

# Bharat Heavy Electricals Limited

(A Government of India Enterprise)  
Tiruchirappalli – 620 014



## MATERIALS MANAGEMENT

Phone: 0431 – 257 8109, 4366; E-mail: [kevin@bhel.in](mailto:kevin@bhel.in), [www.bhel.com](http://www.bhel.com)

### **NOTICE INVITING TENDER**

Dear Sir/ Ma'am,

Ref : **170\_DC\_STARTER\_FC** dated 11.02.2025

Subject : Two-part **e-Tender** inviting techno-commercial and price bids for supply of **DC motor starter boxes for thermal power projects** to BHEL -Trichy.

Kindly submit your competitive offer for the above subject work as per the tender terms and conditions given in the tender document through e-procurement portal <https://eprocurebhel.co.in> only.

This two-part e-tender consists of the following:

**Part – I :: Techno-Commercial Bid**

Qualifying criteria for the contract  
Scope of work and technical terms & conditions  
Terms & conditions of the contract  
Annexures 1 to 18

**Part – II :: Price Bid**

**Special Instructions to the bidders:**

- The tender documents shall be deemed to form an integral part of the purchase order.
- Tender can be cancelled at any stage due to unavoidable circumstances.
- Bidders are advised not to wait till the last minutes w.r.t tender closing time to submit their offer to avoid complications related with internet connectivity / network problem/ power failure etc.
- Bidders are advised take due care while quoting the technical and price bids forms in the e-procurement system. Bidders, those who tampers with tendering procedure affecting ordering process or misusing the technical information of the tender document or withdrawing their offer after price bid opening, will be penalized as per BHEL guidelines on suspension of business dealings with suppliers/ contractors. Abridged version of the guideline is available in [www.bhel.com](http://www.bhel.com).
- Bidders who have been suspended or black listed or issued with “Show Cause Notice” by BHEL, Tiruchirappalli -620014 or any other unit or GOI will not be allowed to participate in the tender and bidder should declare the same in the tender. Even during the course of evaluation/ finalization of tender, if it is found that some of the parties are black listed/ barred from business transaction/ under business hold, BHEL will not consider them for further participation in the tender.
- It is advised that all the documents to be submitted are kept scanned or converted to PDF format in a separate folder on your computer before starting online submission.
- In case you are not in a position to submit the offer, please send letter suitably specifying the reasons thereof.
- **DISCLAIMER CLAUSE:** Neither the Organization (Bharat Heavy Electricals Ltd.) nor the NIC is responsible for any failure of submission of bids due to failure of internet or other connectivity problems or reasons thereof.

Thanking you,

For **Bharat Heavy Electricals Limited**

**Kevin Ark Kumar**

Senior Manager / Materials Management

IV floor, 24 Building

B.H.E.L., Tiruchirappalli – 620 014, Tamilnadu

Phone: 0431-2578109

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## CONTROLS & INSTRUMENTATION (FB) PRE-QUALIFICATION REQUIREMENT (PQR)

CI:PE:PQR:CTRL BOXES

Rev. No: 04

Dt. : 11-02-2025

### MOTOR STARTER BOXES & ELECTRIC CONTROL BOXES

Sl. No.	Description	Bid requirements	Bidder Compliance	Documents to be submitted by bidder for PQR validation
(A)	(B)	(C)	(D)	(E)
1	Proven Track record	Bidder should have already executed Purchase orders of Electrical items like Electrical Control panels or Motor Starter boxes, prior to the date of Techno Commercial bid opening.	Yes/No	PO Copy with respective invoice (or) despatch clearance from the end user of earlier executed order
2	Testing Facilities	Bidder shall have the facility to conduct the testing of Motor starter boxes or Control panels as per the enquiry.	Yes/No	List of testing facilities

#### General Notes:

1. On meeting the Bid requirements, Bidder to provide their compliance for each point in the Bidder compliance column (D).
2. Vendor shall submit, sealed & signed copy of the documents, as requested in column (E). Before submission, Bidder to ensure the correctness of the documents. If any discrepancy is noted, the offer is liable for rejection.

#### Bidder Sign & Seal:

## TECHNICAL CATALOGUE

<b>Material Code :</b>	L173219619301001
<b>Item Description :</b>	DC MOTOR STARTER BOX - RATING 9.3 KW
<b>Detailed Description :</b>	Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 9.3 KW, as per the technical specification of the DC Starter box Ref. TCI:248,Rev. 07, as per the drawings : 3-96-193-16186 to 3-96-193-16189 , Rev. 00 and as per the project specific annexure Ref. CI:DCSB:TALCHER

## TECHNICAL CATALOGUE

<b>Material Code :</b>	L173219619301002
<b>Item Description :</b>	DC MOTOR STARTER BOX - RATING 11 KW
<b>Detailed Description :</b>	Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 11 KW, as per the technical specification of the DC Starter box Ref. TCI:248,Rev. 07, as per the drawings : 3-96-193-16186 to 3-96-193-16189, Rev. 00 and as per the project specific annexure Ref. CI:DCSB:TALCHER

## TECHNICAL CATALOGUE

<b>Material Code :</b>	L173219619301003
<b>Item Description :</b>	DC MOTOR STARTER BOX - RATING 15 KW
<b>Detailed Description :</b>	Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 15 KW, as per the technical specification of the DC Starter box Ref. TCI:248,Rev. 07, as per the drawings : 3-96-193-16186 to 3-96-193-16189, Rev. 00 and as per the project specific annexure Ref. CI:DCSB:TALCHER

## TECHNICAL CATALOGUE

<b>Material Code :</b>	L183219619301001
<b>Item Description :</b>	DC MOTOR STARTER BOX - RATING 9.3 KW
<b>Detailed Description :</b>	Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 9.3 KW, as per the technical specification of the DC Starter box Ref. TCI:248,Rev. 07, as per the drawings : 3-96-193-16243 to 3-96-193-16247, Rev. 00 and as per the project specific annexure Ref. CI:DCSB:ADANI

## TECHNICAL CATALOGUE

<b>Material Code :</b>	L183219619301002
<b>Item Description :</b>	DC MOTOR STARTER BOX - RATING 11 KW
<b>Detailed Description :</b>	Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 11 KW, as per the technical specification of the DC Starter box Ref. TCI:248,Rev. 07, as per the drawings : 3-96-193-16243 to 3-96-193-16247, Rev. 00 and as per the project specific annexure Ref. CI:DCSB:ADANI

## TECHNICAL CATALOGUE

<b>Material Code :</b>	L183219619301003
<b>Item Description :</b>	DC MOTOR STARTER BOX - RATING 15 KW
<b>Detailed Description :</b>	Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 15 KW, as per the technical specification of the DC Starter box Ref. TCI:248,Rev. 07, as per the drawings : 3-96-193-16243 to 3-96-193-16247, Rev. 00 and as per the project specific annexure Ref. CI:DCSB:ADANI



## TECHNICAL CATALOGUE

<b>Material Code :</b>	L1832S9619301001
<b>Item Description :</b>	SPARES FOR 9.3 KW DC STARTER BOX
<b>Detailed Description :</b>	<p>Mandatory Spares for Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 9.3 KW, as per the technical specification of the DC Starter box Ref. TCI:248/07, Quality Plan ref.: QA:CI:STD:QP:15/06 and Packing Procedure ref.: QA:CI:STD:PR:02/03</p> <p>Make and Model of the above items shall be inline with DC Starter Box of rating 9.3 KW and shall match with the items supplied under NS-1 main supply.</p> <p>&lt;H&gt;&lt;U&gt;List of Spares&lt;/&gt;:&lt;/&gt;  HRC Fuse with Base(Power) - 2 Nos.  HRC Fuse with Base(Control) - 2 Nos.  DC Power Contactor, Two Pole - 1 Nos.  DC Power Contactor, Single Pole - 1 Nos.  Auxiliary Contactor - 5 Nos.  Thermal Overload Relay - 1 Nos.  Push Buttons, STOP PB Mushroom Type - 6 Nos.  Cluster Type LED Indication Lamps, Blue - 20 Nos.  Cluster Type LED Indication Lamps, Green - 20 Nos.  Cluster Type LED Indication Lamps, Red - 20 Nos.  Cluster Type LED Indication Lamps, Amber - 20 Nos.  On Delay Timer - 1 Nos.  Terminal Block (Power) - 4 Nos.  Terminal Block(Control) - 13 Nos.  Digital Ammeter &amp; Shunt - 1 Nos.</p>

## TECHNICAL CATALOGUE

<b>Material Code :</b>	L1832S9619301002
<b>Item Description :</b>	SPARES FOR 11 KW DC STARTER BOX
<b>Detailed Description :</b>	<p>Mandatory Spares for Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 11 KW, as per the technical specification of the DC Starter box Ref. TCI:248/07, Quality Plan ref.: QA:CI:STD:QP:15/06 and Packing Procedure ref.: QA:CI:STD:PR:02/03</p> <p>Make and Model of the above items shall be inline with DC Starter Box of rating 11 KW and shall match with the items supplied under NS-1 main supply.</p> <p>List of Spares:  HRC Fuse with Base(Power) - 2 Nos.  HRC Fuse with Base(Control) - 2 Nos.  DC Power Contactor, Two Pole - 1 Nos.  DC Power Contactor, Single Pole - 1 Nos.  Auxiliary Contactor - 5 Nos.  Thermal Overload Relay - 1 Nos.  Push Buttons, STOP PB Mushroom Type - 6 Nos.  Cluster Type LED Indication Lamps, Blue - 20 Nos.  Cluster Type LED Indication Lamps, Green - 20 Nos.  Cluster Type LED Indication Lamps, Red - 20 Nos.  Cluster Type LED Indication Lamps, Amber - 20 Nos.  On Delay Timer - 1 Nos.  Terminal Block (Power) - 4 Nos.  Terminal Block(Control) - 13 Nos.  Digital Ammeter &amp; Shunt - 1 Nos.</p>

## TECHNICAL CATALOGUE

<b>Material Code :</b>	L1832S9619301003
<b>Item Description :</b>	SPARES FOR 15 KW DC STARTER BOX
<b>Detailed Description :</b>	<p>Mandatory Spares for Scanner Air Fan DC motor starter box, suitable for the DC motor of voltage rating - 220V DC, power - 15 KW, as per the technical specification of the DC Starter box Ref. TCI:248/07, Quality Plan ref.: QA:CI:STD:QP:15/06 and Packing Procedure ref.: QA:CI:STD:PR:02/03</p> <p>Make and Model of the above items shall be inline with DC Starter Box of rating 15 KW and shall match with the items supplied under NS-1 main supply.</p> <p>List of Spares: HRC Fuse with Base(Power) - 2 Nos. HRC Fuse with Base(Control) - 2 Nos. DC Power Contactor, Two Pole - 1 Nos. DC Power Contactor, Single Pole - 1 Nos. Auxiliary Contactor - 5 Nos. Thermal Overload Relay - 1 Nos. Push Buttons, STOP PB Mushroom Type - 6 Nos. Cluster Type LED Indication Lamps, Blue - 20 Nos. Cluster Type LED Indication Lamps, Green - 20 Nos. Cluster Type LED Indication Lamps, Red - 20 Nos. Cluster Type LED Indication Lamps, Amber - 20 Nos. On Delay Timer - 1 Nos. Terminal Block (Power) - 4 Nos. Terminal Block(Control) - 13 Nos. Digital Ammeter &amp; Shunt - 1 Nos.</p>



## BHARAT HEAVY ELECTRICALS LIMITED

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPALLI-620 014

### CONTROLS & INSTRUMENTATION/FB

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### TECHNICAL SPECIFICATION FOR DC MOTOR STARTER BOX

SPECIFICATION NUMBER - TCI:248/07

#### Revision History

Rev. No.	Date	Description	Prepared	Reviewed		Approved
			M. Muruga Prabu	V.M. Selvaraj	R.M. Vairavan	D. Mahendrababu
01 to 06	----	Earlier Revisions	-Sd-	-Sd-	-Sd-	-Sd-
07	14/11/14	Specification revisited & revised to include the motor rating of 11 KW and 15KW.	<i>M. Muruga Prabu</i>	<i>V.M. Selvaraj</i>	<i>R.M. Vairavan</i>	<i>D. Mahendrababu</i>



S. No.	Characteristics	Requirement		Vendor's Compliance
	Altitude above MSL	550metre		
	Ambient temperature	50°C		
	Relative Humidity	100 %		
	Atmosphere	Tropical, dusty, salty, corrosive and highly polluted		
1	Reference Drawings/ Documents	a.	Project specific BHEL Drawings Comprising of General arrangement, Control Scheme, terminal block connection drawing.	
		b.	Project specific requirements	
		c.	List of Panel accessories Quality Plan :- QA:CI:STD:QP:34 (Latest Revision)	
		d.	Packing procedure :- QA:CI:STD:PR:02 (Latest Revision)	
2	Applicable Standards	IS-513, IS-60947 (All standards shall be as per latest versions)		
3	Over all dimensions of Starter Box	The over all dimensions shall not be less than the dimensions indicated in the Enquiry drawing.		
4	Material of Construction	<p>Starter Box, Resistance Box, Canopy, Cable Gland plate - CRCA Sheet Steel of Grade D (As per IS 513). Sheet Thickness shall be 3 mm.</p> <p>Rider Clamp with Spring, Bolt, Door hinge pin – SS316</p> <p>Mounting accessories (Bolts/ Nuts &amp; Spring Washers) &amp; Door handle – SS304</p> <p>Other Fasteners – MS with electro-galvanised (Galvanization thickness – 10 to 15 microns)</p> <p>Earthing Bolts – MS with Chromium plated (Plating thickness – 10 to 15 microns)</p>		



