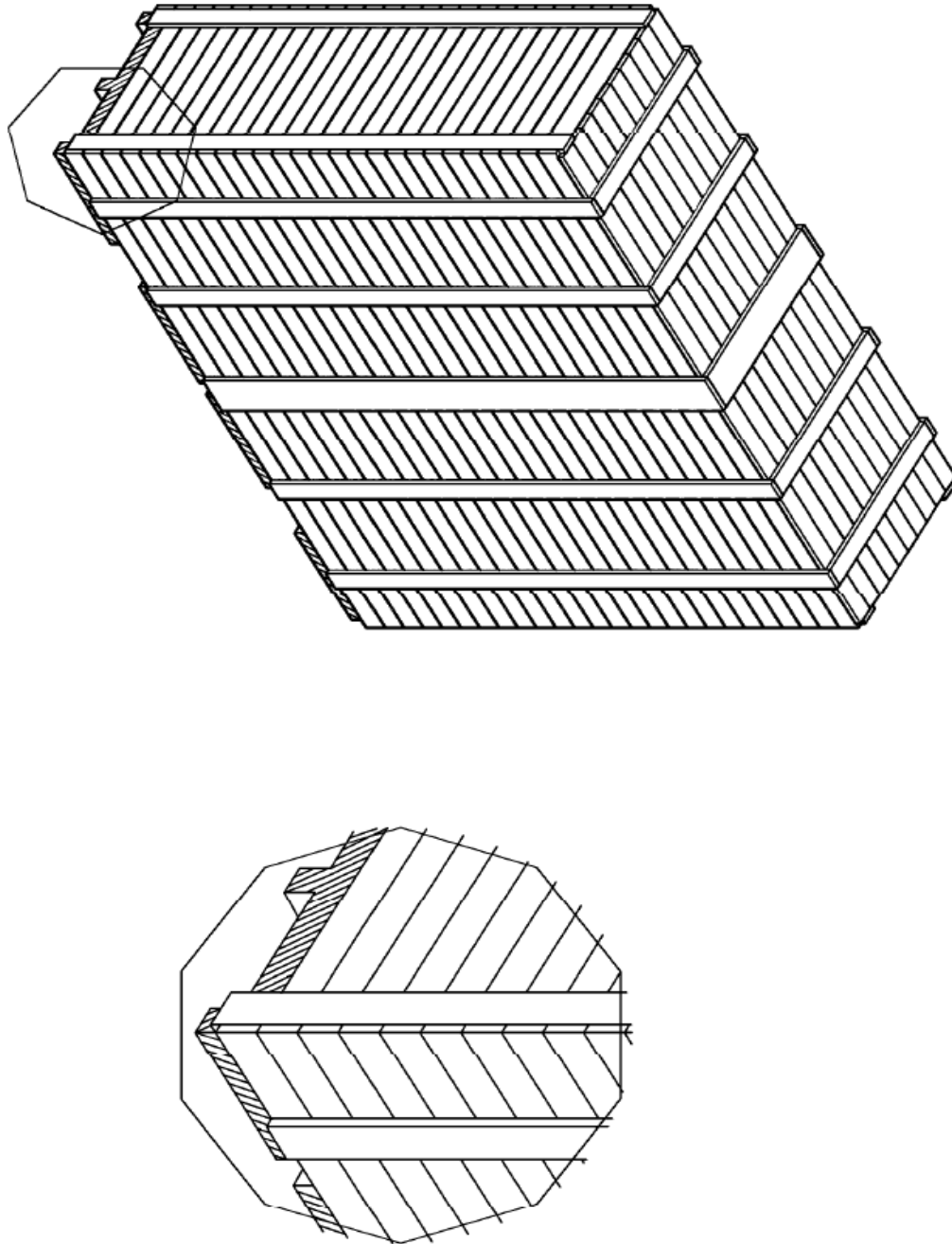
A4 - 14

## PLANT STANDARD

ED 049 00 99

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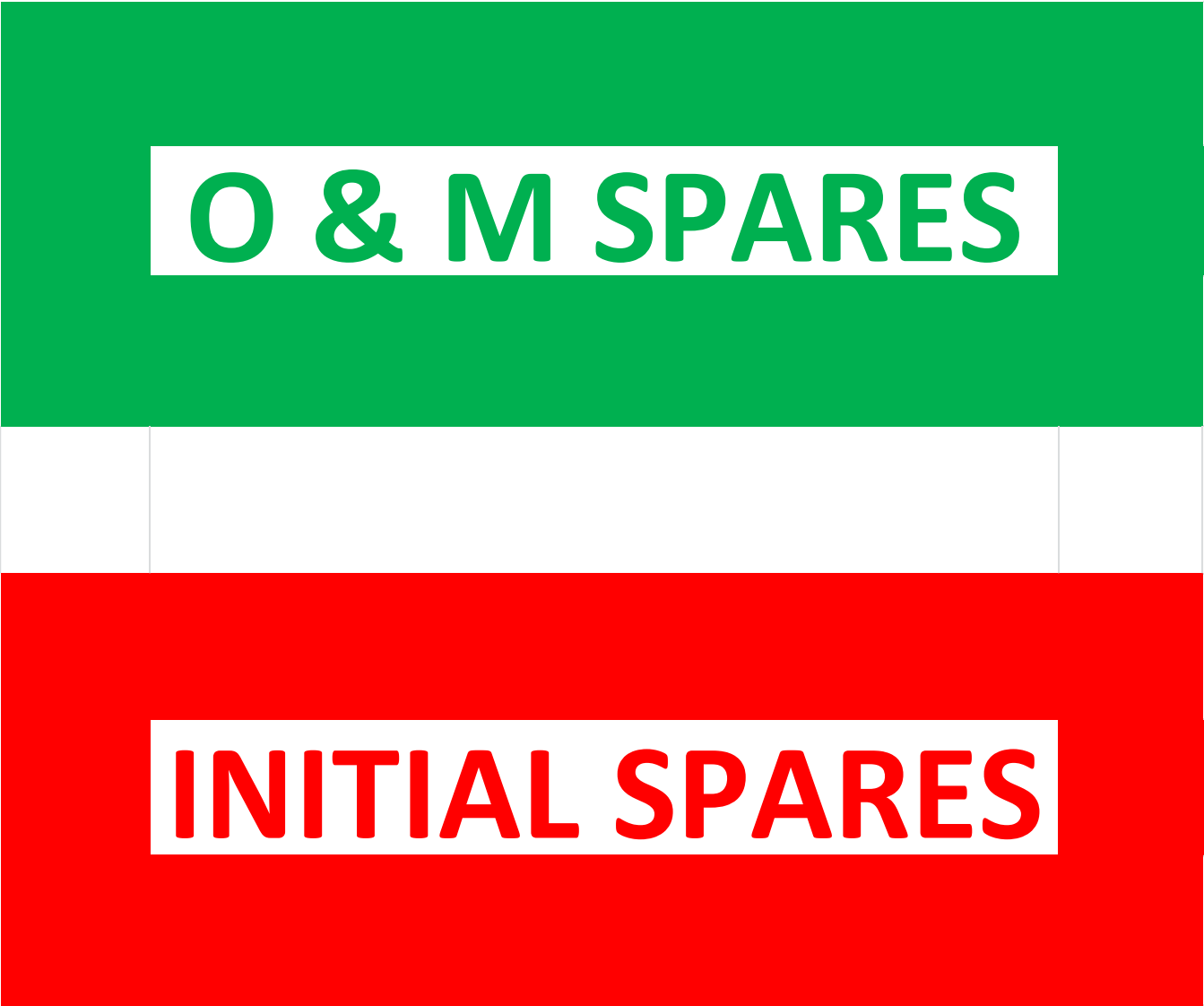


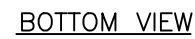
**Fig -15 : Four Suit Panel Packing View**

 A4 - 14	<b>PLANT STANDARD</b>	ED 049 00 99 REV NO 14 PAGE 28 OF 27
