

ANDREW YULE & COMPANY LIMITED
(A Government of India Enterprise)
Engineering Division, Kalyani Works
Plot -16 A & B, Block-D,
Kalyani, Nadia, PIN-741235, WB

TENDER DOCUMENTS FOR SUPPLY OF GUILLOTINE DAMPER

ANDREW YULE & CO. LTD. invites e-Tender under single stage two part system (Part I: Techno-Commercial Bid and Part II: Price Bid) from bona fide and reputed Company/OEM for above mentioned Job. Technical Specification is available in **Annexure-V** of this tender document.

Tender document may be downloaded from MSTC website:

www.mstcecommerce.com/eprochome/aycl. Corrigenda or clarifications, if any, shall be hosted on the above mentioned websites only. AYCL reserves the right to accept or reject any tender.

Brief Description:-

E-TENDERS ARE INVITED FROM REPUTED COMPANY/OEM FOR SUPPLY OF GUILLOTINE DAMPER – 99 % LEAK PROOF , PNEUMATICALLY PERATED , SIZE 1822 X2410 I/S , WITH ACTUATOR.

Price quoted should be FOR destination/Site.

Schedule of Tender

1.	TENDER NO.	AYCL/ENGG/MSD/Z219C/16-17/17/i Dated: 7.2.17
2.	MODE OF TENDER	e-Procurement System Online submission of Part I - Techno-Commercial Bid and Part II - Price Bid through www.mstcecommerce.com/eprochome/aycl The intending bidders are required to submit their offer electronically through this e-tendering portal. No physical tender is acceptable by AYCL/MSTC
3.	E-Tender No. / Event No.	AYCL/ENGINEERING DIVISION/17/16-17/ET/219
4.	Date of publication of e-Tender through publication in MSTC/AYCL websites and Central Public Procurement Portal	17.2.17
5.	Date of availability of NIT to the Vendors for downloading	17.2.17
6.	Earnest Money Deposit	<ul style="list-style-type: none"> • "Earnest Money Deposit" of Rs.15000 (Rupees Fifteen Thousands only) to be paid by D.D. favouring Andrew Yule &Co Ltd, payable at Kolkata. Moreover EMD can be waived under following clauses : • Procurement from the vendor whose turnover is more than 50 crores (balance sheet is to be provided) • Procurement from MSME industries (certificate is to be provided) • Procurement of vendor who has substantial dues more than 5% of the estimated tender value. (Bill details is to be provided)
7	Tender Fee	<ul style="list-style-type: none"> • Tender Fee – Rs. 2,000/- (Two Thousand only) to be paid by D.D. favoring Andrew Yule &Co Ltd, payable at Kolkata.
8	Date of Starting of e-Tender for submission of Online Techno-Commercial Bid and Price Bid at www.mstcecommerce.com/eprochome/aycl	17.2.17 – 10:00 AM
9	Date of closing of Online e-tender for submission of Techno-Commercial Bid & Price	23.2.17 – 02:00 PM

	Bid at <u>www.mstcecommerce.com/eprochome/aycl</u>	
10.	Date & time of opening of Part-I (Techno-Commercial Bid)	23.2.17 – 03:00 PM
11	Date & time of opening of Part-II (Price Bid)	23.02.17 – 04:00 PM

List of Annexure

Important Instructions for E-procurement -	Annexure-I
General Information-	Annexure-II
Techno commercial terms	Annexure-III
General Terms & Conditions	Annexure-IV
Technical Specification	Annexure-V
Preferred make list of	
(for actuator accessories)	Appendix -A

Important Instructions for E-procurement

This is an e-procurement event of ANDREW YULE & COMPANY LTD Ltd.

You are requested to read the Terms & Conditions (Annexure- III, and IV) of this tender before submitting your online tender. Tenderers who do not comply with the Conditions with documentary proof (wherever required) will not qualify in the Tender for opening of Price Bid.

1. Process of E-tender:

A) **Registration:** The process involves vendor's registration with MSTC e-procurement portal which is free of cost. Only after registration, the vendor(s) can submit his/their bids electronically. Electronic Bidding for submission of Techno-Commercial Bid as well as Price Bid over the internet will be done. The Vendor should possess Class III signing type Digital Signature Certificate. Vendors are to make their own arrangement for bidding from a PC connected with Internet. MSTC is not responsible for making such arrangement. (Bids will not be recorded without Digital Signature).

SPECIAL NOTE: THE PRICE BID AND THE COMMERCIAL BID HAS TO BE SUBMITTED ON-LINE AT **www.mstcecommerce.com/eprochome/aycl**

- 1) Vendors are required to register themselves online with **www.mstcecommerce.com** → e-Procurement → PSU / Govt. depts. → Register as Vendor under AYCL- Filling up details and creating own user id and password → Submit.
- 2) Vendors will receive a system generated mail confirming their registration in their email which has been provided during filling the registration form.

In case of any clarification, please contact MSTC/AYCL (before the scheduled time of the e-Tender).

Contact person (ANDREW YULE & COMPANY LTD):

1. Mr. Gourab Banerjee
Asst. Manager – Material
gourab.banerjee@andrewyule.com
Cell- 9674037162

Phone : +91(33) 2582 5734; Fax: +91(33) 2582 8279

2. Mr. Subhankar Saha
Engineer – Material
subhankar.saha@andrewyule.com
Cell – 9038645830

Phone : +91(33) 2582 5734; Fax: +91(33) 2582 8279

Contact person (E-Commerce, MSTC Ltd):

- | | |
|---|---|
| 1. Mr. Arindam Bhattacharjee
Deputy. Manager (E-commerce)
Mobile No: 09330102643
Email: arindam@mstcindia.co.in
Landline: (033) 22901004 | 2) Mr. Sabyasachi Mukherjee
Assistant Manager (E-commerce)
Mobile- 07278030407
Email: smukherjee@mstcindia.co.in |
| 3. Ms Sumona Maity
Management Trainee (E-Commerce)
Mobile-09831155225
Email: smaity@mstcindia.co.in | |

System Requirement:

- i) Windows XP-SP3 or above / Windows 7 Operating System
 - ii) IE-7 or above Internet browser.
 - iii) Signing & Encryption type digital signature
 - iv) JRE 7 updates 79 software to be downloaded and installed in the system. Security level should be medium
 - v) To enable ALL active X controls and disable 'use pop up blocker' under Tools → Internet Options → custom level (Please run IE settings from the page www.mstcecommerce.com once)
- 2. Part-I: Submission of EMD, Tender Fee & Filled up General Information Form (Annexure – II) - in sealed envelope to DGM (Materials), KW, AYCL:**
- Bidder may request for exemption from submitting EMD (Refer details given in SI No 1 of Annexure-IV, General terms & condition).**
- Tender Fee – Rs. 5,000/- (Five Thousand only- Non refundable) to be paid by D.D. favouring Andrew Yule &Co Ltd, payable at Kolkata.**
- Earnest Money as per amount mentioned in Annexure-VII to be paid by DD favouring Andrew Yule & Co. Ltd. Payable at Kolkata**
- General information, under Annexure-II complete in all respect along with desired document.**
- In case of failure to submit the EMD within the stipulated time, the Tender may be rejected.**

Part-II: Online Bid Submission: After proper submission of EMD and Tender Fee at Andrew Yule & Co, the prospective bidder to submit online Techno commercial and price bid through MSTC portal.

Following documents are to be uploaded at the E-Tender Portal as a credential of the prospective bidder:

3. Present Customer List.
4. Copies of purchase Orders & Performance Certificate from at least three reputed Organizations for having supplied same materials and provided same service during the year 2014-2015/2015-2016. Offers received without copies of performance certificate will/may be rejected.
5. Balance sheets and P&L Account. (2013-2014, 2014-2015 & 2015-16).

Bidding in e-Tender:

- a. No interest will be paid on EMD. EMD of the unsuccessful bidder(s) will be refunded by ANDREW YULE & COMPANY LTD. EMD to be paid along with the Document within the last date as mentioned in SOT.
- b. The process involves Electronic Bidding for submission of Techno Commercial Bid as well as Price Bid.
- c. The bidder(s) who have submitted the EMD & Tender Fee to Andrew Yule can submit their Techno Commercial Bids and Price Bid through internet in MSTC website www.mstcecommerce.com → e-procurement → PSU / Govt depts. → Login under AYCL → My Menu → Auction Floor Manager → live event → Selection of the live event.
- d. The bidder should allow to run an application namely enApple by accepting the risk and clicking on run. This exercise has to be done twice immediately after opening of Bid floor. Then they have to fill up Common terms /Commercial specification and save the same. After that clicking on the Techno-Commercial bid, if this application is not run then the bidder will not be able to save / submit his Techno-Commercial bid.
- e. After filling the Techno-Commercial Bid, bidder should click 'save' for recording their Techno-Commercial bid. Once the same is done, the Price Bid link becomes active and the same has to be filled up and then bidder should click on "**Save**" to record their Price Bid. Then once both the Techno-Commercial bid & Price Bid has been saved, the bidder can click on the "**Submit**" button to register their bid.
- f. Vendors are instructed to use link in **My Menu** to **Upload Documents** in document library. Multiple documents can be uploaded. Maximum size of single document for upload is 5 MB.

