

**MILITARY ENGINEER SERVICES**

Name of work: **REPAIR/SERVICING OF DISTRIBUTION TRANSFORMER , SERVO STABILIZER, HT VCBs & RING MAIN UNIT AND CALIBRATION OF RELAYS ETC AT AF STN GURGAON UNDER GE (AF) GURGAON**

**CONTENTS SHEET**

Ser No	Contents	Pages	
		From	To
1	Contents	01	-
2	Tender forwarding letter including instructions to tenderers for completing the tender.	02	06
3	Notice of tender IAWF-2162 (Revised 1960) including Appendix 'A' to Notice of Tender and Annexure-I	07	12
4	Tender and item rate contract works by Measurements (IAFW-1779A Revised 1955) (Authorization Page No: 13, Schedule A Note 14 - 15, BOQ 16 to 20, Sch of credit 21& 22)	13	25
5	General Conditions of Contract IAFW-2249 (1989 Print)	26	58
6	Errata/Amendments to General Conditions of Contract IAFW-2249 (1989 Print)	59	77
7	Schedule of minimum fair wages	78	91
8	Special Conditions	92	101
9	Particular specifications	102	128
10	Errata/Corrigendum/Amendment to the tender documents		
11	Relevant correspondence		
12	Acceptance letter		

Total \_\_\_\_\_ Pages

SIGNATURE OF CONTRACTOR

DATED : \_\_\_\_\_

SSW  
for Accepting Officer

CA NO : CWE/GGN/G-26/18-19

Serial Page No 02

Tele: 25675755

Headquarters  
Commander Works Engineer (AF) Gurgaon  
Military Engineer Services  
C/O CWE (AF) Palam Complex  
Old Palam Road  
Delhi Cantt -110010

8287/G-26 / /E8

Nov 2018

M/S\_\_\_\_\_

**CA NO: CWE/GGN/G-26/2018-19: REPAIR/SERVICING OF DISTRIBUTION TRANSFORMER , SERVO STABILIZER, HT VCBS & RING MAIN UNIT AND CALIBRATION OF RELAYS ETC AT AF STN GURGAON UNDER GE (AF) GURGAON**

Dear Sir(s)

1. Tender documents in respect of above work are uploaded on the site <http://defproc.gov.in>. The tender is on single stage two cover e-tendering system. The contents of Cover I & Cover II are specified in NOTICE OF TENDER.

2. Bids will be received online by ACCEPTING OFFICER upto the date and time mentioned in the NOTICE INVITING TENDER (NIT). No tender/bid will be received in physical form and any tender/bid received in such manner will be treated as non bonafide tender/bid.

3. Bid will be opened on due date and time fixed for opening in the presence of tenders/bidders or their authorised representatives, who have uploaded their quotation bid and who wish to be present at the time of opening the bids.

4. Your attention is also drawn to instruction on filling and submission of tender attached herewith. You may forward your points on tender documents and/or depute your technical representative for discussion on tender/drawings and to clarify doubts, if any. You are requested not to write piece meal points and forward your points duly consolidated.

5. Unenlisted contractors are required to submit the scanned copies (in pdf file) of documents required as per eligibility criteria mentioned in instructions for filling the tender documents and Appendix 'A' to NIT alongwith EARNEST MONEY DEPOSIT(EMD) and tender fee on e-procurement portal and submit the physical documents in the office of **CWE (AF) Gurgaon C/o CWE (AF) Palam Complex, Delhi Cantt-10** within time limit specified in NIT. Inadequacy/deficiency of documents shall make the bid liable for rejection resulting in disqualification for opening of finance bid.

6 (a) contractor having not executed standing security bond and standing security deposit in any MES formation shall upload scanned copy of EARNEST MONEY DEPOSIT(EMD) mentioned in Notice of Tender and shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date & time fixed for this purpose. In case of failure to abide by any of those two requirements, the finance bid will not be opened.

(b) Contractor having not executed standing security bond and standing security deposit in any MES formation would be required to deposit individual security on acceptance of tender which will be calculated with reference to the tendered cost as per scales laid down by MES for calculation of "EARNEST MONEY" enhanced by 25% subject to maximum of Rs. 1875000/- (Rupees Eighteen Lakhs seventy five thousand Only).

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7. Enlisted contractors of MES shall submit the scanned copies (pdf file) of enlistment letter, tender fee and such other documents as mentioned in Appx 'A' to NIT on e-procurement portal and submit physical documents in the office of **CWE (AF) Gurgaon C/o CWE (AF) Palam Complex, Delhi Cantt-10** before date & time fixed for this purpose.

8. The contractor must ensure that the tender/bid on the proper form is uploaded in time as the Accepting Officer will take no cognizance of any quotations/offer received in any other electronic or physical form like email/fax/by hand/ through post from tenderer/bidder even if they are received in time.

9. In view of delays due to system failure or other communication related failure, it is suggested that the tender/bid be uploaded, if necessary, sufficiently in advance of the last due date and time fixed.

10. General Conditions of Contracts (IAFW-2249) (1989 Print) and errata and amendments thereto, Schedule of minimum fair wages and MES SSR (Part-I and Part-II) are not enclosed with these documents. These are available for perusal in the Office of GE concerned and this office.

11. ANY TENDERER, WHICH PROPOSES ALTERATIONS TO ANY OF THE CONDITION, SPECIFICATIONS LAID DOWN IN THE TENDER DOCUMENTS OR ANY NEW CONDITION, WHATSOEVER, IS LAIBLE TO BE REJECTED.

12. (a) Contractor having not executed standing security bond and standing security deposit in any MES formation shall upload scanned copy of EARNEST MONEY DEPOSIT (EMD) mentioned in Notice of Tender and shall ensure receipt of hard copy of EMD in the office of tender issuing authority before date & time fixed for this purpose. In case of failure to abide by any of these two requirements, the finance bid will not be opened.

(b) Contractor having not executed standing security bond and standing security deposit in any MES formation would be required to deposit individual security on acceptance of tender which will be calculated with reference to the tendered cost as per scales laid down by MES for calculation of "EARNEST MONEY" enhanced by 25% subject to maximum of Rs. 1875000/- (Rupees Eighteen Lakhs seventy five thousand Only).

\_\_\_\_\_  
(SIGNATURE OF CONTRACTOR)

SSW  
FOR ACCEPTING OFFICER

DATE: \_\_\_\_\_

**INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER****1. EARNEST MONEY DEPOSIT (EMD)**

Contractor(s) who are not enlisted with MES/who are enlisted but have not executed the standing Security Bond shall submit Earnest Money Deposit as detailed in Notice of Tender in one of the following forms, alongwith their tender/bid:-

- (a) Deposit at Call Receipt from a Scheduled Bank in favour of Garrison Engineer concerned.
- (b) Receipted Treasury Challan, the amount being credited to the Revenue Deposit of GE.

It is advisable that Earnest Money is deposited in the form of deposit call receipt from an approved Schedule Bank for easy refund. In case the tenderer/bidder wants to lodge EARNEST MONEY DEPOSIT' in any other form allowed by MES, a confirmation about its acceptability will be obtained from the Accepting Officer well in advance of the bid submission end date and time. Earnest Money Deposit shall be submitted in the name of concerned GE.

**NOTES:** - Earnest Money Deposit (EMD) in the form of cheque/Bank Guarantee etc will not be accepted. NON-SUBMISSION OF EARNEST MONEY DEPOSIT (EMD) (scanned copy alongwith Technical Bid & hard copy before the date & time fixed for opening of BOQ) WILL RENDER THE BID DISQUALIFIED FOR OPENING OF COVER II (FINANCE BID).

**2. SECURITY DEPOSIT**

In case the tender/bid submitted by such contractor who is not enlisted with MES is accepted, the contractor will be required to lodge with the Controller of Defence Accounts INDIVIDUAL SECURITY DEPOSIT calculated with reference to TENDERED COST as notified by the Accepting Officer subject to a maximum of Rs 18,75,000/-. The amount is required to be lodged within 30(Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid , failing which the sum shall be recovered from the 1<sup>st</sup> RAR payment or from the Final bill (See Condition 22 of GCC(IAFW-2249)).

**3. CONTRACTORS ENLISTED WITH CHIEF ENGINEER WESTERN COMMAND AND WHO HAVE EXECUTED STANDING SECURITY BOND AND DEPOSITED STANDING SECURITY DEPOSIT BUT OF LOWER CLASS**

In case the tender/bid is accepted, the amount of Additional Security Deposit will be as notified by the Accepting Officer. The amount will be the difference between the "Individual Security Deposit" calculated with reference to the "TENDERED COST" AND 'Standing Security Deposit' lodged. The amount is required to be lodged within 30 (Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid, failing which the sum shall be recovered from the 1<sup>st</sup> RAR payment or from the Final bill (See Condition 22 of GCC (IAFW-2249)).

**4. CONTRACTOR ENLISTED IN MES FORMATIONS OTHER THAN CE WESTERN COMMAND**

Contractors whose names are on the approved list of any MES formation i.e. Other than CE Western Command and who have deposited Standing Security and have executed Standing Security Bond may tender/bid without depositing Earnest Money with the bid and if the Accepting Officer decides to accept the tender/bid, such tenderers will be required to lodge Security Deposit as notified by the Accepting Officer. The amount is required to be lodged within 30 (Thirty) days of the receipt by the contractor of notification of acceptance of tender/bid , failing which the sum shall be recovered from the 1<sup>st</sup> RAR payment or from the Final bill.

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**INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER(CONTD...)****5. GENERAL INSTRUCTIONS FOR COMPLIANCE**

5.1 The bids received only in the electronic form will be considered. All bids shall be submitted on 'defproc.gov.in' portal. Documents should be scanned and forwarded in 'pdf' form and 'xls' form as indicated.

5.2 Bids shall be uploaded on 'defproc.gov.in' portal on or before the bid closing date mentioned in the tender. No tender/bid in any other electronic or physical form like date email/fax/by hand/through post will be considered.

5.3 Bid should be DIGITALLY signed using valid DSC. All pages of tender documents corrections/alterations shall be signed /initialed by the lowest bidder after acceptance.

5.4 Drawings, if issued in physical form, must be returned duly initiated by the tenderer/bidder in separate envelope indicating his name and address.

5.5 The tender shall be signed, dated and witnessed at all place provided for in the documents after acceptance. All corrections shall be initialed. The contractor shall initial every page of tender and shall sign all drawings forming part of the tender. Any tender/bid, which proposes alterations to any of the conditions whatsoever, is liable to be rejected.

5.6 In the technical bid, a scanned copy of power of Attorney in favour of the person uploading the bid using his/her DSC shall be uploaded. In case the digital signatory himself is the sole proprietor, scanned copy of an affidavit on stamp paper of appropriate value to this effect stating that he has authority to bind the contractor (through partnership deed, general power of attorney or Memorandum and Articles of Association of the company) in all the matters pertaining to the contracts with Union of India including arbitration clause. A scanned copy of the documents confirming of such authority shall be attached with the tender/bid in 'PDF' form, if not submitted earlier. The person uploading the bid on behalf of another partner(s) or on behalf of a firm or company using his DSC shall upload with the tender/bid a scanned copy (in 'pdf' form) of /Power of Attorney duly executed in his favour by such other or all of the Partner(s) or in accordance with constitution of the company in case of company, stating that he has authority to bind such other person of the firm or the Company in case of company, stating that he has authority to bind such other person of the firm or the Company, as the case may be, in all matters pertaining to the contract including the Arbitration Clause.

5.7 Even in case of Firms or Companies which have already given Power of Attorney to an individual authorizing him to sign tender in pursuance of which bids are being uploaded by such person as a routine, fresh power of Attorney duly executed in his favour stating specifically that the said person has authority to bid such partners of the Firm, or the Company as the case may be, including the condition relating to Arbitration Clause, should be uploaded in 'pdf' form with the tender/bid; unless such authority has already been given to him by the Firm or the Company. It shall be ensured that power of attorney shall be executed in accordance with the constitution of the company as laid down in its Memorandum & Article of Association.

5.8 Hard copies of all above documents should be sent by the contractor to the Tender issuing authority well in advance to be received before the date & time fixed for the same.

5.9 Bid (Cover 1& 2) shall be uploaded online well in time.

5.10 The contractor shall employ Indian Nationals after verifying their antecedents and loyalty. Attention is also drawn to special condition 3 referred hereinafter and also conditions 24 & 25 of IAFW-2249 (General conditions of contract).

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**INSTRUCTIONS ON FILLING AND SUBMISSION OF TENDER(CONTD...)**

5.11 Tenders/bidders who uploaded their priced tenders/bids and are desirous of being present at the time of opening of the tenders/bids, may do so at the appointed time.

5.12 The tenderer/bidder shall quote his rate on the BOQ file only. No alteration to the format will be accepted, else the bid will be disqualified and summarily rejected.

5.13 In case the tenderer/bidder has to revise/modify the rates quoted in the BOQ (excel sheet) he can do so only in the BOQ, through 'http: //defproc.gov.in' site only before the bid closing time and date.

**6. REVOKATION/REVISION OF OFFER UPWARD/ OFFERING VOLUNTARY REDUCTION AFTER CLOSING OF BID SUBMISSION DATE & TIME**

In the event of tenderer/bidder revoking his offer or revising his rates upwards/offering voluntary reduction, after closing of bid submission date & time, his offer will be treated as revoked and the Earnest Money deposited by him shall be forfeited. In case of MES enlisted Contractor, the amount equal to the Earnest Money stipulated in the Notice of tender, shall be notified to the tenderer/bidder for depositing the amount through MRO. Bids of such Contractors/bidders shall not be opened till the aforesaid amount equal to the earnest money is deposited by him in Govt. Treasury. In addition, bids of such tenderer/bidder and his related firm shall not be opened in second call or subsequent calls. Reduction offered by the tenderer/ bidder on the freak high rates referred for review shall not be treated as voluntary reduction.

**7. C P M (Critical Path Method)**

7.1 The Project planning for work covered in the scope of tender is based on CPM.

7.2 The tenderer/bidder is expected to be fully conversant with the CPM technique and employ technical staff who can use the technique in sufficient details. Sufficient books and other literature on the subject are widely available in the market which the tenderer/ bidder may make use of.

7.3 The tenderer's/bidder's attention is drawn to special condition of the tender regarding preparation of the detailed network analysis and time schedule for the work and his liability for employing sufficient resources to adhere to this schedule. Any inability on the part of the tenderer/bidder in using the technique will be taken as his technical inefficiency and will affect his class of enlistment and future prospect/invitation to tenders for future works.

7.4 Department may issue amendments/errata in form of CORRIGENDUM to tender/ revised BOQ to the tender documents. The tenderer/bidder is requested to read the tender documents in conjunction with all the errata/amendments/corrigendum, if any, issued by the department.

8. These instructions shall form part of the contract documents.

SIGNATURE OF CONTRACTOR

Dated: \_\_\_\_\_

SSW  
for Accepting Officer

**MILITARY ENGINEER SERVICES**  
**NOTICE INVITING TENDER**

1. A tender is invited for the work as mentioned in Appendix 'A' to this NOTICE INVITING TENDER (NIT)

2. The work is estimated to cost as indicated in aforesaid Appendix 'A'. This estimate, however, is not a guarantee and is merely given as a rough guide and if the work cost more or less, a tenderer/bidder will have no claim on that account. The tender shall be based on as mentioned in aforesaid Appendix 'A'.

3. The work is to be completed within the period as indicated in aforesaid Appendix 'A' in accordance with the phasing, if any, indicated in the tender from the date of handing over site, which will be on or about two weeks after the date of Acceptance of tender.

4 Normally contractors whose names are on the MES approved list for the area in which the work lies, and within whose financial category the estimated amount would fall, may tender/bid but in case of term contracts, contractors of categories SS to E may tender/bid. In case, where the tender amount is in excess of the financial limit of the contractor and the Accepting officer decides to accept the tender/bid, in which event the tenderer/bidder would be required to lodge additional security deposit as notified by the Accepting Officer in term of conditions of contract. Contractors whose names are on the MES approved list of any MES Formation and who have deposited standing security and have executed standing security bond may also tender/bid without depositing Earnest money along with the tender/bid and if the tender/bid submitted by such a tenderer/bidder is accepted, the contractor will be required to lodge with the Controller of Defence Accounts concerned the amount of 'Individual Security Deposit' within thirty days of the receipt by him of notification of acceptance of his tender/bid, failing which this sum will be recovered from 1st RAR payment or from the first final bill in the case of term/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor. Not more than one tender/bid shall be submitted/uploaded by one contractor or one firm of contractors. Under no circumstances will a father and his son(s) or other close relations who have business dealing with one another be allowed to tender/bid for the same contract as separate competitors. A breach of this condition will render the tenders/bids of both the parties liable for rejection.

5. The Office of **CWE (AF) Gurgaon C/o CWE (AF) Palam Complex, Delhi Cantt-10** will be the Accepting Officer here in after referred to as such for purpose of the contract.

6. The Technical Bid and Financial Bid (Cover-1 and Cover-2) shall be uploaded by the tenderer/bidder on or before the date & time mentioned in NIT. A scanned copy of DD with enlistment details/documents shall be uploaded as packet 1/cover-1 ('T' bid) of the tender/bid on e-tendering portal. DD is refundable in case T bid is not accepted resulting in non-opening of 'Q' bid. The applicant contractor shall bear the cost of bank charges for procuring and encashing the DD and shall not have any claim from Government whatsoever on this account.

6.1. Tender form and conditions of contract and other necessary documents shall be available on **<https://defproc.gov.in>** site for download and shall form part of contract agreement in case the tender/bid is accepted.

6.2 In case of contractor who has not executed the Standing Security Bond, the Cover-I shall be accompanied with by Earnest Money of amount as mentioned in Appendix 'A' in the form of deposit at call receipt in favour of concerned GE (see Appendix 'A') by a scheduled Bank or in receipted treasury Challan the amount being credited to the revenue deposit of the concerned GE (see Appendix 'A').

6.3 A contractor who is not enlisted for the area in which the work lies but whose name is in the MES approved list of any MES formation and who has deposited standing security and executed standing security Bond may bid without depositing earnest money along with the tender; but if the Accepting officer accepts the tender/bid, the contractor will be required to lodge with the Controller of Defence Accounts concerned the amount of 'individual security deposit' within thirty days of the receipt by him of notification of acceptance of his tender/bid, failing which this sum will be recovered from 1st RAR payment or from the first final bill. In this case of terms/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor.

**NOTICE OF TENDER (Contd.)**

6.4 A Contractor who has executed standing security Bond but not corresponding to the appropriate class as mentioned above, shall lodge with the Accepting Officer, Additional Security Deposit as notified by the Accepting Officer within thirty days of the receipt of his notification of acceptance of his tender/bid, failing which this sum will be recovered from the first RAR payment or from the first final bill. In case of term/running contracts, remaining sum shall be recovered from subsequent bill(s) of the contractor. However, in case where any payment is made to the contractor within thirty days of the receipt by him of notification of acceptance of tender/bid, the amount of additional security deposit shall be recovered from such payment.

6.5 The GE will return the Earnest Money wherever applicable to all unsuccessful tenderers/bidders by endorsing an authority on the deposit-at-call receipt for its refund, on production by the tenderer, bidder a certificate of the Accepting Officer that a bonafide tender/bid was received and all documents were returned.

6.6 The GE will either return the Earnest Money to the successful tenderer/bidder by endorsing an authority on the deposit-at-call for its refund, on receipt of an appropriate amount of Security Deposit or will retain the same in part or full on account of security deposit if such a transaction is feasible.

6.7 Copies of the drawings and other documents pertaining to the work signed for the purpose of identifications by the Accepting Officer or his accredited representative, sample of materials and stores to be supplied by the contractor will also be available for inspection by the tender/bidder at the office of Accepting Officer and concerned GE during working hours.

7. The tenderer/bidders are advised to visit the site of work by making prior appointment with GE who is also the Executing Agency of the work (see appendix 'A'). The tenderers/bidders are deemed to have full knowledge of all relevant documents, samples, site etc, whether they have inspected them or not.

8. Any tender/bid which proposes any alteration to any of the conditions laid down or which proposes any other condition or prescription whatsoever, is liable to be rejected.

9. The uploading of bid implies that bidder has read this notice and the conditions of Contract and has made himself aware of the scope and specification of works to be done and to the conditions and rates at which stores, tools and plants etc will be issued to him and local conditions and other factors having bearing on the execution of the work.

10. Tenderers/bidders must be in possession of a copy of the MES Standard Schedule of Rates (See Appendix 'A') including amendments and errata thereto.

11. Invitation for e-tender does not constitute any guarantee for validation of 'T' bid and subsequent opening of finance bid of any applicant/bidder, even of enlisted contractors of appropriate class, merely by virtue of enclosing DD. Accepting Officer reserves the right to reject the 'T' bid and not open the finance bid of any applicant/bidder. 'T' bid validation shall be decided by the Accepting Officer based on, inter alia, capability of the firm as per criteria given in Appx 'A' to this NIT. The applicant contractor/bidder will be informed regarding non-validation of his 'T' bid assigning reasons thereof through the defproc website. The applicant contractor/bidder if he so desires may appeal to the next higher Engineer authority viz **Chief Engineer (AF) WAC Palam, Delhi Cantt-10** with copy to the Accepting Officer on email before the scheduled date of opening of Finance Bid. The decision of the Next Higher Engineer Authority (NHEA) shall be final and binding. The contractors/bidder shall not be entitled for any compensation whatsoever for rejection of his bid.

12. The Accepting Officer reserves the right to accept a tender submitted by a Public Undertaking, giving a purchase preference over other Tender(s) bids which may be lower, as are admissible under the Government Policy. No claim for any compensation or otherwise shall be admissible from such tenderer/bidder whose tender/bid is rejected.

13. Accepting Officer does not bind himself to accept the lowest or any tender/bid or to give any reason for not doing so.

14. This Notice Inviting Tender (NIT) including Appendix 'A' with its annexure shall form part of the contract.

(Signature of the Contractor)

Dated: \_\_\_\_\_

SSW

For Accepting Officer



**APPENDIX 'A' TO NOTICE INVITING e - TENDER**

1	Name of work	:	REPAIR/SERVICING OF DISTRIBUTION TRANSFORMER , SERVO STABILIZER, HT VCBS & RING MAIN UNIT AND CALIBRATION OF RELAYS ETC AT AF STN GURGAON UNDER GE (AF) GURGAON
2	Estimated Cost of Work	:	<b>Rs 30.00 Lakhs</b>
3	Period of completion	:	06 (Six) months
4	Cost of tender documents	:	<b>Rs 500/-</b> in the shape of DD / Bankers cheque from any Scheduled bank in favour of <b>GE (AF) Gurgaon</b> . (Copy shall be uploaded online and original to be submitted offline before due date of opening of cover No 1) payable at <b>Gurgaon</b>
5	Website/Portal Address		<a href="https://defproc.gov.in">https://defproc.gov.in</a>
6	Type of Contract		Item rate based on (IAFW-2249) and (IAFW-1779A). Rates to be quoted by the tenderers.
7	Information & Details		
	(a) Bid Submission start date (b) Last date of bid submission (c) Date of bid opening	:	Refer critical dates shown below
8	<b>Eligibility Criteria</b> (a) For MES enlisted contractors Class in MES, Category of enlistment	:	All contractors enlisted with MES in <b>Class 'D'</b> and above and <b>category (b) (ii)</b> subject to remarks with reference to performance in r/o works in hand reflected in Workload return (WLR) circulated by competent engineer authority. Refer Note – below.
	(b) For Other contractors		(a) The firms not listed with MES shall meet enlistment criteria of <b>Class 'D' and category (b) (ii)</b> i.e. with regard to having satisfactorily completed requisite value works, annual turnover, solvency, working capital, immovable property/fixed assets, T&P, Engineering establishment, no recovery outstanding in any Govt Department, Police verification/Passport etc. As per enlistment criteria given in Para 1.4 & 1.5 of section I of Part I of MES Manual of Contracts-2007 (Reprint-2012) as available in all MES formations (b) These firms shall also submit copy of police verification from police authorities of the area where the registered office of the firm is located/notarized copy of valid Passport of proprietor/each partner/each director. (c) Firm should not carry any adverse remarks in WLR or any other similar report of any authority.
	(c) For all contractors		Contractors will not be allowed to execute the work by subletting or through power of attorney holder on his behalf to a third party/another firm except sons/daughters/spouse of proprietor /partner /director and firm's own employees, Director, Project Manager. This shall be subject to certain conditions which will be prescribed in the NIT forming part of tender documents
9	Tender Issuing and Accepting Officer		HQ CWE (AF) Gurgaon C/o CWE (AF) Palam Complex, Delhi Cantt-10
10	Executing Agency		<b>GE (AF) Gurgaon</b>
11	Earnest Money		<b>Rs 60,000.00</b> in form of DD/ Banker's cheque from any Scheduled/Nationalized bank in favour of <b>GE (AF) Gurgaon</b> .
<b>CRITICAL DATES</b>			
Para 7	Publishing date and time of tender documents	:	<b>14 Nov 2018 at 1700 hrs</b>
	Starting date& time of tender documents downloading	:	<b>14 Nov 2018 at 1800 hrs</b>
	Clarification start date & time	:	<b>15 Nov 2018 at 1000 hrs</b>
	Clarification end date & time	:	<b>10 Dec 2018 at 1800 hrs</b>
	Starting date and time of bid submission(Cover No 1 & 2)	:	<b>30 Nov 2018 at 1500 hrs</b>
	Bid documents download end date & time	:	<b>10 Dec 2018 at 1800 hrs</b>
	Closing date and time of bid submission(Cover No 1 & 2)	:	<b>10 Dec 2018 at 1800 hrs</b>
	Date and time of bid opening (Cover No 1)	:	<b>11 Dec 2018 at 1500 hrs or subsequent days</b>
	Date and time of bid opening (Cover No 2)	:	Will be intimated online after completion of evaluation of tech bid/application (Cover No 01)

**APPENDIX 'A' TO NOTICE INVITING e - TENDER (Contd/--)****Notes:-**

(a) Contractor one class below (two class below in case of remote and difficult area) may also bid this tender. Their application shall be considered subject to fulfillment of other eligibility criteria given in NIT when number of applicants of eligible class qualifying for the tender are less than 7(seven).

