

**TENDER SPECIFICATION
BHEL: PSSR: SCT: 1639**

FOR

**Erection, Testing and Commissioning
of Electrical, C&I and Illumination
works package of Turbo Blower-5 and
its Auxiliaries**

AT

RINL, Vizag Site

VOLUME – II

PRICE BID

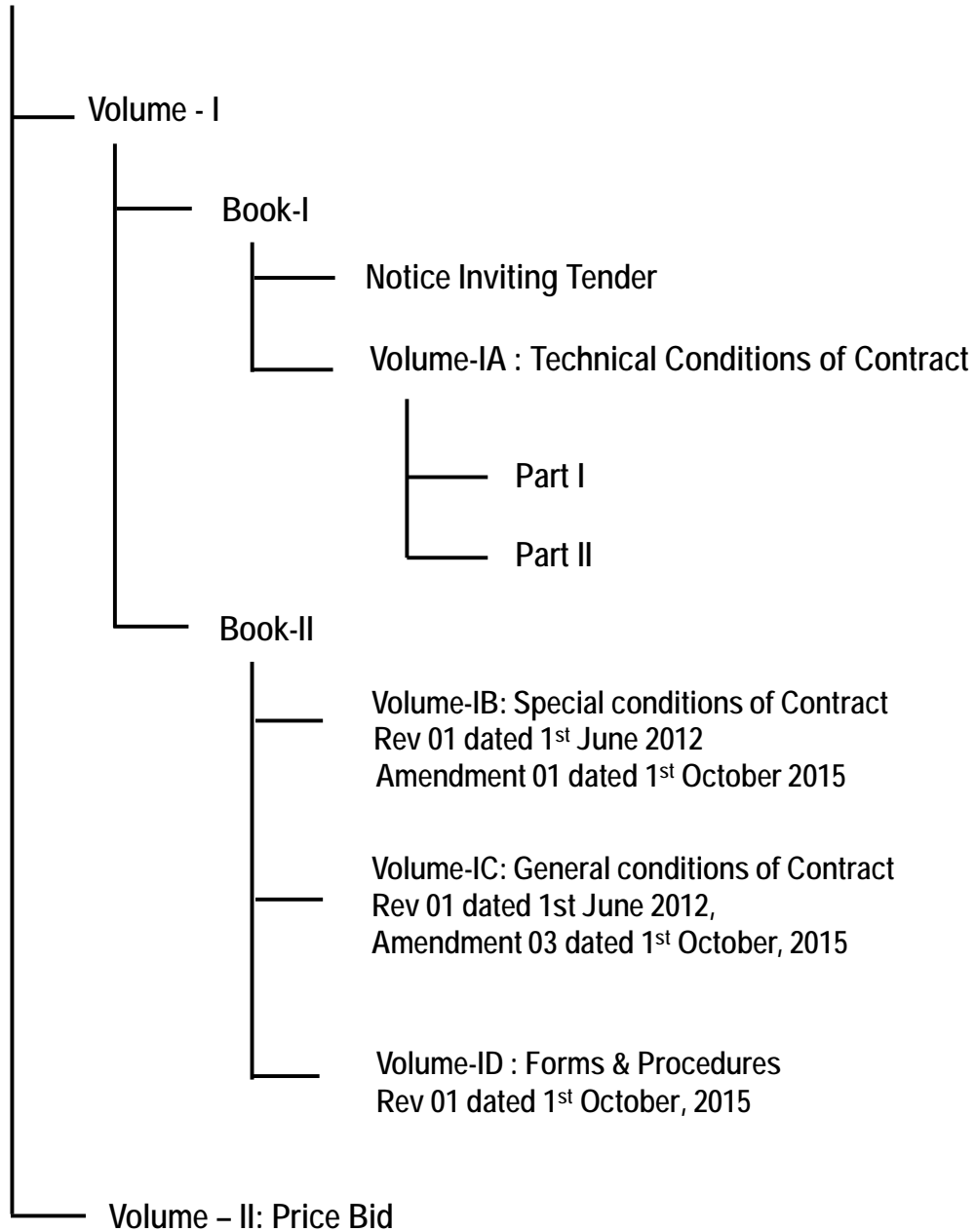


BHARAT HEAVY ELECTRICALS LIMITED

(A Government of India Undertaking)
Power Sector – Southern Region
690, Anna Salai, Nandanam, Chennai – 600 035.