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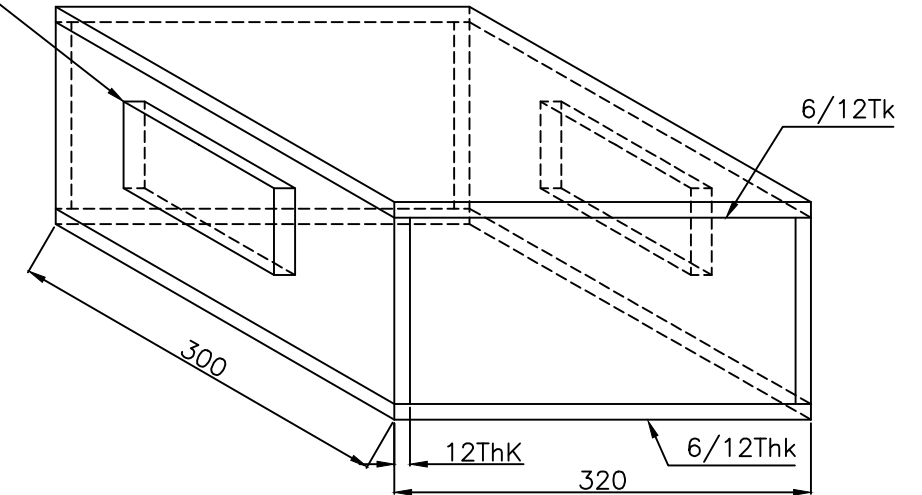
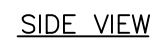
Easy spares [Initial and O&M ] Traceability and Identification at units and as well as at sites:

Fig: 16






LIFT SUPPORT  
PLYWOOD PIECE.