- g. Once documents are uploaded in the library, vendors can attach documents through *Attach Document* link against the particular tender. For further assistance please follow instructions of vendor guide.
- h. In all cases, bidder should use their own ID and Password along with Digital Signature at the time of submission of their bid.
- i. During the entire e-tender process, the bidders will remain completely anonymous to one another and also to everybody else.
- j. The e-tender floor shall remain open from the pre-announced date & time and for as much duration as mentioned above.
- k. Techno-Commercial bid will be opened electronically on specified date and time as given in the NIT. Bidder(s) can download Technical Comparative statement.
- i. Price bid will be opened electronically on specified date and time given in the NIT. Bidder(s) can download Price Comparative statement.
- m. All entries in the tender should be entered in online Technical & Commercial Formats without any ambiguity.
- n. All electronic bids submitted during the e-tender process shall be legally binding on the bidder. Any bid will be considered as the valid bid offered by that bidder and acceptance of the same by the Buyer will form a binding contract between Buyer and the Bidder for execution of supply. Such successful tenderer shall be called hereafter **SUPPLIER**.
- o. It is mandatory that all the bids are submitted with Digital Signature Certificate otherwise the same will not be accepted by the system.
- p. Buyer reserves the right to cancel or reject or accept or withdraw or extend the tender in full or part as the case may be without assigning any reason thereof.
- q. No deviation of the terms and conditions of the tender document is acceptable. Submission of bid in the e-tender floor by any bidder confirms his acceptance of terms & conditions for the tender.
- r. Unit of Measure (UOM) is indicated in the e-tender Floor. Rate to be quoted should be in Indian Rupee as per UOM indicated in the e-tender floor/tender document.

E-tender cannot be accessed after the due date and time mentioned in NIT.

All notices / corrigendum and correspondence to the bidder(s) shall be sent by email only during the process till finalization of tender by ANDREW YULE& COMPANY LTD/MSTC LTD. Hence the bidders are required to ensure that their corporate email I.D. provided is valid and updated at the

stage of registration of vendor with MSTC. Bidders are also requested to ensure validity of their DSC (Digital Signature Certificate).

Any order resulting from this open e-tender shall be governed by the terms and conditions mentioned therein.

No deviation to the technical and commercial terms & conditions are allowed.

ANDREW YULE & COMPANY LTD has the right to cancel this e-Tender without assigning any reason thereof.

The online tender should be submitted strictly as per the terms and conditions and procedures laid down in the website www.mstcecommerce.com/eprochome/aycl of MSTC Ltd.

The bidders must upload all the documents required as per terms of NIT. Any other document uploaded which is not required as per the terms of the NIT shall not be considered.

The bid will be evaluated based on the filled-in technical & commercial formats.

Bidders are requested to read the vendor guide and see the video in the page www.mstcecommerce.com/eprochome/mstc of MSTC Ltd. to familiarize them with the system before bidding.

**ANDREW YULE & COMPANY LIMITED
Kalyani Works, Engineering Division**

General Information

Tender Ref: AYCL/ENGG/MSD/Z219C/16-17/17/i

Dated: 7.2.17

Ref (This document should be dully filled up and attached along with EMD)

The applicants are required to furnish full information to the queries included in this form. In giving the particulars, the supporting documents/certificates as called for per queries at places, must be tagged with the application for evidencing the information furnished in the application.

1. Name of the firm in full :

2. Address, Telephone No.,

Fax No. & E-mail :

a) Address :

b) Telephone No. :

c) Fax No. :

d) E-mail ID :

e) Name of contact person :

3. Status of the company (Limited / Pvt. Ltd /
Proprietary /partnership/ Reg. /Non-Reg.
and date of inception:

4. Trade License No.

**(Please attach a photo
Copy of the license) :**

5. Service Tax Registration No.
(Please enclose photocopy of Reg.)

6. Banker's name

(a) Name of the Bank :

(b) Name& address of the Branch :

(c) Account No. :

Note: A copy of Banker's Certificate to be attached.

7. Sales tax Registration No.

(a) Central :

(b) State / VAT :

8. I. T. Permanent Account No. & assessed up to (latest clearance Certificate to be attached):

9. Turnover in last three financial years (Audited Balance Sheet and P & L Account to be submitted):

10. Name of present customers (Photocopy of few contracts may be enclosed):

11. Details of EMD (DD Details) submitted:

12. Details of Tender Fee (DD Details) submitted:

I/we hereby certify that the particulars furnished by me/us above are true to the best of my / our knowledge and belief and mis-representations of facts will render me/us liable to my/our action as may be deemed fit by Andrew Yule & Co. Ltd. (Engineering Division) & have the sole discretion to reject or accept my/our candidature.

(Signature of the Applicant)
Office Stamp/Seal.

Place :

Date ;

List of Enclosures:

TECHNO-COMMERCIAL TERMS

(To be filled online in MSTC portal).

SL NO	TERMS & CONDITIONS
1	Delivery period/Lead time: Within 8 weeks from the date of order placement/drawing approval as applicable.
2	VAT/CST/ED/ST: Pls. mention with registration No., if any
3	Negotiated L1 price : may be offered to other bidders whose price bid was opened. Andrew Yule reserves the right to order the entire Tender quantity on the L1 bidder.
4	<p>i)Risk purchase clause: The company reserve the right to impose risk purchase clause as " For delay in execution / supply we shall have every right to do the same through some other agency/s which shall deemed fit and the additional cost of the same (Incidental/Consequential) shall be to your account which with respect to our intimation or observation whatsoever. Please confirm acceptance.</p> <p>ii) Force Majeure Clause:</p> <p>1. Force Majeure</p> <p>1.1 Neither vendor nor AYCL shall be liable to the other for any delay or non-performance of its obligations under this Contract arising from any cause beyond its reasonable control including in relation to either Party any act of God, governmental act, act of any regulatory authority, supervening illegality, war, fire, flood, explosion, power blackout, break-down of machinery, loss of utility, civil commotion, industrial dispute, manpower unrest acts or omissions of telecommunications or data communications operators or carriers , in relation to vendor (to the extent not directly attributable to vendor's negligence), (a "Force Majeure Event").The affected Party shall promptly notify the other Party in writing, of the cause and the Force Majeure Event and its likely duration within no later than two (2) days after the affected Party knew of the occurrence of the Force Majeure Event. Performance by the affected Party of its obligations under this Contract shall be suspended for the duration of the Force Majeure Event. If performance is not resumed within 15 (fifteen) days after theForce Majeure Event, either Party may terminate this Contract by giving to the other Party seven (7) days' notice in advance.</p> <p>1.2 On the occurrence of any Force Majeure Event, the affected Party shall use all reasonable efforts (including emergency fixes and workarounds) to perform its obligations under this Contract during the period of suspension. Further the affected Party shall perform such part of its obligations pursuant to this Contract as are not affected by the Force Majeure Event.</p> <p>1.3 The affected Party shall use its reasonable efforts to mitigate the effect of any event of Force Majeure as soon as practicable.</p>
5	<ul style="list-style-type: none"> • EMD - "Earnest Money Deposit" of Rs.15000 (Rupees Fifteen Thousands only) to be paid by D.D. favouring Andrew Yule &Co Ltd, payable at Kolkata. Moreover EMD can be waived under following clauses : • Procurement from the vendor whose turnover is more than 50 crores (balance sheet is to be provided)

	<ul style="list-style-type: none"> • Procurement from MSME industries (certificate is to be provided) • Procurement of vendor who has substantial dues more than 5% of the estimated tender value. (Bill details is to be provided)
6	Liquidated damage - If the delivery is delayed beyond the date of scheduled date of execution in the order, penalty will be levied @ 1/2% per week subject to a maximum of 5% . Please confirm acceptance.
7	Arbitration: All disputes relating to this order or relating to the price of the goods supplied there under or otherwise arising there from between the seller & the buyer shall be subjected to & referred to the court or competent jurisdiction situated within the limits of Kolkata. Neither the seller nor the buyer shall take or adopt any legal proceedings to enforce any claim against the order relating to this order or arising there from in any court other than the court of competent jurisdiction within the limits of the city of kolkata.
8	Validity of offer: Your price should be valid for acceptance till completion of complete supply/service, No price escalation will be entertained during that period
9	Price Basis , P&F : The price quoted should be FOR at Site basis and will remain valid , firm & fixed till completion of supply, installation and commissioning of the items. no price variation will be allowed at any circumstances. P&F – should be inclusive.
10	PAYMENT TERMS: - 60 Days Credit.
11	Guarantee /Warrantee Clause: The equipment must be guaranteed / warranted against faulty design, workmanship and material for a period of 24 months from the date of delivery or 18 months from the date of commissioning against faulty design/poor workmanship / manufacturing defect/ deformation in requisite quality.
12	Inspection: Inspection will be done by us/client at your works. Final inspection may be done, if required by us/client at site after receipt of the materials/installation of the item by you. Vendor to submit QAP for approval.
13	Insurance : Insurance upto our works at Kalyani , WB are inclusive in offer submitted by vendor.
14	PBG : 10% of the order value to be submitted , else 10% will be retained up to warranty period.