TENDER SPECIFICATION CONSISTS OF

Tender Specification



PRICE BID

BHARAT HEAVY ELECTRICALS LIMITED
(A Government of India Undertaking)
Power Sector, Southern Region
690, Anna Salai, Nandanam, Chennai – 35

Tender Specification No. BHEL: PSSR: SCT: 1639

FOR

Erection, Testing and Commissioning of Electrical, C&I and Illumination works package of Turbo Blower-5 and its Auxiliaries at RINL, Vizag Site

One set of Tender documents consisting of

- 1) Techno commercial Bid - 2 copies
- 2) Price Bid - 2 copies

Book SI no

Issued to
M/s

Refer NIT for Last date of submission
Please note this tender document is not transferable

For and on behalf of
Bharat Heavy Electricals Limited

Additional General Manager/SCT &Purchase

Place: Chennai -35
Date:

Tender Specification No.: BHEL PSSR SCT 1639

PRICE BID

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PRICE BID

PART-A-INSTRUCTIONS TO BIDDERS:

1. Bidders shall only quote 'Total Amount' in the format given in PART -B of the price bid. Any other entry elsewhere in the price bid shall be treated as Null and Void.
2. The above mentioned 'Total amount' is for the entire Bill of Quantity (BOQ) given in Part -C of the Price Bid.
3. BHEL has pre-fixed the weightages for the amount of individual items of Bill of Quantity with respect to the 'Total Amount' in Part-C.
4. Based on the pre-fixed weightages, the amount for the individual items of the Bill of Quantity shall be arrived at. This amount shall be rounded off to the nearest rupee.
5. Based on the quantities of individual item and the amount arrived in SI No: 4 above, unit rate of individual items shall be derived. This unit rate shall be rounded off to four decimal places.
6. Bidders to note that this is an item rate contract. Payment shall be made for the actual quantities of work executed at the unit rate arrived at as per SI No.5 above.

Part B: Format to quote Total Amount

**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
at RINL VIZAG TURBOBLOWER 5**

Total Amount for the entire Bill of Quantities(BOQ) given in Part C

In Figures

In words

Note :

Bidders to quote Total Amount in this format given above, which shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope defined in specification and in accordance with all terms & conditions of tender.

Date

SIGNATURE OF BIDDER WITH SEAL

Part C : Bill of Quantities

**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
at RINL VIZAG TURBOBLOWER 5**

Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
A.1	415VST,TB&BOP MCC- 19000 Kg , size: 27000 x1400x2375	No	1	.0182672
A.2	415VSTValveMCC; 23000 Kg, size:32000X1400X2375	No	1	.0312444
A.3	415VPDB ; 8500 Kg, size:11000X1200X2375	No	1	.0097563
A.4	415VMLDB;2400 Kg, size:3200X500X2375	No	1	.0018828

Part C : Bill of Quantities

**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
at RINL VIZAG TURBOBLOWER 5**

Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
A.5	415VACELDB; 1200 kg, size : 1600X500X2375	No	1	.0008889
A.6	220VDCDB :4500kg, size: 5400X600X2375	No	1	.0088204
A.7	220VDCELDB;1200kg, size: 1600X500X2375	No	1	.0008889
A.8	230VUPSDB;3000 kg, size:3200X500X2375	No	1	.0007991

Part C : Bill of Quantities

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at RINL VIZAG TURBOBLOWER 5**

Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
A.9	Insulating Rubber Mats; 3Kg each ,size:10000x1000x2.5	No	15	.0029463
B	Erection, testing & commissioning of 220V DC battery/Charger, Clause No: 6.3.5	--		
B.1	Erection, testing & Commissioning of 220V DC System; 2x100% charger & 2x100% Lead-Acid(Plante) battery . Battery(110 nos per set) wt total 5300kg/set; size7000 x 7000 x1000 Battery (1 Set) with Charger-wt1800kg; size2400x800x2000-Charger (1 set) along with following accessories a) Isolation Box (Wall mounted) 100kg; 600x800x1000 (1 No.) b) Discharge Resistor Bank 100kgs ; 600x800x1000 (1 No.) c) Cell Booster 75Kgs ; 600x800x1000 (1 No.) d) Auto Fill System 100Kgs; 7000 x 7000 x 1000 (1 No.) e) Battery Health Monitoring System 300Kg, size: 700x600x2200-Charger (1 No.)	Sets	2	.0083508