2. PLYWOOD SHEET 12TK. ALL SIDES OR 12TK SHEET FOR SIDES AND 6MM Tk CAN ALSO BE USED, FOR BOTH TOP & BOTTOM
3. SUITABLE NAILS TO BE USED. RECOMMENDED SIZE 14Gx1 1/4 INCH LENGTH.
4. SUPPORT PIECE OF PLYWOOD SHEET SIZE :- 100x50x12Tk 2No'S TO BE PROVIDED FOR BIGGER BOXES FOR EASY HANDLING/ LIFTING.
5. ALL OTHER REQUIRED PACKING MATERIALS TO BE USED FOR PACKING.
6. STANDARD LABELINGS, MARKINGS, TO BE DONE, THE INCLUDING PVC STRAPPINGS.

CARD TYPE 1

	NAME	SIGN.	DATE	No. OF VAR
DRN	ABHILASH		18/06/10	
CKD	NAGARAJUK/KSP		18/06/10	
APPD	KGR/KSP		18/06/10	

DEPT. SAE	FOR UNSPECIFIED- TOLERANCES		SCALE	WEIGHT(Kg)	REF. TO ASSY. DRG.	ITEM NO.	No. OF ITEM
CODE 406	REFER ED 0230499		1: 4				

TITLE	DRAWING NO.	REV.
PLYWOOD RPP BOX	805 RPP BOX 001	00
	SHEET NO. 01	NO. OF SHEETS 01

INVENTORY NO.

SIGN &amp; DATE

SIGN & DATE	REF. DRG.NO.
-------------	--------------

INVENTORY NO.

A3 SIZE

CARD TYPE 1

LEG MODULE-2.3 Kv

	NAME	SIGN.	DATE	No. OF VAR
DRN	G.MARUTHI		27.03.2001	
CKD	KS.PRABHAKAR		27.03.2001	
APPD	SHS RAO		27.03.2001	

No. OF ITEM	DESCRIPTION	QTY	UNIT	AMOUNT
1	...	...	...	...
2	...	...	...	...
3	...	...	...	...
4	...	...	...	...
5	...	...	...	...
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99	...	...	...	...
100	...	...	...	...

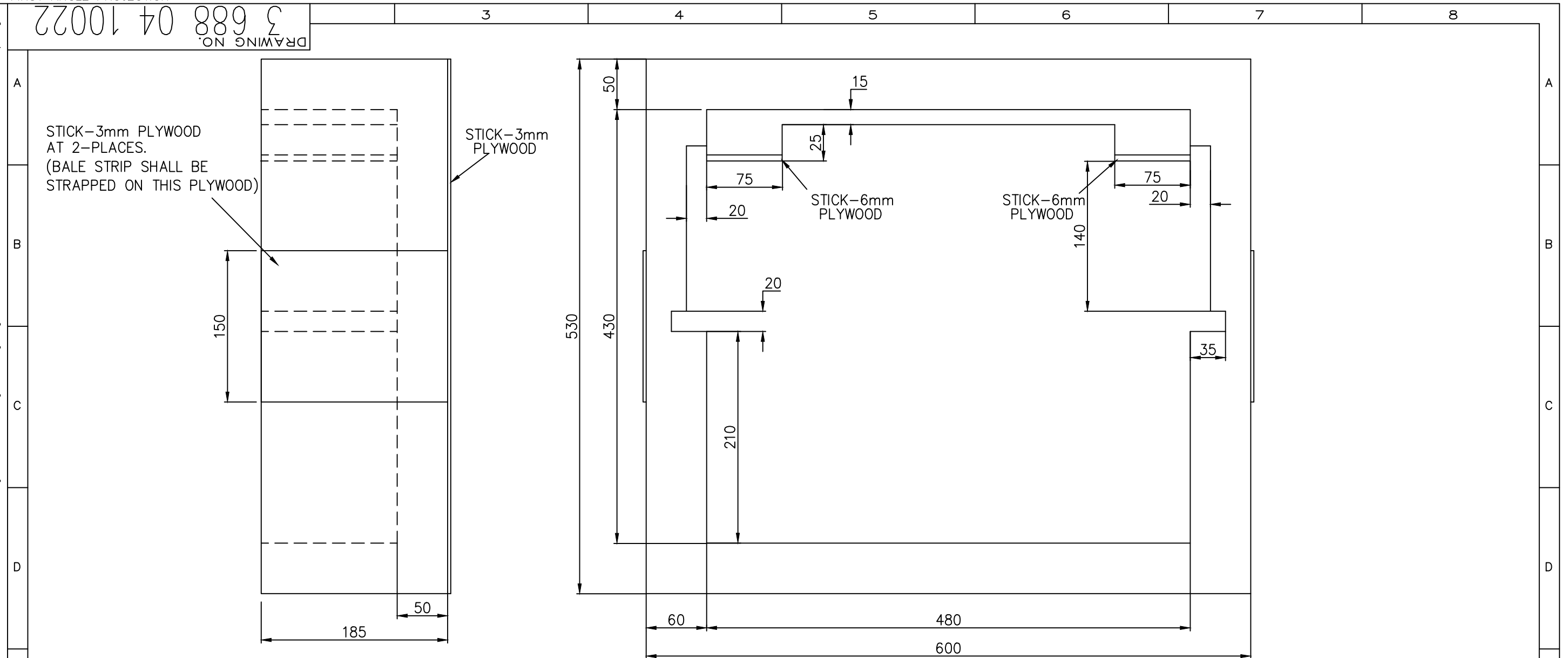
SHEET NO. 01	NO. OF SHEETS 03
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SIGN &amp; DATE

