

RECOMMENDED MAKES OF MATERIALS - ELECTRICAL ANNEXURE 2.1-7

| Sl. No. | Item | | Approved Makes | Category of Test Certificate/Inspection | |
|---------|---------------------------------------------------|------|-----------------------------|-----------------------------------------|----------|
| 1) | Connector Terminal Blocks | i) | Wago | 3 | |
| | | ii) | Phoenix | | |
| | | iii) | Connectwell | | |
| | | iv) | OBO | | |
| 2) | M.V. Switchgear | i) | ABB – Emax | 2 | |
| | a) Air Circuit Breakers | ii) | L & T – U Power | | |
| | | iii) | Schneider – Masterpact NW | | |
| | | iv) | Siemens – 3 WT | | |
| | | v) | Legrand – DMX3 | | |
| | b) Moulded case circuit breakers | | Microprocessor Release | 2 | |
| | | i) | ABB T max | | T max |
| | | ii) | L & T D sine | | D sine |
| | | iii) | Schneider Easypact | | Easypact |
| | | iv) | Siemens 3VA | | 3 VA |
| | | v) | Legrand DPX3 | | DPX3 |
| | c) Motor Protection Unit Breaker (MPCB) | i) | Schneider Electric (GV4) | 2 | |
| | | ii) | Siemens (3RV) | | |
| | | iii) | L & T | | |
| | | iv) | ABB (MS) | | |
| | | v) | Legrand (MPX3) | | |
| | d) Miniature Circuit Breaker (MCB – C curve) | i) | L & T | 2 | |
| | | ii) | Legrand (DX3) | | |
| | | iii) | Schneider Electric (Acti-9) | | |
| | | iv) | Siemens | | |
| | | v) | Hager | | |
| | | vi) | ABB | | |
| | e) Residual Current Circuit Breaker (RCCB & RCBO) | i) | L & T | 2 | |
| | | ii) | Legrand (DX3) | | |
| | | iii) | ABB | | |
| | | iv) | Schneider Electric (Acti-9) | | |
| | | v) | Siemens | | |

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|---------------------------------------------------------------------------------|-------|--------------------|---|
| f) Power / Aux. Contactor | i) | Schneider Electric | 2 |
| | ii) | Siemens | |
| | iii) | ABB | |
| | iv) | L & T | |
| | v) | Legrand | |
| g) Switch fuse units, isolators | i) | L & T | 4 |
| | ii) | Legrand | |
| | iii) | ABB | |
| | iv) | Schneider | |
| | v) | Siemens | |
| h) Indicating Lamps LED type and Push Button | i) | L&T (Esbee) | 4 |
| | ii) | Schneider Electric | |
| | iii) | Siemens | |
| | iv) | ABB | |
| | v) | Tecnic | |
| i) Electronic Digital Meters & load Manager (A/V/PF/Hz/KW/KWH) with LED Display | i) | Schneider Conzerv | 3 |
| | ii) | L&T | |
| | iii) | El Measure | |
| | iv) | Siemens | |
| | v) | ABB | |
| | vi) | Secure | |
| | vii) | Socomec | |
| | viii) | Newtek | |
| j) CT / PT (Cast Resin Epoxy Coated) | i) | Automatic Electric | 3 |
| | ii) | Newtek | |
| | iii) | Kappa | |
| | iv) | L & T | |
| | v) | Pragati | |
| k) Protection Relays (Numeric type) | i) | GE | 3 |
| | ii) | ABB | |
| | iii) | L&T | |
| | iv) | Siemens | |
| | v) | Schneider | |
| l) Automatic Transfer switches | i) | ASCO (230 series) | 3 |
| | ii) | ASCO (7000 series) | |
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|----|-----------------------------------------------|------|-------------------------|---|
| 3) | LT cables Cables | i) | Polycab | 1 |
| | | ii) | RR | |
| | | iii) | KEI | |
| | | iv) | Havells | |
| | | v) | Gloster | |
| | | vi) | Revin | |
| | | | | |
| 4) | Cable end termination double compression type | i) | Lapp Kabel | 3 |
| | | ii) | Dowels | |
| | | iii) | COMET | |
| | | iv) | OBO | |
| 5) | Cable trays /Raceways (Prefabricated) | i) | Indiana | 4 |
| | | ii) | PUK | |
| | | iii) | Nidex | |
| | | iv) | Profab Engg. | |
| | | v) | OBO | |
| | | vi) | SS Industries | |
| | | vii) | Technimont Engg Pvt Ltd | |
| 6) | Conduit wiring | | | |
| | a) PVC pipe (Fire Retardant Heavy Duty) | i) | Precision | 3 |
| | | ii) | Klipsal | |
| | | iii) | lappKabel | |
| | | iv) | Balco | |
| | | v) | BEC | |
| | | vi) | Finolex | |
| | b) Wires (FRLS / Fire Survival) | i) | Rajinigandha | 2 |
| | | ii) | Polycab | |
| | | iii) | Finolex | |
| | | iv) | RR | |
| | | | | |
| | c) Modular switches & sockets | i) | Legrand (Arteor) | 3 |
| | | ii) | ABB (IVIE) | |
| | | iii) | Schneider (Zencelo-BS) | |
| | | iv) | Anchor (Vision) | |
| | | iii) | crabtree (Murano) | |
| | | | | 3 |
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|-----|--------------------------------------------|------|---------------|---|
| | e) Metal clad plug/ socket / Decontactor | i) | Legrand | 3 |
| | | ii) | Schneider | |
| | | iii) | L & T | |
| | f) Thermoplastic receptacles & Decontactor | i) | Mennekes | 3 |
| | | ii) | Hensel | |
| | | iii) | OBO | |
| | | | | |
| | e) Polycarbonate Junction Boxes | i) | Clipsal | 4 |
| | | ii) | Hensel | |
| | | iii) | OBO | |
| | | | | |
| 7) | Distribution Board with padlocking | i) | Legrand | 2 |
| | | ii) | Schneider | |
| | | iii) | L & T | |
| | | iv) | Siemens | |
| | | v) | ABB | |
| | | vi) | Hager | |
| | | | | |
| 8) | Selector/Toggle Switch | i) | Tecnic | 4 |
| | | ii) | L & T | |
| | | iii) | Kaycee | |
| | | | | |
| 9) | Digital Timers | i) | ABB | 4 |
| | | ii) | L&T | |
| | | iii) | Schneider | |
| | | | | |
| 10) | Capacitors | i) | L & T | 3 |
| | | ii) | Epcos | |
| | | iii) | Saha Sprague | |
| | | iv) | Schneider | |
| | | v) | Shreem | |
| 11) | Sandwich busduct / Rising mains | i) | L & T | 2 |
| | | ii) | Schneider | |
| | | iii) | Legrand | |
| | | iv) | RR- Busduct | |
| | | | | |
| 12) | Fire Sealant | i) | Promat | 3 |
| | | ii) | Hilti | |
| | | iii) | Birla 3M | |
| | | | | |
| 13) | Anchor Fastener | i) | Hilti | 4 |
| | | ii) | Fischer | |
| | | iii) | Gripple | |
| | | ii) | Hirawat Raven | |