Part C : Bill of Quantities

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
B.2	230V UPS System with 2x100% VRLA battery (Inverter& charger panel, Input isolation transformer, SVR) ;2700Kgeach,size:2400x800x2110 with battery banks and isolation box as detailed below. Battery Banks (VRLA);5000Kgs each, size: 4200X460X1500 - 2sets UPS Battery Isolation box; 100 Kg each, size: 650X300X550- 2nos	Set	1	.0024002
C	Erection of Junction boxes/ Push button stations. For scope of work refer Clasue no: 6.3.14	--		
C.1	Local Control Stations; 3Kg each , size:300 x 200 x 400	No	110	.0086649
C.2	MotorJunctionBox; 100kg,size : 500X300X750(Each)	No	8	.0011378

Part C : Bill of Quantities

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
C.3	WallMounted DB300kg size: 800X300X1200	No	5	.0013314
C.4	Junction boxes	No	10	.0014223
D	Laying and termination of LT power/Control, Instrumentation cables, For scope of work refer Clause No: 6.3.12	--		
D.1	Laying of LT power cables	--		

Part C : Bill of Quantities

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at RINL VIZAG TURBOBLOWER 5**

Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.1.1	AL XLPE/FRLS PVC CABLE ; A1 1CX630 Sq.mm arm	Mtrs	4,950	.0599437
D.1.2	AL XLPE/FRLS PVC CABLE; A1 3.5Cx120 Sq.mm arm	Mtrs	550	.0028834
D.1.3	AL XLPE/FRLS PVC CABLE; 4Cx70 Sq.mm A1 arm	Mtrs	1,760	.0092279
D.1.4	AL XLPE/FRLS PVC CABLE; A1 3Cx10 XLPE arm	Mtrs	2,750	.0060647

Part C : Bill of Quantities

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.1.5	AL XLPE/FRLS PVC CABLE; Al 3Cx16 Sq.mm arm	Mtrs	3,850	.0124417
D.1.6	AL XLPE/FRLS PVC CABLE; Al 3Cx300 XLPE arm	Mtrs	1,100	.0066196
D.1.7	CU UNAR XLPE/FRLS PVC CABLE; Cu 1Cx150 XLPE UNARM	Mtrs	880	.0036886
D.1.8	CU UNAR XLPE/FRLS PVC CABLE; Cu 1Cx35 XLPE UNARM	Mtrs	880	.0032593

Part C : Bill of Quantities

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.1.9	AL XLPE/FRLS PVC CABLE; 4Cx16 Al XLPE arm	Mtrs	3,300	.0106643
D.1.10	AL XLPE/FRLS PVC CABLE; 4Cx10 Al XLPE arm	Mtrs	550	.0008592
D.1.11	AL XLPE/FRLS PVC CABLE; 3Cx50 Al XLPE arm	Mtrs	550	.0017711
D.1.12	AL XLPE/FRLS PVC CABLE; 3Cx150 Al XLPE arm	Mtrs	1,100	.0035143

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.1.13	AL XLPE/FRLS PVC CABLE; 4Cx25 Al XLPE arm	Mtrs	1,650	.0030071
D.1.14	AL XLPE/FRLS PVC CABLE; 4Cx50 Al XLPE arm	Mtrs	4,400	.0156857
D.1.15	CU XLPE/FRLS PVC FLEX CABLE: Cu 1Cx25 XLPE UNARM	Mtrs	165	.0002578
D.1.16	CU XLPE/FRLS PVC FLEX CABLE: Cu 1Cx95 XLPE UNARM	Mtrs	275	.0005012

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.1.17	CU XLPE/FRLS PVC FLEX CABLE:Cu 1Cx120 XLPE UNARM	Mtrs	275	.0011527
D.2	TERMINATION OF LT POWER CABLES	--		
D.2.1	AL XLPE/FRLS PVC CABLE ; Al 1CX630 Sq.mm arm	No	50	.0013019
D.2.2	AL XLPE/FRLS PVC CABLE; Al 3.5Cx120 Sq.mm arm	No	6	.0001036

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.2.3	AL XLPE/FRLS PVC CABLE; 4Cx70 Sq.mm Al arm	No	20	.0003452
D.2.4	AL XLPE/FRLS PVC CABLE; Al 3Cx10 XLPE arm	No	28	.0003645
D.2.5	AL XLPE/FRLS PVC CABLE; Al 3Cx16 Sq.mm arm	No	39	.0012462
D.2.6	AL XLPE/FRLS PVC CABLE; Al 3Cx300 XLPE arm	No	12	.0005256