Sl. No.	Characteristics	Requirement	Vendor's Compliance
5	Door	Continuous Hinged Door with Neoprene rubber gasket of 6 mm thick. Door hinge shall be on left side of the starter box & the door shall be suitable for 180° opening.  Door shall also be earthed by using flexible Copper Braid	
6	Rider Clamp arrangement	4 nos. of rider clamp arrangement shall be provided.	
7	Door Lock	Pad lock with six-lever Godrej lock or equivalent and 3 keys shall be supplied for door locking.	
8	Drip Shield	Canopy shall be provided for both resistance & starter box with minimum 100 mm projection from the front side for the entire width of the box	
9	Protection class for Starter box	IP-55	
10	Protection class for Resistance box	IP-32	
11	Painting (for both Starter box and Resistor box)	Powder coating shall be done for both exterior and interior surface of the starter box & resistance box. For exterior surface, painting shall be done with semi-glossy finish for a minimum thickness of 60-70 microns. For interior surface and component mounting plate, painting shall be done with glossy finish for a minimum thickness of 50 - 60 microns.	
12	Make of Components	As per Quality plan QA:CI:STD:QP:34 (latest revision).	
13	General requirements for components	All Components shall be selected such that they shall have adequate range and suitable for the specified DC Load/ DC Motor  The power contactor, power switch, fuse, overload relay shall be selected as indicated in the following Tables	



Sl. No.	Characteristics		Requirement				Vendor's Compliance
14	DC Power Contactor		<p>Mill duty/ Bar type, suitable for DC3 application.</p> <p>DC Power contactors for C14 shall be 220 V DC coil, 2 Pole type, rated for 160% of full load current. DC Power contactors for C21, C25 &amp; C29 shall be 220 V DC coil, 1 pole, rated for 160% of full load current.</p> <p>DC coils shall be provided with free-wheeling diodes of suitable rating</p>				
15	Minimum current rating to be followed for Power Switch, Power Fuse, Power Contactor	Motor Rating	Full load current	Power Fuse rating	Power Switch rating	Power Contactor rating	
		5.5 kw	32 A	63 A	100 A	50 A	
		7.5 kw	43 A	100 A	125 A	70 A	
		9.3 kw	53 A	125 A	160 A	85 A	
		11 kw	63 A	150 A	185 A	100 A	
		15 kw	85A	200 A	250 A	135 A	
16	Over load relay		Range shall be -25 % to +25% of Full Load Current				
17	Selector Switch		“Local”, “Off” & “Remote” – 3 Position, Lockable & key removable type in remote position.				
18	Current Transducer		Current Transducer with suitable shunt giving 2 Nos. of 4–20 mA output. The full load current shall fall in the 75% of 4-20 mA range.				
19	Ammeter		A Digital Ammeter Display range : 3 ½ digits shall be provided.				
20	Interposing relays		2 nos. of interposing relays have to be provided for accepting Remote Start/ Stop Command signals.				



Sl. No.	Characteristics	Requirement	Vendor's Compliance
21	Starting Resistance (R1, R2, R3)	<p>Make of the starting resistors shall be Essen/ Sterling/ Quality</p> <p>Shall withstand the starting current up to 30 seconds</p> <p>Shall be made from corrosion resistant stainless steel. In each section of the resistance, value in ohms shall be marked.</p>	
22	Field Trimmer Resistor (R4)	<p>Shall be Rheostat type as per arrangement drawing attached with this specification. The starting resistance and the Field trimmer resistor shall be placed in the resistor box. A door with lockable arrangement shall be provided in the resistance box for adjustment of FTR.</p> <p>Resistance → 100 <math>\Omega</math>, with 3 A current rating</p> <p>Resistor material shall be Copper-Manganese or Copper-Nickel alloy</p> <p>Material Certificate shall be submitted.</p>	
23	Push buttons and Indicating Lamps	<p>Push button → Green colour, Flush type</p> <p>Push button → Red colour, Mushroom type</p> <p>Cluster LED, Red Colour</p> <p>Cluster LED, Green Colour</p> <p>Cluster LED, Amber Colour</p> <p>Cluster LED, Blue Colour</p>	
24	Component Layout/ Mounting/ Identification	<p>A typical "Component placement drawing" is attached with this specification. Vendor to suitably place the components to enable easy maintenance and aesthetics. All components shall be fixed from the front of the component mounting plate. All the internal/ door mounted components shall be identified by suitable (Anodized Aluminium) Name Plates located near the respective components</p>	





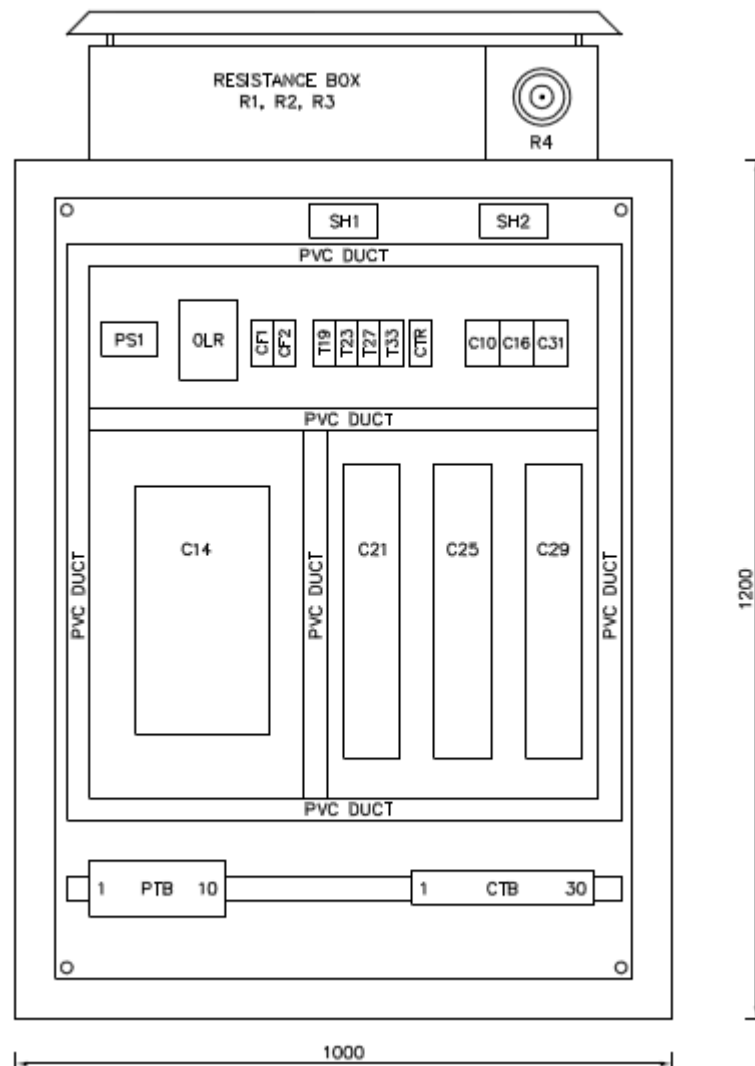
Sl. No.	Characteristics	Requirement					Vendor's Compliance
25	Control Circuit wiring	Shall be done with 1100V grade PVC insulated single core 2.5 sq.mm cable, multi strand tinned copper conductor cable with suitable crimping lugs					
26	Power Circuit wiring	Wiring for power circuits shall be carried out with 1100V grade PVC insulated single core 16 sq.mm multi strand copper conductor cable with suitable crimping lugs					
27	Wiring	All the wiring inside the box shall be formed/ dressed neatly, using non-metallic wire dressing materials. Wiring in the starter box between the terminal blocks and the various components shall be enclosed in wire ducts with removable cover .					
28	Ferruling	Proper ferruling method shall be adopted for all types of wiring					
29	Power Terminal blocks	Shall be Bus bar type mounted suitably in DIN rails. The terminal blocks shall be mounted at a minimum of 100mm distance from the base for easy accessibility of termination of external cables. Quantity → 10 Nos. (total)					
		5.5 KW	7.5 KW	9.3 KW	11 KW	15 KW	
		Suitable for 70 sq.mm. Aluminium conductor	Suitable for 95 sq.mm. Aluminium conductor	Suitable for 120 sq.mm. Aluminium conductor Suitable for 120 sq.mm. Aluminium conductor		Suitable for 150 sq.mm. Aluminium conductor	
30	Control terminal blocks	Cage clamp type, suitable for 2.5 sq.mm. cable. The terminal blocks shall be mounted at a minimum of 100mm distance from the base for easy accessibility of termination of external cables. Quantity – as per requirement + 20 % of actual terminals used as spare					
31	Number Strips	The numbering strips shall be of PVC white back-ground with black letters					



Sl. No.	Characteristics	Requirement	Vendor's Compliance
32	Description	5.5 kw, 7.5 kw, 9.3 kw,11kw, 15 kw	
	Incoming DC Supply From Feeder	Cable Glands → All Cable Glands shall be Weather proof, Double compression, Brass with Nickel Plated type.  Size of the cable & Quantity has to be referred in Project specific requirements furnished along with the purchase enquiry	
	Outgoing DC Supply to Motor		
	To DCS(Feedback)		
	From FSSS(Control)		
	To FSSS(Feedback)		
33	Removable Gland Plate	Removable Gland Plate, 3mm thick shall be provided at the bottom of the box with a neoprene gasket of 3 mm thick.	
34	Transparent Cover	Transparent acrylic cover shall be provided for all the panel mounted components. Transparent Acrylic cover with Caution sticker made of anodized aluminium shall be provided at the front side of all Power terminals.	
35	Earth Bolts	Exterior → 2 Nos., M8 x 20 mm  Interior → 1 No., M8 x 20 mm	
36	Earth Symbols	Circular Sticker with Black lines on Yellow back ground of diameter 20 mm shall be provided near each earth terminal	
37	Lifting Hook	2 Nos. at appropriate location at the top, made out of 10 mm diameter rod	
38	Starter box mounting Bracket and accessories	The box shall be provided with 4 Nos. of Mounting brackets with 50 mm wide, 6 mm thick plates  M10 x 35 mm, Mounting bolts, Spring washers and Nuts shall be supplied.	
39	Quality Plan	QA:CI:STD:QP:15 (Latest Revision)	
40	Inspection	As per BHEL Quality Plan and BHEL Approved vendor Drawings/ Documents	



Sl. No.	Characteristics	Requirement	Vendor's Compliance
41	Packing	QA:CI:STD:PR:02 (Latest Revision) The packing shall meet the Transport, environment and Storage hazards	
42	Documents (Vendor to submit along with the offer)	a. Taking care of all the requirements indicated in the documents referred in Clause 1, Vendor has to submit Sub delivery enquiry deviation format. In that document, Vendor to specify the reference details of the documents referred in Clause 1 and should indicate "No – Deviation".  b. Vendor to submit compliance to quality plan & packing procedure	
43	Documents for approval by BHEL/ Customer (after placement of purchase order)	Soft Copies of the following :-  a. General arrangement drawing, Component layout, terminal block drawing and Control Scheme  b. Bill of material with make, model no., rating and quantity of components.  c. Operation & Maintenance manuals containing the catalogues of various accessories used in the DC Starter box.	



**COMPONENT PLACEMENT DRAWING**

**Legend to the Component Placement drawing :-**

PS1 – Power Switch & Power Fuse

OLR– Overload Relay

CF1, CF2 – Control Fuse

T19, T23, T27, T33 – Timers

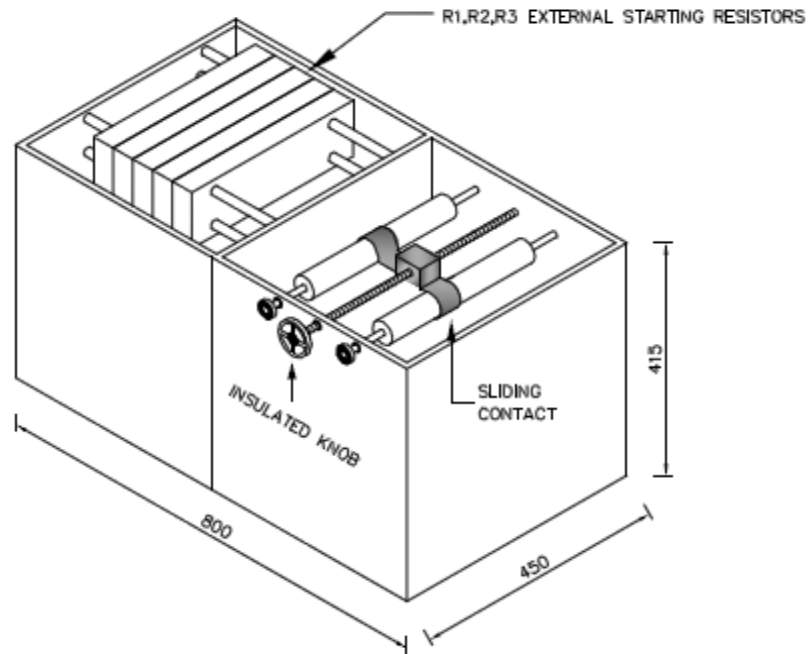
CTR– Current Transducer

C10, C16, C31 - Auxiliary Contactors

C14, C21, C25, C29 – Power Contactors

PTB, CTB – Power/ Control Terminal Blocks

SH1, SH2 - Shunt



ARRANGEMENT OF FIELD TRIMMER RESISTOR (FTR)  
IN RESISTOR BOX

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**Controls & Instrumentation/Fossil Boilers**  
Project Specific requirements for DC Starter Box  
(Annexure to Technical Specification TCI:248/07)

Ref. : CI:DCSB:ADANI

Dated: 29-11-2024

**Project** : Adani Projects

1) Size & Quantity of the Cable glands (Specification Clause No.: 32) :-

Sl. No.	Application	Cable Size	Quantity in Nos.
1	For incoming cable from DCDB and DC starter and outgoing cable from DC starter to Motor	2 Core x 95 sq.mm. (Approx. OD 32mm )	3
2	Cable from DC Starter to Motor & interface to FSSS	2 Core x 2.5 sq.mm. (Approx. OD 15 mm)	2
3	Interface cable with FSSS	8 Pair x 0.5 sq.mm., Overall shielded cable (Approx. OD 20 mm)	1
4	Interface cable with DCS	4 Pair x 0.5 sq.mm., Overall shielded cable (Approx. OD 16 mm)	2

2) Paint Shade : -

SL. No.	Description	Paint Shade
1	Exterior	RAL 7035
2	Interior	Brilliant white with Glossy finish

3) Typical Starting Resistance value in ohms are indicated below for different ratings of the Motor. Exact resistance values will be communicated after placement of purchase order, on receipt of motor datasheet.