(b) In case number of eligible class contractors satisfying the eligibility criteria given in NIT are 7 or more than 7, application of one class below the eligible class shall not be considered except those who have previously completed similar works satisfactorily and are meeting the criteria of upgradation in respect of past experience and / or average annual turnover as applicable and financial soundness (solvency/financial soundness and working capital) provided the value of work is less than twice the tendering limit of such contractors. Contractors one class below the eligible class may upload necessary documents wrt works experience and financial soundness in cover 1 of tender (T bid).

(c) (i) Application/bid not accompanied by scanned copies of requisite value DD/Bankers cheque towards cost of tender and earnest money (as applicable) shall not be considered for validation of 'T bid and their finance bids will not be opened.

(ii) Contractors should ensure that their original DDs and earnest money (as applicable) are received within 5 days of bid submission end date.

(iii) In case of applications/bids from enlisted contractors of MES, where scanned copies of requisite DD/Bankers Cheque towards cost of tender has been uploaded but physical copies are not received by the stipulated date, their finance bids will be opened. However non-submission of physical copies of cost of tender shall be considered as willful negligence of the bidder with ulterior motives and such bidder shall be banned from bidding for a six months commencing from the date of opening of finance bid(cover 2).

(iv) In case of applications/bids from un-enlisted contractors, where scanned copies of requisite DD/bankers Cheque towards cost of tender has been uploaded but physical copies are not received by the stipulated date, finance bids will not be opened. Name of such contractor alongwith complete address shall be circulated for not opening of their bids for a period of six months commencing from the date of opening of finance bid (cover 2).

(v) In case of applications/bids (enlisted contractor as well as un-enlisted contractor) where scanned copies of requisite earnest money (as applicable) were uploaded but the same are not received in physical form within stipulated time, such bids shall not qualify for opening of finance bid (cover 2).

(vi) Contractor shall upload copy of Goods and Service Tax (GST) no of their company. In case of failure to submit GST no, the firm shall be disqualified in technical bid evaluation.

(vii) In case tenderers upload quotation in pre-revised BOQ, the same shall be considered as a willful negligence by the bidder and their quotation shall be considered Non-bonafide.

(d) Contractors may note that they shall not be loaded beyond their tendering limit as under :-

(aa) In case contractors of eligible class are selected for issues of tender : 4 to 5 times the tendering limit.

(bb) In case of one class (two class in case of remote and difficult area as the case may be) contractors are selected for issue of tender : 6 to 7 times.

(cc) In case of unenlisted contractors : 2 times the upper tendering limit of class for which contractor meets the criteria for enlistment.

(e) In case any deficiency is noticed, in the documents required to be uploaded by the tenderers as per NIT, after opening of cover 1 (T bid) and during technical evaluation, a communication in the form of e-mail/whatsapp/sms/speed post etc. shall be sent to the contractor to rectify the deficiency within a period of 7 days from date of communication failing which financial bid (cover 2) shall not be opened and contractor shall not have any claim on the same.

(f) Contractors enlisted with MES will upload following documents for checking eligibility:

(i) Application for bid in Firm's letter head

(ii) Enlistment letter

(iii) Scanned copy of DD of cost of tender

(iv) Scanned copy of GST Registration

(v) Scanned copy of EPF Registration.

(g) Contractors not enlisted with MES will be required to upload necessary documents to prove their eligibility for enlistment in eligible class & category of work, including Affidavit for no recovery outstanding. List of documents required for enlistment in MES has been given in para 1.5 of section 1 of Part I of MES Manual on contracts 2007 (Reprint 2012). Following documents shall also be uploaded amongst others:

(i) Details of three highest valued similar nature of works executed during last five years, financial year-wise in tabular form giving name of work. Accepting Officer's details, viz Address, Telephone < Fax No., E-Mail ID etc, date of acceptance of tender and actual date of completion. This shall be duly signed by proprietor/all partners/authorized Director of Pvt/Public Ltd as applicable. It should indicate whether extension was granted or compensation was levied. Attested copy of acceptance letter and completion certificate shall be enclosed of each work. In case performance report has been given by the client same shall also be submitted duly attested.

Contd/---

**APPENDIX 'A' TO NOTICE INVITING e - TENDER**

- (ii) Solvency certificate and working capital certificate issued by scheduled bank.  
 (iii) Annual turnover certificate for last 2 years issued by Chartered Accountant along with relevant pages of audited balance sheets in support thereof.  
 (iv) Affidavits for possession of movable & immovable properties by proprietor/partner owning the immovable property along with Valuation certificate from regd Valuer in support of movable & immovable properties. In case of Limited Company, the immovable property is required to be in the name of the company.  
 (v) In addition, the un-enlisted contractors shall also furnish affidavit on non Judicial stamp paper in the form of hard copy declaring their turnover for last 2(Two) years.  
 (vi) Scanned copy of DD of cost of tender and earnest money.  
 (vii) Scanned copy of GST Registration  
 (viii) Scanned copy of EPF Registration.

(h) In case of rejection of technical/prequalification bid, contractor may appeal to next higher Engineer authority i.e. CE (AF) WAC Palam on email against rejection, whose decision shall be final and binding. However contractor/bidder shall not be entitled to any compensation whatsoever for rejection of technical/prequalification bid.

(f) Court of the place from where tender has been issued shall alone have jurisdiction to decide any dispute out of or in respect of this tender. After acceptance of tender, condition 72 – Jurisdiction of courts of IAFW 2249 shall be applicable.

8287/G-26/ /E8  
 Headquarter  
 Commander Works Engineers Gurgaon  
 C/o CWE (AF) Palam Complex  
 Delhi Cantt-110010

(Niranjan Singh)  
 Lt Col  
 SSW  
 for Accepting Officer

Dated: Nov 2018

- |   |   |   |
|---|---|---|
| 1. Hony General Secretary, MES Builders Association of India (Regd)<br>Flat No 807(8 <sup>th</sup> Floor )<br>Sahyog, 53<br>Nehru Place, New Delhi –<br><b><u>REGD AD</u></b> | 2. The Hony Secretary, MES Builders Association of India, Delhi Branch, 106 Kirti Deep, Nangal Raya, New Delhi – 46–<br><b><u>REGD AD</u></b> | 3. CE Executive Office<br>DDA, New Delhi      |
| 4 HQ CE(R&D) Delhi -64  | 5 HQ CE(AF) WAC Palam   | 6 HQ CE Delhi Zone                            |
| 7 HQ CWE (AF) Palam   | 8 HQ CWE New Delhi  | 9 HQ CWE Delhi Cantt-10                       |
| 10 HQ CWE (U) Delhi Cantt-10  | 11 HQ CWE No-02 Delhi Cantt-10  | 12 GE(AF) Gurgaon                             |
| 13 GE (AF) Faridabad  | 14 GE(AF) Subroto Park  | 15 GE(P) West Delhi Cantt                     |
| 16 GE E/M Base Hospital, Delhi Cantt  | 17 GE New Delhi   | 18 GE E/M RR Hospital Delhi Cantt             |
| 19 GE(P) East Delhi Cantt   | 20 GE (E/M) Electric Delhi Cantt  | 21 GE(W/S) Delhi Cantt                        |
| 22 GE (West) Delhi Cantt  | 23 GE(U) Plant & Machinery Delhi Cantt  | 24 GE Central Delhi Cantt                     |
| 25 Post Master Gopinath Bazar Delhi Cantt-10  | 26 CE CPWD, Nirman Bhawan, New Delhi  | 27 SBI Delhi Cantt-10                         |
| 28 Chief Executive Office, Cantt Board, Delhi Cantt-110 010   | 29 Station Master New Delhi Railway Station   | 30 Station Master Delhi Cantt Railway Station |
| 31 GE(P) AF Palam Delhi Cantt - 10  |   |   |

**Annexure 'I'**  
**Of Appendix "A"**

**FORM OF SOLVENCY CERTIFICATE FROM NATIONALISED/SCHEDULED BANK**

This is certified that to the best of our knowledge and information M/s / Shri / Smt \_\_\_\_\_ having address \_\_\_\_\_, a customer of our bank are/ is respectable and can be considered solvent up to Rs \_\_\_\_\_ (Rupees \_\_\_\_\_)/ Financially sound for any engagement up to Rs \_\_\_\_\_(Rupees \_\_\_\_\_). This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

(Signature)  
Name, Designation and Personal Code  
No of Signatory & Seal of bank with bank address and Code no.

**Note:** In case of partnership firm, certificate to include names of all partners as recorded with the bank

**FORM OF WORKING CAPITAL CERTIFICATE FROM NATIONALISED/ SCHEDULED BANK**

This is certified that M/s / Shri / Smt \_\_\_\_\_ having address \_\_\_\_\_ have/has been maintaining a saving bank account/ current account/ fixed deposit account with this branch of bank since \_\_\_\_\_ and the firm is having working capital of approximately Rs \_\_\_\_\_ and/ or the firm is enjoying overdraft/ credit facilities up to limit of Rs \_\_\_\_\_. This certificate is issued without any guarantee or responsibility on the bank of any or the officers.

(Signature)  
**Name, Designation and Personal Code**  
**No of Signatory & Seal of bank with bank address and Code no**

**DETAILS OF WORKS EXECUTED DURING LAST 05 YEARS**

Ser No	CA No and Name of Work	Address of Accepting Officer	Amount of CA	Final amount of Work	Date of Completion	Extension granted if any	Remarks
1	2	3	4	5	6	7	8

**MILITARY ENGINEER SERVICES**

**(IAFW-1779A REVISED 1955)**

**TO BE USED IN CONJUNCTION WITH GENERAL CONDITIONS OF CONTRACT  
IAFW-2249 (1989 PRINT)**

Tele: 25675755

Headquarters  
Commander Works Engineer (AF) Gurgaon  
Military Engineer Services  
C/O CWE (AF) Palam Complex  
Old Palam Road  
Delhi Cantt -110010

8287/G-26/

/E8

Nov 2018

**e-TENDER**

**CA NO:CWE/GGN/G-26/2018-19: REPAIR/SERVICING OF DISTRIBUTION  
TRANSFORMER , SERVO STABILIZER, HT VCBS & RING MAIN UNIT AND  
CALIBRATION OF RELAYS ETC AT AF STN GURGAON UNDER GE (AF)  
GURGAON**

1. Mr./Messers \_\_\_\_\_  
of \_\_\_\_\_ is/are hereby authorized to tender  
for the above work. The tender is to be **QUOTED ONLINE AT THE WEBSITE OF MES**  
portal [[www.defproc.gov.in](http://www.defproc.gov.in)] by **10 Dec 2018 up to 1800 hours.**

2. All correspondence concerning this tender shall be addressed as indicated at the  
top of this sheet quoting the reference as given above.

**THE PRESIDENT OF INDIA DOES NOT BIND HIMSELF  
TO ACCEPT THE LOWEST OR ANY TENDER**

\_\_\_\_\_  
SIGNATURE OF CONTRACTOR

SIGNATURE OF THE OFFICER ISSUING  
THE TENDER DOCUMENTS

DATED: \_\_\_\_\_

APPOINTMENT : SSW

DATED : Nov 2018

**BOQ/SCHEDULE 'A' NOTES****(LIST OF WORKS AND PRICES)****NOTES:-**

1. The work under this contract comprises of **REPAIR/SERVICING OF DISTRIBUTION TRANSFORMER , SERVO STABILIZER, HT VCBS & RING MAIN UNIT AND CALIBRATION OF RELAYS ETC AT AF STN GURGAON UNDER GE (AF) GURGAON** as described in Schedule 'A' and as specified in particular specifications.

2. Tenderer is required to get fully acquainted with the scope of work as catered for in tender documents and also the site of work. No claim whatsoever shall be entertained subsequently for any misunderstanding or any in-accuracy with regards to site conditions and provisions made in the tender documents.

3. Contractor's special attention is drawn to condition 6 (D) of IAFW-2249 (General Conditions of Contract). No claim on account of any error in the unit rates inserted by contractor shall be admissible later on.

4. The period of completion for the entire work under this contract shall be **06 (Six) Months** from the date of commencement of work as per work order No 1 to be placed by **Garrison Engineer (AF) Gurgaon**. In case of any delay in handing over of site suitable, extension of time for delay shall be granted as per condition 11 of IAFW-2249 and nothing extra shall be admissible on this account.

5. Garrison Engineer referred to in IAFW-2249 or elsewhere in the tender documents shall be **Garrison Engineer (AF) Gurgaon**.

6. The unit rates quoted by the tenderer in BOQ shall be inclusive of all charges such as:-

- (a) VAT/Sales tax/GST, Octroi, Central Tax, Excise Duty, Service Tax, Labour Tax and/or Cess etc
- (b) Insurance if any.
- (c) Packing unpacking if any.
- (d) Transportation and delivery.
- (e) Entire material and labour for execution of work.

7. The tenderers shall quote their rates against each items of BOQ in figures. The quantities shown in BOQ are provisional and are inserted as guide only. These shall however, not be varied beyond the limits laid down in condition 7 of IAFW-2249 (General conditions of contract)

8. Unit rates quoted by the tenderer shall be deemed to allow for all minor extra and constructional details, which are not specifically given in particular specifications but are essential for the execution of works services in a sound and workman like manner all as mentioned in the description of items of work to conform to good workmanship and sound engineering.

In case of difference in opinion as to whether or not a certain items of works constitutes "Minor extra and constructional details included in the contractor's prices, the decision of the Accepting Officer shall be final, binding and conclusive.

9. BOQ Part-II i.e. schedule of credit is included in the PDF document and not with BOQ since no summary page is included in tender documents to adjust this amount. However the quoted amount of tender shall be worked out by deducting the amount of schedule of credit for the purpose of acceptance. Contractors are requested to take note of this while quoting for items contained in BOQ (Cover No. 2).

Contd....,

**(BOQ/SCHEDULE 'A' NOTES CONTD...)**

10. During execution of work special care is to be taken to safeguard the losses/damages to the existing work as well as Govt properties. In case any losses/damage take place due to contractor's default shall be made good by the contractor without any extra cost to the department. No claim on this account shall be entertained later on.

11. Unless otherwise stated in BOQ and/or particular specification the unit rates quoted by the contractor in BOQ shall be deemed to include for all provisions in the preambles given in MES Schedule 2010 (Part-II) as applicable to respective items.

12. Unless otherwise stated, unit rates quoted by the tenderer in BOQ shall be deemed to include for all "Materials and Labour" or "Supply and fix" complete all as described in BOQ and specified in particular specifications.

13. All materials (except those catered in Schedule of Credit) obtained during dismantling/demolition shall become the property of the Govt and shall be deposited by the contractor in MES store yard as directed by Engineer-in-Charge. The rates quoted by the tenderer in BOQ shall be deemed to include this aspect and nothing extra shall be payable on this account.

14. GE/Engineer – in-Charge of work may administrate this contract in such a manner that work shall be executed by the contractor as per users and site requirement for entire contract period. The contractor will have to arrange his working programme accordingly. No claim what so ever will be entertained by the Department on this account.

15. The materials / fixtures /fittings shall be procured from any of the firms / manufactures whose name mentioned in BOQ/particular specifications. However the materials / fixtures / fittings whose manufacturers name are not mentioned in the BOQ/particular specifications, these shall be conforming to relevant IS and as approved by GE.

**16. A tenderer is supposed to check if any revised BOQ has been uploaded and quote in revised BOQ only. Uploading quotation in pre-revised BOQ shall be considered as a willful negligence by the bidder and his quotation shall be considered non-bonafide.**

17. Consequent upon the provision of section 51 of the Goods and Service Tax Act came into force w.e.f. 01 Nov 2018 circulated vide E-in-C's Branch letter No. 66546/Manual/GST/168/E8 dt 26 Sep 2018 accordingly GST on works contract shall be deducted at source as notified/specified in the Government Of India, Ministry Of Finance , Department of Revenue letter No F. No. S. 31011/11/2018-ST-I-DoR dt. 14 Sep 2018.

Contd....

**SCH 'A' PART – II (SCHEDULE OF CREDIT)**

Ser No	Description of item of works	Unit	Approx unit obtained/retrieved	Unit rate assessed by dept (Rs)	Amount based on deptt Assessment (Rs)	Remarks
1	2	4	5	6	7	9
1	Old unserviceable HT/LT copper winding wire	Kg	414	300.00	124200.00	
2	Old unserviceable LT bushing	Set of 4	3	25.00	75.00	
3	Old unserviceable HT bushing	Set of 3	1	25.00	25.00	
4	Old unserviceable silica jel breather assembly	Each Job	4	50.00	200.00	
5	Old unserviceable transformer oil	Ltrs	600	5.00	3000.00	
6	Old u/s finger,glands etc	Each Job	1	200.00	200.00	
7	Old unserviceable micro switch	Each	3	5.00	15.00	
8	Old unserviceable DPDT switches	Each	2	2.00	4.00	
9	Old unserviceable auto manual switch	Each	2	5.00	10.00	
10	Old unserviceable high and low voltage indicator	Each	3	1.00	3.00	
11	Old unserviceable servo circuit card	Each	2	15.00	30.00	
12	Old unserviceable gear	Each	8	15.00	120.00	
13	Old unserviceable PCB holder	Each	12	2.00	24.00	
14	Old unserviceable push button	Each	10	2.00	20.00	
15	Old unserviceable potentio meter	Each	10	25.00	250.00	
16	Old unserviceable voltmeter	Each	4	30.00	120.00	
17	Old unserviceable electronic sensing transformer	Each	10	10.00	100.00	
18	Old unserviceable servo motor	Each	4	100.00	400.00	
19	Old u/s switch air break, gang operated HT 11 KV	Each	4	300.00	1200.00	
20	Old u/s burnt out jumpers	Each job	4	10.00	40.00	
21	Old u/s lightning arrester	set of 3	4	75.00	300.00	
22	Old u/d porcelain insulator any type	Each	20	3.00	60.00	
23	Old unserviceable CDG relay	Each	4	1500.00	6000.00	
24	Old unserviceable Power Pack	Each	3	750.00	2250.00	
25	Old unserviceable Isolating contact 2 Pair finger type	Each	4	150.00	600.00	
26	Old unserviceable Isolating contact 2 Pair flat type	Each	1	150.00	150.00	
27	Old unserviceable vaccum interrupter	Each	2	500.00	1000.00	
28	Old unserviceable flexible connection	Each	3	100.00	300.00	
29	Old unserviceable shutter for racking shaft	Each	6	20.00	120.00	
30	Old unserviceable closing coil 110 V AC/DC	Each	6	15.00	90.00	
31	Old unserviceable shunt trip coil 24V DC/110V DC	Each	5	15.00	75.00	
32	Old unserviceable Ratchet wheel	Each	2	150.00	300.00	
33	Old unserviceable motor cut off switch	Each	6	20.00	120.00	



**SCH 'A' PART – II (SCHEDULE OF CREDIT Contd..../-)**

34	Old unserviceable Bus bar spout	Each	3	250.00	750.00
35	Old unserviceable Circuit spout	Each	3	250.00	750.00
36	Old unserviceable shutter for bus bar spout	Each	6	35.00	210.00
37	Old unserviceable shutter operating link	Each	12	10.00	120.00
38	Old unserviceable Draw out type 3 phase PT 11 KV/110V	Each	1	10000.00	10000.00
39	Old unserviceable HT Epoxy CT 200-100/5-5A and 100-50/5-5A	Each	6	500.00	3000.00
40	Old unserviceable Spring motor with gear box	Each	2	450.00	900.00
41	Old unserviceable Bus bar spouting insulator	Each	8	25.00	200.00
42	Old unserviceable MCB SP any size	Each	12	10.00	120.00
43	Old unserviceable epoxy body 11 KV 800 A	Each	1	500.00	500.00
44	Old unserviceable Auxialiary contact	Each Set	10	35.00	350.00
45	Old unsv HT cable of size 95 Sqmm	RM	150	140.00	21000.00
46	Old U/S RMU chamber/bottle	Each	4	1325.00	5300.00
47	Old U/S earthing	Each	10	500.00	5000.00
48	Old u/s earth strip	RM	30	15.00	450.00
49	Old u/s LED indication Lamp	Each	8	1.00	8.00
50	Old u/s service/test position limit switch	Each	3	2.00	6.00
51	Old u/s space heater	Each	5	3.00	15.00
52	Old u/s thermostat for space heater	Each	3	2.00	6.00
53	Old u/s change over 160 Amp	Each	1	55.00	55.00
54	Old u/s micro switch	Each	2	3.00	6.00
Total Amount				<b>Rs. 1,90,147.00</b>	

SIGNATURE OF CONTRACTOR  
DATED : \_\_\_\_\_

SSW  
For Accepting Officer

**SCHEDULE 'B'****ISSUE OF MATERIAL TO THE CONTRACTOR (SEE CONDITION 10 OF IAFW-2249 AND AS AMENDED THERE TO)**

Ser No	Particulars	Rate at which material will be issued to the contractor		Place of issue by name	Remarks
		Unit	Rate (Rs)		
1	2	3	4	5	6

- NIL -

**SCHEDULE 'C'****(LIST OF TOOLS AND PLANTS (OTHER THAN TRANSPORT) WHICH WILL BE HELD HIRED TO THE CONTRACTOR)**

(See condition 5, 34 &amp; 35 of IAFW-2249)

Ser No	Quantity	Details of MES Crew supplied	Hire charges per (unit per working day) (Rs.)	Standby charges (per off day) (Rs)	Place of issue (By Name)	Remarks
1	2	3	4	5	6	7

- NIL -

**SCHEDULE 'D'****TRANSPORT TO BE HIRED TO THE CONTRACTOR**

(See condition 15 &amp; 35 of IAFW-2249)

Ser No	Quantity	Particulars	Rate per unit per working day (Rs)	Place of issue of stores by name	Remarks
1	2	3	4	5	6

- NIL -

SIGNATURE OF CONTRACTOR

DATED : \_\_\_\_\_

SSW  
for Accepting Officer

**TENDER**

THE PRESIDENT OF INDIA

Having examined and persued the following documents:-

1. Specifications signed by SSW.
  2. Drawings detailed in the specifications.
  3. Schedule 'A' 'B' 'C' & 'D' attached hereto.
- (ii) MES Standard Schedule of Rates: Part I, 2009 (Specifications) and Part II 2010 (Rates) together with errata and amendment as follows as applicable to the above said schedule :-

Part - I (2009)

Errata – NIL: Amendment Nos 1&amp;2

Part II – (2010)

Errata /Amendment Nos - 1 to 59

5. General Conditions of Contract, IAFW-2249 (1989 Print) together with Errata Nos 1 to 20 and Amendment Nos 1 to 40
6. Water condition 31 of IAFW-2249 General Conditions of Contracts: Water will be supplied by MES and contractor shall pay Rs 3.75 per every Rs 1000/- worth of work done priced at Contract rates.

