

**Request for Proposal Document For Selection of Design Built Contractor For Design, Engineering and Construction for Redevelopment of Milan Mela Complex in Kolkata, West Bengal, India**

Tender Reference No:WBTP0/29/16-17 dated- 25.10.2016

**CORRIGENDUM 1**

**1. Definition of Entity**

*(Reference – Clause 4. of Section 2 – Instruction to Bidders)*

The Entity means is a company registered under the Companies Act, 1956 or Companies Act, 2013 and operating in India for the last 3 years.

**2. Clarification on Evaluation Methodology for Qualification and Experience Score**

*(Reference – Part 1 of Clause 26.3 of Section 2 – Instruction to Bidders)*

The Percentage Range as mentioned in the said Clause shall be considered with respect to the Contract Value (i.e. 120 Crore or 75 Crore or 60 Crore) as in mentioned in Clause 4.1.4 of Section 2 – Instruction to Bidders. The following illustration described the scoring methodology which shall be followed for evaluation:

*Illustration:*

<b>Contract Value</b>	<b>Score</b>
<b>One</b> Contract Valued greater than Rs.120 Crore & upto Rs.180 Crore	10
<b>One</b> Contract Valued greater than Rs.180 Crore & upto Rs.240 Crore	20
<b>One</b> Contract Valued Greater than Rs.240 Crore	30
Combined <b>Two</b> Contracts Valued greater than Rs.150 Crore (each valuing not less than 75 Crore.)& upto Rs.225 Crore	10
Combined <b>Two</b> Contracts Valued greater than Rs.225Crore.	20
Combined <b>Three</b> Contracts Valued greater than Rs.180 Crore ( each contract valuing not less than 60 Crore.) and up to 270 Crore	10
Combined <b>Three</b> Contracts Valued greater than Rs.270 Crore	20

**3. Revised Payment Schedule**

*(Reference Notice Inviting Tender and Clause 5.2 of Section 5 – Special Condition of Contract)*

Mobilization Advance	5% of Contract Value (to be recovered in 5 equal instalments); As per Clause 45.1 of Section 4 – General Condition of Contract
Payment During Detail Design & Drawings (Payable as per following installment) 1. On submission of Design and Drawings: 30% 2. On approval of Design, drawings: 20% 3. On approval of statutory authorities: 20% 4. Proportionate to the agreed milestone-based Payment for construction: 30%	2% of Contract Value
On completion of piling and foundation works	10% of Contract Value
On completion of Superstructure works upto Roof level	20% of Contract Value
On completion of Roof Structure & finishing works of buildings	15% of Contract Value

On completion of Boundary wall, Gates, UGR, STP, WTP, Substation, Pump Room Building and all external services	5% of Contract Value
On completion of Internal Sanitary & Plumbing Works	5% of Contract Value
On completion of Internal Electrical works	5% of Contract Value
On completion of Fire Fighting, Fire detection & related works	5% of Contract Value
On completion of HVAC system	5% of Contract Value
On completion of Roads, Parking & related works	5% of Contract Value
On completion of Landscaping, Water Body etc. works	5% of Contract Value
On completion and CCTV, BMS, Interior fixtures, furniture & Miscellaneous works	8% of Contract Value
On final testing, Commissioning of all Utilities Services, Equipment and Handing over	5% of Contract Value
Submission of "as built" drawing, manual, providing training and obtaining all statutory clearances	5% of Contract Value
After completion Defect Liability Period	Release of Security Deposit (2% of contract value) (as per Clause 29 Section 2 – Instruction to Bidders) and Retention Money (8% of all billed amounts) (as per Clause 43 Section 4 – General Condition of Contract)

#### 4. Project Completion Date

*(Reference (i) Point of Important List of Document; (ii) Point 3 of Press Notice; (iii) Time of Completion of Notice Inviting Tender; (iv) Clause 1.2 of Section 2 – Instruction to Bidders; (v) Clause 1.1 Section 4 – General Condition of Contract)*

The Project Completion time shall read as 18 months from the date of handing over the Project Site free from any encumbrance.

#### 5. Detailed BoQ and Respective Rates

*(Reference 8.3 Section 2 – Instruction to Bidders)*

Detailed Description of Bill of Quantity and Make along with quantities to be submitted in the Technical Bid.