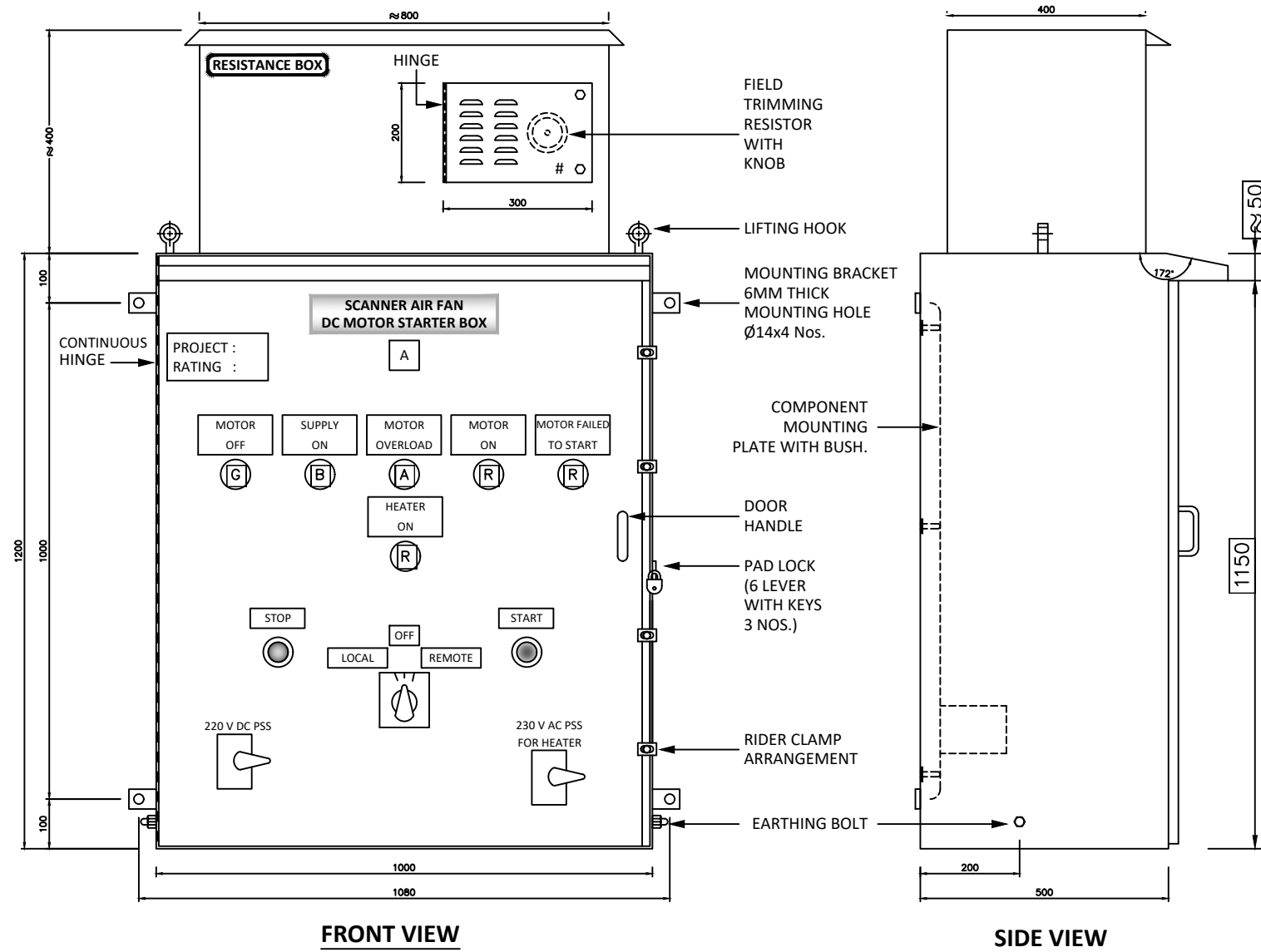
Sl. No.	Motor Rating in KW	Starting resistance Value in ohms			Thermal rating of the starting resistors
		R1	R2	R3	
1	9.3	1.07	0.54	0.27	140 Amps for 30 seconds
2	11	0.91	0.36	0.14	180 Amps for 30 seconds
3	15	0.64	0.23	0.09	200 Amps for 30 seconds

**Basic scope diagram of DC Starter box Drawing ref.: 552H-E-BTG-BOA-DE-I-V-0001**

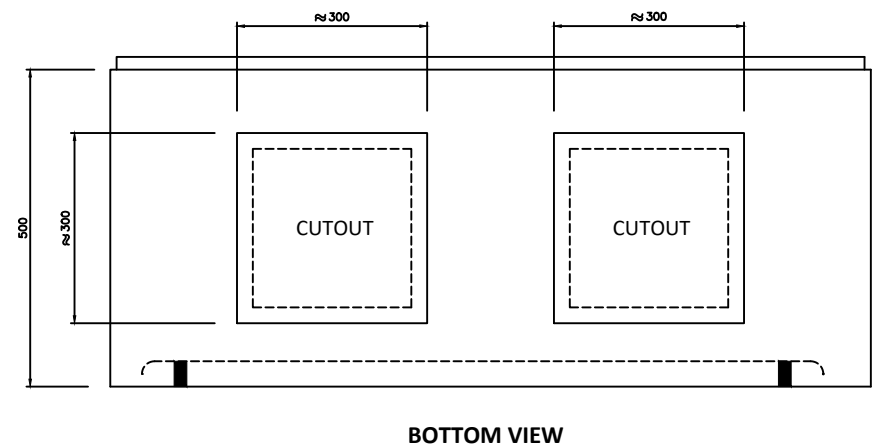
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File Name : MAHDCSB1

3-96-193-16244  
DRAWING NO.



NOTE	
1. Enclosure Protection :	a. Starter Box - IP55 b. Resistance Box - IP32
2. Paint : Exterior :	RAL 7032
Interior :	Brilliant White with Glossy Finish.
3.	DC Scanner Starter Box shall be located near the DC Scanner fan.
4.	Resistance Box shall be protected using wire mesh guard. It shall be mounted on the Starter using Bolt arrangement.
5.	# Field Trimming Resistor(FTR) (R4) is placed inside Resistance Box. The door in the Resistance Box for adjustment of FTR has to be provided with bolt for locking.
6.	Constructional details of Starter & Resistance Box: Material : CRCA Sheet Steel of grade D(As per is 513). Sheet Thickness : 3 mm. Weight : Starter Box = 100 Kg (Approx.) & Resistance Box = 10 Kg (Approx.)
7.	Panel Wiring Details: a. Control Wiring will be done with 1100V grade PVC Insulated single core 2.5 mm <sup>2</sup> Cable, Multi Strand tinned Copper Conductor Cable with suitable Crimping Lugs. b. Power Wiring shall be carried out with 1100V grade PVC Insulated single core 16 Sq.mm Multi Strand copper Conductor Cable with suitable Crimping Lugs. c. All the wiring inside the Box shall be formed/dressed neatly, using non-metallic wire dressing materials and enclosed in wire ducts with removable cover. d. Ferruling is provided for easy identification of Routing of internal wiring.
(R)	- Clustered LED Lamp (G-Green, B-Blue, A-Amber, R-Red)
(●)	- Push Buttons
(A)	- Ammeter
(xxx)	- Name Plate
PSS	- Power Supply Isolation Switch



SAFETY INSTRUCTIONS	
1.	Always ensure the incoming Power Supply is Cut Off before opening the door. If not, the Power Supply should be isolated using the Power Switch.
2.	Local Control shall be used for only Testing purpose
3.	During all other working conditions, the selector switch shall be locked at Remote position.

REV	DATE	ALTERED :
01	07-06-24	NR
		CHD./APPD. : MMP/DK
ZONE	Revised based on Customer's comments dated 20-05-24	

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OWNER :



MAHAN ENERGEN LIMITED

MAHAN (PH-II) SINGRAULI, MP

2X800MW ULTRA SUPER CRITICAL THERMAL POWER PROJECT

CUST NO. 1832 & 1833

OWNER'S CONSULTANT :



TATA CONSULTING ENGINEERS LIMITED



Bharat Heavy Electricals Ltd

UNIT: HIGH PRESSURE BOILER PLANT

TIRUCHIRAPPALLI - 620014

DEPT.		NAME	SIGNATURE	DATE
C&I	DRN	N. Rakesh	sd./- NR	26-04-2024
	CHD	M. Murugaprabu	sd./- MMP	26-04-2024
392	APPD	D. Kavitha	sd./- DK	26-04-2024

TITLE :

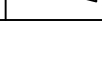
DC MOTOR STARTER BOX - GENERAL ARRANGEMENT DRAWING

BHEL DRAWING NO.

3-96-193-16244

SCALE

NTS



CUSTOMER DRAWING NO :

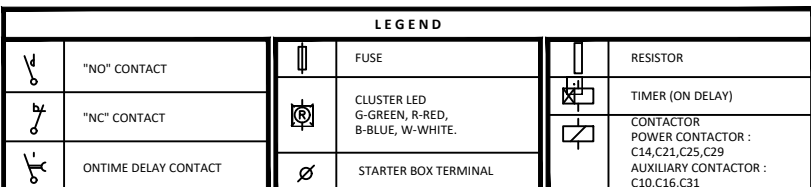
552H-E-BTG-BOA-DE-N-V-0005

Sheet 02 Of 05





REV

01



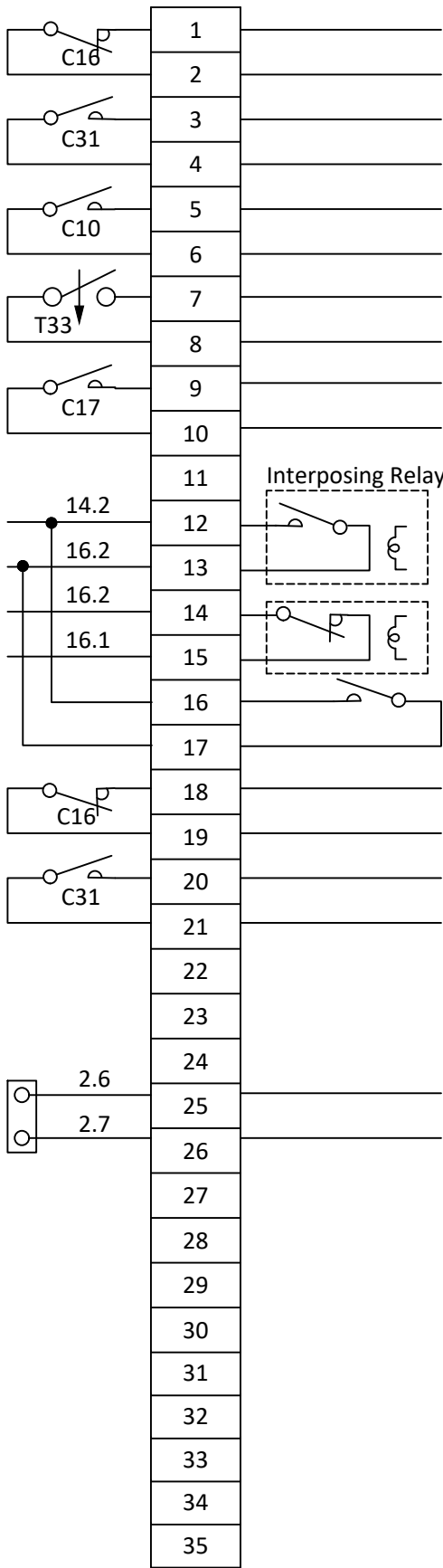


REV	DATE	ALTERED :
		CHD./APPD. :
ZONE		

OWNER :		<div style="text-align: center;">    <b>MAHAN (PH-II) SINGRAULI, MP</b>   <b>2X800MW ULTRA SUPER CRITICAL THERMAL POWER PROJECT</b>   <b>CUST NO. 1832 &amp; 1833</b> </div>			
OWNER'S CONSULTANT :		<div style="text-align: center;">    <b>TATA CONSULTING ENGINEERS LIMITED</b> </div>			
 <div style="margin-left: 10px;"> <b>Bharat Heavy Electricals Ltd</b>   UNIT: HIGH PRESSURE BOILER PLANT  TIRUCHIRAPPALLI - 620014 </div>	DEPT. C&I		NAME	SIGNATURE	DATE
	CODE 392	DRN	N. Rakesh	sd./- NR	26-04-2024
		CHD	M. Murugaprabu	sd./- MMP	26-04-2024
		APPD	D. Kavitha	sd./- DK	26-04-2024
<b>TITLE :</b> DC MOTOR STARTER BOX - CONTROL SCHEME					
BHEL DRAWING NO. <b>3-96-193-16245</b>		SCALE NTS 		CUSTOMER DRAWING NO : <b>552H-E-BTG-BOA-DE-N-V-0005</b> Sheet 03 Of 05	
				REV <b>00</b>	