Should this tender be accepted I/We agree:-

\* "(a) That the sum or **Rs 60,000/- (Rupees sixty thousand only)** forwarded as Earnest Money shall either be retained on account of Security Deposit or to be refunded by the Government on receipt of an appropriate amount as Security Deposit within the time specified on condition 22 of IAFW-2249.

(b) To execute all works referred to in the said documents upon the terms and conditions contained, or referred to therein and as detailed in General Summary below and to carryout such deviation as may be ordered vide Condition 7 of IAFW-2249 upto a maximum of 10% (TEN percent) and further agree to refer all disputes as required by condition 70 of IAFW 2249 to the Sole Arbitrator of a serving Engineer Officer having degree in Engineering or equivalent or having passed final/direct final exam of Sub Div II of Institution of Surveyors (India) recognized by the Govt of India to be appointed by Chief Engineer, Air Force, Western Air Command, Palam, Delhi Cantt -10 or his absence the officer officiating as Chief Engineer, Air Force , Western Air Command, Palam, Delhi Cantt-10 whose decision shall be final, conclusive and binding.

- (ii) To be deleted if not applicable.

Contd....

## TENDER (CONTD--/--)

Signature \_\_\_\_\_ in the capacity of \_\_\_\_\_  
 Name \_\_\_\_\_

duly authorised to sign the tender for and on behalf of M/S \_\_\_\_\_

---

(IN BLOCK LETTERS)

Date \_\_\_\_\_

Witness \_\_\_\_\_ Postal Address \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_ Telephone No \_\_\_\_\_

ACCEPTANCE

\_\_\_\_\_ alterations have been made in these documents and as evidence that these alterations were made before the execution of the contract agreement; they have been initialed by the contractor and Lt Col Niranjana Singh, SSW).

The said officer(s) is/are hereby authorised to sign and initial on my behalf the documents forming part of this contract.

The above tender is/are accepted by me on behalf of the President of India at the item rate contained in Schedule 'A'/BOQ on the \_\_\_\_\_ day of \_\_\_\_\_ 2018

Signature \_\_\_\_\_ dated this \_\_\_\_\_ day of \_\_\_\_\_ 2018

Appointment:

COMMANDER WORKS ENGINEER (AF)  
 GURGAON C/O CWE (AF) PALAM COMPLEX, DELHI CANTT-10  
 (FOR AND ON BEHALF OF THE PRESIDENT OF INDIA)

**GENERAL CONDITIONS OF CONTRACTS (IAFW-2249)(1989 PRINT)**

**FOR**

**MEASUREMENT CONTRACTS**  
**(IAFW-1779 AND 1779-A)**

A copy of the GENERAL CONDITIONS OF CONTRACT (IAFW-2249) (1989 PRINT) with Errata Nos 1 to 20 and Amendment Nos 1 to 40 has been supplied to me/us and is/in my/our possession. I/We have read and understood the provisions contained in the aforesaid GENERAL CONDITIONS OF CONTRACT before submission of this tender and I/We agree that I/We shall abide by the terms and conditions thereof, as modified, if any, elsewhere in these tender documents.

It is hereby further agreed and declared by me/us, that the General Conditions of Contract (IAFW-2249-1989 Print) including Condition 70 thereof pertaining to settlement of disputes by arbitration containing 33 pages (Serial Page Nos 26 to 58) with Errata Nos 1 to 20 and Amendment Nos. 1 to 40 containing 19 pages (Serial Page Nos. 59 to 77) form part of these tender documents.

\_\_\_\_\_  
SIGNATURE OF CONTRACTOR)  
DATED: \_\_\_\_\_

SSW  
FOR ACCEPTING OFFICER

**SCHEDULE OF MINIMUM FAIR WAGES**

It is hereby agreed that the 'Schedule of Minimum Fair Wages' as published by the Government of India or provincial Government, Notification dated 10 Mar 1992 and further notification issued upto date of submission of tenders shall form part of these tender documents.

My / Our signature hereunder amounts to my / our having read and understood the provisions contained therein and I / we agree that I / we shall abide by the same and that aforesaid documents form part of this tender containing 14 pages(**Pages from Srl Page No. 78 to 91**).

Notes: The documents mentioned above can also be seen in the office of the HQ CWE (AF) Gurgaon.

\_\_\_\_\_  
SIGNATURE OF CONTRACTOR)

SSW  
FOR ACCEPTING OFFICER

DATED: \_\_\_\_\_

## **SPECIAL CONDITIONS**

### **1. GENERAL**

1.1 The following Special Conditions shall be read in conjunction with the General Conditions of contracts IAFW-2249 and IAFW-1779 & 1779-A including upto date Errata/Amendments thereto. If any provisions in these Special Conditions are at variance with that of the aforesaid documents, the former shall be deemed to take precedence there over.

1.2. The Work under this contract shall be carried out in accordance with Schedule 'A', particular specifications, drawings and other provisions given in General summary and general specifications/provisions given in MES Schedule.

1.3 The term 'General Specifications' referred to hereinbefore as well as referred to in IAFW-2249 (General Conditions of Contracts) shall mean the specifications contained in the MES Schedule.

1.4 General rules, Specifications, Special conditions and all preambles in the MES Schedule shall be deemed to apply to the works under this contract. In case of any discrepancy the provisions in these documents shall take precedence over the aforesaid provisions in the MES Schedule.

### **2. ADMISSION TO SITE BY CONTRACTOR TO ASCERTAIN HIS OWN INFORMATION**

2.1. The tenderers shall contact the Garrison Engineer for the purpose of inspection of site(s) and relevant documents other than those sent herewith, who will give reasonable facilities for this purpose. The tenderers shall also make themselves familiar with working conditions, accessibility of site(s), availability of materials and other cognate conditions which may affect the entire completion of work under this contract.

2.2. The tenderers shall be deemed to have visited the site(s) and made themselves familiar with the working conditions, whether they actually inspect the site(s) or not.

### **3. SECURITY AND PASSES**

3.1. Contractor's attention is invited to condition 25 of IAFW- 2249. He shall employ only Indian Nationals after verifying their antecedents and loyalty. The contractor shall on demand by the Engineer-in-Charge, submit list of his agents, employees and work people concerned and shall satisfy the Engineer-in-Charge as to the bonafides of such people.

3.2. The Engineer-in-Charge at his discretion has the right to forward the list of personnel's to CO of unit for issuing the passes as per rules and regulations of the area in force to control the admission of the contractor, his agents, employees and work people to the site of the work or any part there of. Passes should be returned at any time on demand by the Engineer-in-Charge and or the authorities concerned and in any case on completion of work.

3.3. The contractor and his agents, employees and work people shall observe all the rules promulgated by the authority controlling the area in which the work is to be carried out e.g. prohibition of smoking and lighting, fire precautions, search of persons on entry and exit, keeping to specific routes, observing specified timing etc. Nothing extra shall be admissible for any man-hours etc lost on this account.

### **4. CONDITIONS OF WORKING IN RESTRICTED AREA**

4.1. **WORK LIES IN RESTRICTED AREA (Visit to site within the Restricted Area):** Permission to enter the restricted area at the time of submission of tenders can be obtained through the Garrison Engineer. Tenderers are advised to send prior intimation of their agent, representative etc. if any, dates and time of their proposed visit so that necessary arrangements may be made by GE to secure admission. Whether tenderer visit the site or not he shall be deemed to have full knowledge of the restrictions of entering into/exit from and within the restricted area and other cognate conditions which may affect the entire completion of work under this contract.

**SPECIAL CONDITIONS (Contd. . .)**

4.2 **ENTRY/EXIT:** The contractor, his agent(s), representatives, workmen etc and his materials, carts, trucks or other means of transports etc, will be allowed to enter through and leave from such gate or gates and at such times as the GE or authorities incharge of the restricted Area may at their sole discretion permit to be used. The contractor's authorised representative is required to be present at the place of entry and exit for the purpose of identifying his carts, trucks etc to the personnel incharge of the security of Restricted Areas.

4.3 **IDENTITY CARDS OR PASSES:** The contractors, his agents and representatives are required individually to be in possession of an identity card or pass duly verified by the police department. The identity card or pass will be examined by the security staff at the time of entry into or exit from the restricted area and also at any time or number of times inside the Restricted Area.

4.3.1 **IDENTITY OF WORKMEN:** Every Workman shall be in possession of an identity card. The identity card will be issued after thorough investigation of the antecedents of the labourers by the contractors and attested by the Officer-in-Charge of the unit concerned in accordance with the standing rules and regulations of the units.

4.3.2 Contractor shall be responsible for the conduct and action of his workmen, agents or representative.

4.4 **SEARCH:** Thorough search of all persons and transport shall be carried out at each gate and for as many times as a gate is used for entry or exit and may also be carried out at any time or any number of times at the work site.

4.5 **WORKING HOURS.**

4.5.1 The units controlling Area, usually work during six days in the week and remain closed on the 7th day. The working hours available to contractor's labour and staff are however, appreciably reduced because of the time taken in security checks observed at the time of entry, exit and during working hours.

4.5.2. The exact working hours, days and non working days observed for the restricted area, where works are to be carried out shall be deemed to have been ascertained by the contractor before submitting his tender. The tenderer's attention is invited to the fact that the total numbers of working hours for a unit are prescribed in regulations and they cannot be increased by the Garrison Engineer.

4.6. **Working on Holidays:** The contractor shall not carry out any work on gazetted holidays, weekly holidays and other non working days except when he is specially authorised in writing to do so by the GE. The GE may at his sole discretion declare any day as holiday or non working day without assigning any reason for such declaration.

4.7 **FIRE PRECAUTIONS:**

4.7.1 The contractor, his agents, representatives, workmen etc, shall strictly observe the orders pertaining to fire precautions prevailing within the restricted area.

4.7.2 Motor transport vehicles, if any, allowed by authorities to enter the area must be fitted with serviceable fire extinguishers.

4.8 **Female searcher:** If the contractor desires to employ female labours on work to be carried out inside the area and a female searcher is not borne on the authorised strength at the time of submission of the tender, he shall be deemed to have allowed in his tender for pay and allowances etc, for a female searcher (Class IV servant/GP `D` servant) calculated for the period female labour is employed by him inside that area. If more than one contractor has/have to be employed in addition to the authorised strength, the salary and allowances paid on an equitable basis between the contractors employing female labour taking in to consideration the value and period of completion of their contracts. The GE's decision with regard to the amount recoverable on this account from any contractor shall be final and binding.

Contd . . ./-



**SPECIAL CONDITIONS (Contd. . )****5. MINIMUM WAGES PAYABLE**

5.1 Refer condition 58 of IAFW-2249. The contractor shall not pay wages lower than minimum wages for labour as fixed by the Govt of India/State Govt whichever is higher.

5.2. The fair wages referred to in condition 58 of IAFW-2249 will be deemed to be the same as the minimum wages payable as referred to above.

5.3 The contractor shall have no claim whatsoever, if any on account of local factor and/or Regulations, he is required to pay the wages in excess of minimum wages as described above during the execution of work.

**6. ROYALTIES**

Reference condition 14 of General Conditions of contracts (IAFW-2249).

No quarries on Defence land are available.

**7. LAND FOR TEMPORARY WORKSHOP AND STORES**

Delete the following from lines 5 to 9 of Sub para 1 of Condition 24 of IAFW-2249 reading "in the event of area of land .....land allotted to him" and insert as under: -

"The contractor shall be allotted free of charge, the area as marked on the layout plans or as directed by Engineer-in-Charge for the purpose of erection of temporary workshop and stores. No M O D land is available for accommodation of labour and canteen for which the contractor shall make his own arrangement at his own expense.

**8. WATER.**

8.1 Refer condition 31 of General Conditions of Contracts IAFW-2249 "Water will be supplied by the MES. As the water supply by MES is likely to be intermittent/short supply make his own arrangement for storing the water required for the work, labour and workmen etc at his own expense. The contractor shall not have any claim on account to supplement the requisite quantity of water.

8.2 Water will be supplied by the MES and contractor shall pay Rs.3.75 per every Rs.1000.00 worth of work done priced as contract rates and the condition 31 shall be deemed to be amended accordingly.

**9. CO-OPERATION WITH OTHER AGENCIES**

The contractor shall permit free access and generally afford reasonable facilities to other agencies or departmental workmen engaged by the Govt to carry out their part of the work, if any, under separate arrangements.

**10. ELECTRIC SUPPLY**

Electricity supply required for the work upto a maximum of 20 KW three phase 440 volts shall be available by the MES at points either shown on site plan or from point (s) as directed by Engineer in charge. KWH meters to register the electric energy supplied and main switch shall be provided and installed by the contractor. Contractor shall provide all necessary cables, fittings etc from the tapping point in order to ensure a proper and suitable supply of electricity for execution of work. The contractor will be craged for the electric energy consumed for execution of works at the following rate:-

- (a) At the rate of Rs. 9.50 Per unit for Lighting.
- (b) At the rate of Rs. 9.50 Per unit for Power.

10.1 MES do not guarantee continuity of supply and no compensation whatsoever shall be allowed for supply becoming intermittent or for breakdown in the system.

Contd . . ./-

**SPECIAL CONDITIONS (Contd. .)**

10.2 GE or his representative shall be free to inspect all the power consuming devices or any electrical lines provided by the contractor. Any devices or electric lines provided by the contractor which is not to the satisfaction of the GE shall be disconnected from the supply if so directed by him.

**11. NET WORK ANALYSIS**

11.1 The time and progress chart to be prepared as per condition 11 of General Conditions (IAFW-2249) shall consist of detailed network analysis and a time Schedule. The critical path network will be drawn jo

intly by the GE and the contractor soon after acceptance of tender. The time scheduling of the activities will be done by the contractor so as to finish the work within the stipulated time. On completion of the time schedule a firm calendar date Schedule will be prepared and submitted by the contractor to the GE who will approve it after due scrutiny. The schedule will be submitted in four copies within two weeks from the date of handing over of site.

11.2 During the currency of work, the contractor will adhere to the time schedule and this adherence will be a part of the contractor's performance under the contract. During the execution of the work the contractor is expected to participate in the reviews and updating of the network under taken by the GE. These reviews may be undertaken at the discretion of the GE either as a periodical appraisal measure or when the quantum of work ordered on the contractor is substantially changed through deviation orders or amendments. Any revision of the time schedule as a result of the review will be submitted by the contractor to GE within a week for the approval after due scrutiny by the authority concerned.

11.3. The contractor shall adhere to the revised time schedule thereafter. In case of contractor disagreeing with revised schedule the same will be referred to the Accepting Officer whose decision shall be final, conclusive and binding. GE's approval to the revised schedule resulting in a completion date beyond the stipulated date of completion shall not automatically amount to a grant of extension of time. Extension of time shall be considered and decided by the appropriate authority mentioned in condition 11 of IAFW-2249 and separately regulated.

11.4 Contractor shall mobilize and employ sufficient resources to achieve the detailed schedule within broad framework of the accepted method of working and safety. No additional payment will be made to contractor for any multiple shift work or other intensive methods contemplated by him in his schedule, even though the time schedule is approved by the GE.

**12 ATTENDANCE UPON DEPARTMENTAL LABOUR AND CO-OPERATION WITH OTHER BUILDING CONTRACTORS**

12.1 The work is required to be carried out in close co-operation with building contractor so as to cause minimum possible damage to the work already executed and this should be done by frequent visit to the site at the appropriate stage. The contractor should therefore supply to Engineer in charge sufficient details of pocket, holes/chases to be left in the work so the building contractor can be directed to do so.

12.2 The contractor shall note that if the requirement of leaving holes etc is not furnished in time, he shall/have to carry out such works himself and make good the disturbed works as necessary at his own cost.

12.3 The contractor shall also note that the building contractor is not required to provide any concrete blocks and the like for embedding lots etc. Such provision if required shall be the responsibility of the contractor under this contract.

Contd . . /-

**SPECIAL CONDITIONS (Contd. .)****13. RECORD OF CONSUMPTION OF CEMENT**

13.1 The contractor shall maintain a pucca bound register with serially numbered pages with all pages initialed by Engineer in charge against numbering showing quantities of cement received, incorporated in the work and balance at the end of each day. The form of record shall be as approved by Engineer-in-Charge. The register shall be signed daily by representatives of MES and the contractor in token of verification of its correctness and will be checked by Engineer-in-Charge, at least once a week.

13.2 The register shall be kept at site in safe custody of the contractor's representative during the progress of the work and shall be produced on demand for verification to the inspecting officer(s).

13.3. On completion of the work the contractor shall deposit the cement register with the Engineer-in-Charge for record.

**14. PERIOD OF COMPLETION**

14.1 Work order to commence the work shall be placed on the contractor soon after the acceptance of tender. The period of completion as laid down in schedule 'A' shall commence from the date of commencement shown in the first work order and the contractor should take the fabrication/procurement action immediately so as to ensure completion of entire work within the stipulated period of completion.

14.2 The period of completion shown in schedule 'A' is for the completion of the entire work to the satisfaction of the GE.

**15. RECOMMENDATION FOR PROCUREMENT OF MATERIALS FOR INCORPORATION IN THE WORK.**

15.1 The contractor shall at his own cost and expense provide all materials required for the work other than those listed in schedule 'B'

15.2 In the event of the contractor experiencing difficulty in procuring the materials required for incorporation in the work through his own requires he may apply to the appropriate authority/manufacturer, such application of the contractor with his recommendations.

15.3 The aforesaid condition would not however amount to any guarantee expressed or implied and the contractor still remains contractually liable to make his own. Arrangements to fulfill his contractual obligations. No claim what so ever shall be admissible in the event of any delay in finalization of the supply of such materials.

**16. PERIOD FOR KEEPING THE TENDER OPEN**

The tender shall remain open for acceptance for a period of 60 (Sixty) days from the date on which the tenders are due to be submitted.

**17. Blank****18. CONTRACTOR'S REPRESENTATIVES AND WORKMEN**

Refer condition 25 of IAFW-2249. The contractor shall employ only Indian Nationals as his representatives, servants and workmen and verify their antecedents and loyalty before employing them for the works. He shall ensure that no person of doubtful antecedents and nationality is, in any way associated with work.

Contd . . /-

**SPECIAL CONDITIONS (Contd. .)****19. SECURITY OF CLASSIFIED DOCUMENTS**

Contractor's Special attention is drawn to conditions 2-A and 3 of IAFW-2249 (General Conditions of Contracts). The contractor shall not communicate any classified information regarding the work either to subcontractors or others without the prior written approval of the Engineer-in-Charge. The contractor shall also not make copies of the design/drawing and other documents furnished to him in respect of work, and shall return all documents on completion of the work or earlier on determination of the contract. The contractor shall alongwith the final bill attaches a receipt of his having returned the classified documents as per conditions 3 of IAFW-2249 (General conditions of contractor).

**20. RECORD OF MATERIALS**

20.1 The quantity of materials such as paints, water proofing compound and the like, as directed by the Engineer-in-Charge (the quantity of which cannot be checked after incorporation in the works), shall be recorded in measurement books and signed by the contractor and the Engineer-in-Charge as a check to ensure that the required quantity has been brought to site for incorporation in the work.

20.2 Materials brought to site shall be stored as directed by the Engineer-in-Charge recorded in Measurement Book and shall be suitably marked for identification.

20.3 The contractor shall, on demand, produce to the GE original receipted vouchers in respect of the supplies. Vouchers so produced and verified shall be stamped by Engineer-in-Charge indicating contract number. The contractor shall ensure that the materials are brought to site in original sealed containers/packing; bearing manufacturer's marking except in the case of the requirement of material(s) being less than smallest packing.

20.4 Contractor shall produce original vouchers from the manufacturers and/or their authorised agents for the full quantity of the following materials, as applicable as a prerequisite before submitting for payment for any advances on account of the work done and/or materials collected in accordance with condition 64 of General Conditions of Contracts IAFW-2249.

- (a) HT XLPE insulated cable
- (b) Cable joints
- (c) Insulators
- (d) Lightning Arrestor
- (e) Earthing plates
- (f) Gang operated air break switch
- (g) Transformer oil
- (h) Relay
- (j) Parts of circuit breakers

**21. SECURITY AGAINST LOSS OR DAMAGE**

The contractor shall furnish to the Engineer-in-Charge every morning distribution return of his plants/equipments on the site of work stating the following particulars: -

(i) Particulars of plants/equipments, their make manufacture Model No. If any. Registration No if any, capacity, year of manufacture and year of purchase etc.

(ii) Total No (Quantity) on site of work.

(iii) Location, indication No. quantity at each location of site of work.

(iv) Purchase value on the date of purchase. For the purpose of the condition, plant/equipment, shall be given vehicle No i.e. trucks and lorries but neither the workman's tools nor any manually operated tools/equipment. The Engineer-in-Charge shall record the particulars supplied by the contractor in the works diary and send the return to the GE for record in his office.

Contd . . /-

**SPECIAL CONDITIONS (Contd. . )**

**Note:** - However this will not absolve the contractor of his responsibility for safe custody of plants, equipments etc even though the work is to be executed in restricted area.

**22. RELEASE OF ADDITIONAL SECURITY DEPOSIT**

22.1 Refer condition 22 and 68 of IAFW-2249

22.2 The contractor in case he has to deposit additional security deposit for the contract, is advised to deposit the additional deposit security in two equal parts so as to facilitate its release in accordance with condition 68 of IAFW-2249.

**23. OFFICIAL SECRET ACT**

The contractor shall be bound by the official secret Act 1923.

**24. CLEANING DOWN**

Refer condition 49 of IAFW-2249, General Conditions of Contracts:- The contractor shall clean all floors, walls remove cement, lime, paint marks, drops etc. clean the joinery glass panes etc touch up all painters work and carryout all other necessary items of work in connection there with and leave the whole premises clean and tidy before handing over the building(s) and other works covered under this contract.

**25. DETAILS OF CONSTRUCTION**

The quoted rates shall be deemed to include for minor details of construction which are obviously and fairly intended and are essential for completion of the work but may not have specially been referred to in these documents. In the event of disputes the decision of the Accepting Officer shall be final, binding and conclusive.

**26. OCTROI/SALES TAX/GST AND OTHER DUTIES**

Contractor's rates shall be deemed to be inclusive of all duties such as Octroi, Sales Tax, excise, VAT/GST etc as referred in condition 10 of IAFW-2249 (General Conditions of Contract) and state Govt sales tax/GST on works contracts payable under respective statutes pursuant to the Constitution (Forty sixth amendment) Act 1982. Any condition stipulated by the tenderer regarding sales tax/GST on works contracts will not be considered and such tender shall be liable for rejection.

**27. CONSTRUCTION LABOUR WELFARE CESS**

The quoted rates by the tenderers shall be deemed to be inclusive of construction labour welfare cess and no extra payment shall be admissible to the contractor on this account.

**28. TESTING OF MATERIALS**

28.1. All the materials to be incorporated in the work shall be subjected to quality control tests as per the testing procedure and frequency as laid down in relevant IS and as indicated in the tender.

28.2. Irrespective of whatever is indicated elsewhere in the tender documents the modalities of testing arrangements shall be as mentioned here in after.

Contd . . /-

**SPECIAL CONDITIONS (Contd. . .)**

28.3. The contractor shall set-up his site laboratory fully equipped to the satisfaction of GE to carry out the `A` type tests as given in Appendix `A` to these specifications. The laboratory shall be set up in all respects before any activity requiring tests as indicated above is physically commenced. Contractor shall employ a competent person technically qualified and approved by the GE to carry out the testing activities. All the tests shall be carried out in the presence of Engr-in-Charge and records shall be jointly signed by the contractor and Engineer-in-Charge.

28.4. Entire cost of laboratory and its functioning including cost of samples will be borne by the contractor in all respects and no separate recovery for testing charges shall be effected for tests/retests carried out at site laboratory. If in the opinion of GE (whose decision in this regard shall be final) any of the `A` type tests as given in Appendix `A` to these specifications cannot be satisfactorily carried out in the site laboratory at any stage due to any reason the same shall be got done in Govt approved lab/Engineering College as approved by GE in respect of which all expenditure there of shall be borne by the contractor.

28.5. Any tests marked as type `A` `B` or `C` in Appendix `A` if got done at SEMT wing, Pune, testing charge as indicated against them will be recovered from the contractor. In addition to this the contractor shall arrange for samples and its handling/transportation to the concerned labs at his own cost.