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.2.7	CU UNAR XLPE/FRLS PVC CABLE; Cu 1Cx150 XLPE UNARM	No	12	.0003197
D.2.8	CU UNAR XLPE/FRLS PVC CABLE; Cu 1Cx35 XLPE UNARM	No	12	.0003834
D.2.9	AL XLPE/FRLS PVC CABLE; 4Cx16 Al XLPE arm	No	34	.0010864
D.2.10	AL XLPE/FRLS PVC CABLE; 4Cx10 Al XLPE arm	No	6	.0000781

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.2.11	AL XLPE/FRLS PVC CABLE; 3Cx50 Al XLPE arm	No	6	.0001724
D.2.12	AL XLPE/FRLS PVC CABLE; 3Cx150 Al XLPE arm	No	12	.0005113
D.2.13	AL XLPE/FRLS PVC CABLE; 4Cx25 Al XLPE arm	No	17	.0002213
D.2.14	AL XLPE/FRLS PVC CABLE; 4Cx50 Al XLPE arm	No	44	.0012644

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.2.15	CU XLPE/FRLS PVC FLEX CABLE; Cu 1Cx25 XLPE UNARM	No	6	.0001165
D.2.16	CU XLPE/FRLS PVC FLEX CABLE; Cu 1Cx95 XLPE UNARM	No	6	.0001172
D.2.17	CU XLPE/FRLS PVC FLEX CABLE; Cu 1Cx120 XLPE UNARM	No	6	.0001599
D.3	LAYING AND TERMINATION CONTROL CABLE PACKAGE :	--		

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.3.1	AL XLPE/FRLS PVC CABLE ; Al 3Cx6 Sq.mm arm	Mtrs	17,600	.0399795
D.3.2	CU PVC/FRLS PVC CABLE; 3Cx2.5 Sq.mm Cu	Mtrs	23,650	.0427719
D.3.3	CU PVC/FRLS PVC CABLE; 5Cx2.5 Sq.mm Cu	Mtrs	2,750	.0050512
D.3.4	CU PVC/FRLS PVC CABLE; 7Cx2.5 Sq.mm Cu	Mtrs	4,950	.009758

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.3.5	CU PVC/FRLS PVC CABLE; 10Cx2.5 Sq.mm Cu	Mtrs	10,450	.0241973
D.3.6	CU PVC/FRLS PVC CABLE; 14Cx2.5 Sq.mm Cu	Mtrs	2,750	.0067396
D.3.7	CU PVC/FRLS PVC CABLE; 19Cx2.5 Sq.mm Cu	Mtrs	17,600	.043634
D.3.8	MUTI STRAND CU PVC/FRLS PVC CABLE; 4Cx0.5 Sq.mm Cu	Mtrs	6,000	.010935

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.3.9	MUTI STRAND CU PVC/FRLS PVC CABLE; 30PAIRx0.5 Sq.mm	Mtrs	2,000	.0052071
D.3.10	CU XLPE/FRLS PVC CABLE ; 3Cx4 Sq.mm Cu arm	Mtrs	6,050	.0138976
D.3.11	CU UNAR XLPE/FRLS PVC CABLE; Cu 1Cx6 XLPE UNARM	Mtrs	550	.0011709
D.3.12	AL XLPE/FRLS PVC CABLE; 4Cx6 Al XLPE arm	Mtrs	1,100	.002584

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.4	Laying, termination of instrumentation cables	--		
D.4.1	2PairX0.5 Sqmm, 7/0.3, PVC insulated armoured cable	Mtrs	6,500	.0138984
D.4.2	4PairX0.5 Sqmm, 7/0.3, PVC insulated armoured cable	Mtrs	3,000	.0046864
D.4.3	8PairX0.5 Sqmm, 7/0.3, PVC insulated armoured cable	Mtrs	5,000	.0097598

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.4.5	2PairX1.5 Sqmm, 7/0.3, PVC insulated armoured cable	Mtrs	5,000	.0148428
D.4.6	4PairX1.5 Sqmm, 7/0.3, PVC insulated armoured cable	Mtrs	5,000	.0078107
D.4.7	Fibre optic cable	Mtrs	3,300	.0064664
D.4.8	Thermocouple extension cable 2 PairX0.5 Sqmm cable	Mtrs	1,000	.0015621