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|-----|----------------------------|------|-----------------------------------------------------------------------------|---|
| 14) | Welding Rod | i) | L&T Esab | 4 |
| | | ii) | Advani Oerlikon | |
| 15) | UPS | i) | Emerson | 2 |
| | | ii) | Socomec | |
| | | iii) | Consul Neowat | |
| | | iv) | APC | |
| | | v) | Eaton | |
| | | vi) | Delta | |
| 16) | Lighting Fixtures | i) | Philips | 3 |
| | | ii) | Wipro | |
| | | iii) | Bajaj | |
| | | iv) | Havels | |
| | | v) | Panasonic | |
| | | vi) | Crompton Lights | |
| 17) | Surge Protection Devices | i) | Legrand | 3 |
| | | ii) | OBO | |
| | | iii) | Dehn | |
| | | iv) | Cape Electric | |
| 18) | Earth Pits | i) | OBO | 3 |
| | | ii) | Dehn | |
| | | iii) | JMV | |
| | | iv) | Furse | |
| | | v) | Cabe Electric | |
| 19) | PVC Race ways | i) | OBO | 4 |
| | | ii) | Legrand | |
| | | iii) | MK | |
| 20) | LT panel boards | i) | IEC 61439 above 630A & IEC 60439 below 630A type tested panel manufacturers | 1 |
| 21) | APFC relays | i) | ABB | 2 |
| | | ii) | Schneider | |
| | | iii) | P2P | |
| 22) | Indicating meters (analog) | i) | AE | 3 |
| | | ii) | MECO | |
| | | iii) | L&T | |
| | | iv) | Rishabh | |

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|-----------|---------------------------------|------|------------------|---|
| 23) | GI/MS conduit | i) | Any IS marked | 3 |
| 24) | Variable Frequency Drive (VFD) | i) | Danfoss VLT HVAC | 3 |
| | | ii) | ABB – ACH | |
| | | ii) | L & T | |
| B) | Low Voltage | | | |
| 1) | Data & Telephone (passive part) | i) | Systemax | 2 |
| | | ii) | AMP | |
| | | iii) | Legrand | |
| 2) | Coaxial Cables | i) | Beldon | 3 |
| | | ii) | AMP | |
| | | iii) | Molex | |
| | | iv) | Calyplast | |
| 3) | Splitter unit- TV | i) | D-link | 2 |
| | | ii) | Molex | |

CATEGORY REQUIREMENT OF TEST CERTIFICATE/ INSPECTION

CATEGORY-1:

- a) Type test certificate for similar item done. If not, One of the items offered is to be type tested.
- b) OEMs routine test certificate.
- c) Acceptance test to be conducted in the presence of Clients representative at OEMs factory.

CATEGORY - 2:

- a) Type test certificate for similar item done. If not, one of the items offered is to be type tested.
- b) OEMs routine test certificate.
- c) Visual and functional check by Client official at site.

CATEGORY- 3:

- a) OEM/Dealer/Contractor routine test certificate.
- b) Visual and functional check by Client official at site.

CATEGORY - 4:

- a) Visual and functional check by Client official at site.