28.6. The tests marked as type `B` and `C` will not be carried out in the site laboratory. These tests shall be carried out only in SEMT wing/Govt approved lab/National test House/Engineering College as approved by the GE. In case type `B` and `C` testing is done in SEMT wing, the testing charges recovered shall be as indicated in the Appendix `A` to these P.S. against each test. However if testing is done in other places as mentioned above, the actual cost will be directly borne by the contractor.

28.7. The list of tests given in Appendix `A` to these PS contain only a few common tests. However all other tests required in the work but not covered in the appendix shall also be got done from Govt approved lab/ Engineering College /National test house as approved by GE and entire cost of samples, handling, transportation and actual testing charge will be borne by the contractor directly.

**29. MATTERS ARISING BETWEEN VARIOUS AGENCIES WORKING AT SITE**

The contractor shall permit free access and afford reasonable facilities to other agencies or departmental workmen, If any engaged by Govt to carry out their part of work in the area No extra payments shall, however be made to the contractor on this account what so ever. The decision of GE shall be final and binding on the contractors in all matters arising between the various contractor working at site simultaneously. The various agencies/contractors working contemporaneously at the site are required to work in close co-ordination.

**30. DAMAGE TO EXISTING WORKS**

Any damage done to the existing structure during the execution of work shall be made good by the contractor at his own cost and the site of work shall be left clean and tidy on completion rectification/re-instatement making good etc shall conform to the standard of materials originally used on the work and shall match with existing work in all respects to the entire satisfaction of the GE. In case of any dispute on this account decision of the GE shall be final, conclusive and binding.

**31. FORCE MAJEURE**

Should any force majeure circumstances arise, each of the contracting party shall be excused for the non fulfillment or for the delayed fulfillment of any of its contractual if the affected part within 15 days of its occurrence informs the other party in writing.

Contd . . /-

**SPECIAL CONDITIONS (Contd. . .)**

Force Majeure shall mean fires, floods, natural calamities or other acts such as war, turmoil's, strikes (as not limited to be establishment of the seller), sabotage, explosions, quarantine restrictions beyond the control of either party.

It is understood and agreed between the parties hereto that the right and obligations of the parties shall be deemed to be in suspension during the continuance of the force majeure event as aforesaid and the said rights and obligations shall automatically revive upon the cessation of the intervening force majeure event the period within the rights and obligation of the parties shall be in suspension due to force majeure event shall not be considered as a delay with respect to the period of delivery and/or acceptance of delivery under the contract or other to the detriment of either party.

Notwithstanding the provisions of the immediately preceding clauses it is further understood and agreed between the parties hereto that in the event of any force majeure persisting for an uninterrupted period exceeding (06) six months, on their part reserves the right to terminate this contract upon giving prior written notice of 30 (thirty) days to the other party of the intention to terminate without any liability other than reimbursement on the terms provided in their agreement for the goods received.

**32. RE-IMBURSEMENT / REFUND ON VARIATION IN "TAXES DIRECTLY RELATED TO CONTRACT VALUE"**

32.1. The rates quoted by the Contractor shall be deemed to be inclusive of all taxes (including Sales Tax/VAT/GST on materials, Sales Tax/VAT/GST on Works Contracts, Turnover Tax, Service Tax, Labour Welfare Cess/Tax etc.), duties, Royalties, Octroi & other levies payable under the respective Statutes. No reimbursement/refund for variation in rates of taxes, duties, Royalties, Octroi & other levies, and/or imposition/abolition of any new/existing taxes, duties, Royalties, Octroi & other levies shall be made except as provided in sub Para 32.2 here-in-below.

32.2. The taxes which are levied by Govt. at certain percentage rates of Contract Sum/Amount shall be termed as "taxes directly related to Contract value" such as Sales Tax/VAT/GST on Works Contracts, Turnover Tax, Labour Welfare Cess/Tax and like but excluding Income Tax. The tendered rates shall be deemed to be inclusive of all "taxes directly related to Contract value" with existing percentage rates prevailing on last due date for receipt of tenders. Any increase in percentage rates of "taxes directly related to Contract value" with reference to prevailing rates on last due date for receipt of tenders shall be reimbursed to the Contractor and any decrease in percentage rates of "taxes directly related to Contract value" with reference to prevailing rates on last due date for receipt of tenders shall be refunded by the Contractor to the Govt. / deducted by the Govt. from any payments due to the Contractor. Similarly imposition of any new "taxes directly related to Contract value" after the last due date for receipt of tenders shall be reimbursed to the Contractor and abolition of any "taxes directly related to Contract value" prevailing on last due date for receipt of tenders shall be refunded by the Contractor to the Govt./deducted by the Govt. from the payment due to the Contractor.

32.3 The contractor shall, within a reasonable time of his becoming aware of variation in percentage rates and/or imposition of any further "taxes directly related to Contract value", give written notice thereof to the GE stating that the same is given pursuant to this Special Condition, together with all information relating thereto which he may be in a position to supply. The contractor shall submit the other documentary proof/ information's as the GE may require.

32.4. The Contractor shall, for the purpose of this condition keep such books of account and other documents as are necessary and shall allow inspection of the same by a duly authorized representative of Govt, and shall further, at the request of the GE furnish, verified in such a manner as the GE may require, any documents so kept and such other information as the GE may require.

Contd . . ./-

**SPECIAL CONDITIONS (Contd. . )**

32.5. Reimbursement for increase in percentage rate/imposition of “taxes directly related to Contract value” shall be made only if the Contractor necessarily & properly pays additional “taxes directly related to Contract value” to the Govt. without getting the same adjusted against any other tax liability or without getting the same refunded from the concerned Govt. Authority and submits documentary proof for the same as the GE may require.

\_\_\_\_\_  
(SIGNATURE OF CONTRACTOR)  
DATED \_\_\_\_\_ 2018

SSW  
FOR ACCEPTING OFFICER



**PARTICULAR SPECIFICATIONS****1. GENERAL**

1.1 The work under this contract shall be carried out in accordance with Schedule 'A'/BOQ and Particular Specifications, drawings forming part of this Contract and General specifications and other provisions in the MES Schedule.

1.2 The term 'General Specifications' referred to hereinbefore, as well as referred to in IAFW-2249 (General Conditions of Contracts) shall mean the specifications contained in the MES schedule 2009 Part I (specifications) and MES Schedule of Rates Part II - 2010.

1.3 General Rules, specifications, Special Conditions and all preambles in the MES schedule shall be deemed to apply to the works under this contract. In case of any discrepancy, the provisions in these tender documents shall take precedence over the aforesaid provision in the MES Schedule

**2. SCOPE OF WORK**

2.1 The work under this section includes for full, final and entire completion of items of works described in BOQ/schedule 'A', as specified in particulars specifications.

**3 LAYOUT**

3.1 The layout of equipments and cable routes shall be as approved by the Garrison Engineer in writing before the contractor takes the work in hand for execution. The length of cable may be increased / decreased to suit the site requirements. The contractor shall verify lengths of the cable etc actually required at site before purchasing the same.

**4. SAMPLES OF MATERIAL**

4.1 The contractor shall produce the samples of all the materials and obtain approval in writing from the GE before he places bulk orders for the materials for incorporation in the work, In respect of materials for which samples are not kept or detailed specifications are not given hereinafter the materials shall comply with relevant IS specifications. The contractor shall supply general specifications, test certificates from the manufacturers whose equipments are proposed to be incorporated in the work under this contract.

**5. EXCAVATION AND EARTH WORK**

5.1 Excavation for trenches shall be carried as per the layout and the depth as directed by the Engineer-in-Charge. The minimum depth and width of the excavation shall be as specified in SSR 2009 (Part I). Excavation and earthwork shall be calculated, measured and paid for a specified in MES standard schedule of rates. In case of any dispute with regard to the classification of various strata the decision of the GE shall be final and binding

**6. SURPLUS SPOILS**

6.1 All surplus spoils of excavation shall be disposed off by the contractor at places as directed by the Engineer-in-Charge and spread and leveled.

**7. HARD ROCK**

The hard rock if obtained from excavation shall be the property of Contractor for which he will be charged at the rate of Rs. 350.00 per Cubic Metre of measurements. The method of measurement shall be as laid down in clause 3.1 on Sr Page No 18 & 19 of SSR-2010 Part II. These measurements shall be properly recorded in MB and signed by Engineer-in-Charge & Contractor. The cost of stacking & removal of the hard rock is deemed to be covered in the rate of recovery mentioned above.

8. **MAKING GOOD DAMAGES**. Any damage during execution of the work, to the MES property under the contract shall be made good by the Contractor without any extra cost to the Government.

9. **STEEL/IRON WORK**. All the steel/iron work shall be ordinary quality Fe-410-0 or Fe-310-0 conforming to IS-1977. All exposed surfaces shall be painted with two coats of approved synthetic enamel paint over a coat of red oxide primer.

**10. STANDARD OF QUALITY AND WORKMANSHIP**

10.1 The installation shall strictly comply with the provision in the latest edition of "Indian Electricity Act & Rules framed thereunder (as amended upto date) as applicable to the works in Schedule 'A' except where such regulations and rules are modified by these specifications.

10.2 Refer Condition-25 of "General Conditions of Contracts (IAFW-2249). All work shall be carried out by properly skilled & licensed electricians under the supervision of qualified supervisors. The entire work shall be of high standard with approved materials and to the entire satisfaction of the Engineer-in-Charge.

Contd....

**PARTICULAR SPECIFICATIONS (Contd..)****11. MAKE/MANUFACTURE OF THE EQUIPMENT MATERIALS**

11.1 The equipment/materials shall be of various makes and manufacturers as stipulated in BOQ/Schedule 'A' and particular specifications of this contract, and as per Appendix to P.S. In case of equipment and material where make/manufacturer is not mentioned, the order of acceptance shall be as under:-

(a) Materials bearing ISI Markings

(b) In the absence of (a) above, materials conforming to IS

(c) In the absence of (a) & (b) above, the materials shall conform to or superior in quality to the 'Samples' referred to in tender and/or shall comply with the specifications given here-in- after.

**11.2 PRODUCTION OF TEST CERTIFICATES**

11.2.1 The contractor shall submit manufacturer's test certificates for the following material/equipment alongwith original purchase vouchers to Garrison Engineer before incorporating the same in the work and before claiming the payments.

- (a) HT XLPE insulated cable
- (b) Cable joints
- (c) Insulators
- (d) Lightning Arrestor
- (e) Earthing plates
- (f) Gang operated air break switch
- (g) Transformer oil
- (h) Relay
- (j) Parts of circuit breakers

12. **UNDER GROUND CABLES** The power cable shall be heavy duty of 1100 volts type aluminum conductor PVC insulated inner sheathed sheet galvanised steel strip armoured or unarmoured as given in Schedule 'A' and as specified. PVC sheathed all conforming to IS-1554 (part I) 1976 as amended upto date.

**12.1 LAYING OF CABLES** The cable shall be drawn on rollers, spaced sufficient close to prevent abrasion. Sharp bends shall be avoided. Cables shall be marked at all joints or junction boxes. Near water mains a clearance of atleast 25cms shall be allowed. The cable shall be snaked to provide adequate length of cable for future joints at all junction boxes and at ends and the cable snaking shall be measured and paid under appropriate item of Sch 'A'. Cable tags shall be provided on all cables at each end and just before entering the equipment enclosure, on both sides of the walls or floor crossing, on each duct/conduit entry and at every 10 metres interval in cable trays & trenches run. Cable tags shall also be provided very near the switchgear, control panel, wherever required for cables identification, such as where number of cables enter together through a gland plate. The price of the cable tags and cable indicator shall be deemed to be included in the rate for cables. The tags shall be of suitable size of GI Sheet with edges chamfered and duly engraved showing the "size ----- and showing route as from ----- to -----".

**12.2. CABLES GLANDS** 11000V cable shall be terminated using double compression type cable glands, these shall be of heavy duty, brass castings, machine finished & turned to avoid corrosion. Cost of the cable glands complete with accessories are deemed to be included in the unit rate of cable. Rubber components used in glands shall be of nectarine tested quality.

**12.3. CABLES INDICATOR**

**12.3.1** PCC cover minimum 450x180x40mm with top tapering at both sides, top visible above ground level duly inscribed (LT 1100 V grade cable from ----- to-----). Inscription will be with black cement paint, Cable indicator will be placed at every 300 metres length, bends and joints. Cost of excavation, refilling, provision of sand PCC Slab, covers, cables indicator & termination of LT cable all as specified in schedule 'A'. HT cable will be laid with PCC slab cover across as per clause 19.20 of SSR Part I in trenches and LT cables will be laid on bricks. For end termination of LT cables, suitable lugs & cable glands double compression type shall be used & the cost is deemed to be included in the cable rates. Earth lead from gland to panel earth bus will be connected. Rates for this also are deemed to be included in the rates of cables.

Contd.../-

**PARTICULAR SPECIFICATIONS (Contd..)**

12.3.2 Cable shall be laid in trenches as specified in SSR 2009 (Part-I) and the depth shall not be less than these specified in SSR 2009 (Part-I). The bottom of the trenches shall be levelled and made free from stones. Cables shall be laid in trenches on 100mm thick cushion of Jamuna sand extending 100mm beyond out of the cable on each side. The cable after the laying and jointing approved by the Engineer-in-Charge shall be covered with a further layer of Jamuna sand 100mm thick and to the same width. The cables laid shall be covered with precast concrete covers as specified in Srl item No 9 of Sch 'A'. The trenches then shall be filled with excavated earth in layer watered & rammed as directed by Engineer-in- Charge. The cable shall not be laid on ashes, refuse or any other material liable to injure the cable. For more than one cable laid in the same trench, the cable shall be separated by minimum distance of 30cms from edge to edge of cables.

**12.4 CABLES LAID IN DUCTS** :- The cable laid in ducts shall be properly secured on cradles made out of 75 x 75 x 6mm MS angle welded to channel ISMC-100. The cradle shall be provided at a distance not exceeding one metre and at near bends and 25 x 5mm, GI bolts, washers, nut etc shall be deemed to include in the unit rates of cable.

**12.5. CABLE LAID THROUGH PIPE** :- Wherever the cables cross the road/plinth of building, they shall be drawn through pipes (as specified in Sch 'A') which shall be laid in trenches. Ends of pipes shall be sealed off properly by means of wooden bushes soaked in bituminous compound after the cables have been passed through the pipes. Cost of sealing material is deemed to be included in the unit rate of items. The slope of cable approaching or leaving the pipe shall not be steeper than 1:10. The cost of GI pipe, excavation and earthwork shall be deemed to be included in respective items of Sch 'A' for entry and exist excluding for road crossing. Before taking up the work of laying of cable in the area belonging to Ministry of Defence, the contractor shall give due notice to the local authorities through MES. He shall also be responsible for making adequate arrangement for lighting and guarding excavation etc which might be source of danger to public

**12.6. TESTING OF UNDERGROUND CABLES** :- Testing of cable shall be carried out as per clause 19.93 to 19.96 of SSR 2009 (Part I). HT/LT cables shall be tested for high voltage to the required value and time as per respective IS. All testing equipment required for cables and other items of work to be executed in this contract is to be provided by the contractor. Cost of testing and material required will be borne by the contractor without any extra cost to the Govt. This element is deemed to be included in the unit rate quoted against the item being tested. Cables shall be supplied in standard drum lengths.

12.7. **JOINTS & CABLE TERMINATIONS** :-Only one straight through joint is permissible in a stretch length of 500 metres (\* 5% tolerance) upto sizes 240sqm and only one joint in a stretch length of 250 metres (5% tolerance) in sizes 300 Sqm and above. These lengths given are the standard drum lengths for the respective sizes of cables. Jointing of cables and cable end termination shall be done by proper crimping method using Dowells lugs/ferrules. Corrosion inhibiting compound shall be supplied on the conductor before crimping the lug.

**13. HT 11 KV CABLES**

13.1 The HT cable shall be XLPE, 11 KV grade, of core and size as specified in schedule 'A'.

13.2 The cable shall conform to IS-7098 Part II -1985.

13.3 The type of cable shall be suitable for 11 KV high tension voltage. The insulation of cable shall be extruded cross linked polyethylene ( XLPE) conforming to IS-7098, which shall be applied using a dry cure process/Sioplas process.

13.4 The contractor shall furnish a certificate from the manufacturer that XLPE cable has been manufactured by dry curing process under pressurised nitrogen conditions. The department shall have the right to confirm from the manufacturer about the genuineness of the manufacturing process/Sioplas process either through an officer deputed for the purpose or through post. The payment against the material of XLPE cable shall only be released after confirmation.

13.5 The department shall also have the right to send the sample of cable (from quantity of the material supplied) to CPRI to confirm whether the cable has been manufactured by dry curing process/sioplas process mentioned above. Necessary charges for transporting of sample to lab and lab charges shall be deemed to be included in the unit rate quoted for the item.

13.6 The cable shall be supplied from any one of the manufacturer as specified in Appendix attached here – in – after.

Contd.../-

**PARTICULAR SPECIFICATIONS (Contd..)**

13.7 The laying of cable shall be carried out as specified here-in-before.

**14. LT CABLES**

14.1 These shall be of 1100 volts grade conforming to ISS-1554 part-I & Part-II. No straight through joints shall be permitted in the unarmoured PVC cables. All cables shall be wired with a tag of GI sheet indicating source, the load & size. The cables shall be of aluminum.

**15. MILD STEEL GALVANISED TUBING.** The tubing shall be provided as mentioned in schedule 'A' and as directed by Engineer-in-Charge. Mild steel galvanized pipes and also their fittings shall be IS-1289 marked.

**16 EARTHING**

16.1 Earthing shall be all as per ISS and Electrical Plate No. 3 in SSR 2009, Part -1. The Contractor shall obtain the approval of GE for layout of earthing before the commencement of work and it shall be executed in the presence of an appropriate MES representative.

16.2. Earthing shall be provided all as described in Schedule 'A' and as specified in Clause 19.137.2 to 19.145 of SSR 2009, Part - 1.

16.3 The charcoal dust return filling shall be done in layers not exceeding 150 mm thick and shall be properly watered and rammed. Surplus soil shall be disposed off to a distance not exceeding 50 m and site left clean and tidy on completion. PCC (1:2:4) type B-1 shall be used for earth pit. 15 mm bore GI light grade protection pipe and 15 mm bore medium grade watering pipe shall be provided. Cost of all excavation and earth work in any strata shall be deemed to be included in the unit rate of earthing.

16.4 All earth electrode shall be tested for earth resistance by means of standard earth megger. The test shall take place in dry months preferably after a protracted spell.

16.5 The resistance of earth electrode shall not exceed 1 Ohm. In case the resistance of electrode exceeds 1 Ohm due to soil conditions the earthing shall be carried out through another method as per IS - 3043.

**17 CABLE PROTECTION COVERS**

17.1 **LT Cable** Protection shall be as specified in Schedule 'A'. Brick shall be provided as mentioned in Schedule 'A' and specified in MES SSR Part-I (2009).

17.2 **For HT Cables** Protection only PCC covers of sizes as indicated in Schedule 'A' shall be provided conforming to IS-5820 and shall be provided as mentioned in Schedule 'A' and specified in clause 19.20 of MES SSR Part-I (2009).

**17A. VCB (VACUM CIRCUIT BREAKER)**

17A.1 The supply, installation, testing and commissioning of vacuum circuit breaker (VCB) indoor type floor mounted complete shall be provided as mentioned in Schedule 'A' and as directed by GE.

17A.2 Tripping/protection system of HT VCB i.e, relays shall be tested by secondary injection system at site after installation, before commissioning at the contractor's cost which is deemed to be included in rates quoted. Relay setting would be done to provide proper discrimination down stream i.e, between JVNL/HVFN & MES panel and main incoming all as directed by GE.

17A.3. VCB shall be manufactured at the factory premises of approved manufacturer only.

**17B. RECORD DRAWINGS**

The contractor after successful completion and testing shall submit record drawings prepared by Auto Cad Software (2 CDs + Soft Copies, A2 size) indicating the complete electrical network and circulatory to facilitate reference, maintenance as under and as applicable to the scope of work.

- (a) Actual position of VCBs, cable runs etc with details.
- (b) Detailed schematic diagram and S/S layouts with equipments details.
- (c) Schematic circuit and control wiring diagram.
- (d) The following record for all buried cables:-
  - (i) Size and type of cable and manufacture's drum number.
  - (ii) Location of the cables in relation to buildings, roads etc with depth.
  - (iii) Cross section showing where cables are laid in pipes or ducts giving their sizes, types and depths together with an indication of any spare ways available.
  - (iv) Position and types of all joints.
  - (v) Locations of other cables which can run along with or cross the cable routes.
  - (vi) Position and depths of all pipes, ducts etc which are met as obstruction to the cable route.
  - (vii) Accurate lengths from joint to joint.
  - (viii) Record of service lines as per MES Schedule Part-I (2009)

**PARTICULAR SPECIFICATIONS (Contd..)****18. TECHNICAL SPECIFICATIONS OF OUTDOOR CIRCUIT****18.1 SCOPE.**

(a) This specification covers the design, engineering, manufacture, testing at works, supply, Transportation to site, erection, testing and commissioning of 36KV voltage class outdoor type SF6 circuit breaker for use on systems with nominal voltage 33KV

(b) Unless otherwise specified, all equipment and material shall conform to the latest applicable Indian Standards, Equipment complying with any other International Standards will also be considered if it ensures performance of equipment equal to or superior to Indian Standards. )

**18.2 GENERAL.**

18.2.1 The circuit breakers and accessories shall conform to IEC :56 or IS: 12729, IEC :694 and other relevant IEC/IS standards.

18.2.2 36 KV circuit breaker offered shall be off sulphur hexa fluoride (SF6) only. The contractor may offer circuit breaker (CB) of either live type or dead tank type of proven design.

18.2.3 The circuit breaker shall be complete with terminal connectors, operating mechanism, control cabinet, piping, Inter pole cable, cable accessories like glands, terminal block, marking ferrules, lugs, Two level pressure switch scale, galvanized support structure for CB and control cabinets and all circuit breaker accessories required for carrying out all the functions the CB is required to perform.

**18.3 DUTY REQUIREMENTS**

18.3.1 The circuit breaker shall be re-strike free as per IEC under all duty conditions and shall be capable of performing their duties without opening resistors .

18.3.2 The circuit breaker shall meet the duty requirements for any type of fault or location for line switching when used on 36 KV effectively grounded system and perform make and break operations as per the stipulated duty cycles satisfactorily.

18.3.3 The breaker shall be capable of interrupting the steady state and transient magnetizing current of power transformer.

18.3.4 The features and constructional details of circuit breakers shall be in accordance with requirements stated as under :-

18.3.4(i) Contacts. The gap between the open contacts shall be such that it can with stand at least the rated phase to ground voltage for 8 hrs at zero gauge pressure of SF6 gas due to leakage. The breaker should be able to with stand all dielectric stresses imposed on it in open at lock out pressure continuously (ie 2p.u across the breaker continuously).

**18.4 THE SF6 CIRCUIT BREAKER SHALL MEET THE FOLLOWING ADDITIONAL REQUIREMENTS**

(a) The circuit shall be single pressure type. The design and construction of the circuit breaker shall be such that there is a minimum possibility of gas leakage and entry of moisture. There should not be any condensation of SF6 gas on the internal insulating surfaces of the circuit breakers.

(b) All gas kitted shall be smooth, straight and reinforced, if necessary, to minimize distortion

and at tight seal. The operation and connecting the operating mechanism to the arc chamber(SF6 media) shall have adequate seals. The SF6 gas leakage should not exceeded beyond 1% per year.

(c) Each pole shall form an enclosure filled with SF6 gas independent of two other poles.

18.5 **SULPHUR HEXAFLUORIDE GAS(SF6 GAS) :** The SF6 gas shall comply with IEC : 376,376A and 376B and shall be suitable in all respects for use in the switchgear under the normal operation condition.

18.6 **INSULATORS** : The porcelain/SMC insulators shall conform to relevant IEC.

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**PARTICULAR SPECIFICATIONS (Contd..)****18.7 GENERAL REQUIREMENTS :**

18.7.1 The circuit breaker shall be operated by spring charged mechanism. The mechanism shall be housed in a weather proof and dust proof control cabinet conforming to IP-65.

18.7.2 The operating mechanism shall be strong, rigid, not subject to rebound and shall be readily accessible for maintenance to a man standing on ground.