INVENTORY NO.



### A3 SIZE



NOTE: -  
1.FOR DETAILS REFER SHET No.01.

QTY.	ITEM No.	DESCRIPTION	DRAWING NO.	ITEM No.	MATERIAL CODE	UT.Wt. (kgs)
				VARIANT	MATERIAL SPECN.	QTY.
CARD TYPE 2				CARD TYPE 1		

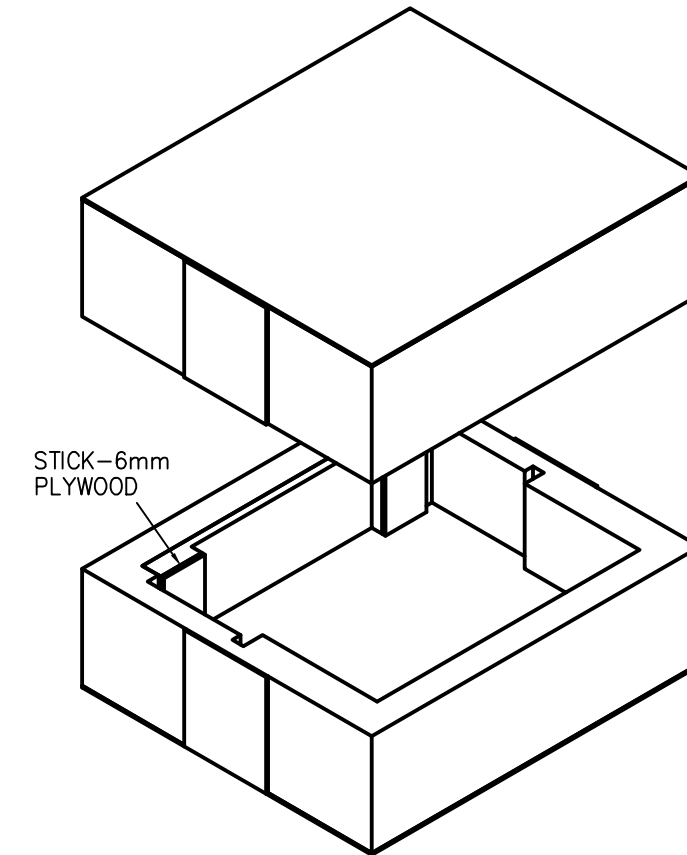
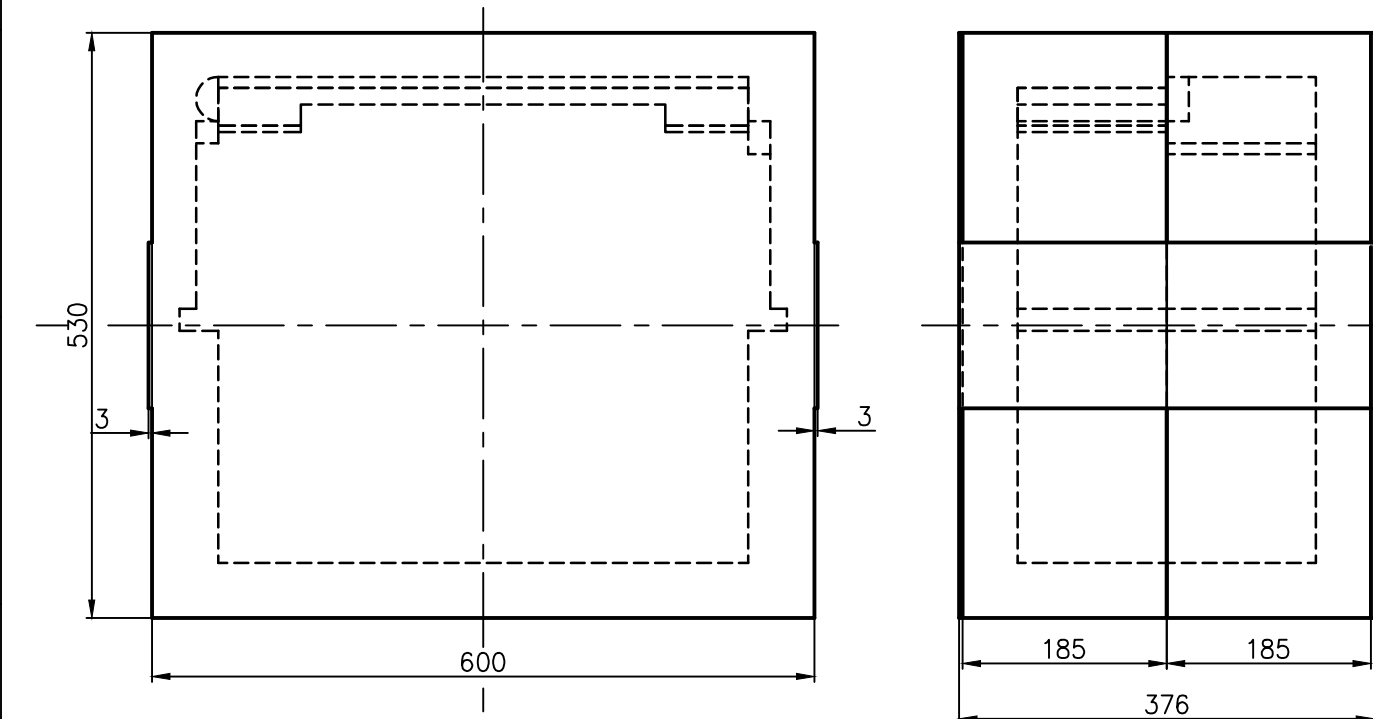
TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	LEG MODULE-2.3 Kv
--	-------------------