GENERAL TERMS AND CONDITIONS

1. EMD: By way of Demand Draft drawn in favor of M/S ANDREW YULE & CO.LTD Payable at Kolkata to be submitted. **“Earnest Money Deposit” of Rs.15000 (Rupees Fifteen Thousands only)** to be paid by D.D. favouring **Andrew Yule &Co Ltd**, payable at **Kolkata**.

For bidders already enlisted with AYCL- Kalyani Works, having outstanding amount more than the EMD amount or who have already submitted the EMD against our earlier tenders or those who have security deposit with Andrew Yule may apply for adjustment of the same.

Bidders who are MSME units may apply for exemption from furnishing EMD by making a specific request in writing and enclosing the necessary document in support of the same.

Bidders whose turnover is more than Rs: 50 crores may apply for exemption from furnishing EMD by making a specific request in writing and enclosing the necessary document in support of the same

If reason for non-submission of EMD or adjustment against the outstanding balance for EMD is not mentioned in Techno-commercial bid of tender, the tender will be rejected.

New vendors are required to submit all credentials for enlistment /competency

2. Bidder should submit copies of purchase orders & Performance Certificate from at least two reputed Organizations for providing/supply of similar items/service during the year 2014-2015/2015-2016. Offers received without copies of performance certificate may be rejected.

3. Bidders should enclose copy of last 3 years Balance sheets and P&L Account. (2013-2014, 2014-2015, 2015-2016).

4. Bidders should enclose a DD for Rs: 2,000 /= in favor of ANDREW YULE & CO.LTD, Payable at Kolkata towards cost of tender document.

5. THE RIGHTS OF THE COMPANY

The company reserves the right to reject any tenderer based on their past performance

6. The breakup of your quoted rate with respect to supply, service and others to be submitted along with Price bid.

TECHNICAL SPECIFICATION

GUILLOTINE DAMPER – 99 % LEAK PROOF , PNEUMATICALLY PERATED , SIZE 1822 X2410 I/S , WITH ACTUATOR.

TECH SPEC :

- I) SIZE : 1822X2410 I/SX450 mm HEIGHT.
- II) PRESSURE : 200 mmWG.
- III) TEMP:160⁰C
- IV) DUST LOAD:150 mg/Nm³
- V) FLOW RATE : 1154780 m³/Hr

ACTUATOR SHOULD HAVE FOLLOWING ACCESSORIES :

- i) AIR FILTER REGULATOR
- ii) AIR LOCK RELAY
- iii) SMART POSITIONER
- iv) HAND WHEEL
- v) LIMIT SWITCHES

ACTUATOR MAKE : ROTEX/EL-O- MATIC /L&T / KEYSTONE/VIRGO/AL SUNDERS/DEL VAL.

QUANTITY – 2 NOS.

PREFERRED MAKE LIST FOR ACTUATOR ACCESSORIES:

PLZ REFER NEXT PAGE ONWARDS:

**LIST OF PREFERRED MAKES (MECHANICAL, UTILITY, ELECTRICAL,
INSTRUMENTATION & AUTOMATION)**

a) LIST OF ACCEPTABLE MAKES FOR MECHANICAL ITEMS

I	GENERAL	
1.	Gearbox (other than crane)	ELECON, NAW, FMG, SHANTHI, PREMIUM ENERGY TRANSMISSION, HEC
2.	Geared Motor	IC BAUER, ROSSI MOTORS, BONFIGLIOLI, NORD, SEW-EURO, DRIVE, BREVENI, WEG, VEM, SIEMENS
3.	Coupling (other)	NAW, HICLIFF, CONCORD, FMG, ELECON, GBM, LOVEJOY, ROMA
4.	Fluid Coupling	VOITH, FLUIDOMAT, PREMIUM ENERGY TRANSMISSION
5.	Resilient Coupling	WELLMANWACOMA, NAW, ELECON, LOVEJOY, FENNER
6.	Transmission Chain & Sprocket	ROLCON / ROLON / REYNOLD/DIAMOND/ ROLKOBO
7.	Brake	BCH, ELECTRONIC & POWER CONTROL, ELECTROMAG, EMCO PRECIMA,
8.	Paint	ASIAN , J&N, GARWARE , BERGER , SHALIMAR, ICI, NEROLAC , BRITISH PAINTS
9.	Liner (other than steel)	TEGA, KAVERI, THEJO, QUADRANT
10.	Portable Electric Drilling Machine	WOLF, BLACK & DECKER, BOSCH
11.	Portable Electric Grinder	WOLF, KULKARNI , BLACK & DECKER, BOSCH
12.	Lathe	HMT , MYSORE KIRLOSKAR, HEC, COOPER
13.	Radial Drilling Machine	HMT , COOPER, MYSORE KIRLOSKAR

14.	Welding Rectifier Range	ADORFONTEK,ESAB, EMCO (MIRA), FINEARC
15.	Shaper	MYSORE KIRLOSKAR, COOPER (WIL), HMT,PMT
16.	Bench Type Drilling Machine	ACCUMAX,INDEF,EIFCO, KERRIJOST,BATLIBOI
17.	Pedestal Grinder	. INDEF, ABMTMT, GRIND TOOLS, GECO, AMC , EIFCO , GLOBE
18.	Welding Transformer	ADORFONTEK,ESAB , EMCO (MIRA) , FINEARC
19.	Power Hacksaw	INDEF, MYSORE, KIRLOSKAR , PMT
20.	Bearing	SKG , FAG , NTN, TIMKEN,KOYO
21.	Passenger cum Goods Elevator	OTIS, KONE ELEVATOR , MITSUBISHI, THYSEN KRUPP
22.	Hook (up to 10 t)	HERMAN MOHTA, FREE TRADING CORPORATION, MACHINETOOLS, OM ENGG., ESKAY MACHINERY
23.	Hook (above 10 t)	HERMAN MOHTA , FREE TRADING CORPORATION, STEEL FORGINGS & ENGINEERING
24.	Wire Rope	MUMBAI WIRE ROPE, USHA MARTIN, FORT, WILLIAMS,ORION ROPES, BHARAT WIRE ROPES
25.	Expansion Joint (metallic)	LONE STAR, MB METALLIC BELLOWS, FLEXATHERM, FLEXICAN
26.	Split Bearing	EICH, COOPER, SKF
27	Sinter machine gear box	FLENDER ,CMD France, PIV drives GmbH
II	MATERIAL HANDLING EQUIPMENT	
1.	Conveyor Belt	PHOENIX YULE, DUNLOP, NIRLON, HILTON, NORTH LAND RUBBER, ORIENTAL RUBBER
2.	Idler & pulley	L & T, ELECON, TRF, BENGAL TOOLS, MSEL, HITECH EQUIPMENTS Pvt. Ltd. INDIANA CONVEYORS, MACMET, BEVCON
3.	Belt Scraper	HOSCH , KAVERI

4.	Vibrating Screen	IC , SCHENK PROCESS, TRF, METSO, McNALLY SAYAJI ENGINEERING LIMITED, ELEKTROMAG- JOEST VIBRATION PVT. LTD.
5.	Apron Feeder	TRF, METSO, ELECON, McNALLY SAYAJI. THYSSEN KRUPP, F L SMIDTH, L & T
6.	Electro mechanical Actuator	PREPEC. AUMA, ROTORK, LIMITORQUE
7.	EOT Crane & it's gear box	JESSOP / HEC / MUKAND / WMI / UNIQUE INDUSTRIAL HANDLERS, ANUPAM
8.	EOT Crane & it's gear box (up to 10 t)	ARMSEL,FAFECO, MUKAND, WMI, ANUPAM, SHIVPRA,TUBROFURGUSON
9.	EOT Crane & it's gear box (up to 50 t)	JESSOP,HEC, MUKAND,WMI,UNIQUE INDUSTRIAL HANDLERS BOMBAY CRANES, DEMAG CRANES, ANUPAM INDUSTRIES
10.	Electric Hoist	VOLTAS, BOMBAY CRANES, REVA ENGG, HERCULES HOIST, ELECTROTHERAPY, AARCO, ARMSEL, EDDY CRANE, INDEF, WH BRADY
11.	Electric Winch	BOMBAY CRANES, PULLMAN, ELECTROMECH ENGG, AARCO, EDDY CRANE
12.	Chain Pulley Block & Hand Operate	INDEF, W.H BRADY, TRACTELTRIFOR,MORRIS
13.	Under slung Cranes	ARMSEL,FAFECO, MUKAND, WMI, ANUPAM, SHIVPRA,TUBROFURGUSON,WHBRADY
14.	Belt Feeder	SHENCK, SIEMENS MILTRONICS, F L SMIDTH
III	HYDRAULICS SYSTEM	
1.	1. Hydraulic Cylinder	BOSCH REXROTH, EATON, WIPRO, USHA TELEHOIST,PARKER ,YUKEN
2.	Hydraulic System	BOSCH REXROTH, YUKEN, PARKER, HYDAC
3.	Accumulator	BOSCH REXROTH, EPE, HYDAC
4.	Hydraulic Fitting & Clamp	HYDAC, HYTECH, PTS, HYDAIR, HYDAC, EPE