18.7.3 The mechanism shall be anti pumping and trip free (as per IEC definition) under every method of closing.

18.7.4. The mechanism shall be such that the failure of any auxiliary spring will not tripping and will not cause trip or closing operation of the power creating devices.

18.7.5 A mechanism indicator shall be provided to show open and close position of the breaker. It shall be located in a position where it will be visible to a man standing on the ground level with the mechanism housing closed. An operation counter shall also be provided in a central control cabinet.

**18.8 CONTROL.**

18.8.1 The close and trip circuit shall be designed to permit use of momentary contact switches and push buttons.

18.8.2 The breaker shall normally be operated by remote electrical control. The electrical tripping shall be performed by shunt trip coils. However, provisions shall be made for local electrical control. For this purpose local/remote selector switch and close and trip control switch/push buttons shall be provided in the breaker central control cabinet.

18.8.3 The trip coil shall be suitable trip circuit supervision during both open and close position of breaker. The trip circuit supervision relay would be provided on relay panels.

18.8.4 The closing coil and associated circuit shall operate correctly at all values of voltage between 85% and 110% of the rated voltage. The shunt trip coil and associated circuit shall operate correctly and all operating conditions of the circuit breaker upto the rated breaking capacity of the circuit breaker and at all values of supply voltage between 70% and 110% of rated voltage

**18.9 SPRING OPERATED MECHANISM**

(a) Spring operated mechanism shall be operated with motor operating spring and closing spring with limit switch for automatic charging and other necessary accessories to make the mechanism and complete operating unit shall also be provided.

(b) As long as power is available to the motor a continuous sequence of the closing and opening operation shall be possible. The motor shall have adequate thermal rating for this duty.

(c) The breaker operation shall be independent of the motor which shall be used solely for compressing of the closing spring. Facility for manual charging of the closing spring shall be provided. The motor rating shall be such that it requires not more than 15 seconds for full charging of the closing spring.

(d) Closing action of circuit breaker shall compress the opening spring ready for tripping.

(e) Provision shall be made to prevent a closing operation of the breaker when the spring is in the partial charged condition.

(f) The spring operating mechanism shall have adequate energy stored in the operating spring to close and latch the circuit breaker against the rated making current and also to provide the required energy for the tripping mechanism in case the tripping energy is derived from the operating mechanism.

**18.10 SUPPORT STRUCTURE**

(a) The structure design shall be such that during operation of circuit breaker vibrations are reduced to minimum.

**18.11. TERMINAL CONNECTOR PAD**

(a) The circuit breaker terminal pads shall be made up of high quality Aluminium/Copper.

**18.12 INTERPOLE CABLING**

All cables to be use by contractor shall be armoured and shall be as per IS-1554(1100 Volts Grade). All cables within and between circuit breaker poles shall be supplied by the CB manufacturer

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**PARTICULAR SPECIFICATIONS (Contd..)****18.13 TEST CERTIFICATES AND EXCISE GATE PASSES ETC.**

(a)Manufacturer's test certificates for routine tests shall be furnished by the tenderer in respect of SF-6. If deemed necessary by the department, these routine tests may be concluded at the manufacturer's work shop in **presence of the GE's representative**. A fifteen days (15 days) notice shall be given by the contractor to the department before ordering despatch from the factory, so that the GE can consider the issue and convey his decision to have it inspected or otherwise. All test shall be carried out in accordance with relevant Indian Standards (Or British Standards where Indian Standards do not exist).

**19. TESTING OF INSTALLATIONS**

19.1. All electrical works shall be tested by the Contractor in the presence of and to the entire satisfaction of the Engineer-in-Charge in accordance with SSR of 2009 and Indian Electricity Rules and the cost of the same shall be borne by the contractor.

19.2. Any equipment material etc found unsatisfactory/not complying with the specifications shall be rectified/replaced by the Contractor at his own cost.

19.3. Not-with-standing the tests carried out at the time of commissioning the equipment/installations the Contractor shall be responsible for rectifying defects, replacing defective equipment before carrying out the final test. Test report shall be furnished duly signed by both the parties.

19.4. The resistance of earth electrode shall not exceed 1 Ohm. In case the resistance of electrode exceeds 1 Ohm due to soil conditions the earthing shall be carried out through another method as per IS - 3043.

**20. TESTING OF TRANSFORMER**

All the transformer shall be deemed to have undergone satisfactory tests as specified in IS : 2026(Part 1, 2, 3 and 4). The test certificates shall be furnished to GE for these test all as specified in relevant clause of SSR Part-I.

**21 MAINTENANCE AND TRAINING**

21.1. Maintenance services for the equipment furnished under these specifications and described in schedule 'A' shall be provided by the contractor without any extra cost to the department.

**22 PRODUCTION OF PURCHASE VOUCHERS**

22.1 The Contractor shall be required to purchase the articles required to be incorporated in the work directly from the manufacturer to ensure that the material is genuine. He shall submit the original purchase vouchers of manufacturers, guarantee certificates excise duty and test certificates to the Engineer-in-Charge for his verification before claiming his payment . However where the manufacturer do not have the system policy of sales directly by them and deals their sales through dealers net work only, the contractor may purchase the material/articles from the authorized dealers of the company who are required to show on the cash memo/bills all the taxes etc makes and numbers as required. The contractor shall submit machine numbered purchase voucher for air brake isolator, LT control cables, lightening arrester, SF-6 Gas circuit breakers, SF-6 gas, CT, PT, insulator, cable jointing kit, fire fighting extinguishers, street light fitting and any other item as desired by the GE or Engineer-in-Charge. Two copies of CTC of the same shall be made by the Engineer-in-Charge for reference and record. The said original purchase vouchers shall be released to the Contractor after defacing the same as having verified with respect to this Contract.

\_\_\_\_\_  
Signature of Contractor

SSW  
for Accepting Officer

Date : \_\_\_\_\_

**LIST OF MAKE/MANUFACTURERS OF EQUIPMENT/MATERIALS**  
**INTERNAL & EXTERNAL ELECTRICATION**

S No	Product	GROUP OF PRODUCTS BASED ON MAKES / BRANDS		
		GROUP 1	GROUP 2	GROUP 3
1	POWER TRANSFORMER 132/66/33/22 KV	BHEL, SCHNEIDER, ABB, SEIMENS, BHARAT BIJLEE, ALSTOM.	CROMPTON GREAVES, ECE INDUSTRIES LTD, VOLTAMP, ANDREW YULE, MEGAWIN, ITE G URG AON, RAJSTHAN TRANSFORMER & SWITCH GEAR, AREVA (T&D)	
2	DISTRIBUTION TRANSFORMERS 11 KV ABOVE 500 KVA CAPACITY	BHEL, SCHNEIDER, ABB, SEIMENS, BHARAT BIJLEE, ALSTOM.	POWERGEAR,ANDREW YULE, INDIAN TRANSFORMERS & ELECTRICALS-GURGAON (ITE-GUR), VOLTAMP, PACTIL, CROMPTON GREAVES, HINDUSTAN TRANSFORMERS, POWER WARE, RAJASTHAN TRANSFORMER AND SWITCHGEAR, SAI TRANSFORMER, URJA TECHNIQUES, DIAMOND, JK TRANSFORMER UNIVERSAL	
3	DISTRIBUTION TRANSFORMERS UPTO 500 KVA CAPACITY	CROMPTON GREAVES, ANDREW YULE, ABB, SCHNEIDER, BHARAT BIJLEE, VOLTAMP	POWERWARE, INDIAN TRANSFORMER & ELECTRICALS-GURGAON, DIAMOND, HINDUSTAN TRANSFORMERS	
4	CHEMICAL EARTHING	OBO,JMB,JMV (EARTHING), ENOV, POWERTRACK, TIRUPATI		
5	STAR RATED ENERGY EFFICIENT TRANSFORMERS STEP DOWN UPTO 200 KVA CAPACITY (4/5 STAR RATING ONLY TO BE USED)	ANY MAKE AS APPROVED BY BUREAU OF ENERGY EFFICIENCY AND BEARING 4/5 STAR RATING LABEL. LIST OF MAKES AVAILABLE ON BEE WEBSITE.		
6	HT SWITCH GEAR 132/33 KV & 66 KV, VCB (OUT DOOR/INDOOR)/ CT & PT	ABB,SIEMENS, SCHNEIDER, BHEL, BHARAT BIJLI, HARTEK	CROMPTON GREAVES, ANDREW YULE, ALSTOM, C&S ELECTRIC, CEC, ITE GURGAON, AREVA (T&D)	
7	HT SWITCH GEAR 33/66 KV,SF6 (OUT DOOR/INDOOR)	ABB,SIEMENS, SCHNEIDER, BHEL, HARTEK	CROMPTON GREAVES, ANDREW YULE, ALSTOM, C&S ELECTRIC, AREVA (T&D), L&T	
8	HT SWITCH GEAR 11KV, VCB (OUT DOOR/INDOOR)HT RING MAIN UNIT, SF6/VACUUM, 11KV/CT & PT	ABB,SIEMENS, SCHNEIDER, BHEL, HARTEK	ALSTOM, L&T, C&S ELECTRIC,ANDREW YULE, CROMPTON GREAVES ADVANCE PANELS & SWITCHGEAR	
9	HT SWITCH GEAR PROTECTION RELAYS (ELECTROMECHANICAL/ NUMERICAL)	L&T, ABB, SIEMENS, SCHNEIDER, EASUN ROYALE	CROMPTON GREAVES, BHARTIYA INDUSTRIES	
10	PACKAGE/UNIFIED SUB-STATION	ABB, SIEMENS, BHEL, SCHNEIDER, BHARAT BIJLEE, VOLTAMP, ALSTOM	CROMPTON GREAVES, L&T, ANDREW YULE, C&S ELECTRIC, INDIAN TRANSFORMERS,& ELECTRICALS GURGAON, RAJSTHAN TRANSFORMER AND SWITCHGEAR, DIAMOND, HINDUSTAN TRANSFORMERS, SUDHIR, POWERWARE	
11	LT/HT CABLE JOINTS HEAT SHRINKABLE /COLD SHRINKABLE/ PUSH ON TYPE	DENSON, M-SEAL, BIRLA 3 M, RAYCHEM, CABSEAL, MSS, JMV		
12	GANG OPERATED SWITCH DEVICE	BHEL,PACTIL,OBLUM, ABB	JAIPURIA, RASHTRIYA, REYCHEM, GE POWER, DENKE POWER SWITCH, ATLAS, SCREW INDIA, SSK ENTERPRISE	
13	LIGHTING ARRESTERS	BHEL, CROMPTON GREVES, SCHEINDER, PACTIL, OBLUM ELECTRICAL, OBO BETTERMEN, JMV, HPL	LEMLOS CO, HPL, ALPRO, CENOTECH INDIA, JAIPURIA, RASHTRIYA	
14	HT/LT PCC POLES	CEMENT FABRIC CHANDIGARH, PUNJAB, CONCRETE LTD CHANDIGARH, HARYANA CONCRETE UDYOG LTD, PCIC, ECI,HINDUSTAN PREFAB, PRACTO ENGINEERS, ICB INDUSTRIES, KASHMIR CEMENT, KB INDUSTRIES, PRE CAST CEMENT, CONCRETE FABRIC, CONCRETE UDYOG LTD, MOAHAN CONCRETE UDYOG LUCKNOW		

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**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

15	CT & PT , 11& 33 KV	ABB, SIEMENS, CROMPTON GREAVES, PRAGATI, AE, KAPPA (AS PER OEM HT PANEL MANUFACTURER)		
16	HT XLPE CABLES 132/66/33 KV & 11 KV	CCI, UNIVERSAL CABLES, FINOLEX, ASIAN CABLES, KEI INDUSTRIES LTD	HAVELLS, GLOSTER CABLES LTD, NICCO, RPG CABLES, POLYCAB, ICL, GEMSCAB, RAVIN, ELEKTRON, CRYSTAL ELECTRIC CO PVT LTD, DIAMOND RALLISON PVT LTD, UNISTAR, PLY CAD	
17	HT/LT STEEL TUBULAR SWAGED POLES	NATIONAL TUBING CO. KANPUR, BHARAT CONDUIT & STEEL WORKS KANPUR, C&S ELECTRIC, SHIVAM METALS	QUALITY STEELS, PARUTHI ELECTRICALS, MS ELECTROSTEEL, SURJEET STEEL INDUSTRIES, SOHAN LAL & SONS, TTI, AST, MAHENDRA INDUSTRIES, VIKRAM INDUSTRIES.	
18	STEEL TUBULAR DECORATIVE POLES OCTAGONAL/HIGH MAST LIGHT AND POLES	FINOLEX, HAVELLS, CROMPTON GREAVES, C & S ELECTRIC, HOMEDEC	KEI, RALLISON, SURYA NICCO, PARAGON, GEMINI, GRANDLAY, POLYCAB, PLAZA, E STANDARD, KALINGA GOLD, GEMSCAB, INDOASIAN, HPL, BAJAJ, SHALABH, LBEE, VRONICA, EON, PARUTHI ELECTRICALS	
19	LT PANELS/APFC/PANELS/AC CONTROL PANELS/PUMP HOUSE PANELS FOR SS HAVING CAPACITY 1000 KVA AND ABOVE <b>OR</b> LT PANELS/APFC/PANELS/AC CONTROL PANELS/PUMP HOUSE PANELS FOR SS HAVING CAPACITY BELOW 1000 KVA	SIEMENS, L&T, ABB, SCHNEIDER, LEGRAND, HENSEL, BHANDARI, INDO ASIAN, OSIAN, &S ELECTRIC, SHALABH, HAVELLS, HARTEK	CROMPTON GREAVES, POWER SYSTEM & CONTROLS JALANDHAR, UNIVERSAL SWITCHGEAR CONTROL, CONELEC SYSTEM, UNILEC, NEPTUNE, CONTROL, WEL TRICOLITE, RMS PANLES, SMS PANELS & SWITCH GEAR, POWER WARE, BENTEC, CATER PILLAR, ADLEC, UNITECH, INIDAN TRANSFORMERS & ELECTRICALS, INDUSTRIAL POWER CONTROL, SYSTEMS & SERVICES (POWER CONTROLS) DV ELECTROMATIC PVT LTD, KRYPTON POWER CONTROLS (INDIA) PVT LTD, AVON CONTROLS, SUPERTECH POWER CONTROL PVT LTD, HANSON ENTERPRISES PVT LTD, STANDARD SWITCHGEAR, ELECTRA POWER, EAP ELECTRO, AE, HPL, SOMBANSI, ADHUNIK SWITCHGEAR, NATIONAL ENGG WORKS, SHALABH, SPC ELECTROTECH PVT LTD, EXPERT SWITCHGEARS, UNIX SWTCHGEAR PVT LTD, MILESTONE, LOMER SUPPEME CONTROL JALANDHAR, SUDHIR POWER LTD, SHALABH, HAVELLS, POWER TECH SWITCHGEARS (I) PVT. LTD. C & ELECTRIC, BCH.	
20	HIGH VOLTAGE INSULATING RUBBER MAT	JYOTI, DUNLOP	KARULA PREMIER POLYFILM, SUNTEX INSULATION, SAFEVOLT, SINTEX	
21	LT AIR CIRCUIT BREAKERS	ABB, SIEMENS, L&T, SCHNEIDER, LEGRAND, ALSTOM, HAGER, INDO ASIAN, C&S ELECTRIC, HAVELLS	C&S ELECTRIC, BCH, INDOASIAN, HAVELLS, CROMPTON, STANDERD, HPL, GE	KINJAL BENTEX, AHDUNIK, CONTROL & SWITCH GEAR, BCH, BHARTI INDUSTRIES LTD
22	MCCBS	ABB, SIEMENS, L&T, SCHNEIDER, LEGRAND, MERLIN GERIN, HAGER, SIEMENS, LEGRAND, HAGER, INDO ASIAN, C&S ELECTRIC, KALINGA PREMIUM, HAVELLS, HPL, BENLO	C&S ELECTRIC, BCH, INDOASIAN, HAVELLS, CROMPTON, ANCHOR, GE POWER, HPL, STANDARD ELECTRICALS, SHALABH	ADHUNIK, BHARTIA INDUSTRIES, CRYSTAL ELECTRIC CO PVT LTD, ELECTRIC CO PVT LTD, SHALABH, BENTEK NOVATEUR.
23	MCB/ELCB/RCCB/RCBO/ISOLATORS/M CB DISTRIBUTION BOARD	L&T, ABB, SCHNEIDER, SIEMENS, LEGRAND, HAGER, INDO ASIAN, C&S ELECTRIC, KALINGA PREMIUM, HAVELLS, HPL, BENLO	BCH, CROMPTON GREAVES, INDOASIAN, C & S ELECTRIC, HAVELLS, STANDARD ELECTRICALS, PLAZA HPL, ELECTRIC CO PVT LTD, GE, SHALABH	SHALABH, BENTEX, ADHUNIK, ANCHOR, ESS ESS KAY, CRYSTAL, KINJAL.
24	POWER CONTACTORS	L&T, SIEMENS, ABB, LEGRAND, SCHNEIDER, GE POWER, AE, INDO ASIAN, C&S ELECTRIC, HAVELLS, HPL	BCH ELECTRIC, C&S ELECTRIC, STANDERD, INDOASIAN, HAVELLS, HPL.	
25	VOLTAMETER/AMMETER/FREQUENCY METER/ PF METER (ANALOG TYPE)	L&T, AE, SECURE, SCHNEIDER, LEGRAND, HAGER, HAVELLS, HPL	IMP, AMTL, HPL, MECO, ESSMA, , INDOASIAN, HAVELLS, C&S ELECTRIC	NAPTUNE CADEL, BENTEC, ENENERCON, DIVIS, DUCATI, TRINITY, RAAS, CONCORD, VAISHNAV
26	SAME AS ABOVE (BUT ELECTRONIC TYPE/ DIGITAL TYPE)	SECURE, DUCATI, L&T (RISHAB), RAAS, CONCORD, C&S ELECTRIC, MECO, AMTL		
27	LT CABLES, 1100 VOLTS, XLPE	CCI, FINOLEX, UNIVERSAL CABLES, RPG, KEI INDUSTRIES PVT LTD, KALINGA PREMIUM, EON, GLOSTER, POLYCAB, HAVELLS	NICCO, ASIAN CABLES, HAVELLS, POLYCAB, ANCHOR, KALINGA GOLD, GRANDLAY, PLAZA HPL, PARAGON, GLOSTER CABLES LIMITED, INDUSTRIAL CABLE, SHALABH, HEAT FLEX, SS CABLE INDUSTRIES, BONTON, PARAMOUNT HIND INDUSTRIES, DIAMOND, WINDSOR, EON ELECTRICAL LTD, GEMSCAB, ALCON WIRES AND CABLES, RALLISON PVT LTD, CABCOM, ICL.	
28	PCC CABLE COVER	MEHTAB TILES, PEARLESS INDUSTRIES, HINDMOZAIC GUJRAT, JJ CONCRETE LUCKNOW		

**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/...)**

29	CHANGE OVER SWITCHES	SIEMENS, L&T, ABB, SCHNEIDER, C&S ELECTRIC, KALINGA PREMIUM, HAVELLS, INDO ASIAN	GE POWER, BCH, C &S ELECTRIC, HPL, HAVELLS, STANDARD, GE , INDOASIAN, ANCHOR, HAGER	SHALABH, ADHUNIK SWITCHGEAR BENTEC, CRYSTAL, ELECTRIC CO PVT LTD UNILEC, EE INDIA LTD, ESS ESS KAY
30	SMART/TAMPER PROOF ENERGY METERS	ABB, L&T, SCHENINDER, SECURE, HAVELLS , HPL	LANDIS & GYR, HPL,AMTL,HAVELLS, GENUS, C&S ELECTRIC, INDO-ASIAN	DIVIS, BUKATI, BENTEC, TRINITY, RAAS, INDOASIAN, CONCORD, VAISHNAV, ENERCON
31	VOLTAGE STABILIZERS UPTO 25 KVA	APLAB, AE, BRENTFORD, V GUARD, ANDREW YULE, VOLINA	POWERWARE, SINETRAC, VOLINA, MICROTTECH, INDIAN TRANSFORMERS & ELECTRICALS, VENER-7, AAR KEY, VINITEC.	
32	VOLTAGE STABILIZERS UPTO 25 KVA(SERVO CONTROLLED)	AE, V GUARD, BRENTFORD, APLAB, ANDREW YULE	POWERWARE, SINETRAC, VOLINA, LOGICSTAT,BLULINE, PACTIL, VOLTAMP, INDIAN TRANSFORMERS & ELECTRICALS, VENER-7, AAR KEY, VINITEC.	
33	UPS (OFFLINE & ON LINE)	EMERSON, TATA LIBERT, APLAB, APC, AE	SU-KUM, MICROTTECH, APS, LABOTEK, V-GUARD, SINETRAC, LUMINOUS, MOSER BAER	AAR KEY
34	DG SETS	<b>ENGINE:</b> CROMPTON GREAVES, MAHINDRA & MAHINDRA, RUSTON, CUMMINS, KIRLOSKAR OILS ENGINES,ASHOK LEYLAND,CATERPILLAR <b>ALTERNATOR:</b> BHARAT BIJLI, CROMPTON GREAVES, SEIMENS, KRILOSKAR ELECTRIC, STAMFORD, CATLER PILLAR, MTU, VOLVO, LEROY SOMER, JYOTI		
35	DG SET INTEGRATOR	AKSON,SUDHIR, MAHINDRA, KIRLOSKER GREENS	LOMBARDINI INDIA PVT LTD	
36	LT CAPACITOR BANKS	L&T, ABB, SCHNIEDER, LEGRAND, BHEL, SIEMENS, ALSTOM, C&S ELECTRIC, HAVELLS	EPCOS, CROMPTON GREAVES, DUCATI, UNIVERSAL(UNISTAR), C&S ELECTRIC, HAVELLS, BCH, GE,	DATAR, GPEC, BHARTIYA INDUSTRIES
37	HT CAPCITOR BANKS	ABB,UNIVERSAL, BHEL,SCHNIEDER, SIEMENS,EPCOS INDIA PVT LTD		
38	RIGID PVC CONDUIT	PLAZA, FINOLEX, BAJAJ, KALINGA PREMIUM	KAMPLAST, SUPREME, KALINGA, DUTRON, AKG, KINJAL, PRINCE, DIPLAST, TIRUPATI, POLYCAB, JAIN IRRIGATION, SAVOIR, INDO.	POLY CAB, VISHAL, HARSH, PARTEEK PIPES, KISAN, PKS EXPORTS.
39	MS CONDUIT/ERW CONDUIT PIPE	BHARAT STEEL, JINDAL, TATA	AKG,BEC,NIC,PRAKASH TUBES, OSWAL, TIRUPATI	
40	PVC COPPER WIRES-650/1100 VOLTS	L&T, FINOLEX, RPG, RR KABLE, GRANDLAY, KALINGA PREMIUM, HAVELLS, HPL,PLYCAB, EON, GLOSTER, ORISON	INDOASIAN, PARAMOUNT, C&S ELECTRIC, BCH, V-GUARD, POLYCAB, BONTON, NICCO, KALINGA PREMIUM, HPL, HAVELLS, PLAZA, PARAGON,(ELEKTRON),ANCHOR,GEMINI,ALCON.PARAFLEX, SHALABH	BENTEC,SHALABH, PARAFLEX
41	PT SWITCH/SOCKETS/CEILING ROSES/FAN RAGULATORS	ANCHOR,LEGRAND, CRABTREE(SCHNEIDER)	C&S ELECTRIC, STANDARD,HAVELLS,SSK,POLYCAB,FINE,PLAZA,CONA, INDOASIAN.	KINJAL,EON,LEADER,RR CABLE
42	LAMINATED SHEET COVER	HYLUM,FORMICA,GREEN LAMINATED BOARDS		
43	MODULAR SWITCH/SOCKETS/FAN REGULATORS	LEGRAND, SEIMENS ABB, CRABTREE,(SCHNEIDER), C&S ELCTRIC, HAVELLS, HPL, POLYCAB, INDO ASIAN	ANCHOR,L&T(ORIS),C&S ELECTRIC,LEADER, SSK,INDOASIAN,HAVELLS,CLIPSAN,STANDARD,POLYCAB,HPL	NOVATEAR,KATATIYA,MK,NORTHWEST, ADHUNIK,RR CABLE
44	STREET LIGHT FITTINGS & ACCESSORIES-HPSV (70/150/250/400),HPMV(80/125/250/400)/ METAL HALIDE	PHILIPS,CROMPTON GREAVES, BAJAJ, WIPRO, SCHNEIDER, C&S ELCTRIC, HAVELLS, HPL, K-LITE	C&S ELECTRIC,GE LIGHTING,HAVELLS, HPL.	KINJAL,TWINKLE, ELECTRO CINE, JAIN INDUSTRIAL LIGHTING CORP (JILCO)
45	TUBE LIGHT/STREET LIGHT FITTING	PHILIPS,CROMPTON GREAVES, BAJAJ, WIPRO, ORISON, C&S ELECTRIC, HPL, HALONIX	SURYA ROSHNI LTD,INSTA POWER,HALONIX TECHNOLOGIES LTD,HAVELLS, POLYCAB,C&S ELECTRIC,SCHNEIDER, GE LIGHTING	ADHUNIK,HPL
46	FLOOD LIGHT FITTINGS	PHILIPS,CG, BAJAJ, WIPRO, HAVELLS. POLYCAB, HALONIX	SURYA ROSHNI LTD,INSTA POWER,HALONIX TECHNOLOGIES LTD,HAVELLS, POLYCAB	ADHUNIK,JAIN INDUSTRIAL LIGHTING CORP (JILCO)
47	ACSR CONDUCTOR	JAIPURIA,ALIND,ICC,NICCO, JMV	DIAMOND,BHARAT CONDUCTORS	
48	BOX TYPE DECORATIVE TUBE LIGHT FITTING	PHILIPS,CROMPTON GREAVES, BAJAJ, WIPRO, C&S ELECTRIC, HPL, HALONIX, POLYCAB	SURYA,HALONIX,SHAKTI,ANCHOR,HPL,LEGERO,POLYCAB,C&S ELECTRIC,SCHNEIDER, GE LIGHTING,HAVELLS	SINTEX,ADHUNIK, NOVATEUR,JAQUAR,HOMEDEC, ASIAN, ELECTROMIX, POLYCAB.