<div></div> <div>BHARAT HEAVY ELECTRICALS LIMITED. ELECTRONICS DIVISION, BANGALORE</div>				DRN	NAME	SIGN.	DATE	No. OF VAR
					G.MARUTHI		27.03.2001	
				CKD	KS.PRABHAKAR		27.03.2001	
				APPD	SHS RAO		27.03.2001	
DEPT. SAE	FOR UNSPECIFIED- TOLERANCES REFER ED 0230499		SCALE  4:1	WEIGHT(Kg)	REF. TO ASSY. DRG.	ITEM NO.	No. OF ITEM	
CODE 406								
TITLE					DRAWING NO.			REV.
PACKING BOX (BOTTOM)					3 688 04 10022			02
					SHEET NO. 02		NO. OF SHEETS 03	

INVENTORY NO.

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F



MATERIAL:—PROFEEL/ARMOUR EXPANDED POLYETHYLENE (EP)FOAM OF  
15 & 20 MM THICKNESS.  
DENSITY: 27–35 Kg/CUBIC METER.  
JOINING OF EP FOAM FITMENTS: BY HOT AIR WELDING METHOD.  
SHAPE & DIMENSIONS: AS PER DRAWING IN SHT 01 & 02.

QTY.	ITEM No.	DESCRIPTION	DRAWING NO.	ITEM No.	MATERIAL CODE	UT.Wt. (kgs)
				VARIANT	MATERIAL SPECN.	QTY.
CARD TYPE 2				CARD TYPE 1		

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT	LEG MODULE-2.3 Kv
--	-------------------

<div></div> <div>BHARAT HEAVY ELECTRICALS LIMITED. ELECTRONICS DIVISION, BANGALORE</div>				DRN	NAME	SIGN.	DATE	No. Of VAR	
					G.MARUTHI		27.03.2001		
					CKD	KS.PRABHAKAR			27.03.2001
					APPD	SHS RAO			27.03.2001
DEPT. SAE	FOR UNSPECIFIED- TOLERANCES REFER ED 0230499		SCALE  NTS	WEIGHT(Kg)	REF. TO ASSY. DRG.	ITEM NO.	No. OF ITEM		
CODE 406									
TITLE  PACKING BOX ASSY					DRAWING NO. 3 688 04 10022			REV. 02	
					SHEET NO. 03		NO. OF SHEETS 03		