*Successful bidder will have to submit the Rate for all the items in the Bill of Quantities.*

#### 6. Taxation

*(Reference (i) Clause "Taxation" of Notice Inviting Tender; (ii) Clause 4.2 Section 2 – Instruction to Bidder; (iii) Clause 13 Section 2 – Instruction to Bidder; (iv) Clause 41 Section 4 – General Condition of Contract and Format for Financial Proposal)*

The Financial Proposal of the Bidder shall be inclusive of all taxes (existing or future) for the performance of the Contract. No additional claim on account of any changes in tax liability of the Contractor shall be entertained by the Employer for the purpose of this Contract.

#### 7. List of Approved Makes

*(Reference Annexure B Section 5 – Special Condition of Contract)*

Detailed list of Approved Makes is attached as Annexure 2.

#### 8. Drawings to Be Uploaded

*(Reference Section 6 Project Information Memorandum and Design Guidelines)*

The following drawing attached as per request of the Bidder:

- a. AutoCad Drawing of Site Layout
- b. AutoCad Drawing of Site Boundary
- c. RAR File of Drawing and 3D Views for Project Theme

Owing to the size of files of the above; these are available with the West Bengal Trade Promotion Organization (WBTPO). Interested bidders may collect soft copy in their respective flash drives from Shri. Pratik Dutta, OSD(Electrical), WBTPO (+919434459830; pratik2008@gmail.com).

#### **9. Last Date for Online Submission of Bid(s) and Opening of Bids**

*(Reference (i) Point 8 – List of Important Dates; (ii) Point 9 – Press Notice; (iii) Notice Inviting E-Tender; (iv) Clause 20 Section 2 – Instruction to Bidders)*

The Submission of Bid shall be read as **Tuesday 20th December 2016** at 15:00 Hours (as per server clock) and Opening of Bids shall be read as 20 December 2016 at 15:30 Hours.

#### **10. Date of Site Visit**

*(Reference Clause 7 Section 2 – Instruction to Bidder)*

All Bidders, interested to visit the site, are advised to contact Shri Pratik Datta, OSD (Electrical), WBTPO for fixation of date and time for such purpose.

#### **11. Others**

The following additional terms shall be part of the RfP Document

- a) Demolition and Disposal of the Food Court Facility of the Milan Mela shall be the responsibility of the Employer;
- b) The Contractor shall keep provision of 100% DG Back up for all the facility proposed for the Project;
- c) The contractor to provide adequate office space/ workspace within site office; with furniture, fixture, basic office equipment and computer (with internet connection) for use of WBTPO and their PMC.

## **ANNEXURE 1:**

*Reproduced due to erroneous printing in the RFP document.*

### **Clause 25: Conflict of Interest**

a. An Applicant shall not have a conflict of interest that may affect the Selection Process or the Contract (the "Conflict of Interest"). Any Bidder found to have a Conflict of Interest shall be disqualified. In the event of disqualification, Employer shall forfeit and appropriate the EMD and (the Security deposits, Performance Security, etc. in case of the Selected Bidder), where available, as mutually agreed genuine pre-estimated compensation and damages payable to Employer for, inter alia, the time, cost and effort of Employer including consideration of such Applicant's Proposal, without prejudice to any other right or remedy that may be available to Employer hereunder or otherwise.

b. Employer requires that the Consultant provides professional, objective, and impartial advice and at all times hold the Employer's interests paramount, avoid conflicts with other assignments or its own interests, and act without any consideration for future work. The Consultant shall not accept or engage in any assignment that would be in conflict with its prior or current obligations to other clients, or that may place it in a position of not being able to carryout the assignment in the best interests of Employer.

c. Without limiting the generality of the above, an Applicant shall be deemed to have a Conflict of Interest affecting the Selection Process, if:

i. the Bidder, or Associates (or any constituent thereof) and any other Bidder, or Associate (or any constituent thereof) have common controlling shareholders or other ownership interest;

ii. such Bidder or its Associate receives or has received any direct or indirect subsidy or grant from any other Bidder or its Associate; or

iii. such Bidder has a relationship with another Bidder, directly or through common third parties, that puts them in a position to have access to each other's information about, or to influence the Proposal of either or each of the other Bidder; or

iv. There is a conflict among this and other consulting assignments of the Bidder (including its personnel and other members, if any) and any subsidiaries or entities controlled by such Bidder or having common controlling shareholders. The duties of the Contractor will depend on the circumstances of each case. While providing consultancy services to Employer for this particular assignment, the Contractor shall not take up any assignment that by its nature will result in conflict with the present assignment; or

v. A firm hired to provide consulting services for the preparation or implementation of a project, and its Members or Associates, will be disqualified from subsequently providing goods or works or services related to the same project;

d. A Bidder eventually appointed to provide Contractor for this Project shall be disqualified from subsequently providing goods or services related to the same Project and any breach of this obligation shall be construed as Conflict of Interest; provided that the restriction herein shall not apply after a period of 12 months from the completion of this assignment; provided further that this restriction shall not apply to consultancy services performed for Employer in continuation of this Contract or to any subsequent contract where conflict of interest does not arise.