Contd.../-

**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

49	CFL FITTINGS	CROMPTON GREAVES, PHILIPS,BAJAJ, WIPRO, C&S ELECTRIC, HPL, HAVELLS	C&S ELECTRIC,GE LIGHTING,OSRAM,HAVELLS, SURYA,HALONIX,ANCHOR,HPL,SINTEX,INDOASIAN.	ADHUNIK,NOVATEUR,JAGUAR, HOMEDEC,JAIN INDUSTRIAL LIGHTING CORP(JILCO), ASIAN ELECTROMIX,OSRAM,SHAKTI.
50	CFL LAMPS	PHILIPS,CROMPTON GREAVES, BAJAJ, WIPRO, HI-TECH, EON, HALONIX	OSRAM,HALONIX,SURYA,HPL,WIPRO	
51	LED LAMP	PHILIPS,CROMPTON GREAVES,OSRAM,SURYA, BAJAJ, BENLO	ELEKTRON,IMPERIAL,SANGWAN ENERGY SYSTEM PRIVATE LTD, HALONIX.	
52	SK FITTING	VIKAS, PRAKASH,JEMCO,SPARKS,HOMEDEC		
53	(A) CEILING PANS(ONLY 5 STAR BEE RATING C/FANS SHALL BE SPECIFIED), (B) EXHAUST/WALL MOUNTED FANS/AIR CIRCULATORS	BAJAJ,CROMPTON GREAVES, GEC. ORISON, EON, HAVELLS, POLYCAB	KHAITAN, ORIENT, POLAR, GEC,HAVELLS, ALMONARD,MIE,OSRAM, ANCHOR,LUMINOUS, ORTEM, HALONIX	POLYCAB,GANESH,EON.
54	WATER HEATER(ONLY 5 STAR BEE RATING WATER HEATERS SHALL BE SPECIFIED)	CROMPTON GREAVES,BAJAJ,RECOLD,HAVELLS, MORPHY RICHARDS, VENUS,USHA LEXUS, BLACK & DECKER, JAGUAR, LUMINOUS, INDOASIAN,SHRIRAM, THERMOKING,ARISE., ORISON, EON		DITZ,SAAHAS, KONARK, PEARLS
55	BUS BAR TRUNKING SYSTEMS	SHENEIDER, SIEMENS,LEGRAND,OBO BETTERMAN.	L&T, C&S ELECTRIC, GE	
56	BATTERY CHARGER	SU-KAM,AMCO,SINETRAC,WAC,BCH,AMAR RAJA		
57	LEAD ACID BATTERIES	AMARON,STANDARD FURKKAVA, EXIDE,	AMAR RAJA,SUKAM,TATA GREEN,APC,LUMINOUS, POWER ZONE, ARISE,AMCO	
58	LED LIGHT FITTING	PHILIPS,BAJAJ,OSRAM,CROMPTON GREAVES, BENLO, HI-TECH, EON, C&S ELECTRIC, KALINGA PREMIUM, HAVELLS, HPL, POLYCAB, ORISON, HALONIX	HAVELLS,C&S ELECTRIC,SURYA ROSHNI LTD, SYSKA LED,ELEKTRON, HALONIX TECHNOLOGIES.	BIRLA POWER, INSTAPOWER,HPL,ESS ESS KAY, ANCHOR, MIC, ADHUNIK,JAIN INDUSTRIAL LIGHTING CORP (JILCO), GOLDWYN LTD, P OLYCAB, IMPERIAL.
59	FLAME PROOF SWITCH/SOCKET/DB	BAJAJ,CROMPTON GREAVES,SUDHIR,FCG BALIGA LIGHTING EQPTS	SHYAAM, C&S ELECTRIC	
60	LIGHT/FITTINGS	BAJAJ,CROMPTON GREAVES,SUDHIR,FCG BALIGA LIGHTING GE	SHYAAM,C&S ELECTRIC, FLEXO ELECTRICALS, PLUTO FLAME PROOF CONTROL, FLEXPRO	
61	FLAME PROOF EXHAUST FAN PEDASTAL FAN/FLAME PROOF AC	BAJAJ,SHYAAM,CROMPTON , FCG ,SUDHIR,		
62	FLAME PROOF SOLAR STREET LIGHT FITTINGS	BAJAJ,PHILIPS,CG	WIPRO, SURYA	JAIN INDUSTRIAL LIGHTING CORP (JILCO)
63	STREET LIGHT TIMERS	L&T,LEGRAND, BAJAJ,SIEMENES,ABB, OSIAN, C&S ELECTRIC HAVELLS	INDOASIAN,HAVELLS, SINETRAC, GE,BCH,C&S ELECTRIC	
64	AVIATION OBSTRUCTION LIGHT	BAJAJ, CROMPTON GREAVES, PHILIPS	WIPRO, SURYA	
65	TRANSFORMER OIL	M&I MATERIAL (MIDEL) POWER LINK, POWER OIL, SAVITA		
66	INTEGRATED SOLAR LIGHT (LED BASED)	ORRISON, AXXON, AURA	ORRISON, AXXON, AURA	ORRISON, AXXON, AURA
67	EARTHING SYSTEM, LIGHTNING PROTECTION SYSTEM, SURGE PROTECTION DEVICES	JMV	JMV	JMV
68	COPPER CLAD STEEL CONDUCTOR	JMV	JMV	JMV
69	CABLE JUNCTION BOXES, CIRCUIT BREAKER BOXES, DC RELATED JUNCTION BOXES	HENSEL	HENSEL	HENSEL

Contd.../-

**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

70	PUSH BUTTON STATIONS		HENSEL	HENSEL
71	INDOOR/OUTDOOR LUMINAIRE INCL STREET LIGHT & GARDEN LIGHT	K-LITE	K-LITE	K-LITE
72	OVERHEAD CONDUCTOR		RHINO	RHINO
73	GI PIPES/MS PIPES	JINDAL Pipes, TATA, BST, PRAKASH TUBES, OSWAL, BHISHAN, APL PPOLO	NIDHI PIPES, INDUS TUBES LTD. SWASTIK,SURYA ROSHNI (PRAKASH) TUBES, OSWAL,	GOOD LUCK, TRIPUTI,RAVINDRA, J STEEL SYSTEM, JTL INFRA
74	HDPE/UPVC/PPR PIPES	DUTRON,FINOLEX,TIRUPATI,SFMC PIPE,JAIN PIPE, RELAINCE(RPPPL ), SWASTIK	ALONPOLY EXTRUSION LTD, KIRTI,SAVIOR FAIRE, SARVORAM.	
75	CI PIPES	ELECTRO-STEEL/LANCO,JINDAL, RASHMI ,KESORAM,ELECTROTHERM,TATA METALIKS, TATA KUBOTA	JAI BALAJEE, KEJERAWAL,NECO,BENGAL IRON COPN	
76	DI PIPES	ELECTRO-STEEL/LANCO,SRIKALAHASTHI,JINDAL,KESORAM,ELEC TROTHERM,TATA METALIKS, TATA KUBOTA	JAI BALAJEE, KEJERAWAL,KISWOK,RASHMI METALIKS	
77	SLUICE VALVES/NON RETURN VALVES/AIR RELEASE VALVES	KIRLOSKAR, LEADER, ZOLOTO,L&T (AUDCO)	BIR,KARTAR,SANT.	MAC INTERNATIONAL, AIP BVI, MINAR, NETA METAL,UPADHAYAY, NEW METAL WORKS
78	BUTTERFLY VALVES/CHECK VALVES	ADVANCE/AUDCO/LEADER/CASTLE,NVR,ZOLOTO	AIP,BVI,MINAR, MAC INTERNATIONAL,NETA METAL, UPADHAYAY, NEW METAL WORKS, BIR KARTAR	
79	GUN METAL GLOBE VALVE	KIRLOSKAR, LEADER, ZOLOTO,L&T (AUDCO),NVR	AIP,BVI,MINAR, MAC INTERNATIONAL NETA METAL, UPADHAYAY, NEW METAL WORKS, BIR KARTAR,SANT	
80	GI FITTING	JINDAL,TATA,BST	ZENTO,NANDA MANUFACTURING, UNIQUE,NIDHI,OSWAL	
81	PUMP SETS-MONO BLCOK	KIRLOSKAR, CROMPTON,BEST & CROMPTON,BEACON,MATHER & PLANTT, GRANDFOS, KSB, CRI	WILLO, ARISE, KALSI BS PUMPS,JYOTI,FLOWMORE,MAX FLOW,JOHNSON & JOHNSON	
82	CENTRIFUGAL PUMPS	KIRLOSKAR,BEACON,KSB,MATHER & PLATT, GRANDFOS, WASP,ITT, CRI	WILLO, ARISE, KALSI BS PUMPS,JYOTI,FLOWMORE,MAX FLOW,ARMSTRONG	
83	SUBMERSIBLE PUMPS	CALAMA, KIRLOSKAR, BEACON, KSB, MATHER & PLATT,GRANDFOS,WASP, ITT, CRI	WILLO, ARISE, GRETINDIA, JYOTI,MODI ATLANTA, SU PUMPS, CROMPTION GREAVES, COLAMER, MODI INDIA, GREAT IND ARMSTRONG.	
84	NON CLOG SEWAGE PUMPS	KIRLOSKAR, BEACON,KSB,CROMPTON	FLOWMORE, GREAT IND, JOHNSON & JOHNSON	
85	VERTICAL TURBINE PUMP	KSB,KIRLOSKAR,WASP	FLOW MORE BAJAJ ATLANTA, JOHNSON & JOHNSON	
86	DOSING PUMP/BLEACHING DOZER	ION EXCHANGE,MAIC INDIA,JESCO	RMCO AQUAPURA, CHLROTECH, VIKRAM PAC	
87	MOTOR STARTERS	L&T, SIEMENS, C&S ELECTRIC , ,BCH, SCHNEIDER, ABB	HAVELLS, INDOASIAN,HPL,STANDARD	
88	ELECTRIC MOTOR	BHARAT BIJLEE,KIRLOSKAR ELECTRIC CROMPTOM GREAVES, ABB, SIEMENS, GEC	JYOTI,NGEF,BCH	
89	SINGLE PHASE PREVENTORS/PHASE SEQUENCE CORRECTOR	L&T, SIEMENS, C&S LECTRIC, SINETRAC, MINILEC, LEGRAND, SCHNEIDER,ABB	AUTO ELECTRONICS, AKASH, TELEMECHANIC, INDOASIAN,HAVELLS, BCH, SINETRAC	
90	LIFTS/ELEVATORS	KONE, SCHINDLER, OTIS, THYSSEN KRUPP,HITACHI JHONSON	KONE,SCHINDLER,OTIS, THYSSEN KRUPP, HITACHI JHONSON	
	<b>AIR CONDITIONING</b>			
1	WINDOW TYPE/SPLIT TYPE AIRCONDITIONERS (NOTE: ONLY 5 STAR BEE RATING ACS SHALL BE SPECIFIED WHERE ANNUAL USAGE IS >1000HRS,3 STAR FOR OTHER PLACES E.G CONFERENCE ROOMS	VOLTAS HITACHI, DAIKIN, O-GENERAL CARRIER, FEDDERS LLYOD	LG, BLUE STAR , VIDEOCON,SAMSUNG, GODREJ	ZENITH,PANASONIC HAIER
2	WATER COOLERS	VOLTAS,BLUESTAR, SHRIRAM(USHA) AND SIDHWAL	-	-

Contd.../-

**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

3	REGRIGERATOR	WHIRLPOOL, LG, SAMSUNG, VOLTAS, VIDEOCON, KELVINATOR	GODREJ, PANASONIC ELECTROLUX, HAIER	
4	DEEP FREEZER	BLUE STAR, VOLTAS, SHRI RAM (USHA)	SIDHWAL, CARRIER, FEDDERS, LLYOD	
5	CASSETTE TYPE AC	BLUE STAR, FEDDERS LLYOD, VOLTAS, DAIKIN	PANASONIC, TOSHIBA, LG	
6	PILLAR TYPE AC	FEEDERS LLYOD, DAIKIN, O-GENERAL, HITACHI	LG, BLUE STAR, WHIRLPOOL PANASONIC	
7	DUCTABLE AC	FEDDERS LLYOD VOLTAS, DAIKIN, O-GENERAL, HITACHI	LG BLUE STAR,	
8	AIR CURTAIN	CROMPTON GREAVES, ALMONARD, ROBUSTIX		
9	FIRE DAMPER	DYAN CRAFT, RAVISTAR, MAPRO, CARRY AIR, AIRFLOW, RUSKIN		
10	ALUMINIUM EXTRUDED, ALUMINIUM GRILL/DIFFUSER	DYNA CRAFT, RAVISTAR, MAPRO, CARRYAIRE, SERVEX, GREEN HECK, BRIGHTFLOW, RUSKIN		
11	DESERT COOLERS	SYMPHONY, KHAITAN, KENSTAR	CROMPTON GREAVES, BAJAJ, OSRAM	JK ELECTRIC, VENUS, KOHLI & CO. AVINLIGHT
12	CHILLER/CHILLING UNITS	YORK, TRANE, DAIKIN, MACQUAY, CARRIER, VOLTAS, BLUESTAR, KIRLOSKAR		
13	AIR HANDLING UNIT, COOLING COIL FOR AHU	BLUE STAR, VOLTAS, CARRIER, FEDDERS LLYOD WAVES, HITECH, EDGETECH		
14	COOLING TOWERS	MIHIR, PAHARPUR, ADVANCE, DELTA	WELLDONE	
15	FRACTIONAL HP MOTORS	AUE, SIEMENS		
16	VARIABLE FREQUENCY DRIVES (VFD)	DANFOSS, MITSUBISHI, HONEYWELL, ABB	ALLENBRADLEY, WOLF, AUTOMATION, SIMPHOENIX	
17	POT/Y-STRAINER	EMERALD/RAPID COOL/LEADER		
18	PRESSURE GAUGE/DIAL TYPE THERMOMETERS	FIEBIG, H.GURU, EMERAID, ANERGY	DROPCO, DIGITAL, MARKETIN G, SYSTEM TAYLOR, DS ENGG, DWYER, AUTO MAT LUB SYSTEM	
19	INSULATION (FIBRE GLASS)	OWENS CORNING UPTWIGA, LLOYD	SHRI FIRE PACK, IMPEX INSULATION, TRANS INSULATION	
20	INSULATION (EXPANDED POLYETHYLENE)	MATTUR BEARSELL, TOSHIBA, STYRENE PACKAGING	CAPRICORN, ECOTHEM INSULATION	
21	INSULATION (CROSS POLYETHYLENE FOAM)	SUPREME, PARAMOUNT AEROFLEX, TROCELLONE		
22	INSULATION (NITRILE RUBER)	ARMAFLEX, KAIFLEX, KFLEX, VIDOFLEX, PARAMOUNT		
23	TF THERMOCOL FOR PIPE INSULATION	PK PACKING, BIRDSSELL, PROPACK, STYRENE, PACKAGING, RYCON, SERVICES	KIWI THERMO PACK, PRAKASH PACKAGING, SAHARA THERMO PACK	
24	CONTROLS (3 WAY VALVES)/ THERMOSTATS	ANERGY, SIEMENS, HONEYWELL	ANERGY, SIEMENS, HONEYWELL	
25	EXTRUDED ALUMINUM GRILLS/DIFFUSERS/ FIRE DAMPERS	DYNE CRAFT, MAPRO, CARRYAIRE, SERVEX, GREEN HECK	DYNE CRAFT, MAPRO, CARRYAIRE, SERVEX, GREEN HECK	
26	COPPER REFRIGERANT PIPING	DIAMOND, STAR	DIAMOND, STAR	
27	GI SHEETS FOR DUCTING	SAIL, TATA, JINDAL, OSWAL, BHUSHAN		
28	ACTUATOR	JEVENTA, BELIMO, SIEMENS, ADVANCE	CASTLE, ROTORK, NIBCO, AIP	
29	CENTRIFUGAL FANS (AHU)	NICOTRA, KRUGER, AIRFLOW, GREENHECK,	COMBIFREE, LLOYD, YILIDA	
30	STRIP HEATERS	RAYCOLD, DASSPASS, AUE, HONEYBEE		
31	HUMIDSTAT/THERMOSTATE	PENN, DANFOSS, HONEYWELL, SIEMENS, JOHNSON, RAPIDCOOL, ANERGY		
32	AIR FILTER/HEPA FILTER	TENACITY, PUROLATOR, LLYOD, MIHIR, DANFOSS, INDOFOSS, KLENZOID JOHN FOWLERS	DELTA, HANNY, AIRTECH, TERMODYNE	
33	FACTORY BUILT DUCTS	CORI ENGINEER, RESISSTO FLEX, ROLASTAR, TECHNO AIR, CAMDUCT, ZECO, DUCTOFAB, ECODUCT		

Contd.../-

**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

34	FLEXIBLE CONNECTOR	CORI ENGINEER, RESISSTO FLEX,DUNLOP	CORI ENGINEER, RESISTO FLEX, DUNLOP	
35	HOT WATER GENERATOR	THERMAX, INDCON 3M, RAPID CONTROL,ZENITH		
36	WATER TREATMENT PLANT	SCALE MASTER,SCALE GUARD WELDONE,AQUAMECH, DELTA	SCALE MASTER, SCALE GUARD, WELDONE, AQUAMECH ,DELTA	
37	DUCT FLANGE	ZECO/ROLSTAR/ECODUCT	ZECO/ROLSTAR/ECODUCT	
38	EXPANSION VALVE	DANFOSS,INDFOSS,SPORLON,ALCO		
39	FLOW SWITCH	RAPID COOL, SIEMENS, BCH, L&T	RAPID COOL, SEIEMENS, BCH, L&T	
	AUTOMATIC AIR VENT	RAPID CONTROL, ANERGY	RAPID CONTROL, ANERGY	
40				
41	3-WAY MODULATING VALVE	HONEYWELL, SIEMENS, ANERGY, SUZLON, INDFOSS, DANFOSS	JOHNSON, ASKA,RAPID CONTROL, CASTLE	
42	ROOM THERMOSTAT/AHU THERMOSTAT	HONEYWELL, SIEMENS, DASPASS,ESCOPTRS,INDFOSS,	HONEYWELL ,SIEMENS, DASPASS, ESCORTS, INDFOSS	
43	HP/LP CUTOUTS/CONTROLS	HONEYWELL, PENN, DANFOSS,INDFOSS,		
44	AIR WASHERS	BREEZE AIR , NICOTRA, PECMA,AIREF,AIRLOW		
45	PROPERLLER FANS	ABB, KRUGER		
46	BUTTERFLY VALVE	AUDECO, ADVANCE, DEEPAK, ZOLOTO		
<b><u>FIRE DETECTION, FIRE ALARM AND FIRE FIGHTING SYSTEM</u></b>				
1	FIRE HYDRANT	MINIMAX, FIREX, SAFEX, FLAME GUARD		
2	RRL HOSE PIPE	NEWAGE, DUNLOP, COSMOS, FLAME GUARD		
3	FIRE PANEL	MATHER & PLATT, MINIMAX SAFEX, AGNI,HONEY WELL, SYSTEM SENSOR,FIREX,NOTEFIRE		
4	HOOTER/SIREN	MINIMAX,MELTRON,AHUJA,PHILIPS,AGNI		
5	MANUAL CALL BELL POINT	AGNI SURKSHA,MINI MAX,FIREX		
6	SMOKE/ HEAT/IONISATION DETECTOR ADDRESSABLE & NON ADDRESSABLE	APPOLO,EDWARDS,HONEY WELL SYSTEM SENSER	RAVEL	
7	WATER SPRINKLER HEAD	TYCO,CEASEFIRE,SAFEX,MINIMAX,STARTECH FIRE SYSTEM,ELECTRONIC CONTROLS, CEASEFIRE		
8	FIRE EXTINGUISHER ALL TYPE	MINIMAX FIREX, NEWAGE, NITIN, CEASEFIRE		

**PARTICULAR SPECIFICATION (CONTD....)**  
**Appendix 'B'**  
**LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

S No	Product	GROUP OF PRODUCTS BASED ON MAKES / BRANDS			
		GROUP 1	GROUP 2	GROUP 3	
1	Cement		(a) M/s Sanghi Industries Ltd. 10 <sup>th</sup> Floor, Kataria Arcade, Off S G Highway, PO-Makarba, Distt-Ahmedabad, Pin-380051	"SANGHI"	
			(b) M/s Cement Manufacturing Company Ltd. Mayur Graden, 2 <sup>nd</sup> Floor, Opp-Rajuv Bhawan, GS Road, Guwhati-781005	"STAR"	
			(c) M/s Ultra Tech Cement Ltd. 'B' Wing, 2 <sup>nd</sup> floor, Mahakali Caves Road, Andheri (East), Mumbai-400093	"Ultratech"	
			(d) M/s OCL India Ltd. Rajgangpur, Distt-Sundargarh, Orissa, PIN-770017	"Konark"	
			(e) M/s Dalmia Cement (Bharat) Ltd. Dalmiapuram Dist-Truchirappalli, Tamil Nadu-621651	"Dalmia Cement"	
			(f) M/s Chettinad Cement Corporation Ltd. 4 <sup>th</sup> floor, Rani Seethai Hall Building, 603, Anna Salai Hall, Chennai-600006	"Chettinad"	
			(g) M/s Heidelberg Cement India Ltd 9 <sup>th</sup> Floor, Infinity Tower "C", DLF Cyber City, Gurgaon, Haryana-122002	"Mycem"	
			(h) M/s My Home Industries Ltd, 9 <sup>th</sup> Floor, Block-3, My Home Hub, Madhapur, Hyderabad-500081	"Mahashakti"	
			(j) M/s Parasakti Cements Ltd. 123/3rt, Plot # 8-3-214/21, Srinivasa Nagar Colony (West) Hyderabad-500038	"Prasakti"	
			(k) M/s Zuari Cement Ltd. No. 6, MC Nichols Road Chetpet Chennai-600031	"Zuari"	
			(l) M/s Toshali Cements Pvt Ltd 123/#rt, 2 <sup>nd</sup> floor, Sanjeeva Reddy Nagar, Hyderabad-500038	"Gajapati"	
			(m) M/s Prism Cement Ltd. 3/113, Vivek Khand, Gomto Nagar, Lucknow-226010	"Prism"	
			(n) M/s Shree Guru Kripa Cement (Pvt) Ltd 4/4, Trikuta Nagar, Jammu	"Sartaj"	
			(o) M/s Barak Valley Cements Ltd Debendra Nagar Badarpur Ghat Distt Karimganj Assam-788803	"BVCL"	
			(p) M/s Dhruv Industrial Company Ltd. 49/27, Sinha Market General Ganj, Kanpur-208001	"Dhruv"	
			(q) M/s The Ramco Cements Ltd. Auras Corporate Centre, 98-A, Dr. Radhakrishnan Salai, Mylapore, Chennai-600004	"Ramco"	
	(r) M/s Saurashtra Cement Gala No A-1, Ground Floor, Udhog Sadan No 3 MIDC, Central Road, Andheri (East), Mumbai-400093	"Saurashtra"			