CONTROL TERMINALS

TBC



Motor Off

Motor On

Motor O/L

Motor Failed  
to Start

Supply available & Remote mode  
Selected

Start Command  
from FSSS

Stop Command  
from FSSS

Loss of  
24V DC

Motor OFF

Motor ON

For Remote Current  
Measurement

To FSSS (8P X 0.5 mm<sup>2</sup> MSC Cable)

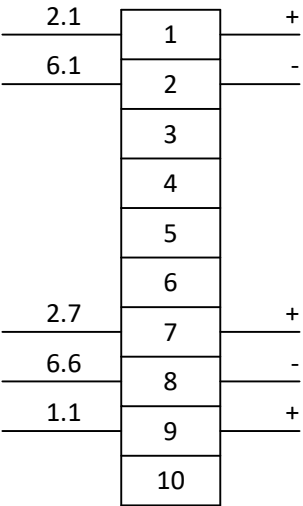
# From FSSS (4P X 1.5 mm<sup>2</sup> MSC  
Cable)

Spare Contacts for Future Use

To DDCMIS (2P x 0.5  
mm<sup>2</sup> MSCICS Cable)

POWER TERMINALS

TBP



220V DC Supply from  
Plant Battery

TO DC Motor

# - IPR Resides in Starter Box

Transducer

REV	DATE	ALTERED : NR
01	07-06-24	CHD./APPD. : MMP/DK
ZONE	Revised based on Customer's comments dated 20-05-24	

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

OWNER :



MAHAN ENERGEN LIMITED

MAHAN (PH-II) SINGRAULI, MP

2X800MW ULTRA SUPER CRITICAL THERMAL POWER PROJECT  
CUST NO. 1832 & 1833

OWNER'S CONSULTANT :



TATA CONSULTING ENGINEERS LIMITED



Bharat Heavy Electricals Ltd

UNIT: HIGH PRESSURE BOILER PLANT  
TIRUCHIRAPPALLI - 620014

DEPT.  
C&I  
CODE  
392

DRN  
CHD  
APPD

NAME  
N. Rakesh  
M. Murugaprabu  
D. Kavitha

SIGNATURE  
sd./- NR  
sd./- MMP  
sd./- DK

DATE  
26-04-2024  
26-04-2024  
26-04-2024

TITLE :

DC Motor STARTER BOX - TERMINAL CONNECTION DRAWING

BHEL DRAWING NO.

3-96-193-16246

SCALE  
NTS



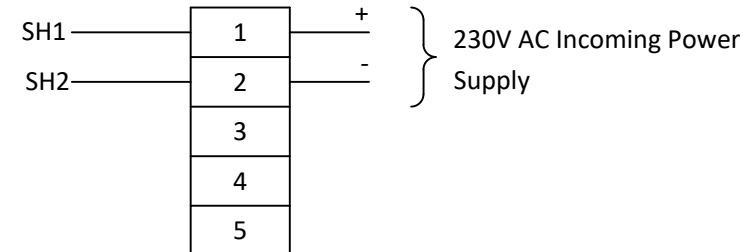
CUSTOMER DRAWING NO :

552H-E-BTG-BOA-DE-N-V-0005

Sheet 04 Of 05

REV

01



REV 01	DATE 07-06-24	ALTERED : NR
		CHD./APPD. : MMP/DK
ZONE	Revised based on Customer's comments dated 20-05-24	

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OWNER :

**MAHAN ENERGEN LIMITED**

MAHAN (PH-II) SINGRAULI, MP

2X800MW ULTRA SUPER CRITICAL THERMAL POWER PROJECT  
CUST NO. 1832 & 1833

OWNER'S CONSULTANT :



**TATA CONSULTING ENGINEERS LIMITED**



Bharat Heavy Electricals Ltd

UNIT: HIGH PRESSURE BOILER PLANT  
TIRUCHIRAPPALLI - 620014

DEPT. C&I		NAME	SIGNATURE	DATE
	DRN	N. Rakesh	sd./- NR	26-04-2024
CODE 392	CHD	M. Murugaprabu	sd./- MMP	26-04-2024
	APPD	D. Kavitha	sd./- DK	26-04-2024

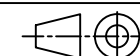
TITLE :

## DC MOTOR STARTER BOX - SPACE HEATER DRAWING

BHEL DRAWING NO.
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**3-96-193-16247**

SCALE	NTS
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CUSTOMER DRAWING NO :

552H-E-BTG-BOA-DE-N-V-0005

Sheet 05 Of 05

REV

01



**BHARAT HEAVY ELECTRICALS LIMITED**  
**TIRUCHIRAPPALLI - 620014**

**STANDARD QUALITY PLAN FOR**  
**AC/DC STARTER BOX, TEMPERATURE PROBE STATER**  
**BOX & CONTROL BOX**

**QA:CI:STD:QP:15**

**Rev: 06**

**Page: 1 of 3**


## **CONTROLS & INSTRUMENTATION/QA/FB**

### **STANDARD QUALITY PLAN FOR** **AC/DC STARTER BOX, TEMPERATURE PROBE STARTER BOX & CONTROL BOX**

REV	DATE	PREPARED	REVIEWED		APPROVED	REVISION HISTORY
00	06.08.1990	Sd/-	Sd/-	Sd/-	Sd/-	Initial release
01	16.06.1997	Sd/-	Sd/-	Sd/-	Sd/-	Format revised
02	21.03.2002	Sd/-	Sd/-	Sd/-	Sd/-	Department name changed, CTQ requirement added & general revision
03	08.01.2004	Sd/-	Sd/-	Sd/-	Sd/-	Revision to include the comments/ feedback on internal discussion.
04	01.12.2010	Sd/-	Sd/-	Sd/-	Sd/-	Format Changed and revised based on discussion with QC.
05	03.02.2018	V AVINASH	A SRIHARI RAO	V M SELVARAJ	R M VAIRAVAN	Revised to incorporate international standard and other general points.
06	31-07-2024	B ARUNKUMAR B. Arunkumar.	M MURUGAPRABU M. Murugaprabu	G V CHILAMBARASAN G. V. Chilambarasan	D KAVITHA D. Kavitha	Notes 5 modified.

**M- MANUFACTURER/ SUB-VENDOR; B - BHEL / TPI ; C - CUSTOMER / TPI**  
**P - PERFORM ; W - WITNESS V - VERIFICATION OF DOCUMENTS;**



	<b>BHARAT HEAVY ELECTRICALS LIMITED</b> <b>TIRUCHIRAPPALLI - 620014</b>	<b>STANDARD QUALITY PLAN FOR</b> <b>AC/DC STARTER BOX, TEMPERATURE PROBE</b> <b>STATER BOX &amp; CONTROL BOX</b>	<b>QA:CI:STD:QP:15</b> <b>Rev: 06</b> <b>Page: 2 of 3</b>
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No	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc. & Acceptance STD	Format of record	AGENCY			REMARKS
					M	B/C			M	B	C	
A	FINISHED PRODUCT INSPECTION											
1	Routine Tests	a) Material Composition	Major	CHEM	-	-	BHEL approved Vendor Drawings	TC	V	V	-	
		b) Dimensions verification	Major	MEAS	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		c) BOM & Components Layout verification	Major	VISU	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		d) Provision of Name plates /labels	Major	VISU	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		e) Paint shade & Thickness verification	Major	VISU MEAS	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		f) Paint scratch test	Major	PHYS	1 Per project		Manufacturer Standard	IR	P	W	-	Not applicable for powder coating
		g) Provision of earth bus bar / bolts and symbols	Major	VISU	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		h) Functional test	Major	ELEC	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		i) IR Test with Megger (500v DC) before & after HV Test	Major	ELEC	100%	20%	>1 MOhm as per IEC 60204-1	IR	P	W	-	
		j) HV Test	Major	ELEC	100%	20%	1KV for 30 sec as per IEC 60204-1	IR	P	W	-	There Should not be any disruptive discharge.
2	Type Tests	Enclosure protection Test for a) Starter / Control Box b) Resistance Box (Wherever applicable)	Critical	ENVI	One of design		BHEL approved Vendor Drawings & IEC 60529	TC	V	V	-	

**M**- MANUFACTURER/ SUB-VENDOR; **B** - BHEL / TPI ; **C** - CUSTOMER / TPI  
**P** - PERFORM ; **W** - WITNESS **V** - VERIFICATION OF DOCUMENTS;



**B.NOTES:**

**1.LEGENDS:**

VISU	: Visual	IR	: Inspection Report
CHEM	: Chemical	TC	: Test Certificate
ELEC	: Electrical		
MEAS	: Measurement		
PHYS	: Physical		
ENVI	: Environmental		

2) Vendor Shall arrange all the required facilities for routine tests at their works. Type for Which facilities are not available are to be carried out at recognized National Tests Houses like ETDC/ CIL/ NPL/ ERTL etc., at vendor cost.

3) Through log Book / any other documents available at the vendor's works, it shall be possible to correlate the finished product with inspection carried out.

4) All Measuring and Testing Instruments shall be periodically calibrated from recognized test houses & certificates made available during inspection for verification.

5) Type test certificate shall not be earlier than 10 years from the date of Purchase Enquiry (or) as mentioned in Technical specification. In case of difference in Type test validity period, Technical Specification shall prevail.




6) Vendor to give tentative inspection program in advance and confirm exact date two weeks in advance for arranging BHEL's inspection.

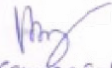
7) Packing shall be as per "PACKING PROCEDURE" indicated in the specification.

**BHARAT HEAVY ELECTRICALS LIMITED  
TIRUCHIRAPPALLI**

**CONTROLS AND INSTRUMENTATION / FB  
QUALITY ASSURANCE**

**STANDARD PACKING PROCEDURE  
FOR  
ELECTRICAL AND ELECTRONIC PANELS  
(INCLUDING BOXES, CABINETS, CUBICLES, SYSTEMS AND CHASSIS)**

Rev	Date	Prepared	Checked	Approved	Revision History
00	01.01.96	Sd/-	Sd/-	Sd/-	Initial History
01	28.03.02	A.J.OMPRAKASH Sd/-	R.VARADARAJAN Sd/-	G.MATHIYALAGAN Sd/-	Department name changed
02	26.02.07	RM.VAIRAVAN	N.SRIDHAR	S.SOMASUNDARAM	Revised after discussion with Shipping Dept.
03	07.02.2017	AVINASH V 	RM VAIRAVAN 	S DAKSHINAMOORTHY 	Type of wood for packing changed

  
(M. Kanagasabapathy)  
PRAMMEN INDUSTRIES  
PLOT NO. 8D & 13E/2,  
SIPCOT COMPLEX,  
PUDUKKOTTAI-622 002



**1.0 SCOPE**

- 1.1 This procedure gives minimum guidelines to be complied with for packing of Electrical, Electronics and Instrumentation panels. This packing shall be suitable for different handling operations and for the adverse conditions during transportation and during indoor / outdoor storage for periods more than one year.

**2.0 WOOD SPECIFICATION FOR PACKING**

- 2.1 Any seasoned wood or plywood as per relevant international standard  
2.2 Sea worthy packing is envisaged for international shipments.

**3.0 PACKING**

- 3.1 Any seasoned wood or plywood shall be used .It shall be free from knots, etc. and any kind of decay caused by insects and fungus.
- 3.2 The required wood case for the equipment to be packed shall be made out of individual planks of single length and no joint is permissible. Using such planks, the required wood case for the panel shall be made,
- 3.3 Sufficient number horizontal, vertical and diagonal planks (dimension depending upon case size) shall be used for binding and strengthening. Runners have to be provided with metallic sling plates for handling.
- 3.4 Support planks are to be provided such that, no force is acting on the parts of equipment or its parts.
- 3.5 Panels above 1.5 metre shall be bolted at the bottom.
- 3.6 The equipments covered with a polythene sheet shall be kept inside the box, followed by coir, wooden bottoms, thermo coal, etc to prevent vibration effect during loading, transportation, etc.
- 3.7 On all sides of the inner case, black polythene sheet shall be nailed.
- 3.8 Loose items of the equipment, if any, shall be packed separately.
- 3.9 Delicate components likely to be damaged, example PCB – Electronic modules, instrument, etc are to be covered individually in anti-static bags and packed in cartons and filled with fillers like thermo coal, paper cuttings, etc.
- 3.10 Such cartons shall be packed with overall polythene rapping and packed in wooden cases. Mark prominently as "ELECTRONIC COMPONENTS".