**ANNEXURE-II****PART-II (PRICE BID)(For Reference)**

SL NO	DESCRIPTION OF WORKS	ITEM TO BE PACKED	SCOPE OF WORK	UOM	APPROX QTY	QUOTED UNIT RATE	VALUE
<b>SCHEDULE-A: Supply of packing material and Packing of Cubicles with Plywood, plywood support batten and other materials as per PLANT STANDARD ED 0490092 Rev 10 )</b>							
A.1	Supply of 12 mm thick Comml Plywood - MR Grade IS:303 , Plywood support batten ,other packing materials and packing of <b>CUBICALS</b> as per scope of work	C&I CUBICALS	SUPPLY OF PACKING MATERIAL AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	SQ. MTR OF PLYWOOD	60000		
A.2	Supply of 12 mm thick Comml Plywood - Marine Grade IS:710 , Plywood support batten ,other packing materials and packing of <b>CUBICALS</b> as per scope of work	C&I CUBICALS	SUPPLY OF PACKING MATERIAL AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	SQ. MTR OF PLYWOOD	1500		
<b>SCHEDULE-B: Supply of packing material and Packing of (TRACTION EQUIPMENTS) Cubicles like Railways and equivalent bigger / heavier size panels with Plywood along with plywood support batten, mechanical latching unit or suitable nut &amp; bolt and other materials as per PLANT STANDARD ED 0490092 Rev 10</b>							
SL NO	DESCRIPTION OF WORKS	ITEM TO BE PACKED	SCOPE OF WORK	UOM	APPROX QTY	QUOTED UNIT RATE	VALUE
B.1	Supply of 12 mm thick Comml Plywood - MR Grade IS:303 , Plywood support batten ,other packing materials and packing of <b>TRACTION EQUIPMENTS</b> as per scope of work	TRACTION EQUIPMENTS	SUPPLY OF PACKING MATERIAL AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	SQ. MTR OF PLYWOOD	35000		
<b>SCHEDULE-C: Supply of packing material and Packing of [SPARES &amp; MAIN EQUIP] Loose items / spares / Railway VCU / and other items with Plywood along with plywood support batten and other materials as per PLANT STANDARD ED 0490092 Rev 10 ]</b>							
SL NO	DESCRIPTION OF WORKS	ITEM TO BE PACKED	SCOPE OF WORK	UOM	APPROX QTY	QUOTED UNIT RATE	VALUE
C.1	Supply of 12 mm thick Comml Plywood - MR Grade IS:303 , Plywood support batten ,other packing materials and packing of <b>LOOSE ITEMS</b> as per scope of work	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES	SUPPLY OF PACKING MATERIAL AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	SQ. MTR OF PLYWOOD	40000		
C.2	Supply of 12 mm thick Comml Plywood - Marine Grade IS:710 , Plywood support batten ,other packing materials and packing of <b>LOOSE ITEMS</b> as per scope of work	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES	SUPPLY OF PACKING MATERIAL AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	SQ. MTR OF PLYWOOD	1000		