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.4.9	Ethernet cable 2 pairX0.5 Sqmm cable	Mtrs	1,500	.0023829
D.4.10	Master Clock Interface Cable(RG-58 cable)	Mtrs	749	.0013516
D.4.11	2coreX2.5Sqmm cable	Mtrs	3,000	.0039054
D.4.12	Cable 1 x 2 x 1.3mm ²	Mtrs	180	.0002343

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
D.4.13	Cable 1 x 3 x 1.3mm ²	Mtrs	30	.0000391
D.4.14	Cable 2 x 2 x 1.3mm ²	Mtrs	70	.0000911
E	ERECTION OF PRE FABRICATED CABLE TRAYS AND ACCESSORIES LIKE BEND, TEE, ELBOW , CROSS & REDUCERS ETC.(For scope of work, refer clause no:6.3.13)	--		
E.1	600MM STRAIGHT RUN (ANGULAR) CABLE TRAY WITH ACCESSORIES	Mtrs	875	.0134919

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
E.2	600MM STRAIGHT RUN (PERFORATED) CABLE TRAY WITH ACCESSORIES	Mtrs	750	.0146462
E.3	300MM LADDER (ANGULAR) STRAIGHT RUN CABLE TRAY WITH ACCESSORIES	Mtrs	875	.0128617
E.4	300MM STRAIGHT RUN (PERFORATED) CABLE TRAY WITH ACCESSORIES	Mtrs	1,500	.0220487
E.5	50MM STRAIGHT RUN (PERFORATED) CABLE TRAY WITH ACCESSORIES	Mtrs	875	.0070307

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
E.6	50MM STRAIGHT RUN (PERFORATED) CABLE TRAY COVER WITH ACCESSORIES	Mtrs	875	.0070307
F	ERECTION OF PLANT EARTHING & LIGHTNING PROTECTION system, For scope of work, refer clasue no:6.3.19	--		
F.1	GI STRIP 75x10; For below groundearthing.	Mtrs	900	.0098622
F.2	GI STRIP 75x10; For above groundearthing.	Mtrs	600	.0062486

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F.3	GI STRIP 50x6; For above ground earthing and other purpose.	Mtrs	2,200	.0202026
F.4	GI STRIP 25x6; For above ground earthing.	Mtrs	200	.0017771
F.5	16 SWG GI WIRE-STRANDED; For above ground earthing.	Mtrs	1,200	.0024632
F.6	8 SWG GI WIRE-SOLID; For above ground earthing.	Mtrs	3,500	.0055915

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F.7	100mm CI Pipe electrode; Treated earth pits for Machine Neutral Earthing& Untreated earth pits for Machine Body Earthing.	Mtrs	25	.0399424
F.8	Cu Pipe Electrode; Treated Earth pits for Electronic earthing	Mtrs	12	.0031243
F.9	Vertical Air Termination Rod; For Lightning protection	Mtrs	8	.0005208
G	Erection ,Testing and Commissioning of Lighting transformers , For scope of work refer clause no:6.3.1	--		

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
G.1	75KVA415/415,ANDry type lighting transformer; 690 kg , size: 1375X935X1305 ;	No	2	.0079885
G.2	25KVA415/415,AN Dry type emergency lightingtransformer; 400 Kgs; size: 1275X825X985	No	1	.0019971
H	INSTALLATION OF ILLUMINATION PACKAGE ,For scope of work refer clause no:6.3.17	--		
H.1	Industrial type Bulk head luminaire with die-cast aluminium LM6 body having stove enameled finish, with prismatic front glass, wire guard, tropicalised gasket, BC lamp holder suitable for 100W GLS Lamp and 220V DC supply along with accessories.	No	70	.0037256

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
H.2	Industrial type general purpose luminaire with high efficiency electronic ballast, MS sheet steel housing (CRCA) with vitreous enameled/Epoxy powder coated AND external reflector suitable for 2x28W T5 Fluorescent lamp-Surface/suspension mounted through down conduit.	No	120	.0063906
H.3	Industrial type Corrosion proof luminaire with high efficiency electronic ballast, FRP housing and clear acrylic cover suitable for 2x28W T5 Fluorescent lamps â Surface/suspension mounted through down conduit.	No	6	.0003195
H.4	Industrial type high performance narrow distribution Non integral High Bay luminaire with die cast aluminium housing & specular anodized aluminium reflector suitable for 400W HPSV tubular lamp. Fixture should be totally enclosed type & complete with suitable CG Box, eye bolt and shall be suitable for roof truss/Purlin/ceiling mounting.	No	25	.0016272
H.5	Industrial type dust proof & vapour proof Non-Integral Well glass luminaire made of die cast aluminium housing with stove enameled, white inside and grey outside reflector, heat resistant clear toughened glass and galvanized wire guard. Fixture shall be suitable for 150W HPSV lamp in complete with control gear box, eyebolt, bracket and pole reducer for suitability of suspension/ceiling/pole mounting.	No	130	.0084616