## ANNEXURE 2

### List of Approved Makes

#### CIVIL ITEMS

Sl. No.	Description of Approved Material	Approved Make
1	Cement	ULTRATECH (L&T) / AMBUJA /ACC /LAFARGE/KONARK/BIRLA GOLD
2	Reinforcement Steel	SAIL/TATA/RINL
3	Structural Steel	SAIL/TATA/RINL
4.	Glazed Ceramic Tile	NITCO /KAJARIA / JOHNSON
5.	Ceramic Floor Tile	NITCO /JOHNSON/ KAJARIA
6.	Vitrified Tile	NITCO / RESTILES /KAJARIA
7.	Cement Bonded Particle Board Conforming to IS 14276 – 1995	“BISON PANEL” – INDIA – NCL INDUSTRIES LTD. (Boards Division) / EVEREST INDUSTRIES LTD .
8.	Ply Wood, Shuttering Ply Conforming to IS 303-1989 / IS 4990-1993	M/s. Century Plyboards (I) Ltd. / M/s. Green Ply Industries Ltd./ SARDA Industries
9.	Wooden Frame	Siliguri Sal / Malayasian Sal
10.	Fire Door	Shakti Met-Dor / NAVAIR/ GODREJ
11	Rolling Shutter	Bengal Rolling Shutter / ISI MKD
12.	Stainless Steel Section	SAIL/ TATA / RINL
13.	Stainless steel hardware for doors	Dorma /Haffelle / GODREJ
14	Glazing	Saint Gobain / Asahi Float Glass Ltd / Hindustan Safety Glass Works Ltd. / Modi.
15.	Injection water proofing, waterproofing coating, water repellents Conc. Admixtures. Plasticized PVC membrane of waterproofing	Sika Qualcrete Ltd./ Structural Waterproofing Co. / Pidilite Industries Ltd. / ‘Fosroc / BASF. (The applicator has to be certified by the water proof vendor)
16.	Synthetic Enamel Paints, Distemper, Acrylic Emulsion Paints, Melamine Coating , Aliphatic Acrylate	I.C.I (I) Ltd. / Berger Paints (I) Ltd. / Jenson & Nicholson (I) Ltd. / Asian Paints (I) Ltd. / FOSROC Chemicals(I) Pvt Ltd .
17.	Flush door ( Factory made )	M/s. Century Plyboards (I) Ltd. / Green ply / Merino Industries
18.	Aluminium Sections and Extrusion shall conform IS:733-1983 and IS:1285-1975	HINDALCO / JINDAL /DOMAL
19.	General Hardware	
	a) Latches, hinges etc.	GODREJ / DORMA / HAFELLE
	b) Locks , Flush bolt	GODREJ / DORMA / HAFELLE
	c) Handles	GODREJ / DORMA/ HAFELLE
	d) Screw	Nettlefold / GKW / ND
	e) Door Closure	GODREJ / DORMA/HAFELLE

