



**PRODUCT STANDARD
PROJECT ENGINEERING
HYDERABAD**

**ANNEXURE-3 TO
PY-55127**

REV NO. 00

Page 1 of 4

PROJECT: TURBO BLOWER STATION (Package-010A)

CUSTOMER: M/s NMDC LIMITED, 3.0MTPY INTEGRATED STEEL PLANT, NAGARNAR, CHHATTISHGARH

CONSULTANT: M/s MECON, RANCHI

SUB-VENDOR LIST FOR ELECTRICAL COMPONENTS

Sub vendors for the LT switchgear components shall be as per the following list:

Sl.No.	ITEM	RECOMMENDED ELECTRICAL VENDOR
1.	Air Circuit Breaker	L&T/ SIEMENS/ SCHNEIDER/ ABB/ GE POWER CONTROL/
2.	Intelligent Controller	Siemens, Schneider, L&T, Rockwell Automation.
3.	PROTECTION RELAYS (NUMERIC RELAYS)	ABB/ SIEMENS/ L&T/ AREVA/ SCHNEIDER/ EASUN REROYLLE
4.	PROTECTION RELAYS/ AUXILIARY RELAYS (E/M)	AREVA (VAJC)/ ABB/ SIEMENS/ AREVA/ EASUN REROYLLE.
5.	SOFT STARTERS	ABB/ ROCKWELL AUTOMATION/ BHEL/ SIEMENS/ INNOVATIVE TECHNOMICS/ SCHNEIDER (Only for LT motor)
6.	Annunciators	MINILEC/ SPA/ PROCON/ YASHMUN/ PYROTECH (UDAIPUR)
7.	Panel / Indicating meters	IMP/ AE/ MECO/ L&T/ MOTWANI/ CONZERVE/ RISHAB INSTRUMENTS/ SECURE METERS/ ABB/ SIEMENS/ EMERSON/ RAIL/ TOSHNIWAL INDIA/ ENERCON/ AREVA/ KAPPA
8.	Earth Leakage Circuit Breaker	GE POWER CONTROL/ STANDARD/ HAVELLS/ABB / SIEMENS/ SCHNEIDER/ MDS (LEGRAND) /L&T/ INDOASIAN
9.	Fuses	GE POWERCONTROL/ L&T/ SIEMENS/ INDO ASIAN/ HAVELLS/ STANDARD/ BUSSMAN/ CONTROL & SWITCH GEAR/ ABB/ AREVA
10	Heavy duty switches	Controls & Switchgear, Indo Asian Fusegear, L&T, Siemens, Schneider Electric
11	MCBs	SIEMENS/ L&T/ GE POWER CONTROL/ SCHNEIDER (PROTEC / MG)/ STANDARD/ INDOASIAN/ HAVELLS/ MDS (LEGRAND)/ ABB
12	MCCBs	SCHNEIDER (MG)/ L&T/ ABB/ SIEMENS/ GE POWER CONTROL / BCH
13	Meters	Automatic Electric, Areva T&D India Ltd, Meco Instruments, Nippen Electrical Instruments, Rishabh
14	Transducers	Automatic Electric Ltd., Elster, Rishabh
15	DIGITAL TYPE MULTI-FUNCTION METER	CONSERVE/ L&T/ SECURE/ RISHABH/ SIEMENS/ ABB
16	ELECTRONIC ENERGY METERS (TRIVECTOR / KWH)	SEMS/ L&T/ SATEC/ CONZERVE/ DUKATI/ ABB/ SIEMENS/ AREVA/ SCHNEIDER
17	Timers	Bhartia, Electronic Automation, L&T, Siemens

COPYRIGHT AND CONFIDENTIAL

The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED . It must not be used directly or indirectly in any way detrimental to the interest of the company.