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**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
at RINL VIZAG TURBOBLOWER 5**

Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
H.6	Industrial type Integral Well glass luminaire with cast aluminium alloy mounting piece and sheet steel Al. canopy with stove enamel white inside and grey outside, reflector with heat resistant glass and wire guard suitable for 70W HPSV lamp in complete with Eyebolt and bracket for suitability of suspension/ceiling/pole mounting.	No	50	.0026628
H.7	Street Light luminaire with single piece die cast aluminium body, electrochemically brightened and anodized/Glaskote finish aluminium reflector, heat resistant clear toughened flat front glass cover & Gasket etc. Fitting shall be fully wired complete with copper wound ballast, power factor improvement capacitor, igniter etc. and shall be suitable for 150W HPSV tubular lamp	No	20	.0012781
H.8	Industrial weather proof heavy duty type narrow beam Non-Integral Flood Light luminaire made of cast aluminium housing having brightened anodized aluminium reflector with heat resistant toughened front glass cover, neoprene gasket etc. Suitable for 1x250W HPSV lamp. Fitting shall have provision for rotating in both horizontal & vertical plane and supplied with necessary control gear box etc.	No	8	.0005113
H.9	6 way AC Indoor type Lighting Panel (Safe area)	No	2	.0000893

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**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
H.10	12 way AC Indoor type Lighting Panel (Safe area)	No	4	.0001428
H.11	18 way AC Indoor type Lighting Panel (Safe area)	No	2	.0000714
H.12	6 way DC Indoor type Lighting Panel (Safe area)	No	4	.0001428
H.14	12 way AC Indoor type Lighting Panel (Safe area)	No	3	.0001071

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**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
H.15 , H.16	3000 mm long 25mm GI conduit;3000 mm long 25mm PVC Conduit	No	600	.003832
H.17 , H.18 , H.19	3000 mm long 50 mm GI conduit;3000 mm long 50mm PVC conduit;3000mm long 20mm GI conduit	No	410	.0032827
H.20	FSB-3 Flush mounted switchboard with 3 nos 5A piano type switches(modular type)	No	10	.0001598
H.21	FSB-2 Flush mounted switchboard with 3 Nos 5A piano type switches (modular type)	No	6	.0002343

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**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
H.22	20A DP MCB Box outlet (Indoor type)	No	14	.0004028
H.23	Push button type switch box outlet consist of two no.ON/OFF Push button switch,terminal block and other accessories (indoor type)	No	8	.0006391
H.24	Industrial metal clad type 5/15A, 240 V receptacle with 15A MCB switch (Indoor Type)	No	20	.0003195
H.25	Industrial metal clad type 5/15A,240V receptacle with interlocked Rotary switch (Indoor Type)	No	20	.0003195

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**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
H.26	Industrial metal clad type 24 V Socket with 10A MCB switch (Indoor Type) with hand lamp,15m cable and other accessories	No	8	.0001278
H.27	63A TPN welding receptacles (Safe area)	No	12	.0007524
H.28	240/24V Transformer module (Indoor type)with all accessories	No	1	.0001042
H.29	1Cx2.5sq.mm 1.1KV PVC insulated Cu flexible wire	Mtrs	19,500	.0083055

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
H.30	CU PVC/FRLS PVC CABLE; 3Cx2.5 Sq.mm Cu along with supply of spacers and hardware, laying, termination for lighting purpose	Mtrs	2,000	.0042578
H.31	200X150X80MM 4 Way indoor rectangular 16 swg sheet steel JB with 6 nos. 2 pin TB suitable for 6 sqmm wire. JB shall have minimum IP-55 protection and cable entries suitable for 3CX2.5 Sqmm Cu. Cable along with its DC cable glands.	Nos	120	.0019004
H.32	200X150X80MM 4 Way outdoor rectangular 16 swg sheet steel JB with 4 nos. 2 pin TB suitable for 6 sqmm wire. JB shall have minimum IP-55 protection and cable entries suitable for 3CX2.5 Sqmm Cu. Cable along with its DC cable glands.	Nos	10	.0001584
H.33	200X200X100MM 4 Way outdoor rectangular sheet steel JB outdoor type (IP 55) with two 1.5	Nos	25	.0003959