	f) Floor Spring	GODREJ / M/s. EVERITE Agencies Pvt. Ltd. / M/s. Garnish
	g) Aldrop	ISI Marked
	h) Tower bolt	ISI Marked
	I ) PVC Buffer block	ISI Marked
	J) Door Stopper	ISI Marked
	k) Patch fittings for toughened glass	ISI Marked
20.	Laminates	"DECOLAM" (Bakelite Hylam Ltd.) / "MERINO" (Century Laminating Co. Ltd.) / GREENLAM (GREEN PLY )
21	<b>Marble</b>	
a)	White Variety ( Indian )	Abu White Super
b)	Green Variety ( Indian )	Udaipur
c)	Italian Marble	As per approved shade
	<b>Granite :</b>	
a)	Red	Ruby Red
b)	Black/Grey	Premium
22	<b>Kotah stone</b> ( Bluish grey )	Premium
23	Waterproof Adhesive for Tile / Slab fixing to wall or floor	Terraco India (P) Ltd. / M/s. Pidilite Industries Ltd. / M/s. Roffe Construction Chemicals Pvt. Ltd.
24	Sealant	Rhodorsil-33, Pidiseal A-11 & B-11 : M/s. Pidilite Industries Ltd. Techseal RDL-600, Techseal RDL-940, Techseal RDL-1000 : M/s. Choksey Chemical (P) Ltd. Roffseal : M/s. Roffe Construction Chemicals Pvt. Ltd. or Fosroc .
25	<b>Tile Jointing Materials</b>	"Rainbow Tile Mate – HD" (M/s. Roffe construction Chemicals Pvt. Ltd.). "Terragrout" (M/s. Terraco India (P) Ltd.). or Fosroc
26	Decorative Ply (Teak / Cedar / Mahegony / Walnut Veneer)	M/s. Century Plyboards (I) Ltd. / Jacsons/Truwoods (P) Ltd /GREEN PLY
27.	Cement Based Exterior Textured Paint	ICI ( I ) Ltd / Asian Paints / Berger Paint (I) Ltd.
28	Glass Mosaic tiles	Shon, Kent , Bisazza
29	Glass for structural glazing & canopy (Coloured Reflective toughened glass)	Saint Gobain / Hindustan Pilkington/ Ashai float glass .
30	Silicone Sealant	GE/Dow Corning
31.	Aluminium composite panel	Aluco bond ,Aludecor , Alstrong
32.	MS Conduit pipe	BEC /SUPREME/ AKG
33.	PVC Conduit pipe	AKG /PLAZA/PRECISION/POLYCAB/AKG
34.	Pre-constructional Anti-termite ( Chloropyriphos )	Pest Control India or approved by Engineer-in-charge

35.	Cement Primer	ICI / BERGER / ASIAN
36.	Textured Paint	ICI / BERGER / ASIAN PAINTS ,
37.	Waterproofing acrylic emulsion exterior grade paint	ICI / BERGER / ASIAN PAINTS
38.	Acrylic Polymer waterproofing coat	SIKA / FOSROC / PIDILITE / ROFFE/ BASF
39.	Expanding grout admixture	SIKA / FOSROC / PIDILITE / ROFFE/ BASF
40.	Integral waterproofing compound	SIKA / FOSROC / PIDILITE / ROFFE
41.	Waterproofing admixture	SIKA / FOSROC / PIDILITE / ROFFE
42.	Plasticizer	SIKA / FOSROC / PIDILITE / ROFFE
43	APP Modified Bituminous membrane	SIKA / FOSROC / PIDILITE / ROFFE
44	PVC door	SINTEX OR AS APPROVED BY ENGINEER-IN-CHARGE
45	Aluminium anodized louver	HUNTER DOUGLAS / Everest / Fameline
46	Structural glazing	JINDAL/HINDALCO/Domal.
47	Stainless steel handrail with balluster	GODREJ / DLINE / Fameline
48	False ceiling	GYP SUM/EVEREST/ARMSTRONG
49	Floor hardener	Ironite/ Feronite / SIKA
50	Fabrica for tensile structure	Mehlar / Eroka / Farari
51	Roof Sheets	Kalzip/Kingspanrigidal/ Everest / TATA

## WATER SUPPLY, SEWERAGE & DRAINAGE

Sl. No.	Description of Approved Material	Approved Make
	G.I. Pipes - medium class (As per IS-1239, P - I )	TATA / JINDAL/IS MKD
	G.I. Pipe fittings (as per IS-1239, P - II) ; of material with Galvanised Cast Iron Fillings, with material code conforming to IS- 1879	HB/ "NB' /"ZOLOTO"/Leader /-"JSI" fittings ISI approved Heavy
	<b>C.P. on brass fittings</b>	
	CP Bib cock	JAQUAR-Continental /CERA /ESSCO'-Delux' or 'sumthing special'/ "Marc"/"Hindware" or as approved by ENGINEER-IN-CHARGE
	CP 'Long Nose' /or' Long Body' Bib cock	- Do -