5.	Filter	INTERNORMEN, PALL, PARKER, HYDAC
6.	Hydraulic Motor	HAGGLUNDS, EATON, REXROTH, YUKEN, PARKER, SAUER DANFOSS
7.	Hose	HYDROKRIMP, HYDROLINE, INDO INDUSTRIAL SERVICES, AEROLEX, SUPERSEAL, PSI HYDRAULICS, SONI RUBBER
8.	Heat Exchanger	ALFA LAVAL, SWEP, GEA, TRANTER,
IV	PNEUMATIC SYSTEM	
1.	Pneumatic	WIPRO, FESTO CONTROLS, NUCON, VELJAN,
	Cylinder	HYDAIR, GABRIEL PNEUMATICS, SHRADER, ROTEX, I.L. PALAKKAD
2.	Hose	HYDROKRIMP, HYDROLINE, INDO INDUSTRIAL SERVICES, AEROLEX, SUPERSEAL, PSI HYDRAULICS, SONI RUBBER
V	LUBRICATION SYSTEM	
1.	Oil Lubrication System	CEN. LUB, LINCOLN, PRAKASH LUBRIQUIPMENT, BOSCH
2.	Screw Pump	TUSHACO, ALWEILER, IMO, NORTEK
3.	Gear Pump	TUSHACO, ROTODEL, REXROTH/PARKER/A LFA
4.	Filter Strainer	PARKER, INTERNORMEN, PAL, HYDAC
5.	Centrifuge V	HYDAC, ALPHA LAVAL
6.	Oil Mist / Mist	NORGEN, LINCOLN, DELIMON
7.	Grease Lubrication System	LINCOLN, DELIMON
8.	Hose	HYDROKRIMP, HYDROLINE, INDO INDUSTRIAL SERVICES, AEROLEX, SUPERSEAL, PSI HYDRAULICS, SONI RUBBER
VI	MINING & MINERAL PROCESSING AREA:	
1.	Crusher (Cone / Gyratory/ Jaw)	METSO, SANDVIK, L&T, TRF, HEC, FLSMIDTH, URALMASH, THYSENKRUPP

2.	Ball / Rod / Ag Mill	TRF, L&T, SANDVIK , HEC, METSO, URALMASH
3.	Classifier	HUMBOLDTWEDAG, HINDUSTAN DORR, OLIVER, METSO, FLSMIDTH, DURGA METALS, EIMCO-KCP
4.	Hydrocyclone	MOZLEY,FLSMIDTH KERBS, MSEL , METSO, CDE
5.	Thickener	FLSMIDTH,HINDUSTAN DORR OLIVER,OUTOTEC, BATEMAN-DELKOR, CDE, METSO
6.	Jig	HUMBOLDTWEDAG,DOWNER EDI, TENOVA - BATEMAN
7.	Filter	OUTOTEC, DELKOR, METSO, FLSMIDTH, OT KLIN
8.	Magnetic Separator	METSO, ERIEZ, HUMBOLDT WEDAG, ELECTRO ZAVOD, ELEKTROMAG
9.	Metal Detector	METSO, ERIEZ, HUMBOLDT WEDAG, ELECTRO ZAVOD, ELEKTROMAG
10.	Cable Reeling Drum	ELECTROZAVOD, ELEKTROMAG
11.	Dumper (50 t & above)	BEML, KOMATSU, CATERPILLAR , LIBHERR, BELAZ, TEREX
12.	Excavator(0.9m3 bucket capacity & above)	BEML, KOMATSU, VOLVO, HIND-DEMAG, CATERPILLAR, LIBHERR
13.	Drill (6" dia.- DTH)	ATLAS COPCO, SANDVIK
14.	Dozer	BEML, KOMATSU, HYUNDAI, CATERPILLAR, LIBHERR,
15.	Grader	BEML, KOMATSU, VOLVO , KAWASAKI , CATERPILLAR
16.	Wheel Loader	BEML, KOMATSU, VOLVO, CATERPILLAR, HINDUSTAN, TEREX, JCB
17.	Stacker &Reclaimer and	ELECON, L & T, Mc NALLY BHARAT, METSO, TRF, THYSSENKRUPP, HEC
18.	Wagon Tippler	ELECON, L & T,Mc NALLY BHARAT, METSO, TRF, THYSSENKRUPP, HEC

b) LIST OF ACCEPTED MAKES LIST FOR UTILITY ITEMS

A. Fire fighting, ACVS & Pollution control System:

Sl.No.	Item Description	Makes
	POLLUTION CONTROL EQUIPMENT	
1.0	ESP	
1.1	Capacity $\leq 500,000 \text{ m}^3/\text{h}$	THERMAX, ALSTOM, BHEL, ANDREW YULE, ELEX, FL SMIDTH, GEA PROCESSING, LODGE COTTRELL
1.2	Capacity $> 500,000 \text{ m}^3/\text{h}$	ALSTOM, BHEL, ANDREW YULE, FL SMIDTH, LODGE COTTRELL
2.0	BAG FILTER	
2.1	Capacity $\leq 250,000 \text{ m}^3/\text{h}$	THERMAX, BATLIBOI, KLEEN AIR, F. HARLEY, ALSTOM, ANDREW YULE, RIECO, FL SMIDTH
2.2	Capacity $> 250,000 \text{ m}^3/\text{h}$	ALSTOM, ANDREW YULE, RIECO, FL SMIDTH
3.0	ID FAN (for Dedusting System)	
3.1	Capacity $\leq 500,000 \text{ m}^3/\text{h}$	REITZ, TLT Engg., BHEL, ANDREW YULE, FLAKTWOOD, HOWDEN, AEROTO BOLDROCHI
3.2	Capacity $> 500,000 \text{ m}^3/\text{h}$	BHEL, ANDREW YULE, FLAKTWOOD, HOWDEN, AEROTO BOLDROCHI
	AIR CONDITIONING, REFRIGERATION & VENTILLATION EQUIPMENT	
1.0	Window/ Tower/ Split AC/ Ductable Split AC	HITACHI, DAIKIN, FEEDERS LLYOD, VOLTAS, BLUE STAR, CARRIER, SAMSUNG
2.0	Packaged Chillers	VOLTAS, BLUE STAR, CARRIER, TRANE,

		HITACHI, KIRLOKAR CHILLERS
3.0	Package AC	VOLTAS, BLUE STAR, ETA, ROOTS COOLING, CARRIER
4.0	Cooling Tower	VOLTAS, DBR, FRICK INDIA, PAHARPUR, GAMMON INDIA, SOUTHERN COOLING TOWERS, SHRIRAM TOWER TECH
5.0	Air handling Unit	VOLTAS, BLUE STAR, FEEDERS LLYOD, ETA, ROOTS COOLING, CARRIER
6.0	Tube Axial Fan	KHAITAN, EFE, FLOWLINK, KRUGER, CARYAIRE, AEROVENT, DUSTVEN, TUBOFLOW, MAXFLOW
7.0	Panel Filter for Air	FMI, EFE, FLOW LINK, C.DOCTOR, GEC, ACCO, ABB, BHARAT, PUROLATOR
8.0	Propeller Fan	ABB, VENTURA, ANDREW YULE, ACCO, AEROVENT, DUSTVEN, TUBOFLOW, ALMONARD
9.0	Man Coolers	KHAITAN, C. DOCTOR, ORIENT, ALMONARD, FLOWLINK, VENTURA
10.	Roof Exhauster	ALMONARD, KRUGER, CARYAIRE, FLOWLINK, VENTURA, EFE, AIRLINK, C. DOCTOR, AEROVENT
	FIRE FIGHTING EQUIPMENT	
1.0	Portable Fire Extinguisher	FIEX, MINIMAX, NITIN, FIRE SHIELD, SAFEX, STEELAGE, ZENITH
2.0	Fire Hydrant	NEWAGE, STEELAGE, ASCO, ZENITH, STEELCO, MINIMAX, NITIN