<b>SCHEDULE-D: Supply of packing material and Packing of [SPARES &amp; MAIN EQUIPMENT LOOSE ITEMS] items suitable for SPEEDPOST using all sides with 12 mm Thick Commercial Plywood [MR Grade] general purpose with other following pkg materials: Silica gel, Polythene Cover for items, PVC strappings and markings. [ No rubber wood supporting battens] as per Drawing Number: .805 - RPP - BOX - 001</b>							
D.1	Supply of 12 mm thick Comm'l Plywood - MR Grade IS:303 and other packing materials and packing of <b>LOOSE ITEMS SUITABLE FOR SPEEDPOST</b> as per scope of work	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES SUITABLE FOR SPEEDPOST	SUPPLY OF PACKING MATERIAL <b>EXCEPT SUPPORT BATTENS</b> AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	SQ. MTR OF PLYWOOD	6000		
<b>SCHEDULE-E: Supply of packing material and Packing of Cubicles with Rubber Wood and other packing materials as per PLANT STANDARD ED 049 0099 Rev 14</b>							
E.1	Supply of <b>RUBBERWOOD</b> and other packing materials and packing of <b>HEAVY PANELS</b> as per scope of work.	HEAVY PANELS	SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL	CUBIC METER OF WOOD	40		
<b>SCHEDULE-F: Supply of packing material and Packing of Cubicles with Silver Oak / Pine wood and other packing materials as as per PLANT STANDARD ED 049 0099 Rev 14</b>							
F.1	Supply of <b>SILVER OAK / PINE WOOD</b> ,other packing materials and packing of <b>HEAVY PANELS ( FOR EXPORT )</b> as per scope of work.	PANELS FOR EXPORT	SUPPLY OF PACKING MATERIAL AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	CUBIC METER OF WOOD	50		
<b>SCHEDULE-G:SCHEDULE-L: Supply of packing material and Packing of Loose Items with Rubber Wood and other packing materials as per PLANT STANDARD ED 049 0099 Rev 14</b>							
G.1	Supply of <b>RUBBERWOOD</b> , other packing materials and packing of <b>LOOSE ITEMS</b> as per scope of work.	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES	SUPPLY OF PACKING MATERIAL AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	CUBIC METER OF WOOD	50		
<b>SCHEDULE-H: Supply of packing material and Packing of Loose Items with Silver Oak / Pine wood and other packing materials as per PLANT STANDARD ED 049 0099 Rev 14</b>							
H.1	Supply of <b>SILVER OAK / PINE WOOD</b> ,other packing materials and packing of <b>LOOSE ITEMS ( FOR EXPORT )</b> as per scope of work.	LOOSE ITEMS PERTAINING TO MAIN EQUIPMENTS AND SPARES FOR EXPORT	SUPPLY OF PACKING MATERIAL AND <b>PACKING</b> USING THE SUPPLIED MATERIAL	CUBIC METER OF WOOD	50		

<b>SCHEDULE-I: Supply and Packing with Bitumen Coated Hessein Cloth etc., as per PLANT STANDARD ED 049 0099 Rev 14</b>							
I.1	Supply of <b>BITUMEN COATED HESSEIN CLOTH</b> , other packing materials and packing of <b>LOOSE ITEMS</b> as per scope of work.	<b>LOOSE ITEMS</b>	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	<b>SQUARE METER</b>	50		
<b>SCHEDULE-J: Supply and Packing of panels with Galvanised Iron Sheet of Thickness 0.3 mm + /- 0.05mm tolerance with suitable Nails &amp; Wooden batten for covering packed cases as per PLANT STANDARD ED 049 0099 Rev 14</b>							
J.1	Supply of <b>GALVANIZED IRON SHEET OF THICKNESS 0.3MM +- 0.05MM</b> with suitable Nails & Wooden batten and covering of <b>PACKED CASES</b> as per scope of work.	<b>PACKED CASES</b>	<b>SUPPLY OF PACKING MATERIAL AND PACKING USING THE SUPPLIED MATERIAL</b>	<b>SQUARE METER OF GI SHEET</b>	15000		
<b>SCHEDULE-K: LABOUR CHARGE for packing of materials in plywood using all other materials except plywood/pine /Silver Oak. [Plywood supplied by BHEL.] PACKING CHARGE ONLY</b>							
K.1	<b>LABOUR CHARGE</b> for packing of materials in plywood using all other materials except plywood. [ Plywood supplied by BHEL.] <b>(PACKING CHARGE ONLY)</b>	CUBICLE, TRACTION PANEL , SPEED POST, LOOSE ITEMS PERTAINING TO MAIN EQUIPMENT S, SPARES, TRACTION	<b>SUPPLY OF PACKING MATERIAL EXCEPT PLYWOOD AND PACKING USING THE SUPPLIED MATERIAL</b>	<b>PER SQUQRE METER</b>	4000		
K.2	<b>LABOUR CHARGE</b> for packing of materials (Railway Module) in Carton Box using all other materials except Carton Box and filling material. [ Carton Box with filling material supplied by BHEL.] <b>PACKING CHARGE ONLY</b>	<b>MATERIALS ( RAILWAY MODULES )</b>	<b>PACKING USING BHEL SUPPLIED MATERIAL</b>	<b>NOS.</b>	3000		
<b>SCHEDULE-O:SUPPLY OF PACKING MATERIAL</b>							
L.1	<b>SILICAGEL</b>	Not Applicable	<b>SUPPLY OF MATERIAL</b>	<b>KG</b>	100		
L.2	<b>POLYETHENE SHEET ( 175 MICRON)</b>	Not Applicable	<b>SUPPLY OF MATERIAL</b>	<b>KG</b>	100		
L.3	<b>POLYETHENE SHEET ( 200 MICRON)</b>	Not Applicable	<b>SUPPLY OF MATERIAL</b>	<b>KG</b>	100		
L.4	<b>IRON CLAMPS</b>	Not Applicable	<b>SUPPLY OF MATERIAL</b>	<b>NOS.</b>	50		
L.5	<b>HOOP IRON(0.6 mm Thick)</b>	Not Applicable	<b>SUPPLY OF MATERIAL</b>	<b>KG</b>	50		