	CP Angle valve	- Do -
	CP 'Concealed' Stop cock 'Heavy' type with adjustable CP wall Flange	- Do -
	CP Shower Rose	- Do -
	Bronze /Gun metal-body "Pressure-Release" valve with threaded screwed ends, class (PN-1.0) / or (PN-1.6) class	"Zoloto"- 1040A / Leader"/ "Sant" / "Neta
	Gun metal body Ball Float valve with PVC (High pressure) Ball Float	Zoloto" / Leader"/ "Sant" / "Neta
	15 mm dia. PVC Connector pipe with Symet nuts at both ends. - ( for Wash Basin Pillar tap &W.C. &Urinal - Cistern connections)	PRAYAG or as approved by ENGINEER-IN-CHARGE
	Wall Outlet Connection Flexible Pipe - 15mm dia	"Jaquar" / "Essco"/ "Hindware"
	Bronze /Gun metal-body Gate valve with threaded screwed ends, "Non-rising Spindle" type (PN-1.0) / or (PN-1.6) class	Sant / "Leader" / "Zoloto"-for Bronze body / "Neta" / SBM – "Peglar" type
	Bronze -body Globe valve with 'BSPT(F), threaded screwed ends, "Non-rising Spindle" type (PN-1.0) (PN-1.6) class	Valves of 'Zoloto', or 'Sant' or as approved by ENGINEER-IN-CHARGE.
	CI body Gate /Sluice valve with flanged ends rising Spindle" type (PN-1.0) /or (PN-1.6) class	'Sant' / 'Zoloto'/Leader / 'Hawa'
	Pump for water supply .	'Willo' / "KSB" / "CRI" / "Grundfos"/DP.pump
	CP Urinal Spreader-15mm (for Urinals only)	for all Toilets :- Hindware / "Parryware" or as approved by ENGINEER-IN-CHARGE.
	Soil, waste & vent pipes / and Pipe Fittings & Specials :- C.I. Centri cast (as per 15-3989)	'NECO' / 'HEPCO' / 'KAPILANSH DHATU UDYOG (P) L TD.'
	<b>C.P. on brass fittings</b>	JAQUAR/ESSCO'-Delux'/Marc /Hindware /CERA/or as approved by ENGINEER-IN-CHARGE
	C.P. on brass fittings C.P. Waste Coupling, ii) C.P. Bottle Trap, iii) C.P Robe Hook, iv) C.P. Towel Rail. v) CP Two way Bib Tap	JAQUAR/ESSCO'-Delux'/Marc /Hindware /CERA/or as approved by ENGINEER-IN-CHARGE
	CP Toil. Paper Holder	- Do -
	CP Towel Ring	- Do -
	CP Soap Dish Holder	- Do -
	CP Bottle Trap with CP wall connection Pipe	- Do -
	Sanitary Fixtures & Fittings	
	CP Robe Hooks	- Do -



	CP "Two-way" Bib cock	- Do -
	CP Shower Rose	- Do -
	Rigid PVC (Concealed) Waste pipe, [Schdl.-40], (as per ASTM D 1785)- (concealed or exposed)	Supreme / Oriplast / Finolex/ Utkarsh
	Rain Water Pipes :- C.I. – Sand cast "SWR" class, ' as per (IS: 1792)	NECO/'HEPCO'/'KAPILANSH DHATU UDYOG (P) LTD.
	Rain Water Pipe Fittings :- 'Sand cast Iron' - "SWR" class, as per (IS: 1792)	DO
	'Salem' Stainless Steel Sink as per AISI 304 (18/8) conforming to I.S.- 13983	"Hindware" "Hafele" ""Nirali' , 'Parryware'
	<b>Stone- Ware Pipes</b> , and S.W. Pipe Fittings	Sonali / GINNI / NIRALI / Hind
	C. I. Manhole Cover ( I.S. - 1726) - "Medium" or "Heavy" Grade' (Light duty only on Oil/Grease Trap Chamber)	NECO' / 'HEPCO'/ Swastika / 'BPL'/ "BIC".
	<b>NP-2</b> class R.C.C. Pipes and Pipe Fittings (i.e., RCC Collars etc.)	Eastern Spuncrete / 'West Bengal Concrete Industries (P) Ltd. / 'HINDUSTAN' / 'SUR'./ or equivalent ISI approved Make.
	Stone- Ware Gully Trap	Sonali / GINNI / NIRALI / Hind / or equivalent ISI approved make.
	C. I. Grating- (Over Catch Pit I Yard Gully Chamber), (I.S. - 1726) - "Medium" or "Heavy" Grade	NECO' / 'HEPCO' / 'BPL'/"KapilanshDhatuUdyog"
	<b>STP cum STP- 60 cum/day</b> : As per the Detailed Specifications	<b>"Arya WaterTechnologics</b> / " "Ion-Exchange"/Trans Organics Pvt Ltd or equivalent.
	<b>Rain Harvesting Pump/ Agriculture Pump of required capacity -.</b>	<b>"Willo"/"KSB"</b> / "CRI" / "Grundfos"/ DP pumps/
	"Enclosed" Analogue type Water Meter ("Bulk" Type), conforming to IS- 2373 with Calibration Certificate, including all necessary accessories	"Dashmesh" / 'Kaycee' / "Capstan"/ "Kent".
	Bronze body "Parallel Slide" 'Blow-off valve ("Spring loaded, blow-off pressure sellable" type), with flanged ends, also with matching Flanges (PN-1.0) / or (PN-1.6) class	'Zoloto' / Sant –make / Leader.
	<b>Air-Release Valve</b>	
	Bronze body "Parallel Slide" 'Blow-off valve ("Spring loaded, blow-off pressure sellable" type), with flanged ends, also with matching Flanges (PN-1.0) / or (PN- 1.6) class	Zoloto' / Sant –make / Leader.
	Bronze / Gun metal -body Ball valve with 'BSPT(F), threaded screwed ends, "quarter turn Lever operated" type (PN-1) / or (pN-1.6) class	Valves of Bronze body :-'Leader', 'Zoloto' – Metal only:- Sant make / Leader.
	Gaskets-CAF 'Full face' conforming to IS-2712, Gr.- C; (3mm thick)	"Klinger" / "Permanite" / "Champion".