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**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
H.34	88 mm dia GI 4 way Round JB with 3nos. TB suitable for 6 sq.mm wire & Flat cover. JB should have cable entries suitable for fitting with 25mm GI conduit.	Nos	150	.0026684
I	FABRICATION/ ERECTION OF STRUCTURAL STEEL , For scope of work refer clause no:6.3.18	--		
I.1 , I.2 , I.3 , M.5 , M.6	ISMC 100X50X6mm Channels(9.2 Kg/meter) ISA 65X65X6mm Runner angles(5.4 Kg/meter) ISA 50X50X6 mm Runner angles(4.5 Kg/meter) ISMC 75X40X6mm Channels	MT	33	.0688022
J	INSTALLATION OF FIRE PROOF SEALING SYSTEM PACKAGE, For scope of work refer clause no:6.3.25	--		

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**Tender Specification BHEL:PSSR:SCT:1639(R1) for Electrical, HT Electrical, LT Electrical, Others(Electrical & CI)
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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
J.1	Fire proof sealing materials for cable opening sealing	Sq.Mt	150	.0079883
J.2	Fire Break Coatings for HT/LT Power Cables	Sq.Mt	400	.0255628
K	Erection,commissioning of DCS system, For scope of work refer clause no:6.3.4	--		
K.1	EHTC & TP Panel(CJJ21-24),Siute of four cubicle, Dimensions: 3500(L)X1000(B)X2500(H) WT-1600 KGS	No	1	.0019308

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
K.2	ATRS Panel(CCA01-03) Siute of threecubicle, D0imensions: 2500(L)X1000(B)X2500(H) Total WT-1200 KGS	No	1	.0011824
K.3	Relay panel(CCA04) Siute of one cubicle,including TSI 19 inch rack, Dimensions: 1000(L)X1000(B)X2500(H) Total WT-400 KGS	No	1	.0010946
K.4	AC Power Distr. Panel(CCA08) Siute of threecubicle, Dimensions: 1000(L)X1000(B)X2500(H) Total WT-400 KGS	No	1	.0156229
K.5	BOP Panel(CRE01-03) Siute of three cubicle, Dimensions: 2500(L)X1000(B)X2500(H) , Total WT-1200 KGS	No	1	.0016334

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
K.6	Network Panel(NWPC01) Dimensions: 1000(L)X1000(B)X2500(H) WT- 400 KGS	No	1	.0007323
K.7	Network Enclosure Dimensions: 1000(L)X1000(B)X2500(H) WT- 400 KGS	No	2	.0007189
K.8	Hardwired Backup Control Panel size; 1050 LX 925 B X 1571 H , Weight-300 kgs	No	1	.0017359
K.9	Anti-Surge control/Turbolog panel 1600(W)X2000(H)X800(D)	No	1	.0006509

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
K.10	HMI Accessories	--		
K.11 , K.12 , K.13 , K.14 , K.15	Engineer Work Station (Max Storian , Max Operator Station , Max LVS Operator Station ,Max Link Station) Intel xeon processor, Min 3 Ghz; 4GB RAM; 500GB hard drive; DVD- ROM Drive; DVD Writer; Graphics I/F; 10/100/1000 Base T Ethernt I/F (2 Nos); ASCII keyboard & Optical Mouse; 4 Nos USB port; min 2 GB USB pen drive; Windows 7 operating system (Lincensed)	Set	8	.0028955
K.16 , K.17 , K.18 , K.19	A4 B/W Laser Printer , A4 Color Laser Printer , A3 Scanner ,Dot Matrix Printer	Set	4	.0014478
K.20	TSI Configuration computer Work station	No	1	.0005207

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
K.21	70' Large Video screen - includes stand fabrication, controller, associated cabling, vendor support for E&C	No	1	.0003906
K.22	Modular Operator Desk - size suitable for 5 sets of work station.	Set	1	.0032548
L	Erection/Commissioning of local/Field Instruments. For scope of work refer Clause No: 6.3.6	--		
L.1	Pressure gauges.	No	47	.0060069