B. Water supply facilities:

Sl.No.	Item Description	Manufacturers
	Pumps	
1.	Centrifugal Pumps (Horizontal Split Casing Type)	MATHER & PLATT, BHEL, JYOTI, SULZER, FLOW SERVE, XYLEM, KBL, KSB, RUHRPUM PEN
2.	Centrifugal Pumps (Horizontal Back Pullout Type)	KSB, MATHER & PLATT, BHEL, JYOTI, FLOW SERVE, SULZER, KBL, KSB
3.	Centrifugal Pumps (Vertical Turbine)	JYOTI, FLOW SERVE, MATHER & PLATT, SULZER, KBL,, XYLEM, RUHRPUMPEN
4.	Centrifugal Pumps (Vertical)	KSB, JYOTI, FLOW SERVE, SULZER, KSB MATTER PLATT, RUHRPUMPEN
5.	Submersible pump	KSB, SU MOTORS, KISHORE, GODWIN PUMPS, JYOTI, SULZER, BHARAT BIJLEEE, KBL, MATTER PLATT
6.	Multi-stage Pumps	MATHER & PLATT, SULZER, BAREJA, KSB, KBL
7.	Centrifugal Pumps For Slurry Handling	SAM, WEIR MINERAL, METSO, DORR OLIVER, XYLEM, MATTER PLATT
8.	Reciprocating Slurry Pump	DORR OLIVER, GEHU
9.	Screw pump	TUSHACO, ROTO, AIRAUTO, UT PUMPS, BORNEAMAN, ALLWEILER, FLOW SERVE
10.	Gear Pump	UT PUMPS, AIRAUTO, BAREJA, TOWN INDUSTRIAL ENGINEERS, JOHNSON, ROTODEL, FLOW SERVE
11.	Dosing pump	ING-TECH ENGG CO., ANTICO (TRANSFER PUMPS), THERMAX, MATZ ENGINEERS, VK PUMP, MILTON –ROY, SHAPOTOOL, ION EXCHANGE
12.	Reciprocating Pumps	ACME, AIRAUTO, BHARAT PUMPS & COMPRESSOR, CHEMTROL, SWELORE ENGG., TOWN INDUSTRIAL ENGINEERS, FLOW SERVE
13.	Diaphragm Pumps	WILDEN, YAMADA, BLAGDON, WATERMAN, SWELORE ENGG, KRUPAM, SOLTECH PUMPS, VK PUMP
14.	Liquid Ring Pump	FLOWMORE, KIRLOSKAR, ACMEVAC, KAKATI, USHA, VINDI

Sl.No.	Item Description	Manufacturers
15.	Fire Fighting Pumps	MATHER & PLATT, KIRLOSKAR, BEST & CROMPTON
	VALVES	
16.	Gate, Globe, Non-Return Valves (Cast Steel Or Forged Steel)	BHEL, L & T, KSB, WEIR-BDK, KIRLOSKAR, FOURESS, HAWA VALVES, WEIR
17.	Gate, Globe, Non-Return Valves (Alloy Steel)	BHEL, KSB, L & T, FOURESS, HAWA VALVES, WEIR-BDK,
18.	Gate, Globe, Non-Return Valves (CAST IRON, & SG IRON)	LEADER, , WEIR-BDK,, FOURESS, L&T, HAWA VALVES, KIRLOSKAR
19.	Double & Triple Eccentric Butterfly Valves	ADAMS, FOURESS, VIRGO, DEL –VA, WEIR BDK, L&T
20.	Butterfly Valve	L&T, FOURESS, KIRLOSKAR, METSO, KSB, WEIR-BDK, SIGMA FLOW, INTERVALVE, HAWA VALVES, VIRGO, HABONIM, VASS, DEL VAL
21.	Fabricated Valves (Gate, Goggle & Butterfly Valves)	FOURESS, ADAMS, Z & J, CIIMCO((EXCLUDING GOOGLE VALVE), L&T(EXCLUDING GOOGLE VALVE), HAWA VALVES (EXCLUDING GOOGLE VALVE),
22.	Plug Valve (CS / FS / CI / SS)	FLOW SERVE, KSB, MICRO FINISH, XOMOS, WEIR-BDK
23.	3 Or 4 Way Cock (CS/ FS / CI)	AL SAUNDERS, UNIVERSAL ENGG.
24.	Ball Valve (SS/CS / FS / CI)	L&T, KSB, WEIR-BDK, DEL VAL, AL SAUNDERS, XOMOX, HAWA VALVES, VIRGO, TYCO VALVES, VASS IND, KBL
25.	Float Valve	LEVCON, LEADER, IVC, HAWA VALVES, WEIR BDK
26.	Foot Valve	LEVCON, IVC, SHIVA DURGA, WEIR-BDK
27.	Piston Valve	UNI KLINGER
28.	Diaphragm Valve	FLUID SYSTEM, AL SAUNDERS, WEIR-BDK, IVC, HAWA VALVES
29.	Air Release Valve	LEVCON, IVC, KBL, LEADER
30.	Safety Valve	IL, KEYSTONE / TYCO, MEKASTAR, J.N. MARSHALL, WEIR-BDK , BHEL

Sl.No.	Item Description	Manufacturers
31.	Needle Valve	FOURESS, SEIMAG, AIR CHEM, SCHRODER
32.	Knife Gate Valve	WEIR-BDK, HABONIM VASS, TYCO DEZURIK, VELJAN, HAWA VALVES
33.	Plunger Valve	VAG-RIKO, UNI-KLINGER
34.	Valves (Non-Metallic)	GEORGE FISCHER, POLY VALVE
35.	Pressure Reducing Valve	J.N.MARSHALL, IL, MEKASTER, AKSONS, CRESCENT, FLOWTEK VALVES, VK, MASSOLENIN
36.	Non-Ferrous Valves (General Purpose)	AKSONS, CRESCENT, BOMBAY METAL, LEADER, FLUIDLINE, ASCO, GM DALUI, SANT VALVES , HAWA VALVES
37.	Solenoid Valves	BURKERT, SIEMAG, SCHARDAR, ROTEX, ASCO
38.	Sluice Gate	JASH, IVPL, LEVCON, IM ENGG
VALVE ACTUATORS		
39.	Valve Actuator (Electrical)	AUMA, ROTORK, LIMITORQUE, SIEMENS,
40.	Valve Actuator (Pneumatic)	ROTEX, ELOMATIC, L&T, KEYSTONE, VIRGO, AL SAUNDERS, DEL VAL,
HEAT EXCHANGERS		
41.	Heat Exchanger (Plate Type)	IDMC, ALFA LAVAL, GEA, SWEP, TRANTER, APV
42.	COOLING TOWERS	PAHARPUR, WET BULB, GAMMON, PALTECH, SOUTHERN COOLING TOWERS, SHRIRAM TOWER THERMOPACK, , GEA COOLING TOWERS
FILTERS / STRAINERS		
43.	Filters /Strainers	OTOKLIN, SUPERFLOW, AMIAD, FILTRATION ENGINEERS, PUROLATOR, HYDAC
44.	Pressure Filters	THERMAX, ION EXCHANGE, RESIN INDIA, DRIPLEX, ING-TECH ENGG. CO., VA TECH, PENTAIR WATER
45.	Activated Carbon Filter	THERMAX, RESIN INDIA, ION, EXCHANGE, OTTOKILN, ING-TECH ENGG. CO, ARUDRA, VASMYL, PENTAIR WATER

Sl.No.	Item Description	Manufacturers
46.	Y-Strainer	DRAYTON-GREAVES, J.N. MARSHALL, UNIKLINGER, CADILLAC
	EXPANSION JOINTS/COMPENSATORS	
47.	Expansion Joints / Compensators (Metallic)	SUR INDUSTRIES, FLEXICAN, LONE STAR, FLEXATHERM, INTEGRAL
48.	Expansion Joints/Compensators (Rubber)	DIENS FLEXO , SUR INDUSTRIES, PRECISION ENGRS., STANDARD PRECISION BELLOWS, KELD ELLENTOFT INDIA, GBM, INTEGRAL
49.	Expansion Joints/Compensators (Non-Metallic)	DIENS FLEXO , HINDUSTAN FERODO, KELD ELLENTOFT INDIA, GBM, SUR INDUSTRIES
	PIPES AND HOSES	
50.	Steel Pipes	SAIL (RSP), TATA TUBES, SURYA TUBES, MAHARASHTRA SEAMLESS, INDIAN SEAMLESS, KHANDELWAL, JSW, UTKARSH
51.	Stainless Steel Pipes	CHOKSY, ZENITH, STANDARD (INDIA), JINDAL STERLING, DIVINE TUBES, NOBLE TUBES, MAHARASHTRA SEAMLESS, MEC TUBES
52.	Cast Iron Pipes & Specials	KESORAM, KALINGA
53.	RCC Pipes	SUR INDUSTRIAL CORP., INDIAN HUME PIPES, HIND CERAMICS
54.	DI Pipes	SAW, ELCTRO STEEL CASTING, TATA METALLIC
55.	HDPE Pipes, PVC Pipes & Fittings	GEORGE FISHER, ASTRAL, ORIPLAST, EMCO, POLYFIX, CHEMPLAST, EMOCOTHENE, PIL, POLYOLEFINS, FINOLEX
56.	FRP Pipes & Fittings	GEORGE FISHER, GLASS ROLL INDUSTRIES, FIBRE GLASS, FIDRO PLASTICHEM, COROMANDAL, NOCIL, PIL, ORIPLAST
57.	Hoses (Rubber & Stainless Steel)	D.WREN, HYDRA, OTOKILN, FLEXICAN, INALSA, AEROFLEX, TEKSONS, MARKWEL, FLEXATHERM
	PIPES FITTINGS	