	CPVC and uPVC and HDPE pipe including fittings	Ori-Plast /Suprim/Alom
	Pressure Reducing Valve , Blow-off" VALVE : Bronze / Gun metal Body,: Bronze/Gun metal Body, Non-Return Valve (N.R.V) : C.I. Body	<b>Zoloto, / "Sant" / "Leader" / "Amco"/ "Hawa")</b>
	<b>WTP - 20 cum/Hr</b> : As per the Detailed Specifications	<b>Arya WaterTechnologies</b> / "Ion-Exchange"/Trans Organics Pvt Ltd or equivalent.
	Sanitary wares (Vitreous chinaware) :- (" <b>Hindware</b> ,/ "Parryware"/ "CERA" / "KOHLER" / or as per Architect's/ Client's choice) :- W.C. - (European type) - with'S' / 'P' -Trap - Floor mounted type, without PVC Flushing Cistern, ii) Wash Basins - "Flat-back" type rectangular pattern (size-550mm x 400mm /or as per Client's / Architect's choice) with "Essco" CP Pillar Tap / or "Swan neck" type Mixer, iii) Urinal - Flat back "Small" with CP Spreader, CP Waste coupling, CP Bottle Traps with waste pipes..	
	Wall Mirror	6mm thick 'Modiguard' / 'Ashai' / or equivalent as approved by ENGINEER-IN-CHARGE, with 12mm thick hard-board backing
	W.C.:- Floor mounted "Pedestal" type- W.C. -	'Hindware- /Parryware' or 'Cera' :-
	Wash Basin	'Hindware- /Parryware' or 'Cera'
	For WC flushing :- PVC 'Low-level' "Dual- Flush" Cistern	Hindware' "SLEEK" or equivalent Parryware or 'Cera' Model.
	Urinals :- Hindware - "Flat Back 'Small'- (size-440 x 315 x 265mm) /	orParryware / or 'Cera' – equivalent.
	Urinals :- "	"Jaquar', "PRESSMATIC

### Electrical Items

Sl. No.	Description of Approved Material	Approved Make
1	Diesel engine	CUMMINS / CATERPILLAR / KIRLOSKAR
2	Alternator	KIRLOSKAR / STAMFORD / AREVA
3	LT Cable termination materials	DOWELLS / COMET / LOTUS
4	Air Circuit Breaker	SCHNEIDER / ABB / L&T
5	MCCB / Contactor	SCHNEIDER / ABB / L&T
6	MCB Distribution Board	SCHNEIDER / ABB / L&T
7	MCB / RCCB / RCCBO	SCHNEIDER / ABB / L&T