18	MPCB	SCHNEIDER/ L&T/ ABB/ SIEMENS/ GE POWER CONTROL
19	Switch fuse unit/Fuse disconnecter(fuse switch unit),air breaker switch	GE power control,L&T,Siemens,Basant Pran &co,Havells,Standard,INDO-ASIAN,Control &Switchgear,ABB
20	Power contactor for general purpose & contious duty operation	ABB, Siemens, Schneider, L&T, Rockwell automation, Andrew yule, Schneider(CG) BCH (BIL), Moeller, Control & Switchgear.
21	THERMAL (BIMETALLIC) OVER LOAD RELAYS	BCH/ L&T/ SEIMENS/ SCHNEIDER(TELEMECANIQUE)/ ROCKWELL AUTOMATION/ ABB/ CONTROL & SWITCHGEAR/ GE POWER CONTROL
22	Electronic over load relays	SIEMENS/ L&T/ BCH/ SCHNEIDER-SAMWHA/ LG
23	Electro magnetic over load relay	BCH, Kilburn, BHEL, Schneider (telemecanique).
24	AUX.Contactors/ Control relays	OEN, L&T, Schneider, Andrew yule, GE power control, BCH(BIL), Easun Rerolle, Jyoti, Rockwell Automation, Control & Switchgear.
25	POWER CONTACTOR / AUX. CONTACTORS	ABB/ SIEMENS/ SCHNEIDER (TELEMECANIQUE)/ L&T/ GE POWER CONTROL/ CONTROL & SWITCHGEAR/ BCH
26	VACUUM CONTACTOR	SIEMENS/ L&T/ ABB/ SCHNEIDER
27	TIMERS & TIME DELAY RELAY	ABB/ BCH/ L&T/ GEPOWER/ SIEMENS/ ESSEN/ ELECTRONIC AUTOMATION/ TELEMECANIQUE/ OMRON
28	Time delay relay	--
	a. Electro Pneumatic	BCH(BIL), Schneider (telemecanique), BHEL, ESAUN REFOLLE
	b. Electronic timer	Selectron, Siemens, BCH(BIL), ALSTOM, L&T, Rockwell Automation IFM, Schneider (telemecanique).
	c. Time switches	L&T, GE power control, EAPL, INDO-ASIAN, Schneider(MG)
29	Master controller	EPCC, Schneider, Industrial syndicate, Strom kraft, Schneider (Square D), Schneider (telemecanique).
30	MASTER CONTROLLER (STEP CONTROL TYPE)	EPCC/ INDUSTRIAL SYNDICATE/ STROM KRAFT/ SCHNEIDER (SQUARE D)/ SCHNEIDER (TELEMECANIQUE) / ELECTROMAG/ SPEED O CONTROL
31	LIMIT SWITCHES	SIEMENS/ ESSEN/ GE-POWER/ SCHNEIDER/ BCH/ JAYSHREE / EPCC(KAKKU) / AG-MECHANIC/ INDUSTRIAL SYNDICATE/ L&T/ ELECTROMAG/ PROTOCONTROL
32	ROTARY LIMIT SWITCHES	EPCC(KAKKU)/AG-MECHANIC/ TELEMECHANIQUE
33	Limit switches	--
34	1. Crane &heavy duty application	EPCC, Schneider, Industrial Syndicate, Storm Kraft, Jai balaji
35	2. Micro & other actuating type	Essen Deinki, L&T, BCH(BIL), Siemens, Schneider(Telemecanique), Jai balaji
36	RESISTANCE BOXES (FECHRAL EDGE WOUND)	EPCC/ ELECTROMAG/ BCH
37	ELECTROMAGNETIC DC BRAKE ASSEMBLY	EPCC/ BCH / INDUSTRIAL SYNDICATE

**PRODUCT STANDARD
PROJECT ENGINEERING
HYDERABAD**

**ANNEXURE-3 TO
PY-55127**

REV NO. 00

Page 3 of 4


COPYRIGHT AND CONFIDENTIAL
The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED .
It must not be used directly or indirectly in any way detrimental to the interest of the company.