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
L.2	Differential Pressure gauges.	No	2	.0002748
L.3	Electronic pressure transmitters/ Temperature transmitters	No	61	.0116598
L.4	Pressure switches	No	8	.000917
L.5	Electronic diff. Pressure transmitters	No	13	.0023455

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
L.6	Temperature Gauges (Bimetallic)	No	10	.0013637
L.7	Temperature Gauges (GAS FILLED)	No	5	.0006632
L.8	Thermo couples	No	15	.0015487
L.9	Thermo wells	No	31	.0034834

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
L.10	Level gauges	No	3	.0004301
L.11	Level transmitters	No	2	.0002216
L.12	Speed measuring loop	No	6	.0011712
L.13	RTDs	No	12	.0013484

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
L.14	Control valves	No	13	.0117505
L.15	Vibration Probes	No	17	.0017884
L.17	LVDT Casing Expansion Probe	No	1	.0000822
L.23 , L.18 , L.19 , L.20 , L.16 , L.22	Vibration, Axial displacement monitoring system. (Mounted on EDN panel), Differential Expansion Probe ,Proximitors ,Proximitor housing ,Axial Displacement Probe ,Velocity Probes(Velomitor) - integral portion/ blower portion	Set	2	.006038

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
L.21	Solenoid valves	No	11	.0005893
L.24	Portable Vibration Analyzer	set	1	.0007192
L.25	1 GB Small form factor pluggable transceiver	No	1	.0001438
L.26	HART Management System Dimensions: 1000(L)X1000(B)X2500(H) WT- 400 KGS, HART Management system consisting of 1 No. HMS Panel, PC, printer and other accessories like RS485/RS232 Convertor, monitor, keyboard, mouse, interconnecting cables for above, etc. The scope of work covers installation, integration of system and commissioning	Set	1	.000651

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
L.27	SWAS Analyser for TurboBlower, consisting of:Wet Panel : 1 No., Dry Panel: 1 No., Sensors/ Analysers and other accessories,The scope of work covers installation, integration of system and commissioning	Set	1	.0057047
M	Installation of Process Impulse Pipes/tube fittings, For scope of work refer Clause No: 6.3.7	--		
M.1	PIPE 21.3 x 3.73 SA335 GRP22	Mtrs	500	.0065089
M.2	PIPE 21.3 x 3.73 CS SA106 GR B	Mtrs	265	.0041397

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
M.3	TUBE SS 12.7 X 2.1	Mtrs	250	.0058584
M.4	TUBE SS 12.7 x 1.24mm	Mtrs	54	.0012654
M.8	FLAT 50X6mm	Mtrs	50	.0004591
M.7	FLAT 40X8mm	Mtrs	25	.0002221

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
N	Erection /testing of local instrument enclosures/racks/Guage boards(LIE/LIR/LGB), For scope of work refer Clause No: 6.3.8	--		
N.1	INSTRUMENT RACK(1600X1800)	Nos	2	.0013019
N.2	Local gauge board 1400w x1700 h x 350 d	No	3	.0007811
O	Checking and commissioning of following erected by other agency, For scope of work refer Clause No: 6.3.23	--		

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
O.1	LT motors	Nos	16	.0020297
O.2	Electrical actuators	Nos	60	.0071408
O.3	Solenoid valves	Nos	113	.0044134
O.4	Pnuematic Control valves	Nos	20	.0021428

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
P	PA System - material receipt from stores to work spot, erection/commission supervision, coordination with vendor and misc fabrication work. (E&C by PA system vendor)	--		
P.1	Erection/Commissioning supervision charges (till handing over)	Lot	1	.0143844
P.2	Civil work, earth excavation for preparing cable trenches, Road crossings and refilling of soil, etc. inside the package battery limit.	CUM	20	.0007192
Q	MISCELLANEOUS ITEMS REQUIRED FOR THE SUBSTATION SUPPLY, ERECTION, TESTING, COMMISSIONING	--		

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Ref.No.	Description	Unit	Qty.	Weightage for amount of each item (Nearest to the 7 decimal points) w.r.t the total amount
Q.1	GI conduits of 100 mm diameter. Shall be medium duty, Class âBâ Type Galvanizing thickness shall by minimum 75 microns	Mtrs	80	.000748
Q.2	GI Conduits of 150mm diameter Shall be medium duty, Class âBâ Type.Galvanizing thickness shall be minimum 75 microns	Mtrs	80	.000748
Q.3	PVC Conduits of 200 mm diameter	Mtrs	30	.0002521
TOTAL Weightage				1.0