**4.0**     **MARKING**

- 4.1     After completing the packing, Stencil marking, as per dispatch instructions and symbol marking as per Annexure – I shall be made. Please ensure the box is stenciled with "FRAGILE ITEM", "HANDLE WITH CARE"

**5.0**     **PACKING SLIP**

- 5.1     A copy of the packing slip, kept in a polythene cover shall be kept inside the box. Another copy of the packing slip, kept in a polythene cover shall be kept out side the box and covered with a metallic plate to the case.

**6.0**     **CAUTION**

Do not pack any other Mechanical items with this case.

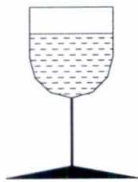
**7.0**     **GENERAL**

- 7.1     These packing procedures are the minimum requirements in addition to the standard instructions mentioned in the Purchase Order and Specification.

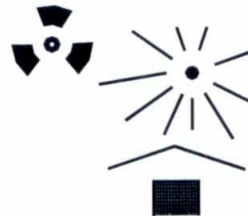
ANNEXURE - 1

TO

PROCEDURE NO:CI:QAC:PR:02/00 ; PR:03/00 ; PR:04/00



FRAGILE, HANDLE WITH CARE



PROTECT FROM HEAT AND RADIOACTIVE SOURCES



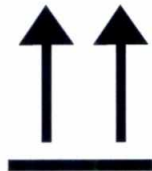
USE NO HOOKS

NOTE: The design of heavy goods packages cannot always resist top lifting by grabhooks.



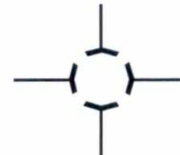
KEEP DRY

NOTE: Not all cases have waterproof internal liners: plywood used in the construction may not have a waterproof glue-line.



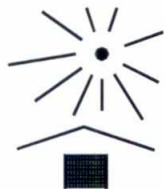
THIS WAY UP

NOTE: Certain designs of small cases make it difficult to distinguish top from bottom.



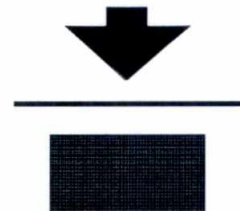
CENTRE OF GRAVITY

NOTE: This should be stencilled as a minimum on the two longest case sides (this information will normally be supplied by the manufacturer of the item(s) packed).



KEEP AWAY FROM HEAT

... kg max



STACKING LIMITATION

NOTE: The maximum load in kilograms should be marked above the arrow.



INTERNATIONAL "SLING HERE" SYMBOL

**Controls & Instrumentation/Fossil Boilers**  
**Project Specific requirements for DC Starter Box**  
**(Annexure to Technical Specification TCI:248/07)**

Ref. : CI:DCSB:TALCHER

Dated: 02-08-2024

**Project** : Talcher, 2 x 660 MW

**Customer No.** : 1732 & 1733

1) Size & Quantity of the Cable glands (Specification Clause No.: 32) :-

Sl. No.	Application	Cable Size	Quantity in Nos.
1	For incoming cable from DCDB and DC starter and outgoing cable from DC starter to Motor	2 Core x 95 sq.mm. (Approx. OD 32mm )	3
2	Cable from DC Starter to Motor & interface to FSSS	2 Core x 2.5 sq.mm. (Approx. OD 15 mm)	2
3	Interface cable with FSSS	8 Pair x 0.5 sq.mm., Overall shielded cable (Approx. OD 20 mm)	1
4	Interface cable with DCS	4 Pair x 0.5 sq.mm., Overall shielded cable (Approx. OD 16 mm)	2

2) Paint Shade : -

SL. No.	Description	Paint Shade
1	Exterior	RAL 9002
2	Interior	Brilliant white with Glossy finish

3) Typical Starting Resistance value in ohms are indicated below for different ratings of the Motor. Exact resistance values will be communicated after placement of purchase order, on receipt of motor datasheet.

Sl. No.	Motor Rating in KW	Starting resistance Value in ohms			Thermal rating of the starting resistors
		R1	R2	R3	
1	9.3	1.07	0.54	0.27	140 Amps for 30 seconds
2	11	0.91	0.36	0.14	180 Amps for 30 seconds
3	15	0.64	0.23	0.09	200 Amps for 30 seconds



## BHARAT HEAVY ELECTRICALS LIMITED

HIGH PRESSURE BOILER PLANT, TIRUCHIRAPALLI-620 014

### CONTROLS & INSTRUMENTATION/FB

Page 1 of 10

### TECHNICAL SPECIFICATION FOR DC MOTOR STARTER BOX

SPECIFICATION NUMBER - TCI:248/07

#### Revision History

Rev. No.	Date	Description	Prepared	Reviewed		Approved
			M. Muruga Prabu	V.M. Selvaraaaj	R.M. Vairavan	D. Mahendrababu
01 to 06	----	Earlier Revisions	-Sd-	-Sd-	-Sd-	-Sd-
07	14/11/14	Specification revisited & revised to include the motor rating of 11 KW and 15KW.	<i>M. Muruga Prabu</i>	<i>V.M. Selvaraaaj</i>	<i>R.M. Vairavan</i>	<i>D. Mahendrababu</i>



S. No.	Characteristics	Requirement		Vendor's Compliance
	Altitude above MSL	550metre		
	Ambient temperature	50°C		
	Relative Humidity	100 %		
	Atmosphere	Tropical, dusty, salty, corrosive and highly polluted		
1	Reference Drawings/ Documents	a.	Project specific BHEL Drawings Comprising of General arrangement, Control Scheme, terminal block connection drawing.	
		b.	Project specific requirements	
		c.	List of Panel accessories Quality Plan :- QA:CI:STD:QP:34 (Latest Revision)	
		d.	Packing procedure :- QA:CI:STD:PR:02 (Latest Revision)	
2	Applicable Standards	IS-513, IS-60947 (All standards shall be as per latest versions)		
3	Over all dimensions of Starter Box	The over all dimensions shall not be less than the dimensions indicated in the Enquiry drawing.		
4	Material of Construction	Starter Box, Resistance Box, Canopy, Cable Gland plate - CRCA Sheet Steel of Grade D (As per IS 513). Sheet Thickness shall be 3 mm.  Rider Clamp with Spring, Bolt, Door hinge pin – SS316  Mounting accessories (Bolts/ Nuts & Spring Washers) & Door handle – SS304  Other Fasteners – MS with electro-galvanised (Galvanization thickness – 10 to 15 microns)  Earthing Bolts – MS with Chromium plated (Plating thickness – 10 to 15 microns)		



Sl. No.	Characteristics	Requirement	Vendor's Compliance
5	Door	Continuous Hinged Door with Neoprene rubber gasket of 6 mm thick. Door hinge shall be on left side of the starter box & the door shall be suitable for 180° opening.  Door shall also be earthed by using flexible Copper Braid	
6	Rider Clamp arrangement	4 nos. of rider clamp arrangement shall be provided.	
7	Door Lock	Pad lock with six-lever Godrej lock or equivalent and 3 keys shall be supplied for door locking.	
8	Drip Shield	Canopy shall be provided for both resistance & starter box with minimum 100 mm projection from the front side for the entire width of the box	
9	Protection class for Starter box	IP-55	
10	Protection class for Resistance box	IP-32	
11	Painting (for both Starter box and Resistor box)	Powder coating shall be done for both exterior and interior surface of the starter box & resistance box. For exterior surface, painting shall be done with semi-glossy finish for a minimum thickness of 60-70 microns. For interior surface and component mounting plate, painting shall be done with glossy finish for a minimum thickness of 50 - 60 microns.	
12	Make of Components	As per Quality plan QA:CI:STD:QP:34 (latest revision).	
13	General requirements for components	All Components shall be selected such that they shall have adequate range and suitable for the specified DC Load/ DC Motor  The power contactor, power switch, fuse, overload relay shall be selected as indicated in the following Tables	



Sl. No.	Characteristics		Requirement				Vendor's Compliance
14	DC Power Contactor		Mill duty/ Bar type, suitable for DC3 application. DC Power contactors for C14 shall be 220 V DC coil, 2 Pole type, rated for 160% of full load current. DC Power contactors for C21, C25 & C29 shall be 220 V DC coil, 1 pole, rated for 160% of full load current.  DC coils shall be provided with free-wheeling diodes of suitable rating				
15	Minimum current rating to be followed for Power Switch, Power Fuse, Power Contactor	Motor Rating	Full load current	Power Fuse rating	Power Switch rating	Power Contactor rating	
		5.5 kw	32 A	63 A	100 A	50 A	
		7.5 kw	43 A	100 A	125 A	70 A	
		9.3 kw	53 A	125 A	160 A	85 A	
		11 kw	63 A	150 A	185 A	100 A	
		15 kw	85A	200 A	250 A	135 A	
16	Over load relay		Range shall be -25 % to +25% of Full Load Current				
17	Selector Switch		"Local", "Off" & "Remote" – 3 Position, Lockable & key removable type in remote position.				
18	Current Transducer		Current Transducer with suitable shunt giving 2 Nos. of 4–20 mA output. The full load current shall fall in the 75% of 4-20 mA range.				
19	Ammeter		A Digital Ammeter Display range : 3 ½ digits shall be provided.				
20	Interposing relays		2 nos. of interposing relays have to be provided for accepting Remote Start/ Stop Command signals.				



Sl. No.	Characteristics	Requirement	Vendor's Compliance
21	Starting Resistance (R1, R2, R3)	<p>Make of the starting resistors shall be Essen/ Sterling/ Quality</p> <p>Shall withstand the starting current up to 30 seconds</p> <p>Shall be made from corrosion resistant stainless steel. In each section of the resistance, value in ohms shall be marked.</p>	
22	Field Trimmer Resistor (R4)	<p>Shall be Rheostat type as per arrangement drawing attached with this specification. The starting resistance and the Field trimmer resistor shall be placed in the resistor box. A door with lockable arrangement shall be provided in the resistance box for adjustment of FTR.</p> <p>Resistance → 100 <math>\Omega</math>, with 3 A current rating</p> <p>Resistor material shall be Copper-Manganese or Copper-Nickel alloy</p> <p>Material Certificate shall be submitted.</p>	
23	Push buttons and Indicating Lamps	<p>Push button → Green colour, Flush type</p> <p>Push button → Red colour, Mushroom type</p> <p>Cluster LED, Red Colour</p> <p>Cluster LED, Green Colour</p> <p>Cluster LED, Amber Colour</p> <p>Cluster LED, Blue Colour</p>	
24	Component Layout/ Mounting/ Identification	<p>A typical "Component placement drawing" is attached with this specification. Vendor to suitably place the components to enable easy maintenance and aesthetics. All components shall be fixed from the front of the component mounting plate. All the internal/ door mounted components shall be identified by suitable (Anodized Aluminium) Name Plates located near the respective components</p>	





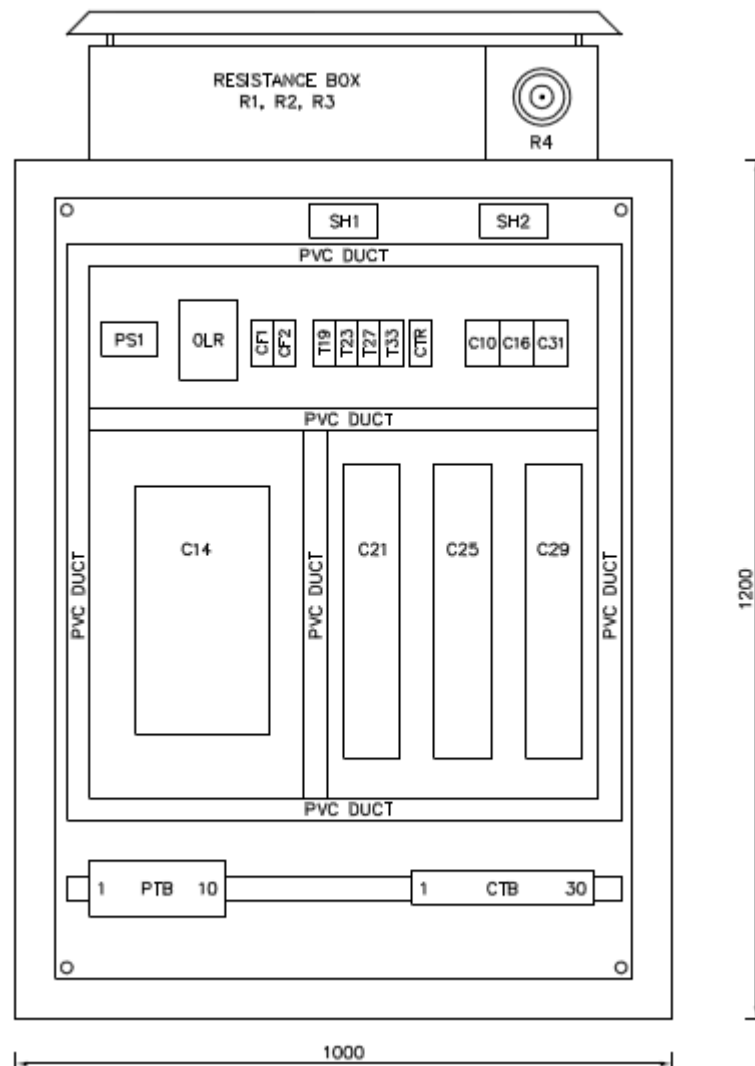
Sl. No.	Characteristics	Requirement					Vendor's Compliance
25	Control Circuit wiring	Shall be done with 1100V grade PVC insulated single core 2.5 sq.mm cable, multi strand tinned copper conductor cable with suitable crimping lugs					
26	Power Circuit wiring	Wiring for power circuits shall be carried out with 1100V grade PVC insulated single core 16 sq.mm multi strand copper conductor cable with suitable crimping lugs					
27	Wiring	All the wiring inside the box shall be formed/ dressed neatly, using non-metallic wire dressing materials. Wiring in the starter box between the terminal blocks and the various components shall be enclosed in wire ducts with removable cover .					
28	Ferruling	Proper ferruling method shall be adopted for all types of wiring					
29	Power Terminal blocks	Shall be Bus bar type mounted suitably in DIN rails. The terminal blocks shall be mounted at a minimum of 100mm distance from the base for easy accessibility of termination of external cables. Quantity → 10 Nos. (total)					
		5.5 KW	7.5 KW	9.3 KW	11 KW	15 KW	
		Suitable for 70 sq.mm. Aluminium conductor	Suitable for 95 sq.mm. Aluminium conductor	Suitable for 120 sq.mm. Aluminium conductor Suitable for 120 sq.mm. Aluminium conductor		Suitable for 150 sq.mm. Aluminium conductor	
30	Control terminal blocks	Cage clamp type, suitable for 2.5 sq.mm. cable. The terminal blocks shall be mounted at a minimum of 100mm distance from the base for easy accessibility of termination of external cables. Quantity – as per requirement + 20 % of actual terminals used as spare					
31	Number Strips	The numbering strips shall be of PVC white back-ground with black letters					