8	Power Factor Correction Relay	SCHNEIDER // L&T/EPCOS
9	Power Factor Correction Capacitors	SCHNEIDER / EPCOS / L&T
10	Relays	SCHNEIDER / SIEMENS / L&T
11	Meters	SCHNEIDER /ENERCON/ AEI
12	Ammeter/Voltmeter selector switch	L&T/ KAYCEE / SALZER
13	IndicatingLamp	SCHNEIDER /SIEMENS/VAISHNO/ L&T
14	Push Buttons / Indicating Lamps	SCHNEIDER /L & T (RISHAB) / SIEMENS
15	CT	KAPPA / AUTOMATIC ELECTRIC / BCH
16	L. T. Power, control and signal cable	HAVELLS / POLYCARB / CRYSTAL
17	Cu. Wires	MESCAB / FINOLEX /HAVELLS
18	M.S.Conduit	JINDAL / TATA / GST
19	PVC conduit & Accessories	ISI Marked
20	Industrial Power Socket Outlets	SCHNEIDER / ABB / L&T
21	Switches and Sockets modular type	LEGRAND / CRABTREE / L&T
22	Lighting Fixture	WIPRO / CG / PHILIPS
23	Wall/ Ceiling / Exhaust Fans	USHA / CROMPTON / HAVELLS
24	Ductable Split Units	LG / PANASONIC / CARRIER
25	Wall Mounted Split Unit	LG / PANASONIC / CARRIER
26	Cable Tray	FABRICATED / LEGRAND
27	EPABX	UNIFY / CISCO / AVAYA
28	RJ 11 SOCKET	LEGRAND/L&T/SCHNEIDER
29	RJ 45 SOCKET	LEGRAND/L&T/SCHNEIDER
30	LAN Cable & Accessories	HAVELLS / POLYCARB / CRYSTAL
31	UPS	ETON/EMERSON / NUMERIC
32	CCTV CAMERAS	L&T/SCHNEIDER/ABB
33	PA SYSTEM along with all accessories	BOSCH / HONEYWELL
34	TRANSFORMER	VOLTAMP / SCHNEIDER / KIRLOSKER
35	HT BREAKER	SCHNEIDER/ABB/L&T
36	HT XLPE CABLE	HAVELLS / POLYCARB / CRYSTAL
37	11 KV RUBBER MAT	ISI MARKED
38	11 KV HAND GLOVES	ISI MARKED
39	ELECTRONIC LIGHTING ARRESTER	PROLITE/ APS/ SGF

#### **FIREFIGHTINGMAKE**

<b>Sl. No.</b>	<b>Description of Approved Material</b>	<b>Approved Make</b>
1	Relays	Siemens / Schneider / L & T
2	Meters	IMP / Neptune
3	Ammeter/Voltmeter selector switch	Kaycee / Salzer / AE
4	IndicatingLamp	Siemens/ Schneider
5	Wires (copper conductor)	Mescab / Polycab/ Havells/ Nicco / Gloster
6	MCCB	Siemens/ Schneider / L & T
7	CT	Kappa / AE / BCH
8		

9	<b>MS-Black Main Pipes-Hydrant ERW (IS-1239) Butt weldable /threaded IS:1239 Part-I (Heavy)</b>	<b>JINDAL / TATA / ISI TATA/ Nezone/ 'Skipper'</b>
10	<b>Gate valve(IS:210,GR-210) ,</b>	<b>Crawlie&amp; Ray /Leader /Intervalve/Sant/ Zoloto/L&amp;T Kirloskar/</b>
11	<b>Butter fly valve in C.S. lever / Wheel operated to be fitted between flanges, PN-1.0 BS-5155</b>	
12	<b>Foot Valve with Strainer as per IS- 4038</b>	
13	Sluice / Gate Valve.	
14	N.R.V.	
15	R.C.C. pipes (NP-3	Eastern Spuncrete / W.B. Concrete Industries Pvt. Ltd./ Hindustan
16	Hydrant Valve IS-5290	Fire Shield /Minimax, Surex –all ISI marked
17	CP fire Hose with G.M. Nozzle.	FireShield /Minimax, Surex – all ISI marked
18	Pressure Gauge	FireShield /Minimax, Surex – all ISI marked
19	Hose Box	FireShield /Minimax, Surex – all ISI marked
20	<b><u>Fire Extinguishers</u></b> D.C.P.- 5 Kg.- including MS fastening Clamps for mounting on walls/columns  CO <sub>2</sub> 4.5 Kg.- including MS fastening Clamps for mounting on walls/columns  Water CO <sub>2</sub> including MS fastening Clamps for mounting on walls/columns A B C – Powder type (Mono Ammonium Phosphate base) - including MS fastening Clamps for mounting on walls/columns	FireShield /Protector/ /Surex /Minimax-all ISI approved
21	Pump	BE Pumps/Kirloskar/KSB/ SAM TURBO /WPIL/Grundfos or Equivalent
22	'Y'-strainer	<b>Kirloskar/Leader/ Sant /Zoloto</b>
23	Pressure Release Valve	<b>Kirloskar/Leader/ Sant /Zoloto</b>
24	Fire Sprinklers (both pendent & Up-Right type)	<b>'TYCO' / 'VIKING' / 'Omex' / "Central"-ELO 16 / Crawlie&amp; Ray</b>
25	FIRE ALARM PANEL DETECTORS	HONEYWELL-ESSER, Notifire, Simplex, 'Morley-