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**PARTICULAR SPECIFICATION (CONTD....)**  
**Appendix 'B'**  
**LIST OF MAKES / FIRMS/ MANUFACTURERS OF MATERIALS**

S No	Product	GROUP OF PRODUCTS BASED ON MAKES / BRANDS		
		GROUP 1	GROUP 2	GROUP 3
			(s) M/s Lafarge Cement (Lafarge india Pvt Ltd.) Crescenzo, 1004, B-wing, 10 <sup>th</sup> floor, C-38/39, G Block, Bandra Kurla Complex, Bandra (East), Mumbai-400051	"Lafarge"
			(t) M/s The Associated Cement Companies Ltd. 414-421, Splendor Forum (4 <sup>th</sup> Floor), 3, District Centre, Jasola, New Delhi-110044	"ACC"
			(u) M/s Grasim Industries Ltd Birlagram, Nagda, Madhya Pradesh, PIN-456331	"Grasim"
			(v) M/s The India Cement Dhun Building, 827, Anna Salai, Chennai-600002	
			(w) M/s The Andhra Cement Ltd Durga Cement Works, Durgapura, Dechepalli Guntur, Andhra Pradesh, PIN-522414	
			(x) M/s Century Cements Industry House, 159 Church gate, Reclamation, Mumbai-400020	"Century"
			(y) M/s Binani Cements Ltd. Mercantile Chambers, 12, J.N. Heredia Marg, Ballard Estate, Mumbai-400001	"Binani"
			(z) M/s Mangalam Cement Ltd PO Adityanagar, Morak, Distt-Kota, Rajasthan-326520	"Mangalam"
			(aa) M/s Birla Corporation Ltd Birla Building (3 <sup>rd</sup> & 4 <sup>th</sup> floor) 9/1, R.N. Mukherjee Road, Kolkata-700001	"Birla"
			(ab) M/s Orient Cement 5-9-22/57/D, 2 <sup>nd</sup> and 3 <sup>rd</sup> Floor, GP, Birla Centre, Adarsh Nagar, Hyderabad-500063	"Orient"
			(ac) M/s Shree Cement Bangur Nagar, Beawar, Distt-Ajmer, Rajasthan-305901	"Shree"
			(ad) M/s J K Cement Kamla Tower, Kanpur-208001	"J K"
			(ae) M/s J K Lakshmi Cement Ltd Jaykaypuram, Distt-Sirohi, Rajasthan	"J K Lakshmi"
			(af) M/s Jaypee Rewa Cement Jaypee Nagar, PO-Jaypee Nagar, Rewa-486450 MP	"Jaypee"
			(ag) M/s Ambuja Cement Ltd Kodinar, PO-Ambujanagar, Taluka-Kodinar, Distt-Junagadh, Gujarat-362715	"Ambuja"

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**PARTICULAR SPECIFICATION (CONTD....)**  
**Appendix 'B'(Contd....)**

Srl No	Product	Company Name & Brand	Address	Type of Steel	Valid Upto
2	TMT Steel	(a) Rashtriya Ispat Nigam Limited (RINL) Brand : "RINL"	Visakhapatnam Steel Plant, Visakhapatnam -530031, India. Tel : (91 891) 518226, 518376, Fax : (91891) 518316, Email: cmdvsp@itpvis.ap.nic.in	All	-
		(b) Tata Iron & Steel Company (TISCO, or Tata Steel) Brand "TATA"	Bombay House, 2, 4 Homi Modi Street, Mumbai-400001, India, Tel:(9122)2049131, Fax: (9122) 2049522, 2870840, Email:corpcomm@jsr.tatasteel.com (Br office for North : Jeevan Tara Bldg, Patel Chowk, New Delhi)	All	-
		(c) Steel Authority of India Limited Brand "SAIL"	Central Marketing Organization, Northern Region, 17th Floor, scope Minar, Laxmi Nagar Distt. Centre, Delhi-110092	All	-
		(d) M/S Jai Balaji Industries Ltd. Brand "Balaji Shakti"	5 Bentek street, Kolkata-700001, Delhi office :-510, Block-b, Navraung House 21 Kasturba Gandhi Marg, New Delhi-110001. Tele: 011-43620219, 43620220, Mob-7838272772/9958936103, Email: info@jaibalajigroup.com	TMT Bars of Gde Fe 500 Fe 500D	Feb 2023
		(e) M/S Shyam Steel Industries Ltd. Brand "SHYAM"	Shyam Towers EN-32, Sector-V, Slat Lake, Kolkata-700091, Tel-033-40074007 Fax-033-40074010, Email: marketing@shyamsteel.com	TMT Bars of Gde Fe 500 Fe 500D CRS	Jan 2023
		(f) M/S SPS Steels Industries Ltd. Brand : "ELEGANT TMT"	Elegant Towers, 68A, Ballygunge Circular Road, Kolkata-700019, Ph-033-2895160/67 Fax-033-22894386, Email: spsdelhi@spsgroup.co.in	TMT Bars of Gde Fe 500/ Fe 500D Fe 550	Feb 2023
		(g) M/S Steel Exchange India Ltd. Brand "SIMHADRI TMT"	My Home Laxminivas Apartments, Ameerpet, Hyderabad-500016, A.P. Tel-040-23403725, Fax-040-23413267, Email: info@seil.co.in	TMT Bars of Gde Fe 500 Fe 500D HSCRM	Jan 2023
		(h) M/S Jindal Steels and Power Ltd. Brand "JINDAL PANTHER"	OP Jindal Road, Hissar, Haryana, PIN-125005 Tel:+91 1662 222471-84, Fax:+91 1662 220476	TMT Bars of Gde Fe 500/ Fe 500D, Fe 550 /Fe 550D	Feb 2023
		(j) M/S SRMB Srijan Pvt Ltd Brand "SRMB"	SRMB House, 7, Khetra das lane, Kolkata-700012, Tel : 033-66006600 Fax: 033-22110483	TMT Bars of Gde Fe 500/ Fe 500D, Fe 550 /Fe 550D,(Size 8-32 mm)	Aug 2022
		(k) M/S Concast Steel & Power Ltd. Brand: "CONCAST MAXX"	21 Hemant Basu Sarani, Suit Nos -511 & 512, 5th Floor, Kolkata-700001 Tel-91-33-2213041-87, 91-33-22130488, Email:info@concastgroup.com	TMT Bars of Gde Fe 500/ Fe 500D, (Size 8-32 mm)	Aug 2019
		(l) M/S Shri Bajrang Power & Ispat Ltd Brand "GOEL TMT"	Vill-Borjhara Urla Industrial Area, Raipur-493221, Chhattisgarh, Tel: 0771 4288019/29/39	TMT Bars of Gde Fe 500, Fe 500D(Size 8-32mm)	Jan 2020
		(m) M/S JSW Steel Ltd Brand "NEOSTEEL"	JSW Centre, Bandra Kurla Complex, Bandra (East) Mumbai-400051, Maharashtra Phone: 022-42861000, Fax-022-42863000	TMT Bars of Gde Fe 500, Fe 500D CRS(Size 8-40mm)	Feb 2023
		(n) M/S Electrosteel Steels Ltd Brand "ELECTROSTEEL"	G K Tower, 2nd & 3rd Floor, 19 Camac Street, Kolkata, WB-700017 Tel No: 91-33-2283-9990, 91-33-7103-4400 Fax: 91-33-22902882, Website : www.electrosteel.com	TMT Bars of Gde Fe 500D (Size 8-36mm)	Aug 2020

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**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

Srl No	Product	Company Name & Brand	Address	Type of Steel	Valid Upto
	TMT Steel (contd../)	(o) M/S Shyam Metalics & Energy Ltd. Brand "SEL"	Viswakarma, 1st Floor, 86 C, Topsia Road, Kolkata-700046 Ph: +91 33 22852212, Website: www.shyamgroup.com	TMT Bars of Gde Fe 500, Fe 500D(size 8-32mm)	Dec 2020
		(p) M/S Kamachi Industries Ltd. Brand "KAMACHI"	ABC Trade Centre, 3rd floor, (Inside Devi Theatre Complex) Old No. 50, New No. 39, Anna Salai, Chennai-600002, India. Tel: +91-044-42961100, Fax: +91-044-42961122, Email: sales@kamachitmt.com, Website: www.kamachitmt.com	TMT Bars of Gde Fe 500, Fe 500D, Fe 550, Fe 550D HCRM(Size 8-40mm)	May 2021
		(q) M/S BDG Metal & Power Ltd. Brand "BDG 6"	HMP House, 4 Fairlie Place, 5th floor, Kolkata-700001, India, Tel: +91-33-4005-9005 Fax: +91-33-4005-9095, Email: info@goyalgroup.in, Website: www.goyalgroup.in	TMT Bars of Gde Fe 500 Fe 500D Fe 550D(size 8-40mm)	Mar 2019
		(r) M/S Gallant Metal Ltd Brand "GALLANT TMX"	Ward 10BC, Plot No. 123, Ground floor, Gandhi Dham, Kutch, Gujrat-370201 Tel: +91-2836-228164, Fax: +912836-235787, Email: gml@gallantt.com, Website: www.gallantt.com	TMT Bars of Gde Fe 500 Fe 500D(size 8-32mm)	Jul 2019
		(s) M/S Rashmi Metaliks Ltd Brand "RASHMI TMT"	Premlata Building, 39, Shakespeare Sarani, 6th floor, Kolkata-700017 Tel: 033-22894255/56, Fax: 033-22894254, Email: domesticdip@rashmigroup.com Website: www.rashmigroup.com	TMT Bars of Gde Fe 500(Size 8-32mm) Fe 500D, Fe 550D(Size 8-25mm)	Aug 2019
		(t) M/S Real Ispat & Power Ltd. Brand "G K TMT"	Vrindavan, Near IDBI Bank, Civil Lines, Raipur-492001, C.G. Tel: +91-771-4224000, Fax: +91-771-4224010, Email: real@realispat.com, Website: www.realispat.com	TMT Bars of Gde Fe 500 Fe 500D (Size 8-36mm)	Jan 2020
		(u) M/S Super Smelters Ltd Kolkata. Brand "SUPER SHAKTI"	Premlata, 39, Shakespeare Sarani, 3rd floor, Kolkata-700017, Tel/Fax: +91-33-2289-2734/36, Email: info@supershakti.in Website: www.supershakti.in	TMT Bars of Gde Fe 500 Fe 500D, Fe 550(Size 8-32mm)	Feb 2020

Srl No	Product	Company Name & Brand	Address	Type of Steel
2A	Structural Steel	(a) Rashtriya Ispat Nigam Limited (RINL) Brand "RINL"	Visakhapatnam Steel Plant, Visakhapatnam -530031, India. Tel : (91 891) 518226, 518376, Fax : (91891) 518316, Email: cmdvsp@itpvis.ap.nic.in	Structural Steel (Angle, Beam, Column, Channel, Plate)
		(b) Tata Iron & Steel Company (TISCO, or Tata Steel) Brand "TATA"	Bombay House, 2, 4 Homi Modi Street, Mumbai-400001, India, Tel:(9122)2049131, Fax: (9122) 2049522, 2870840, Email:corpcomm@jsr.tatasteel.com, (Br office for North : Jeevan Tara Bldg, Patel Chowk, New Delhi)	-Do-
		(c) Steel Authority of India Limited (SAIL) Brand "SAIL"	Central Marketing Organization, Northern Region, 17th Floor, scope Minar, Laxmi Nagar Distt. Centre, Delhi-110092	-Do-
		(d) M/S Jindal Steels and Power Ltd Brand "JINDAL"	Jindal Centre, Plot No. 2, Sector-32, Gurgaon-122001, Haryana, Tele-01246612000 Fax-01246612125, Website: www.jindalsteelpower.com	-Do-

S No	Product	GROUP OF PRODUCTS BASED ON MAKES / BRANDS		
		GROUP 1	GROUP 2	GROUP 3
3	Pressed Steel Door Frames/Chowkhats for Doors/Cupboard and Window frames	M/s SK Steel Fabricators Ludhiana, M/s Sehgal Doors, New Delhi, M/s Bhawani Steel Fabrication, Ghaziabad, M/s India Mart Intermesh Ltd, Hyat Interiors, Ashish Industries, Shivam Metal Shapers	SS Engg Industries, Ghaziabad, Dahiya Industries,Panchkula, M/s Metal Window Corporation, New Delhi, M/s Ishwar Industries, Meerut, M/s Trishul Industries, M/s Aswani & Sons, M/s Jangid Engineering Works , Ghaziabad, M/s GS Udyog, Kanpur,Shri Krishna Associates, Panchkula, Steel Master Industries, Panchkula, Pioneer Fabricatiron Meerut, Vardhman Precision Tubes and profiles, New Delhi M/s Royal Safe Works, New Delhi, M/s Delite Safe works, New Delhi,M/s Jangid Engineering Works, M/s Steelman Industries, Jalandhar,M/s laxmi steel Works, Rohtak,	M/s Anoop Industries, M/s Mohata Engg & Construction Co, Bikaner, M/s Chhabra Steel Udyog, Meerut, M/s Chandni Industries.

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**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

4	Steel Window/Vents	Agew Steel Manufacturer Pvt. Ltd, Ahmedabad, Multiwyn Industrial Corp, Kolkata, Satkar Industries, Pathankot Rd Jalandhar, Arcat, Ashish industries, Shivam Metal Shapers	Ganpat doors, Rajpura, M/s Metal Window Corporation, M/s Mohindra Fabricators, M/s SK Fabrication (India) M/s Gurjeet Industries, M/s GR Kalsi & Co, M/s SKS Industires,M/s Steel PlastsMachines,M/S Surbi Metal(India),Govind Enterprises,Delhi, M/s GS Udyog, Kanpur, M/s Shree Krishna Associates, Panchkula, M/s Jangid Engineering Works, Jaipur, Godrej and Boyce, Mfg, Mumbai, Steel Master Industires, Jalandhar, Shri Krishna Associates, Panchkula, M/s Bharat Steel fabrication & Engineer,Ghaziabad,M/S Laxmi Steel Works , Rohatak, M/s Steel Man Industries Jalandhar	Anup Industires, M/s Chandni Industries, Sen Harvice, Mumbai, M/s Bihar Bobbin & Engg Works, Katihar, M/s Mohata Engg & Construction Co. Bikaner
5	Rolling Shutters & Rolling Grills	Swastik Rolling Shutters & manufacturing works,Mumbai, Hercules Rolling shutters Bangalore, Standard Industries Pune	Prakash & Co, New Delhi, Ishwar Industries, Meerut Cantt, Dahiya Industries, Panchkula, Shubdwar, M/s Prakash Industries, SKS Steel Industires, New Delhi , M/s Akash Rolling Shutters, Delhi, M/s Auto Rolling Shutters Enterprises, Delhi, Rama Rolling Shutters industries New Delhi, Shri Krishna Associates, Panchkula, M/s Bharat Rolling Shutters Industries, Jabalpur, M/s Prakash Rolling Shuttter Delhi,M/S Steelman Industries, Jalandhar, Chabra Steel Udyog.	
6	Welded wire Mesh/Fabric	Multiweld Wire Co Ltd, Mumbai, Jainsons Sales Crop, Delhi, Jaisons industries	Multiweld Wire Co Ltd, Mumbai, Jainsons Sales Crop, Delhi, Jaisons industries	
7	Factory mad Panelld Door Shutters	M/s MP Wood Product Indore, M/s Jainwood Industires (Jayana Board) Delhi, M/s Jain Doors Pvt Ltd Sonipat.	Chandigarh Timber Products, Patiala, M/s New Jagdamba Doors, M/s AB Composites Pvt Ltd, M/s Haryana Industries, M/s Supreme Doors and allied products, kanpur, M/S NND Wood Industries, Srigananagar, M/S Shakti Industries, Dhanaula. M/s Sarab Enterprises, Kangra,M/s Ecocell Doors, Udaipur, M/s Massonite Doors, Pathankot, Pioneer Timber Products, Chandigarh, Goyal Industrial Corporation New Delhi, Shri Krishna industries, Panchkula, M/s Laxmi Doors, M/s Joinery Manufacturing Co Kolkata,	M/s Rajendra, M/s Neha Indusries, M/s Goel Brothers, Raipur, M/s Surbhi, Metal India, Ltd, Jodhpur.
8	Factory made Flush door Shutters	M/s Green Ply Industries, M/s Centuary Ply, M/s Dura Ply. Mysore Chip Board, Archid, Swastik Ply Wood, M/s Jain Wood Industries	Sitapur Plywood Manufacturers Sitapur, M/s Laxmi Doors, Lucknow, Merino Flush Door, Faridabad. MP Wood, Goyal Industries Faridabad	M/s Harkirat Industries, M/s PR Ceiling Products
9	PVC Door Frame/Shutters	Sintex, Rajshri Plastiwood Ltd, M/s Dura Plast Extraction PVt Ltd, M/s Fenesta	M/s Poly Window, Pune Accura, Polytech Ahmedabad, Fixopan indo Plast Pvt Ltd, New Delhi	
10	UPVC Window/Doors	Fenesta, Veka Industries Pvt Ltd Mumbai, Kundli Industrial Estate, Sonipat, H2O solutions	Accura Polytech, Kumar Arch Tech, Poly windows, Pune, H2O Solution (Window & doors)	
11	Iron Mongery	Mowjee, M/s Kitch Architectural Product Pvt Ltd, RS Industries.	Mowjee, M/s Kitch Architectural Product Pvt Ltd, RS Industries.	
12	Standard Mortice lock	Godrej, Harrison, Link	Godrej, Harrison, Link	
13	Hydraulic Door Closer	Everest, Universal, Godrej	Amar, Sandhu, Priya	
14	Anodised Aluminium Doors/Window/Frames/Partitions	Fenesta, jindal, Indal, Hindalco	Aluminium System Corp, Mumbai, Nairs Arkinetal Enterprises, New Delhi, Aluminium Manufacturing Co, Kolkatta Santosh & Co, New Delhi, Dada Aluminum Fabricators, Jalandhar, M/s Alumilite PVt Ltd, Dhiraj, M/s Ajay Industries, Bombay, M/s Ramnikal S Raste,, Jabalpur, M/s Aluminium Tech Industries, Delhi, M/s VR Associates, Delhi, Mahavir, Ambala, Consolidated Engineer Com, New Delhi, Aluminium PVT LTd, Ajit India Pvt. Ltd	
15	Aluminium wooden Doors and Window Fittings	Argent Industries, Mowjee, Crown	M/s Elite Enterprises, Mumbai, M/s Classic, NEW Delhi, M/s aluminium Udyog, M/s Mohan Metal Industries, Delhi	Ganpati
16	Aluminium Section	Hindalco, Jindal, Indal	Valco Industries Ltd Chandigarh, Banco Aluminium Ltd. Vadodra Gujrat.	
17	Aluminium Sheets	NALCO Pvt Ltd, CRIL, Jindal, BALCO	Jagdish Aluminium Pvt Ltd, Ahmedabad, Gurjat, Alco Industires Pvt Ltd New Delhi	
18	Aluminium Composite Panels	ALCO Bond, Aluminium Clad, Alstrong, Armstrong	Alstone	
19	Particle Board(Veneered & Unveneered Laminaed)	Kitply, Nova Pan Industries, New Delhi, M/s Green Ply Industries Ltd, Archid Ply, Bhutan Board, Dura Board Mysore Chip Board Ltd	Bakelite Hylam LTd	Asis Particle Board, Shirdi Industries, Arolite Ceiling System Pvt Ltd , M/s Associate Décor Ltd

**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

20	Plywood for General Purposes	Dura Ply, Archid ply, Bhutan Board, Archid Board, Century, Durian, Mysore Chip Board Ltd	Swastik Ply, Jaipur, National Plywood Industries PVT Ltd, Kolkata, Merino Plywood, Mayur Ply, Jayna Plywood ,M/s Janardhan Ply Board Industries	Sh Ram Pannels Pvt Ltd Punjab, Rams Wood & General Industries Ltd, BLJ Plyam Marketing Pvt Ltd, MP & Co.
21	Decorative Laminates	Archid Lam, Sunmica, Merino, Lam, Mysore Chip Board, Greelam	Sungloss, Formica, ecolam, Bakelite Hylam	
22	Fibre Board(Medium Density)	Novapan, Bhuttan Board, Kit Ply, Mysore Chip Board Ltd, Green Panel Max (plain exterior Grade MDF/prelam/veneered MDF/Green Floormax Laminated)	Managalam Timber Products, Kolkatta, Ramco Industries Ltd, DECO, Green Panel Max Plain exterior MDF	
23	Pre Fab Panel Boards/Wall Lining ceiling tiles	Lafarge, Boral Gypsum Board Pvt Ltd, Shri Nepal Board Ltd, Aerolite Ceiling System Pvt Ltd, Hilux, Armstrong, V Board	Ramco Industries Pvt Ltd, Endura Modular Systems, Reliance Bldg System , BPB India Gypsum Ltd	M/s PR Ceiling Product, Dexume Marketing Pvt Ltd, M/s Bharat Steel Roll Bahadur Garh (Calsi Brand)
24	Galvanised steel sheets & Colour Coated galvanized steel sheets	SAIL, TATA, Jindal, Bhushan	Aone Industries, Bhushan, CRIL, Prestar	Bhushan
25	Polycarbonate Sheets	Duratuff, Lexan , VMT Plaste Ltd M/s Coxwell Domes Engg Pvt Ltd	Duratuff, Lexan , VMT Plaste Ltd M/s Coxwell Domes Engg Pvt Ltd	
26	Galvalume sheets	Indian Ispat, TATA Blue scope, JSW, Bhishan Galvacolor	Multicolor, aone industries, metco Global, CRIL, Kirby, Prestar	Bhushan Galvacolor
27	AC Sheets/AC Boards (Corrugated, Semi Corrugated)	Charminar, Ramco, Everest	Swastik, Bombay, M/s Eternit Everest Ltd, UP Asbestos Ltd	
28	Gypsum Board	India Gypsum, Lafarge, Son Industries, Kanpur	India Gypsum, Lafarge, Son Industries, Kanpur	
29	PVC Tiles/Sheet	Primer Polyfilm Ltd, Wonder Floor, Armstrong	Rikvin Floot Ltd, New Delhi, Fixopen Machineries, New Delhi, Krishna Tiles, Polyfin	
30	Glass Mosaic Tiles	Johnson, Italia, Coral Mosaic, NITCO	Paladio, Accura, Bisazza, Mridul, Unistone, Arihant	
31	Terrazzo Tiles /PPC Tiles/PPC Chequered tiles	NTC, NITCO, Eurocon, Duracrete	Ultra Tiles Pvt Ltd Bharat Tiles, Mehtab Tiles, Regent Tiles, Hindustan Tiles, SS tiles	Oasis Vitrified Pvt. Ltd.
32	Interlocking Tiles/Exterior Tiles/ Paver Blocks	Unistone, NTC, NITCO, Ultra, Johnson, Surya K	Terra Firma, A-One tiles, Coral, Mehtab, Tiles, Pavit, SS Tiles, Hindustan Tiles	Shri Tiles, Surya K, Singh Traders
33	Decorative textures/Coatings	Unitile, Bakelite Hylam (Heritage) NCL Altek Seccolor, Dulux (Acratex), Apex (Duracast), British ( Xtracem 76)	Luxture surface coatings, Spectrum Paint	
34	Exposed Brick Façade	Unistone, Pioneer Bricks, Regent Tiles	Unistone, Pioneer Bricks, Regent Tiles	
35	Glazed Earthen Ware Tiles	H&R Johnson, Kajaria, Somani	Orient Ceramic, Asian, Vermora, Orient Bell	
36	Glazed Ceramic/non Skid Wall/Floor Tiles	Kajaira, H&R Johnson, Cera, Unistone , Somani, NITCO, Eurotiles, Spartek, Cengres, Simpolo, Sunheart, Varmora	National tiles , Ultra, tiles, Orient Ceramic, Asian, Swastik, Varmora, Orient Bell, Bonzer-7 (Trial)	Victory Ceratec, Sogo Ceramics, Oricle Granites, Royal tiles, GEM tiles, Regency, Romano, Ferrous-Crete, Mashusudan Ceramics, Pavit Ceramic, Oasis Vitrified