Ref. Doc

38	Thyristor devices	West code, ABB, BHEL, EUPEC, HIND rectifier, Rutton shaw, Semikron rectifier.
39	Power diodes	Rutton shaw, Usha rectifier, Hind rectifier, INSEL, Semikron rectifier, West code, EUPEC
40	Control diodes	ECIL, BEL, HIND rectifier, INSEL
41	Panel board (fire retardent board)	LAMTUF plastic Hyderabad
42	Panel enclosures	EPCC, BCH, RITTAL, Transrect advance power control, Control & Switchgear
43	Terminal blocks	EPCC/ ELMEX/ PHOENIX CONTACT/ CONNECT WELL/ ESSEN DEINKI/ WAGO/ LAPP/ S&S/ HANSEL
44	Selector switches & control switches	ABB/ GE POWER CONTROL/ BCH/ EPCC/ KAYCEE/ SIEMENS/ TEKNIK/ L&T/ CONTROL & SWITCHGEAR / AREVA/ VAISHNO/ JYOTI/ SALZER
45	Control transformers	AEI/ AEP/ VOLTAMP/INTRAVIDYUT/INDCOIL/ KAPPA/ INDUSHREE/ SIEMENS
46	MIMIC PANELS & ANNUNCIATION PANELS	L&T/ ADVANI OERLIKON/ GE POWER CONTROL/ BHEL / BCH/ TRANSRECT/ MINLEC/ TIRUPATI ELECTRONICS / ADVANCE POWER CONTROL/ CONTROL DEVICES
47	Push buttons	SALZER/ BCH/ L&T/ SCHNEIDER/ SIEMENS/ GE POWER/ VAISHNO/ CONTROL DEVICES/ ESSEN/ TECNIC/ CONTROL & SWITCHGEAR
48	INDICATING LAMPS	BINAY/ SIEMENS/ L&T/ ESSEN/ BCH/ VAISHNO /TECNIC/OSRAM/ TELEMECANIQUE/ AREVA/ ESBEE
49	Indicating LED lamp assembly	BINOY, ESSEN DEINKI, Siemens, TECHNIK, BCH, L&T, ALTOS, Control & Switchgear
50	Open type panels	EPCC, Transrect, EEW, Control & Switchgear
51	Current transformers (LV) & PT	ABB/ JAYSHREE/ PRAGATI/ KAPPA/INTRAVIDHYUT / INDCOIL/ PRECISE
52	Control panel	Sonitech, EPCC, Tirupati electronics, Transrect advance power control, EEW, Control & Switchgear
53	CRANE CONTROL PANEL (ABOVE 50 T CRANES)	SIEMENS / ABB / SCHEIDER / L&T
54	Cable Termination Kit	RAYCHEM/ 3M/ MECP/ DENSON
55	OPTICAL FIBRE CABLE	MOLEX / LUCENT / FINOLEX / ERICSON / STERLITE / HFCL / OPTEL
56	CABLE GLANDS	LAPP/ HANSEL/ PHOENIX/ COMET/ PRECISSION-QUALITY/ SUNIL & CO./ ELECTROMAC
57	WELDING SOCKETS	BCH/ SCHNEIDER/ BEST & CROMPTON/ GEPOWER/ HAVELL/ JAIBALAJI/ HENSEL/ MDSLEGRAND
58	SWITCH SOCKET OUTLET	ALSTOM/ ANCHOR/ BCH/ CGL/ ESSEN/ BEST & CROMPTON/ AREVA
59	LAPTOP/NOTE-BOOK/ PC	HP/LENOVO/COMPAC/ DELL WIPRO/ IBM
60	WALL Mounted DBs	VENUS/ ANDREW YULE/ BCH/ SCHNEIDER ELECTRIC/ HAVELLS/ STANDARD/ TRICOLITE/ ADVANCE POWER CONTROL/ HINDUSTAN CONTROL/ CONTROL & SWITCHGEAR/ L & T/ SIEMENS/ GE POWER CONTROL/ ABB/ SWITCHING CIRCUITS/ KMG A TO Z SYSTEMS/ SEN & SINGH ENGINEERS/ MEDITRON

NOTES:

1. Vendor shall strictly follow the list of makes for equipments as specified above.

	Form No.	 HYDERABAD	PRODUCT STANDARD PROJECT ENGINEERING HYDERABAD	ANNEXURE-3 TO PY-55127 REV NO. 00 Page 4 of 4
COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED . It must not be used directly or indirectly in any way detrimental to the interest of the company.			<ol style="list-style-type: none"> 2. For components other than the above, vendor shall submit past track record for the proposed sub-vendors and obtain written approval from BHEL. 3. BHEL reserves the right to choose any particular make from the above list for Protection relays during order execution for overall system integration. 	
Ref. Doc				