Sl.No.	Item Description	Manufacturers
58.	Steel Pipe Fittings	TUBE BEND, ITC (S&L), NL HAZRA, AJANTA, ENGINEERING SERVICE ENTERPRISE, MS FITTINGS, WELSPUN, M.S. FITTINGS, S. NOMI, SWASTIK LLOYDS, NOBLE TUBES, KHANDELWAL BROS., SHYAM ENGG
59.	SS Pipe Fittings	TUBE BEND, ITC (S&L), N.L. HAZRA, M.S. FITTINGS, NOBLE TUBES, HEAVY METAL TUBES POONAM ENTERPRISES, SHYAM ENGG
WATER TREATMENT AND DM WATER PLANT		
60.	DM & Soft Water Plant	THERMAX, ION EXCHANGE, DOSHI ION, RESIN INDIA, DRIPLEX, AQUA TECH, PENTAIR WATER, TRIVENI, GEA ENERGY SYSTEMS, IJT
61.	Waste Water Treatment Plant	HINDUSTAN DORR OLIVER, TRIVENI, ING-TECH ENGG. CO., THERMAX, KIRLOSKAR, KAAF, DOSHI ION, GE, XYLEM
62.	Water Pre-Treatment	TRIVENI, THERMAX, ION EXCHANGE, DORR OLIVER, KIRLOSKAR, KAAF, DOSHIION
63.	Clarifier	HINDUSTAN DORR OLIVER, EIMCO-KCP, JORD ENGINEERS,
64.	Effluent Treatment Plant	VA TECH, GEA ENERGY SYSTEM, TRIVENI, UEM INDIA, DOSHIION
65.	Drinking Water Treatment Plant	DRIPLEX, VA TECH, GEA ENERGY SYSTEM, TRIVENI, UEM INDIA, THERMAX
66.	Chemical Dosing System	HINDUSTAN DORR OLIVER, TELLABS CHEMICALS, NALCO
MISCELLANEOUS ITEMS		
67.	Surge Tanks	ANUP ENGG., ZENITH ERECTORS, PERFECT ENGG., SAKTHI HITECH
68.	Oil Skimmer	JVM ENG., PREMIER OIL SKIMMER, HI-TECH ENGRS, POTENTIAL ENGG
69.	Sludge Scraper	TRIVENI, GEOMILLER, MATA INDIA, NEO-PARISTRUTAN
70.	Ejector	BHEL, WEIGAND, NEWFIELD, MAZDA
71.	Traveling Water Screen	MACMET, TRIVENI, MAHINDRA ASTECH, SWAMINA INT., Mc.GALE
72.	Spring Supports for Pipelines	BHEL, SARATHI
73.	Flanged Dismantling Joint	DIENS FLEXO, NL HAZRA, ENGINEERING

Sl.No.	Item Description	Manufacturers
		SERVICE ENTERPRISE

C. Gas & Energy:

Sl. No.	ITEMS	MAKE
1.	CENTRIFUGAL GAS BOOSTER	TLT, ANDREW YULE, DONKIN (UK), JAMES HOWDEN (UK), AIRTO BOLDROCCHI
2.	Blowers & Fans (General Purpose)	BHEL, ANDREW YULE, AEROTOBOLDROCCHI, FLAKT WOOD, TLT, REITZ

c) LIST OF ACCEPTABLE MAKES FOR ELECTRICAL ITEMS

Sl.No	Items	Make
1	TRANSFORMERS:	
i)	132 kV / 11kV/6.6 kV Power Transformer above 15MVA	SCHNEIDER(ALSTOM)/ BHARAT BIJLEE/ BHEL/ CGL/SIEMENS/ABB
ii)	11 / 6.6 / 3.3 / 0.433 kV Power Transformer upto 15MVA	ABB/ SCHNEIDER/ BHARAT BIJLEE/BHEL/ CGL/EMCO/ KIRLOSKAR ELEC.COMPANY/SUDHIR TRANSFORMERS (INTRA VIDYUT)/ VOLTAMP/ SIEMENS
iii)	L.T. (Dry Type) cast resin Transformer (11 KV/6.6 KV/3.3 KV/ 0.433 KV)	CGL/ KIRLOSKAR ELECTRIC COMPANY/ SUDHIR TRANSFORMERS (INTRAVIDYUT)/ VOLTAMP/ ABB/ BHEL
iv)	Control Transformer	INDUSHREE / BCH / APOLLO / TRIL / INTRA VIDYUT/
v)	CVT	APLAB/ ELNOVA/ SEN & PANDIT
vi)	Converter Transformer	INTRA VIDYUT / CGL / KEC / BHEL/ SCHNEIDER
vii)	Protective Numerical Relays	ABB/SCHNEIDER(ALSTOM)/ SIEMENS
2	EHT & HT EQUIPMENT	
i).	33 kV/ 132 kV/ 220 kV GIS	ABB/ SIEMENS/ ALSTOM/ CGL
ii).	33kV/ 132kV/ 220 kV outdoor Isolator/ Disconnecting Switch	CGL/SIEMENS(ELPRO)/AREVA/ ALLIANCE/ S&S Pondicherry
iii).	33kV/ 132kV/ 220 kV outdoor Breaker	ABB/SIEMENS/BHEL/SCHNEIDER(ALSTOM)/ CGL
iv).	33kV/ 132kV/ 220 kV outdoor CT/ PT	BHEL/ AREVA/ CGL/ SIEMENS/ ABB/ MEHRU(AE)/ ECS
v).	33kV/ 132kV/ 220 kV outdoor Lightning Arrestor	AREVA/ BHEL/ CGL/ SIEMENS (ELPRO)/ OBLUM
vi).	33kV/ 132kV/ 220 kV outdoor Insulator & Bushing	WSI/ AREVA/ BHEL/ CGL
vii).	11kV & 6.6kV Insulator & Bushing	JAYSHREE INSULATORS/ OBLUMS/ WSI/ BHEL/ CJI/ AREVA/ CGL
viii).	33kV/ 132kV/ 220 kV ACSR Conductor	APAR/ CABCON/ STERLITE
ix).	33kV/ 132kV/ 220kV cable XLPE	KEC (RPG)/ KEI/ CCI (Cable Corporation of India)/ UNIVERSAL/ GLOSTER (only 33 kV)/ NICCO (only 33 kV)
x).	33kV/ 132kV/ 220 kV STJ & Termination kit	RAYCHEM/ CCI (Cable Corporation of India)/ KABELDON
xi).	11 / 6.6KV On-load Isolator	A BONDSTRAND/ ABB/ DRESCHER PANICKER/ SIEMENS/ MEGAWIN

Sl.No	Items	Make
xii).	11 KV /6.6KV/3.3 KV Vacuum Circuit Breakers and Panel	ABB/SCHNEIDER(ALSTOM)/ BHEL/ CGL/ SIEMENS
xiii).	11kV & 6.6kV Capacitors	ABB/ BHEL/ GE/UNISTAR (UNIVERSAL CABLE)
xiv).	11kV & 6.6kV CT / PT	ABB/ AEL/ INTRAVIDYUT/ JYOTI/ KAPPA/ PRAGATI
xv).	11kV & 6.6kV Vacuum contactor	ABB/ SCHNEIDER(ALSTOM)/ ANDREW YULE/ GE/ SIEMENS
xvi).	Reactor	PS ELECTRICALS/ QUALITY POWER/ ALSTOM
xvii).	Peterson coil	QUALITY POWER/ EBEARLEY/ TRENCH
xviii).	Earth fault monitoring system	EBEARLEY/ TRENCH
xix).	HT Bus duct	ECC/ KGS ENGG LTD (STAR DRIVE)/ L&T
3	LT EQUIPMENT	
i)	LT Air Circuit Breaker (Draw Out type)	ABB/ GE/ L&T/ SCHNEIDER/ SIEMENS
ii)	High Speed DC Circuit Breaker	GE/ SIEMENS/ABB
iii)	Intelligent Motor control centre (MCC)	ABB/ GE/ L&T/ SCHNEIDER/ SIEMENS/ ROCKWELL
iv)	Non Intelligent Motor control centre (MCC) up to 1000 A	ABB/ GE/ L&T/ SCHNEIDER/ SIEMENS/ BCH/ C&S/
v)	Non Intelligent Motor control centre (MCC) above 1000 A	ABB/ GE/ L&T/ SCHNEIDER/ SIEMENS/ C&S/ BCH
vi)	PCC	ABB/ GE/ L&T/ SCHNEIDER/ SIEMENS
vii)	PDB/MLDB	SIEMENS/BCH/L&T/SCHNEIDER/C&S/GE/ HAVELLS/ MEDITRON
viii)	MCCB	ABB/ BCH/ GE/ L&T/ SCHNEIDER/ SIEMENS/ C&S/ HAVELLS
ix)	MPCB	GE/ SCHNEIDER/ SIEMENS/ LG/ABB/L&T/BCH/C&S/ MOELLER/SPRECHER+SCHUH
x)	MCB	HAVELLS/ INDO ASIAN/ AY/ABB/LEGRAND(MDS)/ SCHNEIDER/ STANDARD/ C&S/GE/SIEMENS/L&T
xi)	LT CT/PT	SIEMENS/ ABB/ KAPPA/ SILKAANS/ IND-COIL/ PRECISION/INTRAVIDYUT/AEL/JYOTI/PRAGATI
xii)	HRC Fuse	SIEMENS/ L&T/ GE/ C&S/STANDARD BUSMAN/SCHNEIDER/ HAVELLS/ INDO ASIAN