Sl. No.	Characteristics	Requirement	Vendor's Compliance
32	Description	5.5 kw, 7.5 kw, 9.3 kw,11kw, 15 kw	
	Incoming DC Supply From Feeder	Cable Glands → All Cable Glands shall be Weather proof, Double compression, Brass with Nickel Plated type.  Size of the cable & Quantity has to be referred in Project specific requirements furnished along with the purchase enquiry	
	Outgoing DC Supply to Motor		
	To DCS(Feedback)		
	From FSSS(Control)		
	To FSSS(Feedback)		
33	Removable Gland Plate	Removable Gland Plate, 3mm thick shall be provided at the bottom of the box with a neoprene gasket of 3 mm thick.	
34	Transparent Cover	Transparent acrylic cover shall be provided for all the panel mounted components. Transparent Acrylic cover with Caution sticker made of anodized aluminium shall be provided at the front side of all Power terminals.	
35	Earth Bolts	Exterior → 2 Nos., M8 x 20 mm  Interior → 1 No., M8 x 20 mm	
36	Earth Symbols	Circular Sticker with Black lines on Yellow back ground of diameter 20 mm shall be provided near each earth terminal	
37	Lifting Hook	2 Nos. at appropriate location at the top, made out of 10 mm diameter rod	
38	Starter box mounting Bracket and accessories	The box shall be provided with 4 Nos. of Mounting brackets with 50 mm wide, 6 mm thick plates  M10 x 35 mm, Mounting bolts, Spring washers and Nuts shall be supplied.	
39	Quality Plan	QA:CI:STD:QP:15 (Latest Revision)	
40	Inspection	As per BHEL Quality Plan and BHEL Approved vendor Drawings/ Documents	



Sl. No.	Characteristics	Requirement	Vendor's Compliance
41	Packing	QA:CI:STD:PR:02 (Latest Revision) The packing shall meet the Transport, environment and Storage hazards	
42	Documents (Vendor to submit along with the offer)	a. Taking care of all the requirements indicated in the documents referred in Clause 1, Vendor has to submit Sub delivery enquiry deviation format. In that document, Vendor to specify the reference details of the documents referred in Clause 1 and should indicate "No – Deviation".  b. Vendor to submit compliance to quality plan & packing procedure	
43	Documents for approval by BHEL/ Customer (after placement of purchase order)	Soft Copies of the following :-  a. General arrangement drawing, Component layout, terminal block drawing and Control Scheme  b. Bill of material with make, model no., rating and quantity of components.  c. Operation & Maintenance manuals containing the catalogues of various accessories used in the DC Starter box.	



**COMPONENT PLACEMENT DRAWING**

**Legend to the Component Placement drawing :-**

PS1 – Power Switch & Power Fuse

OLR– Overload Relay

CF1, CF2 – Control Fuse

T19, T23, T27, T33 – Timers

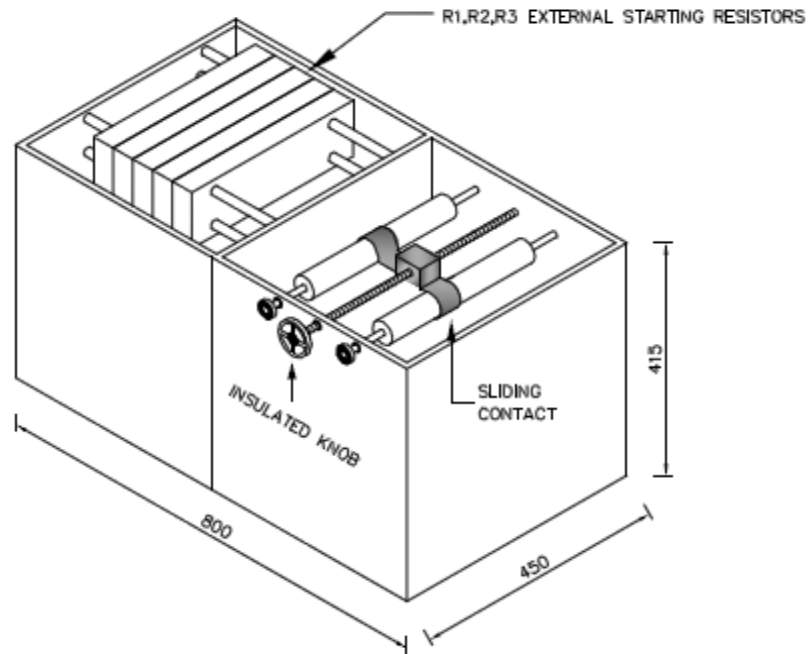
CTR– Current Transducer

C10, C16, C31 - Auxiliary Contactors

C14, C21, C25, C29 – Power Contactors

PTB, CTB – Power/ Control Terminal Blocks

SH1, SH2 - Shunt



ARRANGEMENT OF FIELD TRIMMER RESISTOR (FTR)  
IN RESISTOR BOX



---

3-96-193-16186

DRAWING NO.

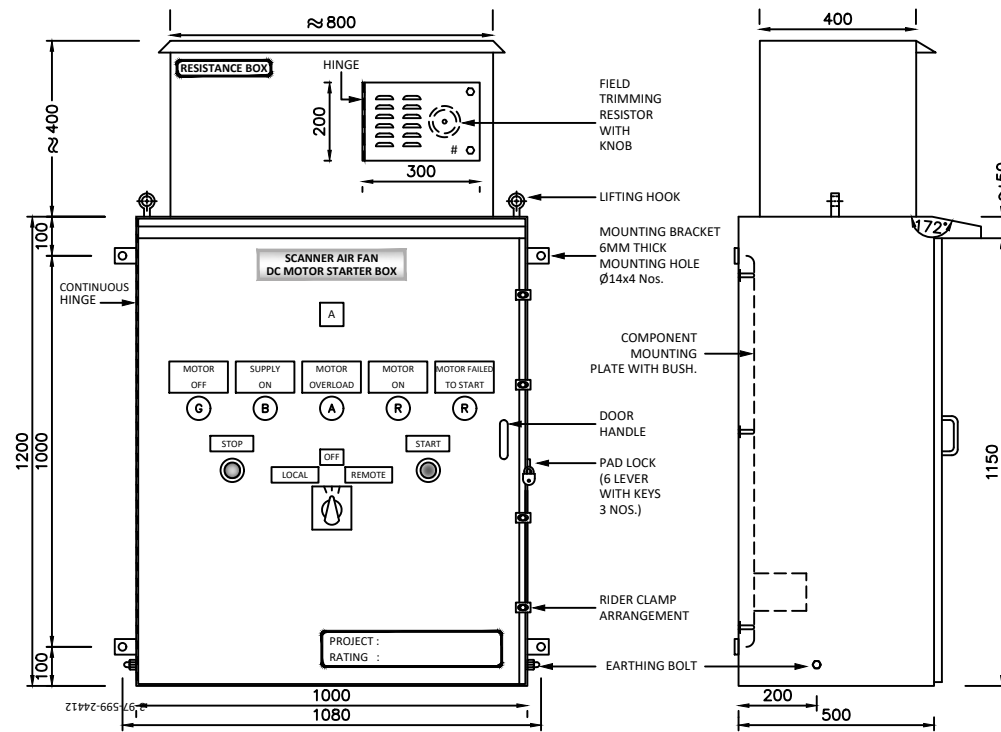
SHEET No.	DRAWING No.	Rev.	DESCRIPTION
SHEET-01	3-96-193-16186	00	SCANNER AIR FAN DC MOTOR STARTER BOX DRAWINGS - COVER SHEET
SHEET-02	3-96-193-16187	00	DC MOTOR STARTER BOX - GENERAL ARRANGEMENT DRAWING
SHEET-03	3-96-193-16188	00	DC MOTOR STARTER BOX - CONTROL SCHEME
SHEET-04	3-96-193-16189	00	DC MOTOR STARTER BOX - TERMINAL CONNECTION DRAWING

CUST NO:1732 & 1733

<div>CAUTION: The information on this document is the property of BHARAT HEAVY ELECTRICALS LTD. It must not be used directly or indirectly in any way detrimental to the interest of the company.</div>		OWNER		<div>NTPC LIMITED (A GOVERNMENT OF INDIA ENTERPRISE)</div>																	
		PROJECT		TALCHER THERMAL POWER PROJECT STAGE-III (2 X 660MW) EPC PACKAGE																	
		<div>Bharat Heavy Electricals Ltd UNIT: HIGH PRESSURE BOILER PLANT TIRUCHIRAPALLI - 620014</div>		NAME		SIGNATURE		DATE		NO. OF VAR											
				DRN		N.RAKESH				07.12.2023		—									
		CHD		N.RAKESH				07.12.2023		—											
		APPD		D.KAVITHA				07.12.2023		—											
REV		DATE		REVISED BY		APPROVED BY		DEPT		GRADE OF UNTOL. DIM		SCALE		WEIGHT (Kg)		REF TO ASSY / OLD DWG		ITEM NO		No OF ITEMS	
								C&I		C/M/F		N.T.S		—		---		—		—	
								CODE		385											
								TITLE		SCANNER AIR FAN DC MOTOR STARTER BOX DRAWINGS - COVER SHEET		CARD CODE		U 01		BHEL DRG. NO.		3-96-193-16186		REV	
																				00	

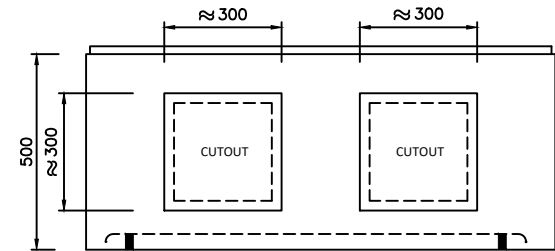
3-96-193-16187

DRAWING NO.