L.6	RUBBERISED COIR	Not Applicable	SUPPLY OF MATERIAL	KG	100		
L.7	TARFELT	Not Applicable	SUPPLY OF MATERIAL	SQUARE METER	500		
L.8	NAILS ( 2' AND 2-1/2')	Not Applicable	SUPPLY OF MATERIAL	KG	50		
L.9	PACKING NOTE HOLDER	Not Applicable	SUPPLY OF MATERIAL	NOS.	400		
L.10	NAME PLATE	Not Applicable	SUPPLY OF MATERIAL	NOS.	400		
L.11	BITUMINOUS WATERPROOF KRAFT PAPER	Not Applicable	SUPPLY OF MATERIAL	SQUARE METER	300		
L.12	PLY BOARD 12MM THICK MR 303 GRADE	Not Applicable	SUPPLY OF MATERIAL	SQUARE METER	100		
L.13	AIR BUBBLE ROLL OF 1.5M WIDE X100 METERS LONG OR EQUIVALENT QTY HAVING DIA OF AIR BUBBLE:9.5MMOR MORE AND 450 GAUGE	Not Applicable	SUPPLY OF MATERIAL	ROLL	10		
L.14	2 PLY CORRUGATED PAPER ROLL [ NON VERGIN ] OF 100 GSM SIZE : 1 M X 100 M LONG	Not Applicable	SUPPLY OF MATERIAL	ROLL	10		
L.15	EP FOAM SHEETS OF SIZE : 1000 MM X 500 MM X 50 MM THICK WITH NORMAL DENSITY	Not Applicable	SUPPLY OF MATERIAL	NOS.	100		
L.16	EXPANDED POLYETHYLENE FOAM PACKING BOX FOR LEG MODULE PACKING AS PER DRAWING 3-688-04-10022 VER 02	Not Applicable	SUPPLY OF MATERIAL	NOS.	50		
L.17	EXPANDED POLYETHYLENE FOAM CORNER BLOCK AS PER DRAWING HAVING SIZE : 250 X 250 X 200 MM WITH WALL THICKNESS OF 50 MM	Not Applicable	SUPPLY OF MATERIAL	NOS.	50		
L.18	THERMOCOLE SHEETS SIZE : 1M X 0.5 METRE WIDTH X 15 MM THICK OF NORMAL DENSITY	Not Applicable	SUPPLY OF MATERIAL	NOS.	100		
L.19	NAILS SUITABLE FOR SPEEDPOST PARCELS SIZE : 14 G X 1.25 INCH LONG	Not Applicable	SUPPLY OF MATERIAL	KG	25		
L.20	GUM - UTILITY BRAND SUITABLE FOR SPEED POST PARCEL PACKING , QTY : 700 ML BOTTLE	Not Applicable	SUPPLY OF MATERIAL	NOS.	50		

L.21	BOPP GUM TAPES [ SELF ADHESIVE] SIZE: 2" X 65 METRE LONG ROLL HEAVY GUAGE	Not Applicable	SUPPLY OF MATERIAL	ROLL	100		
L.22	BOPP GUM TAPES [ SELF ADHESIVE] SIZE: 3" X 65 METRE LONG ROLL HEAVY GUAGE	Not Applicable	SUPPLY OF MATERIAL	ROLL	100		
L.23	LABELS - VINYL(STICKERS)	Not Applicable	SUPPLY OF MATERIAL	SQUARE FEET	300		
L.24	LABELS - FLEX	Not Applicable	SUPPLY OF MATERIAL	SQUARE FEET	300		
L.25	"S" LABELS OF SIZE 75MM X 75MM FOR INITIAL SPARES	Not Applicable	SUPPLY OF MATERIAL	NOS.	250		
L.26	"S" LABELS OF SIZE 150MM X 150MM FOR INITIAL SPARES	Not Applicable	SUPPLY OF MATERIAL	NOS.	250		
L.27	"BHEL" MONOGRAM LABEL OF SIZE 150MM X 200MM	Not Applicable	SUPPLY OF MATERIAL	NOS.	500		
L.28	MARKER PEN (BLACK)	Not Applicable	SUPPLY OF MATERIAL	SET ( 12NOS.)	25		
L.29	PLY WOOD 18 MM THICK OF MR GRADE IS 303	Not Applicable	SUPPLY OF MATERIAL	SQR METER	100		
Total value towards packing and supply of packing material ( A ) ₹							
Goods and Services Tax ( GST ) @ .....%of A( B ) ₹							
Total Value Including GST( C=A+B ) ₹							