Sl.No	Items	Make
xiii	SEMI CONDUCTOR/ THYRISTOR FUSE	SIEMENS/ FERRAZ/ BUSMAN/ GE
xiv	LT CAPACITOR	ABB/ BHEL/ CGL/ GE/BCH
xv)	LT BUS DUCT	ECC/ STAR DRIVE/ L&T/ KMG ATOZ/C&S
4	LT CONTACTOR / RELAYS	
i)	TIMER / TIME DELAY RELAY (ELECTRONIC)	BCH/ SIEMENS/ L&T/ ALSTOM/ SCHNEIDER/ EAPL/MINILEC/ABB/GE/ OMRON
ii)	TIME SWITCH (ELECTRONIC)	BCH/ EAPL/ LEGRAND/ SIEMENS/L&T/ALSTOM/ SCHNEIDER/GE
iii)	PNEUMATIC TIMER	BCH/ SCHNEIDER/BHEL
iv)	AC POWER CONTACTOR	ABB/ GE/ BCH/ L&T/ SCHNEIDER/ SIEMENS/ C&S
v)	DC POWER CONTACTOR	BHEL/BCH/ SCHNEIDER/ABB/SIEMENS/GE
vi)	BI-METALLIC THERMAL O/L RELAYS	ABB/ ANDREW YULE/ BCH/ L&T/ SIEMENS/ SCHNEIDER/ GE/ ROCKWELL/ C&S
vii)	AUXILIARY RELAY (MINIATURE PLUG GABLE RELAY)	SIEMENS/ L&T/ BCH/ SCHNEIDER/ ABB/ GE/ C&S/JYOTI
viii	ELECTRO MAGNETIC O/L RELAY	BCH/ MEL/ SCHNEIDER/ SIEMENS/ L&T/GE
ix)	ELECTRONIC MOTOR PROTECTION RELAY	SAMWHA/ FANOX/ MOELLER/ LG/ SPECHER & SCHUH/ L&T/ SIEMENS/ MINILEC/BCH
x)	EARTH LEAKAGE CIRCUIT BREAKER	HAVELLS/GE POWER/ABB/SIEMENS/SCHNEIDER/LEGRAN D/STANDARD/L&T
xi)	VACUUM CONTACTOR (LT)	SIEMENS/L&T/ABB/SCHNIEDER/MOELLAR
5	POWER SUPPLY DEVICE	
i)	DC DRIVES	ABB/ L&T/ SIEMENS/ ROCKWELL AUTOMATION
i)	MV AC DRIVES	GE/TMEIC/SIEMENS/ABB/HITACHI/ TOSHIBA
ii)	LV AC DRIVES	ABB/ HITACHI/ROCKWELL/ SCHNEIDER/ SIEMENS/ L&T (YASKAWA)/TMEIC /VACON
iii)	SOFT STARTER	ABB/ ROCKWELL AUTOMATION/ SIEMENS
iv)	MINIATURE / MODULAR POWER SUPPLY UNIT	APLAB/ SIEMENS/ SCHNIEDER
v)	FCMA /Series reactor type softstarter	INNOVATIVE TECHNOMICS/ JAYSHREE
6	CONTROL PANEL DEVICE / FIELD DEVICE	
i)	CONTROL DESK/ CONTROL PANEL/ LOCAL CONTROL BOX	HAVELLS/ECC/ TECHNIC CONTROL/ BCH/ MEDITRON/ EMCONS

Sl.No	Items	Make
ii)	CONTROL SWITCH	ABB/ BCH/ EPCC/ KAYCEE/ L&T/ SIEMENS/ GE POWER
iii)	LIMIT SWITCH (other than crane application)	SIEMENS/BCH/EPCC/AG CONTROL/ JAI BALAJI/PROTOCONTROL/ JAYSHREE/L&T
iv)	LIMIT SWITCH (for crane application)	BCH/ SIEMENS/EPCC/STROMKRAFT/INDUSTRIES SYNDICATE
v)	PROXIMITY SWITCH	ABB/ BCH/ SCHNEIDER/ROCKWELL/ SIEMENS/ TELEMCHANIQUE/ SICK/ IFM/ JAYSHREE
vi)	ROTARY LIMIT SWITCH	ABB/ L&T/TEKNIC CONTROL/ VOLLEN/ BROICH/ GE/ BCH/ EPCC/ KAYCEE/ KAYESS/IFM
vii)	PUSH BUTTON	SIEMENS/ BCH/ L&T/ SCHNEIDER/ C&S/ CGL/ VAISHNO/ GE
viii)	TRACK LIMIT SWITCH	BCH/EPCC/ AG MECH/ STROMKRAFT/INDUSTRIES SYNDICATE
ix)	CABLE GLAND	DOWELS/ ELECTRO WERKE/ CCI/ HELUKABLE/LAPP/HANSEL/PHOENIX/COMET BRASS PRODUCT
x)	CABLE LUG	DOWELS/ JAINSON/ ISMAIL/MULTI
xi)	CONNECTORS/TERMINAL BLOCK	ESSEN/ WAGO/ CONNECT WELL/PHOENIX/ ELMEX/LAPP/HANSEL
7	INDICATING / MONITORING / ANNUNCIATION DEVICE	
i)	VOLTMETER/ AMMETER / WATTMETER/PF METER/FREQUENCY METER/ WATT HOUR METER	AEL/IMP/ MECO/ L&T/ SECURE METER/RISHAV/KAPPA/ALSTOM/ BHEL
ii)	INDICATING LAMP (LED)	ESSEN/ BLUE BELL/ BINAY/ MICROTECH/ BCH / GE/ KHERAJ/ EPCC/ BEMCO/VAISNO/SIEMENS/L&T
iii)	HOOTER / BUZZER / BELL	KHERAJ/ EPCC/ BEMCO
iv)	SOLID STATE ANNUNCIATOR	MINILEC/PROCON/ SEMUDA/ APLAB/ IIC/ADVANI OERLIKON/ALSTOM/ CONTROL & DYNAMICS/DIGICON/IL/ L&T
v)	TEMPERATURE SCANNER	PYROTECH/ MASIBUS/ SIEMENS
vi)	PHOTO VOLTAIC TRANSDUCERS	BHEL/ ECU ABB/ SIEMENS/ ALSTOM
vii)	DIGITAL MULTI FUNCTION METER	CONZERVE/ FLUKE

Sl.No	Items	Make
8	CABLE & JOINTING / TERMINATION KITS	
i)	HT(up to 11kv)	CCI/ GLOSTER/ NICCO/ RPG CABLES (ASIAN)/ UNIVERSAL/ KEI/ HAVELLS
ii)	LT POWER & CONTROL	CCI/ GLOSTER/ NICCO/ POLYCAB/ RPG CABLES (ASIAN)/ UNIVERSAL/ KEI/ HAVELLS
iii)	HOUSE WIRING WIRE / CABLE	HAVELLS/ POLYCAB/ FINOLEX/ UNIVERSAL/ RPG / KEI/ NICCO
iv)	TRAILING CABLE (EPR/TRS)	CCI/ UNIVERSAL/NICCO/RPG/LAPP
v)	FIBER OPTIC / ETHERNET CABLE & STRUCTURED CABLIND SYSTEM	D-LINK/ AMP/ MOLEX/ 3-D NETWORK/ KRONE/ LUCANT/ BELDEN(GERMANY)/FINOLEX
vi)	CABLE TERMINATION / JOINTING KIT	CCI/ RAYCHEM/ M-SEAL
vii)	CABLE REELING DRUM	ELECTROMAG/ELECTRO ZAVOD/BENGAL TECHNOCRAT
9	MOTORS	
i)	HT AC MOTORS	ABB/ BHEL/ CGL/ GE/ KIRLOSKAR/ SIEMENS/ WEG
ii)	LT AC MOTORS	ABB/ BHARAT BIJLEE/CGL/ KIRLOSKAR/ SIEMENS/ Marathon
iii)	LT AC GEARED MOTOR	BAUER/NORD/SIEMENS/WEG/VEM
iv)	DC MOTORS	BHEL/ IEC/ KIRLOSKAR ELEC. COMPANY
v)	STALLED TORQUE MOTOR	CROMPTON/ SMS DEMAG/ ELECTROMAG
vi)	UNBALANCED MOTORS	ELECTROMAG/ IC / EMI
10	LIGHTING EQUIPMENTS	
i)	LIGHTINGS/ LIGHT FITTINGS (GENERAL) &TOWER/SEARCH LIGHTS & ACCESSORIES	BAJAJ/ CROMPTON GREAVES/ GE LIGHTING/ HAVELLS/ PHILIPS
ii)	LIGHT FITTINGS (FLAME PROOF)	CROMPTON/ BAJAJ/ BALIGA/ BARLEE
iii)	SOCKET OUTLET(415 V, 20A 240V)	BCH/ BEST & CROMPTON/ CGL/ SCHNEIDER/ HAVELLS
iv)	5 AMPS. / 15 AMP. SWITCH, SOCKET OUTLET	ANCHOR/ MK/ PRECISION/ HAVELLS/ MDS LEGRAND
v)	CEILING FAN	BAJAJ/ USHA/ KHAITAN/ CROMPTON/ HAVELLS/ ORIENT/ CALCUTTA FAN
vi)	EXHAUST FAN	CROMPTON/ ORIENT/ VENTWEL/ KHAITAN/ GTR/ IM ENGINEER/BAJAJ