	MODULES/ MCP (system sensor)', 'Edwerad'.	
25	RESPONSE INDICATOR	Approved matching Brand.
26	CABLE	Finolex or equivalent
27	PVC CONDUIT	Ori-Plast or other equivalent
28	FIRE ALARM PANEL	HONEYWELL-ESSER,
29	Smoke Detector	Siemens/Esser/Tyco
30	Heat Detector	Siemens/Esser/Tyco
31	Manual Call Box	ISI Approved Make
32	PC	HP/Dell / LENOVO
33	Pressure Switch	Indfoss ,/ Switzer

#### HVAC ITEMS:

Sl. No.	Description of Approved Material	Approved Make
1.	Water cooled screw chiller.	Trane / Dunham Bush/ York/ Carrier/ Climaveneta
2.	Induced Draft Cooling Tower	Paharpur/ Marley/ Advance
3.	Chilled water pumps / Condenser water pumps	Kirloskar / KSB/ Grundfoss.
4.	Three phase motors	Siemens / Kirloskar/ ABB /NGEF
5.	Y-strainer	Emerald /Strainwell /S kollay& co.
6a	Water piping up to 200 mm	SAIL/GST/Jindal Hissar/HSL/BST
6b	Water piping above 200 mm Spiral Welded only.	Jindal Hissar / Sail / HSL /BST
7a	Water duty butterfly valve	Audco / Advance / Inter valve/DelVal
7b	Water duty check valve (Dual plate check type)	Advance/Audco/ Intervale
8	Balancing valves with provision for built in flow meter	Advance / Audco
9.	Pressure Gauges	Feibig /Emerald / H Guru
10.	Industrial type thermometer (alcohol filled V form angle type)	Emerald / H Guru / Jaspin
11.	Expanded polystyrene	P.R.Packaging Ltd./ Indian Packaging Services / Calcutta Packaging / Calcutta Insulation.
12	Glass Wool Blanket	P.R.Packaging Ltd./U.P.Twiga/ Indian Packaging Services.
13.	Fiber Glass Rigid Board	U.P.Twiga / Owen Corning
14.	Paints	ICI / Asian / Jenson & Nicholson
15.	Tar felt / Cprx compound	Shalimar tar product
16.	Air-Circuit Breaker	L & T /Siemens / ABB/Alsthom/Merlin Gerin
17.	S.D.F.U.	L & T/ GE / Siemens/Alsthom
18	Power cable	Cable Corporation of India /GlosterFinolex / Universal/Polycab/Ranvir cables.
19.	Control cable	Cable Corporation of India / Gloster / Finolex/Polycab

20.	Voltmeter / Ammeter	A.E./IMP/Rishab?Enercon/Crycard
21.	Switches	L & T /Siemens / Schneider
22.	HRC Fuse and Fittings	L & T /Siemens / Alsthom
23.	Current Transformer	A.E. / Kappa / L & T/Pragati
24.	Contractors	L & T / Siemens / Snider
25.	Starter	L & T / Siemens / Schneider
26.	Overload Relays	L & T / Siemens / Schneider
27.	Indicating Lights	Siemens / L & T / Schneider
28.	Selector / Toggle switch	Kaycee / L &T / Schneider
29.	Time Delay Device	SIEMENS / L &T / SCHNEIDER
30.	Single Phase Device	L & T/Minilec / Schneider
31.	Vibration Isolators	Dunlop / Resistoflex
32.	GI Sheets	Jindal/SAIL/VSP/Nippon/Deuro
33.	Air handling Unit	Carrier/ CarryAire/ Suvidha/ Blue Star / Zeco / Edgetech./PANASONIC
34.	Power Manager	L & T Enercon / Schneider / ABB
35.	Motor Control Centre (MCC)	Neptune / Genpower Electric / R T Enterprise / System Syndicate
36.	VSD starter	ABB / DANFOSS / ALLEN BRADLEY
37.	Ventilation fans	Nicotra / Kruger / Flaktwoods / comefree
38.	Control valves	Siemens / Honeywell / L & T

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