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**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

37	Vitrified Tiles (Normal/Antiskid)	Somani,Kajaria, johnson,Orient Bell, NITCO, Cengres, Simpolo, Sunheart, Varmora	Murdushwar Ceramics Ltd, Orient, Asian, Swastik,Crystal, Bonzel-7(Trial)	Oasis Vitrified, Oracles Granito.
38	HDPE Storage Water Tanks	Sintex, Polycon, Sheetal	Rotex, Fusion, SPL, Diplast Plastics, Aqua Polymers	Uniplus
39	Sanitary appliances/fittings(Chin aware)	Hindustan Sanitary Ware, Parryware,Cera, Jaquar, Neycer	Duravit, Madhusudan Ceramics	Blue Star Sanitary, Anupam Industires, Sona Ceramic, Prakash Industries,SFMC Solution
40	Water Closet Seats and cover (Solid Bakelite) Thermostat Moulded toilet seat cover	Parryware, Jaquar, Somani, Commander, CERA, Neycer	Supreme, Prayag, Polytuff, Millennium	Ajanta, Precision Products
41	PVC Flushing Cisterns	Hindustan Sanitary Wares, Commander, Parryware, CERA, Jaquar, Johnson Pedar, Neycer	Khodiyar Pottery Works, Millennium, Supreme, Prayag	Precision Products
42	CI Flushing Cistern	Hindustan Sanitary Ware, Parryware, Orient Sanitary Ware	Sanifix Inida, Phenoweld Polymer, Anupam industries	Areal Bros, Hind Iron Foundry, Jaipur Maze Products
43	Stainless Steel Kitchen Sink with or without Draining Board, Plate Rack	NIRALI, Kobra, Neelkanth, Jayna Blue Star	Pheonix Diamond, AMC, Prestige, Allex, Neel, Prayag Polymers, Anupam Industries, Vardhaman Enterprises (Jain ko), Elite Metal Products, Franke India Pvt Ltd Prakash Sanitary Appliance, Shakti Enterprises	RA Engineering Industries, Plasto Craft, Impex Sanitation Kodar Industries
44	Ball Valves (Horizontal Plunger type)	Dripless Faucets India, Flowjet, Ball Valves Inida.	Hind Enterprises, Prakash & Co, Leader valves, Bombay metal, Taurus Engineering Industries, Prima	
45	Shower Roses Chromium plated (Swivel Type)	GEM,JAQUAR, Jal	Jainka,Blustar, Prima	Jal, Shakti
46	Bath room Fancy fittings	JAQUAR,GEM,MARC, Jalangi	Anchor, Spectrum,Pico,Dripless, Kingston, Prima	Shakti, Jalangi, Coronet
47	Bib Taps and Stop Taps (CP) Fancy fittings	JAQUAR, PARKO, GEM, Marc, ESS ESS, Jalangi	ELITE, Zim, Prima, Essco, Jainko, Prayag, Jalangi, Coronet, Shakti	Jalangi, Coronet, Shakti
48	Bathroom Cabinets	Jaquar, Cera, Commander, Parryware	Gratolite,Alpina,Prayag, Pearl	Pearl
50	Salt Glazed Stone Ware Pipes/ Glazed Stone Ware Pipes	Devraj Industrial, Buran, Perfect Santiary Pipe, Superme Pipe and fittings	Shri Kamakshi Agencies, Hind Creamics, Bhardwaj stone Ware, Binary Udyog, Creamic Industries	Bhaskar Sons, TriumatiMoulds, Kiran Potteries
51	Concrete Hume Pipes	Indian Hume Pipe Company	Jain Spun,DayaSpun,Delhi Spun pipe,Ramnik Enterprises	Hindustan Pressure Pipes, Bhasker Sons
52	AC Pipes	Hyderabad Asbestos,Everest, Ganga Asbestos, Konark Cement and Asbestos	JK Super Pipes, Sarbamangala Manufactruing Co, Maharashtra Asbestos	Poddar Industrial Corporation
53	PVC Rain Water Pipe/Sewage Pipes	Supreme,Finolex,Reliance	Kissan, Prince,Diplast Plastics	
54	GI Pipe /fittings	Jindal, TATA, NECO<UNCO Steel Industries, Bharat Steel Tube Delhi, Bhishan, APL Appolo	Nidhi Pipe Ltd, Swastik Ltd, Surya Roshni (Prakash) Indus Tubes Ltd Bhushan, APL Applo	Tirupati, J-Steel, JTL, Bhushan, APL Applo
55	CI Pipes Fittings (For Sewerage/Rainwater)	SKF,SRIF, Singhal Iron Foundry, Hindustan Engineering Products, Jindal Saw, NECO(Jayaswal), HEPCO(BinaryUdyog)	Ashutosh Casting LTd, Veetus Industries LTD,Anand Founders&Engineers, Electrosteel,Kesoram, BIC, NFL.	Bhara Industrial corpn Delhi, New india Founry, Ludhinana, Mahavir Iron Foundry, NFL

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**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

55	Soil Waste Pipes fittings/steel Manhole Cover	SKF,Singhal Iron Foundry, NECO,SLIC	BIC	
56	PPR Pipes	SFMC,SAFE,WETFLOW	Diplast Plastics, Veekay Technocrat Pvt Ltd, Amitex Polymers, Kitec Industries Ltd	Hindustan Plastics & Machine Corpn
57	HDFE Pipes/SNR Pipes(Water/Sewage)	Gamson India, Dustron, Rex Polyextrusion Ltd, SRIF, SKF	Kirti Industries India Ltd, Vertex Green Poly Pipes, Uniplus,Diplast Plastics	Nandi Polymer, Tirupati, Structural
58	Sand Cast Iron Spigot & Socket Soil Waste, Vent Pipes & fittings	SRIF, RIF (Gola Castings), NECO (Jayaswal), HIF	Raj Iron, Foundary, BIC Kolkatta, Kajecao, NFL	KK Pumps, NFL
59	Cement Based Paints	Snowcem, Asian, Jenson & Nicholson, Berger, Duracem, British Xtracem	Acquolac Paints, Godavari Paints, Rajdoot Paints, Classic Paints, Acropoints	Gattocem, Rubycem, Cemkote, Snow White Industrial Corpn
60	Dry Distemper/Oil Bound Distemper/Plastic Emulsion /Exterior emulsion /Silicon paints & Coating	Goodless Nerolac Paints, Jenson & Nicholson, Berger Paints, ICI Dulax, Asian paints, British Acri silk	Shalimar Paints, Godavari paints, Acro Paints	
61	Plastic Emulsion Paint	Berger (Silk,Rangoli easy clean), Asian (Royale, Apcolite advance), Akzo Nobel (Velvet touch), Nerolac (Impression ecoclean, impression 24 carat), British (Splendour luxury)	Berger (Rangoli emulsion), Asian (Premium emulsion), Akzo Nobel (Supermooth), Nerolac (Lotus Touch Beauty Gold), Jenson & Nicholson (Eqvt. Make), Shalimar (Eqvt. Make), Shalimar (Eqvt. Make), British (Glamour Premium).	Berger (Bison emulsion), Asia(Tractor emulsion), Akzo Noble (Rainbow), Nerolac(Beauty silver, Little Master), Jenson & Nicholson (Eqvt. Make) Shalimar (Eqvt Make), British Interior Emulsion.
62	Paint Exterior	Berger (Weather Coat all guard), Asian (Apex Ultima) Akzo Noble (Weather shield max), nerolac (Excel total), British ( Expa-7 Advanced)	Berger (Weather Coat smooth), Asian (Apex weather proof) Akzo Noble (Weather shield), nerolac (Suraksha Advanced), British (Expa Cool)	Berger (Walmasta), Asian (Ace) Akzo Noble (Promise), nerolac (Suraksha Plus), British (Shiner Exterior)
63	Synthetic Enamel Paint	Goodless Nerolac Paints, Jenson & Nicholson, Berger Paints, ICI Dulux, Asian paints, British (Glo Highgloss)	Aquolac Paints, Shalimar Paints, Acro Paints, British (YAK)	British (20-20 Synthetic)
64	False Ceiling Tiles Fiber Cement Board	Lafarge, Boral, Gyproc, Armstrong, Diaken, Lloyds, luxalong., Dexune V- Board	Reliance big System , BPB India Ltd, Shree Nepal Boards, Bhutan , Duratuff, Anchor, V Board	Dexune Mareting, Endusa Modular System, V Board
65	Drapery rods	Vista Levalor	Visa Levalor	Visa Levalor
66	Mirror Looking	Saint Gobain, Modi Float, Triveni Float Glass	Saint Gobain, Modi Float, Triveni Float Glass, Crown, Prayag polymers	Saint Gobain, Modi Float, Triveni Float Glass, Crown, Prayag polymers
67	False Ceiling	Gypboard, Armstrong, Anchorlam Anchor, Hi Steel, Dexune	Gypboard, Armstrong, Anchorlam Anchor,Bhutan Boad, Duratuf, Aerolite, Hi Steel, Dexune.	Gyboard, Armstrong, Anchorlam Anchor,Bhutan Boad, Duratuff, Aerolite, Hi Steel, Dexune.
68	PTMT Fitting	PRAYAG, Shakti , Polytuf	PRAYAG, Shakti , Polytuf, Pearl, Millennium Ajanta Polymers	PRAYAG, Shakti , Polytuf, Pearl, Millennium Ajanta Polymers
69	Tiles PCC (Chequered/plain/Terrazzo)	(a)Mehtab Tiles (b) NITCO (c) Bharat Tiles (d) Hindustan Tiles (e) Regent Tiles (f) NTC (g) Oasis Vitrified Pvt Ltd	(a)Mehtab Tiles (b) NITCO (c) Bharat Tiles (d) Hindustan Tiles (e) Regent Tiles (f) NTC (g) Oasis Vitrified Pvt Ltd	
70	WC Seat cover ISI Marked	(a) Commander (b) Parryware; (c)Hindware (d) Prayag (e) CERA	(a) Commander (b) Parryware; (c)Hindware (d) Prayag (e) CERA	

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**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

71	Steel Windows	(a) M/s Ram Fabricators Pvt. Ltd., 223, Industrial Area, Panchkula (b) Ganpati Doors, 18, Industrial Estate Rajpura (c) Tee Pee Entps, Gill Road, Ludhiana Punjab (d) Friends Manufacture Co., B-1 Focal point, Kotakapura, PB (e) Steelman Industries, Old Adda, Kapurthala, Jalandhar City. (f) Steelmaster Industries, Old Area, Kapurthala, Jalandhar City (g) Bharat steel fabricators & Engineers, 44 Majitha Road,B/S Canara Bank, Amritsar	(a) M/s Ram Fabricators Pvt. Ltd., 223, Industrial Area, Panchkula (b) Ganpati Doors, 18, Industrial Estate Rajpura (c) Tee Pee Entps, Gill Road, Ludhiana Punjab (d) Friends Manufacture Co., B-1 Focal point, Kotakapura, PB (e) Steelman Industries, Old Adda, Kapurthala, Jalandhar City. (f) Steelmaster Industries, Old Area, Kapurthala, Jalandhar City (g) Bharat steel fabricators & Engineers, 44 Majitha Road,B/S Canara Bank, Amritsar	
72	Dry Distemper/Oil Bound Distemper/Plastic Emulsion /Exterior emulsion /Silicon paints& Coating	(a) Choksey (b) Fairmate; (c) Pidilite; (Dr Fixit- such as Terrece water proofing - Roofseals, New coat, Sunkens area -Fastflex, Pidifin 2K, Bathseal kit, General repair/water proofing- Powercrete, Pidicrete URP) (d) MC Bauchemie; (e) CICO; (f) Fosroc (g) Kunal Conchem (h) SIKA (J) STP LTD	(a) Choksey (b) Fairmate; (c) Pidilite; (Dr Fixit- such as Terrece water proofing - Roofseals, New coat, Sunkens area -Fastflex, Pidifin 2K, Bathseal kit, General repair/water proofing- Powercrete, Pidicrete URP) (d) MC Bauchemie; (e) CICO; (f) Fosroc (g) Kunal Conchem (h) SIKA (J) STP LTD	
73	INTEGRAL WATER PROOFING COMPOUND	(a) Water Seal/Acro1/Acroflo LWP from Acro Paints (b) Fair Plast IP from Fairmate (c) SIKA (d) Pidilite (Dr Fixit LW +, Dr Fixit) (e) Fosroc (f) Choksey (Masterproof IWP-1) (g) Kuna kon from Kunal Conchem (H)STP Ltd(h) BASF (j) Maruti Bitumen Pvt Ltd	(a) Water Seal/Acro1/Acroflo LWP from Acro Paints (b) Fair Plast IP from Fairmate (c) SIKA (d) Pidilite (Dr Fixit LW +, Dr Fixit) (e) Fosroc (f) Choksey (Masterproof IWP-1) (g) Kuna kon from Kunal Conchem (H)STP Ltd(h) BASF (j) Maruti Bitumen Pvt Ltd	
74	APP MODIFIED MEMBRANE FOR WATER PROOFING AND DAMP PROOFING	(a) Multi-plas-M/s Texas; (b) Shalimar Tar Products; (c)Tikitar; (d) Torch Tar (e) Pidilite Ind Ltd (Dr Fixit Torch Shield) (f) Bengal Bitumen (g) Modern Bitumen Pvt Ltd (h) Shivam Tar Products (j) Hyper Plas from IWL India Ltd (k) STP Ltd	(a) Multi-plas-M/s Texas; (b) Shalimar Tar Products; (c)Tikitar; (d) Torch Tar (e) Pidilite Ind Ltd (Dr Fixit Torch Shield) (f) Bengal Bitumen (g) Modern Bitumen Pvt Ltd (h) Shivam Tar Products (j) Hyper Plas from IWL India Ltd (k) STP Ltd	
75	Polyurethane Joints Sealant and Primer	(a) M/s Ameya Dye chem Pvt Ltd (ADPL) (b) CIPY Polyurethanes Pvt Ltd (c) Pidilite Industries Ltd (d) Sika India Pvt Ltd (e) AI Stone (f) BASF (g) STP Ltd (h) Maruti Bitumen Pvt Ltd	(a) M/s Ameya Dye chem Pvt Ltd (ADPL) (b) CIPY Polyurethanes Pvt Ltd (c) Pidilite Industries Ltd (d) Sika India Pvt Ltd (e) AI Stone (f) BASF (g) STP Ltd (h) Maruti Bitumen Pvt Ltd	
76	Backup rod	(a) STP Limited (b) Supreme Industries Ltd	(a) STP Limited (b) Supreme Industries Ltd	
77	Expansion Pad	Supreme Industries Ltd ,STP LTD	Supreme Industries Ltd ,STP LTD	
78	Premoulded Joint filler (IS-1838)	(a) Tikitar Industries Ltd, (b) STP Ltd (c) Capital Steel & Chemicals, (d) M/s Garlick & Co Pvt Ltd	(a) Tikitar Industries Ltd, (b) STP Ltd (c) Capital Steel & Chemicals, (d) M/s Garlick & Co Pvt Ltd	
79	Polymer modified Bitumen (PMB-40/70) /Polymer modified emulsion	a) M/s Ooms Polymer Modified Bitumen Pvt Ltd b) M/s Shell India Market Pvt Ltd c) HINDUSTAN COLAS Ltd, New delhi	a) M/s Ooms Polymer Modified Bitumen Pvt Ltd b) M/s Shell India Market Pvt Ltd c) HINDUSTAN COLAS Ltd, New delhi	

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**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

80	Refurbishment	a) Sika India Pvt Ltd	a) Sika India Pvt Ltd	
81	Concrete surface Improvement	M/s BASF India Ltd,STP LTD	M/s BASF India Ltd,STP LTD	
82	Bitumen Emulsion	Shiva Asphaltic products Pvt Ltd M/s Shell India Markets Pvt Ltd M/s LN Petro Chem Pvt Ltd,STP LTD, Maruti Bitumen Pvt Ltd	Shiva Asphaltic products Pvt Ltd M/s Shell India Markets Pvt Ltd M/s LN Petro Chem Pvt Ltd,STP LTD, Maruti Bitumen Pvt Ltd	
83	Non circular synthetic fibre	Recron 3S.	Recron 3S.	
84	Repair and rehabilitation/Bonding agent/Grouts	a) The Structural Water Proofing Co Pvt Ltd b) Pidilite Industries Ltd c) Sika India Pvt Ltd d) STP Ltd e) BASF India Ltd	a) The Structural Water Proofing Co Pvt Ltd b) Pidilite Industries Ltd c) Sika India Pvt Ltd d) STP Ltd e) BASF India Ltd	
85	Reinforcement Glass Grid	a) M/s HMBS Textiles Pvt Ltd b) Maccaferri Environmental Solutions Pvt Ltd\ c) Tech Fab (India) Industries Ltd d) Giridhar Tech Fab Pvt Ltd	a) M/s HMBS Textiles Pvt Ltd b) Maccaferri Environmental Solutions Pvt Ltd\ c) Tech Fab (India) Industries Ltd d) Giridhar Tech Fab Pvt Ltd	
86	Curing Compound	a) The Structural Water Proofing Co Pvt Ltd b) STP Ltd (c) SIKA INDIA PVT LTD(d)BASF (e)Maruti Bitumen Pvt Ltd	a) The Structural Water Proofing Co Pvt Ltd b) STP Ltd (c) SIKA INDIA PVT LTD(d)BASF (e)Maruti Bitumen Pvt Ltd	
87	Admixtures for PQC/DLC	a) SIKA India Pvt Ltd b) STP Ltd c) BASF India Ltd d) The Structural Water Proofing Co Pvt Ltd (e)Maruti Bitumen Pvt Ltd	a) SIKA India Pvt Ltd b) STP Ltd c) BASF India Ltd d) The Structural Water Proofing Co Pvt Ltd (e)Maruti Bitumen Pvt Ltd	
88	Ready Mix Concrete	Alliance Concrete construction Company Adampur/RMC India Ludhiana/ACC Ludhiana/Lafarge Amritsar	Alliance Concrete construction Company Adampur/RMC India Ludhiana/ACC Ludhiana/Lafarge Amritsar	
89	Hangar Doors	M/S Butzbach Industries(Jugapro) M/S RCC Eco Build Systems Ltdd	M/S Butzbach Industries(Jugapro) M/S RCC Eco Build Systems Ltdd	
90	Polymeric Bitumen Emulsion	(a)M/S Shell India Markets Private Ltd (b) M/S LN Petro Chem Private Ltdd (c) M/S Maruti Bitumen Pvt Ltd	(a)M/S Shell India Markets Private Ltd (b) M/S LN Petro Chem Private Ltdd (c) M/S Maruti Bitumen Pvt Ltd	
91	Soil Stabilizer	M/S Alchemist Touchnology Ltd	M/S Alchemist Touchnology Ltd	
92	Pothole Repair	M/S Shell India Markets Pvt Ltd, M/S Fosroc Chemicals, M/S STP Ltd, M/S Tiki Tar Industries (Baroda) Ltd, M/S Choksey Chemicals Pvt Ltd	M/S Shell India Markets Pvt Ltd, M/S Fosroc Chemicals, M/S STP Ltd, M/S Tiki Tar Industries (Baroda) Ltd, M/S Choksey Chemicals Pvt Ltd	
93	Reinforcement/Concrete Protective Coatings/Systems	a) SIKA India Pvt Ltd b) BASF India Ltd c)Maruti Bitumen Pvt Ltd (d) M/S Fosroc Chemicals	a) SIKA India Pvt Ltd b) BASF India Ltd c)Maruti Bitumen Pvt Ltd (d) M/S Fosroc Chemicals	
94	Rolled frames GI section windows	(a) NCL (b) Ashish Industries	(a) NCL (b) Ashish Industries	
95	EPOXY POLYURETHANE FLOORING	a) SIKA India Pvt Ltd b) STP Ltd c) Choksey Chemicals Pvt Ltd (d) M/S Fosroc Chemicals (e) CIPY Polyurethanes Pvt Ltd	a) SIKA India Pvt Ltd b) STP Ltd c) Choksey Chemicals Pvt Ltd (d) M/S Fosroc Chemicals (e) CIPY Polyurethanes Pvt Ltd	



**LIST OF MAKES/MANUFACTURERS OF EQUIPMENTS/MATERIALS (Contd/....)**

**Notes:-**

- (i) If makes of items specified in Schedule 'A' are mentioned, than makes mentioned in Schedule 'A' are to be provided and makes of Group-2 of Appendix- B shall be provided if makes are not mentioned in Schedule 'A'
- (ii) In case makes mentioned in Group-2 are not available than Group I products shall be provided.
- (iii) In case makes are not specified in the tender documents, these shall be confirming to IS.

\_\_\_\_\_  
(SIGNATURE OF CONTRACTOR)

DATE: \_\_\_\_\_

SSW  
FOR ACCEPTING OFFICER

**APPENDIX 'C'****SOURCES OF MATERIALS****(LIST OF MATERIALS OF LOCAL ORIGIN TO BE INCORPORATED****IN WORKS (FOR GUIDANCE ONLY)**

Sl No	Name of Material	Sources of Material
1	2	3
1.	Coarse Aggregate for all RCC and plain cement concrete works.	Khanak (TOSHAM)/ Dadri,
2.	Sand for all RCC and PCC work.	Ghagger sand near Chandigarh Yamuna sand near Karnal
3.	Sand for plastering, pointing and brick work	Ghagger sand near Chandigarh Yamuna sand near Karnal
4.	Bricks and Brick tiles	Locally available best quality
5.	Stone for soling	Dadri (Harayana)
6.	WBM crushed stone aggregate	Dadri (Harayana)
7.	Fine sand	Ghagger sand near Chandigarh Yamuna sand near Karnal

**NOTES: -**

(a) Sources of materials shall be as given Serial 1 to 7 above or in the vicinity thereof. The tenderer shall enquire the actual location of source before submitting his tender and no additional payment shall be made on account of any misunderstanding or its distance from site of works.

(b) Materials of sources listed above, shall only be used. In the event of non-availability, use of alternatives shall be decided by the Accepting Officer without any price adjustment/extra cost to Government.

\_\_\_\_\_  
(SIGNATURE OF CONTRACTOR)  
DATED: \_\_\_\_\_

SSW  
FOR ACCEPTING OFFICER

**Appendix 'D'**

**CEMENT SUPPLY AND ACCEPTANCE REGISTER**

1. CA No & Name of Work: **CWE/GGN/G-26/2018-19: REPAIR/SERVICING OF DISTRIBUTION TRANSFORMER , SERVO STABILIZER, HT VCBS & RING MAIN UNIT AND CALIBRATION OF RELAYS ETC AT AF STN GURGAON UNDER GE (AF) GURGAON.**

2. Control No :

3. Name of Manufacturer/Brand Name/Gde of Cement:

(a) Manufacturer..... (b) Brand..... (c) Grade.....

4. Qty of cement & Lot No/Week No (in Bags): (a) Qty.....  
 (b) Lot No /Week No.....

5. Manufacturer's test Certificates to .....

6. Random Test Details:

(a) Physical test report from..... vide their letter No .....  
 (Name of approved Lab/Engg College)

(b) Chemical test report from ..... vide their letter No .....  
 (Name of approved Lab/Engg College)

7. Details of Physical & Chemical properties:-

	Physical Requirements (As per IS 4031)									Chemical Requirements (As per IS 4032)								
	Specific Surface (Area (M <sup>2</sup> /Kg)	Soundness by Le Chatellar	Soundness by Auto Clave	Initial Setting Time (Minutes)	Final Setting Time (Minutes)	03 days	07 days	28 days	Temp during testing 0 C	Stranded Consistency (%)	Lime Saturation Factor (Ratio)	Alumina iron Ratio (Ratio)	Insoluble Residue (%)	Magnesium (%)	Sulphuric Anhydride (%)	Loss on Ignition (%)	Alkalies (%)	Chlorides (%)
As per relevant IS																		

Remarks with Signature

Accepted/Rejected

Contractor Junior Engineer

Engineer-in-Charge

Garrison Engineer

Remarks of BOO/Inspecting Office/CWE

Signature of Contractor

Dated: \_\_\_\_\_

SSW  
for Accepting Officer