Sl.No	Items	Make
11	AUTOMATION & CONTROL	
i)	PROGRAMMABLE LOGIC CONTROLLER	ABB/SIEMENS / ROCKWELL AUTOMATION/
ii)	PULSE TACHO	HUBNER/ STEGMANN/HUBNER GISSEN/ THALHEIM
iii)	LIGHT BARRIER	PAULI/ SICK/ ABB/ DELTA
iv)	ENCODER	HUBNER/ STEGMANN/ HUBNER GISSEN/HLIDENHEN/LIEN & LINDE/ ROCKWELL/LEONARD BAUR/ SICK
v)	DIODE	HIND RECT/ RUTTONSHAW/ USHA/ KELTRON/ BHEL/ SEMICRON
vi)	UPS	EMERSION (DB POWER ELECTRONICS)/ HITACHI-HIREL/ SIEMENS/ GE
vii)	SCADA	ABB/ SIEMENS / ROCKWELL AUTOMATION/
12	MISC. ITEMS & CRANE ELECTRICS	
i)	BATTERY CHARGER	CHABI ELECTRICALS/AMAR RAJA/ CALDYNE/ SABNIFE(HBNIFE POWERSYSTEM)
ii)	DC. E.M. BRAKE WITH RECTIFIER PANEL	BCH/ EPCC/ STROMKRAFT
iii)	RESISTANCE BOX	BCH/ EPCC/ NARKHEDE/RESITECH/RSI SWITCHGEAR/PEFCO
iv)	LIFTING MAGNET	ELECTROMAG/ STERLING/ MAGNET INCORPORATED/ SUPERLIFT
v)	LIMIT SWITCH (GRAVITY TYPE)	EPCC/ AG CONTROL/ STROMKRAFT/ KAYESS/BCH
vi)	TRACK LIMIT SWITCH	EPCC/ AG CONTROL/ KAYESS
vii)	MASTER CONTROLLER	AG MECH/ EPCC/ KAYCEE/ L&T/ SIEMENS/ STROMKRAFT
viii)	BELT SWAY / BELT SPEED / ZERO SPEED / PULL CHORD SWITCH	JAYSHREE/ EPCC/ AG CONTROL/ SCHNEIDER/PROTO CONTROL
ix)	BATTERY BANK	CHLORIDE (EXIDE)/AMAR RAJA/ AMCO/ HBL
x)	GENERATOR	BHEL/ TOYO DENKI/ ABB/ SIEMENS/KIRLOSKAR/ HONDA
xi)	AVR	BHEL/ TOYO DENKI/ ABB/ SIEMENS/KIRLOSKAR/ HONDA
xii)		

d) LIST OF ACCEPTED MAKE LIST FOR INSTRUMENTATION & AUTOMATION

Sl.No.	Item	Makes
1.	Smart Transmitters	Emerson, Fuji, Yokogawa, E&H, Siemens
2.	RTD / Thermocouple	Tempson, Pyro Electric, Nagman, Toshniwal Industries
3.	Pressure / DP switch	Switzer, Danfoss, Ashcroft, Indfoss
4.	Tuning Fork type Level Switch	E&H, Vega, Siemens (Miltronics)
5.	Ultrasonic / Radar Type Level Instruments	E&H, Vega, Siemens (Miltronics), Yokogawa, Emerson, Krohne
6.	Electro Magnetic Flowmeter	Emerson, Yokogawa, E&H, Krohne
7.	Flow Elements	IL, EnggSpecialities, Emerson
8.	Radiaion Pyrometer	Land, Ircon, Chino, Raytek, Eurotherm
9.	Control Valve with Pneumatic Actuator	IL, Fisher, Koso, Fouress, Audco, IL(P)
10.	Electrical Motor Actuator	IL(Bernard), Rotork, Auma, ABB
11.	Solenoid Valve	Rotex, Schrader Schovill, Avcon, Asco
12.	Air Filter Regulator	ShavoNorgren, Placka, Delair, ABB, Seimag
13.	Output Isolator	P&F, Stahl, Yokogawa, Phoenix, Masibus
14.	Zenner Barrier	P&F, MTL, Stahl
15.	Process Control System (DCS)	Yokogawa, Siemens, Toshiba, ABB, Emerson, Rockwell Automation
16.	Hopper / Belt Weighing System	Sartorius, Schenk, ABB
17.	Panel / Encloser / Rack	Rittal, Hoffmann, Siemens, IL
18.	PC / Laptop	IBM, Dell, HP
19.	Server	IBM, HP, Dell
20.	Network Switches (managed)	Cisco, HP, Brocade, Extreme, Datalink
21.	Security Appliances like Firewall, UTM etc.	Cisco, Juniper, Check Point, Cyberoam
22.	Laserjet Printer	HP, Cannon, Samsung, Toshiba
23.	UPS	Emerson, DB, GE, Hitachi Hi-rel
24.	SMF Battery	Excide, Amron, Panasonic, Furukawa, Amar Raja

Sl.No.	Item	Makes
25.	Regulated DC Power Supply Unit / SMPS	Aplab, Cossel, Phoenix, Siemens
26.	Pressure Gauge	Budenberg, ANI, GI, Wika, Fiebig, Waree
27.	Temperature Gauge	ANI, GI, Wika, Fiebig, Waree, Danfoss
28.	Gas Analysers	ABB(H&B), Emerson, Yokogawa, Panametrics, Ametek, Siemens, Chemtrols
29.	Opacity Analyser	Codel, Sick, Durag, Chemtrols
30.	CV Analyser	AMS, Union, Reneike, Thermo Fisher, Emerson
31.	SOX / NOXAnalysers	Emerson, Yokogawa, ABB, Sick
32.	Gas Detectors	Beiler& Lang, Dragger, Oldham, MSA
33.	Vibration Monitoring System	Bentley Nevada, Shinkawa
34.	Portable Vibration Monitor with analysis software	Forbes Marwill, Bentley Nevada
35.	Instrumentation Cable	Incab, Finolex, CCI, Delton, MEM, Lapp, Thermocables, RPG, Universal Cables
36.	Fire Detection System	Siemens Building Technologies, Honeywell (Notifier), Tyco
37.	Computer Furniture	Godrej, Usha Lexus, Zuari
38.	Large Display Screens (LED/TFT)	Sony, Panasonic, Hitachi
39.	VHF Communication Equipment	Motorola
40.	Nucleonic moisture gauge	Berthold
41.	Infrared / microwave / capacitance type moisture gauges	NDC, Vega, E&H, Miltronics, Emerson, Sick, Yokogawa, Siemens
42.	PA System	Bosch, Honeywell, Ahuja, PHI-Audicom
43.	Telephone sets	Beetel, Siemens, BPL, ITI
44.	Telephone Exchange	C-dot, Siemens, Ericson, ITI, IL
45.	CCTV System	Bosch, Pelco, Honeywell, Samsung, Seimens
46.	Weigh Feeder System	Schenck, Siemens (Miltronics), FL SmidthPfister
47.	Load cell	ABB, Schenck, KELK, Sartorius
48.	Laboratory equipment's (Testing & measuring instruments)	Fluke, Yokogawa, Beamex, Nagman

Sl.No.	Item	Makes
49.	Chartless Recorder	Yokogawa, Honeywell
50.	Controllers (SLC)	Yokogawa, Tosdic
51.	Digital Indicators	Musibus, Yokogawa, ABB, Honeywell
52.	Annunciation System	Minilec, Digicont, Semuda
53.	Temperature Transmitters	Honeywell, ABB, Emerson
54.	Flow Switch	Switzer, Danfoss, Levcon
55.	Push Button	Seimens, BCH, L&T, Schnieder