## NOTE

- ENCLOSURE PROTECTION :  
a. STARTER BOX IP 55, b. RESISTANCE BOX IP 32
- P A I N T : EXTERIOR : RAL 9002  
INTERIOR : BRILLIANT WHITE WITH GLOSSY FINISH.
- DC SCANNER STARTER BOX SHALL BE LOCATED NEAR THE DC SCANNER FAN.
- RESISTANCE BOX SHALL BE MOUNTED USING BOLTING ARRANGEMENT.
- # FIELD TRIMMING RESISTOR (R4) IS PLACED INSIDE RESISTANCE BOX. THE DOOR IN THE RESISTANCE BOX FOR ADJUSTMENT OF FTR HAS TO BE PROVIDED WITH BOLT FOR LOCKING.
- (R) - CLUSTERED LED LAMP (G-GREEN, B-BLUE, A-AMBER, R-RED)
- (PUSHBUTTONS)
- (A) - AMMETER
- (XXX) - NAME PLATE



CUST NO:1732 &amp; 1733

OWNER



**NTPC LIMITED**  
(A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT

**TALCHER THERMAL POWER PROJECT**  
**STAGE-III (2 X 660MW)**  
EPC PACKAGE



**Bharat Heavy Electricals Ltd**  
UNIT: HIGH PRESSURE BOILER PLANT  
TIRUCHIRAPALLI - 620014

	NAME	SIGNATURE	DATE	NO. OF VAR
DRN	N.RAKESH		07.12.2023	
CHD	N.RAKESH		07.12.2023	
APPD	D.KAVITHA		07.12.2023	

DEPT  
C&I  
CODE  
385

GRADE OF  
UNTOL DIM  
C/M/F



SCALE  
N.T.S

WEIGHT (Kg)  
---

REF TO ASSY / OLD DWG  
---

ITEM  
NO  
---

No OF  
ITEMS  
---

TITLE  
**DC MOTOR STARTER BOX - GENERAL  
ARRANGEMENT DRAWING**

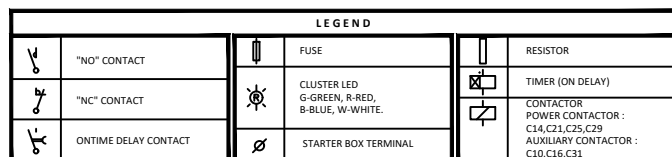
CARD  
CODE  
U 01

BHEL DRG. NO.  
**3-96-193-16187**

REV  
**00**

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REV	DATE	REVISED BY APPROVED BY



**Size A3**

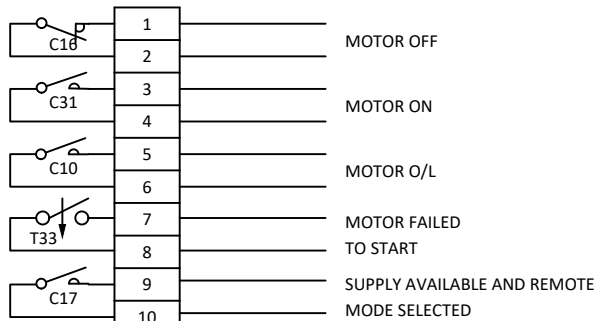


68191-161-96-3

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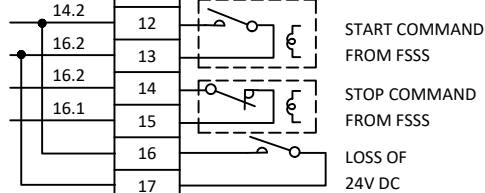
### CONTROL TERMINALS

#### TBC

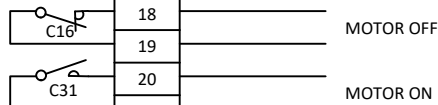


TO FSSS (8P X 0.5 sq.mm. MSC Cable)

#### INTERPOSING RELAY

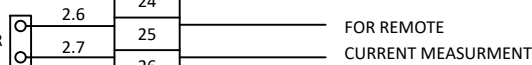


# FROM FSSS (4P X 1.5 sq. mm. MSC Cable)



SPARE CONTACTS FOR FUTURE USE

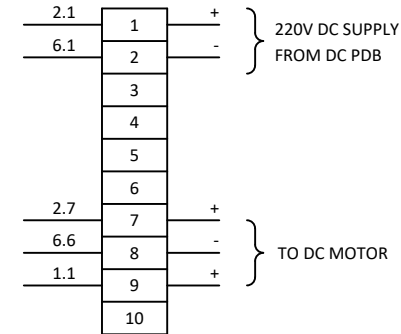
TRANSDUCER



TO DDCMIS (2P x 0.5 sq.mm. MSCICS Cable)

### POWER TERMINALS

#### TBP



# - IPR RESIDES IN STARTER BOX

CUST NO:1732 & 1733

OWNER



**NTPC LIMITED**  
(A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT

**TALCHER THERMAL POWER PROJECT**  
**STAGE-III (2 X 660MW)**  
EPC PACKAGE



**Bharat Heavy Electricals Ltd**  
UNIT: HIGH PRESSURE BOILER PLANT  
TIRUCHIRAPALLI - 620014

	NAME	SIGNATURE	DATE	NO. OF VAR
DRN	N.RAKESH		07.12.2023	
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APPD	D.KAVITHA		07.12.2023	

DEPT  
C&I  
CODE  
385

GRADE OF  
UNTOOL DIM  
C/M/F



SCALE  
N.T.S

WEIGHT (Kg)  
---

REF TO ASSY / OLD DWG  
---

ITEM  
NO  
---

No. OF  
ITEMS  
---

TITLE  
**DC MOTOR STARTER BOX - TERMINAL  
CONNECTION DRAWING**

CARD  
CODE  
U 01

BHEL DRG. NO.  
**3-96-193-16189**

REV  
**00**

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REV	DATE	REVISED BY APPROVED BY



**BHARAT HEAVY ELECTRICALS LIMITED**  
**TIRUCHIRAPPALLI - 620014**

**STANDARD QUALITY PLAN FOR**  
**AC/DC STARTER BOX, TEMPERATURE PROBE STATER**  
**BOX & CONTROL BOX**

**QA:CI:STD:QP:15**

**Rev: 06**


**Page: 1 of 3**

## **CONTROLS & INSTRUMENTATION/QA/FB**

### **STANDARD QUALITY PLAN FOR** **AC/DC STARTER BOX, TEMPERATURE PROBE STARTER BOX & CONTROL BOX**

REV	DATE	PREPARED	REVIEWED		APPROVED	REVISION HISTORY
00	06.08.1990	Sd/-	Sd/-	Sd/-	Sd/-	Initial release
01	16.06.1997	Sd/-	Sd/-	Sd/-	Sd/-	Format revised
02	21.03.2002	Sd/-	Sd/-	Sd/-	Sd/-	Department name changed, CTQ requirement added & general revision
03	08.01.2004	Sd/-	Sd/-	Sd/-	Sd/-	Revision to include the comments/ feedback on internal discussion.
04	01.12.2010	Sd/-	Sd/-	Sd/-	Sd/-	Format Changed and revised based on discussion with QC.
05	03.02.2018	V AVINASH	A SRIHARI RAO	V M SELVARAJ	R M VAIRAVAN	Revised to incorporate international standard and other general points.
06	31-07-2024	B ARUNKUMAR B. Arunkumar.	M MURUGAPRABU M. Murugaprabu	G V CHILAMBARASAN G. V. Chilambarasan	D KAVITHA D. Kavitha	Notes 5 modified.

**M- MANUFACTURER/ SUB-VENDOR; B - BHEL / TPI ; C - CUSTOMER / TPI**  
**P - PERFORM ; W - WITNESS V - VERIFICATION OF DOCUMENTS;**

	<b>BHARAT HEAVY ELECTRICALS LIMITED</b> <b>TIRUCHIRAPPALLI - 620014</b>	<b>STANDARD QUALITY PLAN FOR</b> <b>AC/DC STARTER BOX, TEMPERATURE PROBE</b> <b>STATER BOX &amp; CONTROL BOX</b>	<b>QA:CI:STD:QP:15</b> Rev: 06      Page: 2 of 3
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No	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc. & Acceptance STD	Format of record	AGENCY			REMARKS
					M	B/C			M	B	C	
A	FINISHED PRODUCT INSPECTION											
1	Routine Tests	a) Material Composition	Major	CHEM	-	-	BHEL approved Vendor Drawings	TC	V	V	-	
		b) Dimensions verification	Major	MEAS	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		c) BOM & Components Layout verification	Major	VISU	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		d) Provision of Name plates /labels	Major	VISU	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		e) Paint shade & Thickness verification	Major	VISU MEAS	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		f) Paint scratch test	Major	PHYS	1 Per project		Manufacturer Standard	IR	P	W	-	Not applicable for powder coating
		g) Provision of earth bus bar / bolts and symbols	Major	VISU	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		h) Functional test	Major	ELEC	100%	20%	BHEL approved Vendor Drawings	IR	P	W	-	
		i) IR Test with Megger (500v DC) before & after HV Test	Major	ELEC	100%	20%	>1 MOhm as per IEC 60204-1	IR	P	W	-	
		j) HV Test	Major	ELEC	100%	20%	1KV for 30 sec as per IEC 60204-1	IR	P	W	-	There Should not be any disruptive discharge.
2	Type Tests	Enclosure protection Test for a) Starter / Control Box b) Resistance Box (Wherever applicable)	Critical	ENVI	One of design		BHEL approved Vendor Drawings & IEC 60529	TC	V	V	-	

**M**- MANUFACTURER/ SUB-VENDOR; **B** - BHEL / TPI ; **C** - CUSTOMER / TPI  
**P** - PERFORM ; **W** - WITNESS **V** - VERIFICATION OF DOCUMENTS;



**B.NOTES:**

**1.LEGENDS:**

VISU	: Visual	IR	: Inspection Report
CHEM	: Chemical	TC	: Test Certificate
ELEC	: Electrical		
MEAS	: Measurement		
PHYS	: Physical		
ENVI	: Environmental		

2) Vendor Shall arrange all the required facilities for routine tests at their works. Type for Which facilities are not available are to be carried out at recognized National Tests Houses like ETDC/ CIL/ NPL/ ERTL etc., at vendor cost.

3) Through log Book / any other documents available at the vendor's works, it shall be possible to correlate the finished product with inspection carried out.

4) All Measuring and Testing Instruments shall be periodically calibrated from recognized test houses & certificates made available during inspection for verification.

5) Type test certificate shall not be earlier than 10 years from the date of Purchase Enquiry (or) as mentioned in Technical specification. In case of difference in Type test validity period, Technical Specification shall prevail.

6) Vendor to give tentative inspection program in advance and confirm exact date two weeks in advance for arranging BHEL's inspection.



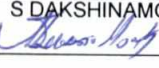
7) Packing shall be as per "PACKING PROCEDURE" indicated in the specification.



**BHARAT HEAVY ELECTRICALS LIMITED  
TIRUCHIRAPPALLI**

**CONTROLS AND INSTRUMENTATION / FB  
QUALITY ASSURANCE**

**STANDARD PACKING PROCEDURE  
FOR  
ELECTRICAL AND ELECTRONIC PANELS  
(INCLUDING BOXES, CABINETS, CUBICLES, SYSTEMS AND CHASSIS)**

Rev	Date	Prepared	Checked	Approved	Revision History
00	01.01.96	Sd/-	Sd/-	Sd/-	Initial History
01	28.03.02	A.J.OMPRAKASH Sd/-	R.VARADARAJAN Sd/-	G.MATHIYALAGAN Sd/-	Department name changed
02	26.02.07	RM.VAIRAVAN	N.SRIDHAR	S.SOMASUNDARAM	Revised after discussion with Shipping Dept.
03	07.02.2017	AVINASH V 	RM VAIRAVAN 	S DAKSHINAMOORTHY 	Type of wood for packing changed

**1.0 SCOPE**

- 1.1 This procedure gives minimum guidelines to be complied with for packing of Electrical, Electronics and Instrumentation panels. This packing shall be suitable for different handling operations and for the adverse conditions during transportation and during indoor / outdoor storage for periods more than one year.

**2.0 WOOD SPECIFICATION FOR PACKING**

- 2.1 Any seasoned wood or plywood as per relevant international standard  
2.2 Sea worthy packing is envisaged for international shipments.

**3.0 PACKING**

- 3.1 Any seasoned wood or plywood shall be used .It shall be free from knots, etc. and any kind of decay caused by insects and fungus.
- 3.2 The required wood case for the equipment to be packed shall be made out of individual planks of single length and no joint is permissible. Using such planks, the required wood case for the panel shall be made,
- 3.3 Sufficient number horizontal, vertical and diagonal planks (dimension depending upon case size) shall be used for binding and strengthening. Runners have to be provided with metallic sling plates for handling.
- 3.4 Support planks are to be provided such that, no force is acting on the parts of equipment or its parts.
- 3.5 Panels above 1.5 metre shall be bolted at the bottom.
- 3.6 The equipments covered with a polythene sheet shall be kept inside the box, followed by coir, wooden bottoms, thermo coal, etc to prevent vibration effect during loading, transportation, etc.
- 3.7 On all sides of the inner case, black polythene sheet shall be nailed.
- 3.8 Loose items of the equipment, if any, shall be packed separately.
- 3.9 Delicate components likely to be damaged, example PCB – Electronic modules, instrument, etc are to be covered individually in anti-static bags and packed in cartons and filled with fillers like thermo coal, paper cuttings, etc.
- 3.10 Such cartons shall be packed with overall polythene rapping and packed in wooden cases. Mark prominently as "ELECTRONIC COMPONENTS".

**4.0**    **MARKING**

- 4.1    After completing the packing, Stencil marking, as per dispatch instructions and symbol marking as per Annexure – I shall be made. Please ensure the box is stenciled with "FRAGILE ITEM", "HANDLE WITH CARE"

**5.0**    **PACKING SLIP**

- 5.1    A copy of the packing slip, kept in a polythene cover shall be kept inside the box. Another copy of the packing slip, kept in a polythene cover shall be kept out side the box and covered with a metallic plate to the case.

**6.0**    **CAUTION**

Do not pack any other Mechanical items with this case.

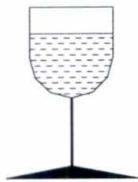
**7.0**    **GENERAL**

- 7.1    These packing procedures are the minimum requirements in addition to the standard instructions mentioned in the Purchase Order and Specification.

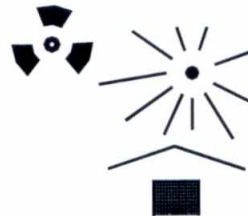
ANNEXURE - 1

TO

PROCEDURE NO:CI:QAC:PR:02/00 ; PR:03/00 ; PR:04/00



FRAGILE, HANDLE WITH CARE



PROTECT FROM HEAT AND RADIOACTIVE SOURCES



USE NO HOOKS

NOTE: The design of heavy goods packages cannot always resist top lifting by grabhooks.



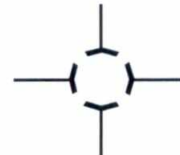
KEEP DRY

NOTE: Not all cases have waterproof internal liners: plywood used in the construction may not have a waterproof glue-line.



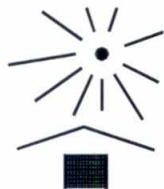
THIS WAY UP

NOTE: Certain designs of small cases make it difficult to distinguish top from bottom.



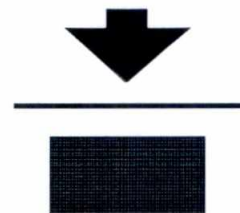
CENTRE OF GRAVITY

NOTE: This should be stencilled as a minimum on the two longest case sides (this information will normally be supplied by the manufacturer of the item(s) packed).



KEEP AWAY FROM HEAT

... kg max



STACKING LIMITATION

NOTE: The maximum load in kilograms should be marked above the arrow.



INTERNATIONAL "SLING HERE" SYMBOL



**Controls & Instrumentation/Fossil Boilers**  
**Project Specific requirements for DC Starter Box**  
**(Annexure to Technical Specification TCI:248/07)**

**Ref. :** CI:DCSB:LARA

**Dated:** 03-02-2025

**Project** : Lara, 2 x 800 MW

**Customer No.** : 1834 & 1835

1) Size & Quantity of the Cable glands (Specification Clause No.: 32): -

Sl. No.	Application	Cable Size	Quantity in Nos.
1	For incoming cable from DCDB and DC starter and outgoing cable from DC starter to Motor	2 Core x 95 sq.mm. (Approx. OD 32mm )	3
2	Cable from DC Starter to Motor & interface to FSSS	2 Core x 2.5 sq.mm. (Approx. OD 15 mm)	2
3	Interface cable with FSSS	8 Pair x 0.5 sq.mm., Overall shielded cable (Approx. OD 20 mm)	1
4	Interface cable with DCS	4 Pair x 0.5 sq.mm., Overall shielded cable (Approx. OD 16 mm)	2

2) Paint Shade: -

SL. No.	Description	Paint Shade
1	Exterior	RAL 9002
2	Interior	Brilliant white with Glossy finish

3) Typical Starting Resistance value in ohms are indicated below for different ratings of the Motor. Exact resistance values will be communicated after placement of purchase order, on receipt of motor datasheet.

Sl. No.	Motor Rating in KW	Starting resistance Value in ohms			Thermal rating of the starting resistors
		R1	R2	R3	
1	9.3	1.07	0.54	0.27	140 Amps for 30 seconds
2	11	0.91	0.36	0.14	180 Amps for 30 seconds
3	15	0.64	0.23	0.09	200 Amps for 30 seconds

**BHARAT HEAVY ELECTRICALS LIMITED  
TIRUCHIRAPPALLI-620 014.**

**Buyer Added Bid Specific Additional Terms & Conditions (ATC)  
FRAMEWORK AGREEMENT FOR DC MOTOR STARTER BOX**

**Note:** This Annexure has to be mandatorily filled & signed by the manufacturer (or) mill and submitted along with Technical bid.

**Any deviation to the below mentioned terms shall be stated specifically in the comments column for each term and also in case of acceptance to our terms, it will be construed that the whole term is understood and agreed in totality without any deviation. (If otherwise mentioned).**

SI No	BHEL Requirements	Supplier Comments
01	<p><b>Pre-Qualification Criteria:</b></p> <p>1.1 Technical as per CI:PE: PQR: CTRL BOXES Rev.No.04 dt.11.02.2025</p> <p>i. Bidder should have already executed Purchase orders of Electrical items like Electrical Control panels or Motor Starter boxes, prior to the date of Techno Commercial bid opening. PO Copy with respective invoice (or) despatch clearance from the end user of earlier executed order.</p> <p>ii. Bidder shall have the facility to conduct the testing of Motor starter boxes or Control panels as per the enquiry. List of testing facilities.</p> <p>1.2 Not Applicable</p> <p>1.3 Integrity Pact – Not Applicable</p> <p>1.4 Bidder must not be admitted under Corporate Insolvency Resolution Process or Liquidation as on date, by NCLT or any adjudicating authority/authorities, and shall submit undertaking (Annexure-4) to this effect.</p> <p>1.5 Customer Approval Vendors offer will be considered for price bid opening subject to fulfilment of techno commercial suitability and customer approval.</p> <p><b>Explanatory Notes for the PQR:</b></p> <p>i. 'Supplied' in <b>PQR – 1.1</b> means, bidder should have delivered the tendered item. Bidder shall submit the relevant documents against the above PQRs inclusive of Purchase order (wherein PO no., date, etc. is legible) along with proof of supply (i.e. - Completion Certificate/ Copy of Invoices / LR Copies/ Store Receipt Vouchers/ Payment Advice etc.) in the respective attachments in their offer in support of PQR. The “Contract” referred in Technical PQR may be Rate Contract/ Framework Agreement/ Purchase Order/ Work Order.</p> <p>ii. Bidder to submit Audited Balance Sheet and Profit and Loss Account for the respective years as indicated against Financial Turnover <b>PQR – 1.2</b> above along with all annexures.</p> <p>iii. In case of audited Financial Statements have not been submitted for all the three years as indicated against Financial Turnover PQR above, then the applicable audited statements submitted by the bidders against the requisite three years, will be averaged for three years i.e. total divided by three.</p> <p>iv. If Financial Statements are not required to be audited statutorily, then instead of audited Financial Statements, Financial Statements are required to be certified by Chartered Accountant.</p> <p>v. Credentials furnished by the bidder against "PRE-QUALIFYING CRITERIA" shall be verified from the issuing authority for its authenticity. In case, any credential (s) is/are found to be spurious, offer of the bidder is liable to be rejected. BHEL reserves the right to initiate any further action as per extant guidelines for Suspension of Business Dealings as applicable in BHEL.</p> <p>vi. Price Bids of only those bidders shall be opened who stand qualified after compliance of <b>QR – 1.1 to 1.5</b></p>	

02	<b>Scope of Supply:</b> Supply of DC motor starter box to BHEL Trichy Stores on F.O.R. Destination Basis.																																												
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Unloading of materials at Destination / Site shall be in BHEL’s scope.																																													
03	<b>PRICE BASIS:</b> Firm Price in INR should be quoted for F.O.R. DESTINATION delivery to BHEL Trichy Stores. Offers with PVC clause will not be considered.																																												
	<b>The rates finalized through this frame work agreement shall be valid for one year from the date of LOI/signing of frame work agreement.</b> GSTIN : will be issued along with MDCC																																												
04	<b>TAXES &amp; DUTIES:</b>  <b>4.1</b> The Supplier/Vendor shall pay all (save the specific exclusions as enumerated in this clause) taxes, fees, license, charges, deposits, duties, tools, royalty, commissions, other charges, etc. which may be levied on the input goods & services consumed and output goods & services delivered in course of his operations in executing the contract. In case BHEL is forced to pay any of such taxes/duties, BHEL shall have the right to recover the same from his bills or otherwise as deemed fit along with the applicable overheads @5% and interest on the total value (i.e. amount paid by BHEL + overhead).  However, provisions regarding <b>GST</b> on output supply (goods/service) and TDS/TCS as per Income Tax Act shall be as per following clauses.  <b>4.2 GST (Goods and Services Tax)</b>  <b>4.2.1</b> GST as applicable on output supply (goods/services) are excluded from Supplier/Vendor’s scope; therefore, contractor’s price/rates shall be <b>exclusive</b> of GST. Reimbursement of GST is subject to compliance of following terms and conditions. BHEL shall have the right to deny payment of GST and to recover any loss to BHEL on account of tax, interest, penalty etc. for non-compliance of any of the following condition.  <b>4.2.2</b> The admissibility of GST, taxes and duties referred in this chapter or elsewhere in the contract shall be limited to direct transactions between BHEL & its Supplier/Vendor. BHEL shall not consider GST on any transaction other than the direct transaction between BHEL & its Supplier/Vendor.																																												

**4.2.3** Supplier/Vendor shall obtain prior written consent of BHEL before billing the amount towards such taxes. Where the GST laws permit more than one option or methodology for discharging the liability of tax/levy/duty, BHEL shall have the right to adopt the appropriate one considering the amount of tax liability on BHEL/Client as well as procedural simplicity with regard to assessment of the liability. The option chosen by BHEL shall be binding on the Contractor for discharging the obligation of BHEL in respect of the tax liability to the Supplier/Vendor.

**4.2.4** Supplier/Vendor has to submit GST registration certificate of the concerned state. Supplier/Vendor also needs to ensure that the submitted GST registration certificate should be in active status during the entire contract period.

**4.2.5** Supplier/Vendor has to issue Invoice/Debit Note/Credit Note indicating HSN/SAC code, Description, Value, Rate, applicable tax and other particulars in compliance with the provisions of relevant GST Act and Rules made thereunder.

**4.2.6** Supplier/Vendor has to submit GST compliant invoice within the due date of invoice as per GST Law. In case of delay, BHEL reserves the right of denial of GST payment if there occurs any hardship to BHEL in claiming the input thereof. In case of goods, Supplier/Vendor has to provide scan copy of invoice & GR/LR/RR to BHEL before movement of goods starts to enable BHEL to meet its GST related compliances. Special care should be taken in case of month end transactions.

**4.2.7** Supplier/Vendor has to ensure that invoice in respect of such services which have been provided/completed on or before end of the month should not bear the date later than last working day of the month in which services are performed.

**4.2.8** Subject to other provisions of the contract, GST amount claimed in the invoice shall be released on fulfilment of all the following conditions by the Supplier/Vendor: -

- a) Supply of goods and/or services have been received by BHEL.
- b) Original Tax Invoice has been submitted to BHEL.
- c) Supplier/Vendor has submitted all the documents required for processing of bill as per contract/purchase order/ work order.
- d) In cases where e-invoicing provision is applicable, Supplier/Vendor is required to submit invoice in compliance with e-invoicing provisions of GST Act and Rules made thereunder.
- e) Supplier/Vendor has filed all the relevant GST return (e.g. GSTR-1, GSTR-3B, etc.) pertaining to the invoice submitted and submit the proof of such return along with immediate subsequent invoice. In case of final invoice/ bill, contractor has to submit proof of such return within fifteen days from the due date of relevant return.
- f) Respective invoice has appeared in BHEL's GSTR - 2A for the month corresponding to the month of invoice and in GSTR-2B of the month in which such invoices has been reported by the contractor along with status of ITC availability as "YES" in GSTR-2B. Alternatively, BG of appropriate value may be furnished which shall be valid at least one month beyond the due date of confirmation of relevant payment of GST on GSTN portal or sufficient security is available to adjust the financial impact in case of any default by the Supplier/Vendor.
- g) Supplier/Vendor has to submit an undertaking confirming the payment of all due GST in respect of invoices pertaining to BHEL.

**4.2.9** Any financial loss arises to BHEL on account of failure or delay in submission of any document as per contract/purchase order/work order at the time of submission of Tax invoice to BHEL, shall be deducted from Supplier/Vendor's bill or otherwise as deemed fit.

**4.2.10** TDS as applicable under GST law shall be deducted from Supplier/Vendor's bill.

**4.2.11** Supplier/Vendor shall comply with the provisions of e-way bill wherever applicable. Further wherever provisions of GST Act permits, all the e-way bills, road permits etc. required for transportation of goods needs to be arranged by the contractor.

**4.2.12** Supplier/Vendor shall be solely responsible for discharging his GST liability according to the provisions of GST Law and BHEL will not entertain any claim of GST/interest/penalty or any other liability on account of failure of Supplier/Vendor in complying the provisions of GST Law or discharging the GST liability in a manner laid down thereunder.

**4.2.13** In case declaration of any invoice is delayed by the vendor in his GST return or any invoice is subsequently amended/alterd/deleted on GSTN portal which results in any adverse financial implication on

	<p>BHEL, the financial impact thereof including interest/penalty shall be recovered from the Supplier/Vendor's due payment.</p> <p><b>4.2.14</b> Any denial of input credit to BHEL or arising of any tax liability on BHEL due to non-compliance of GST Law by the Supplier/Vendor in any manner, will be recovered along with liability on account of interest and penalty (if any) from the payments due to the Supplier/Vendor.</p> <p><b>4.2.15</b> In the event of any ambiguity in GST law with respect to availability of input credit of GST charged on the invoice raised by the contractor or with respect to any other matter having impact on BHEL, BHEL's decision shall be final and binding on the Supplier/Vendor.</p> <p><b>4.2.16 Variation in Taxes &amp; Duties:</b></p> <p>Any upward variation in GST shall be considered for reimbursement provided supply of goods and services are made within schedule date stipulated in the contract or approved extended schedule for the reason solely attributable to BHEL. However downward variation shall be subject to adjustment as per actual GST applicability.</p> <p>In case the Government imposes any new levy/tax on the output service/goods after price bid opening, the same shall be reimbursed by BHEL at actual. The reimbursement under this clause is restricted to the direct transaction between BHEL and its Supplier/Vendor only and within the contractual delivery period only.</p> <p>In case any new tax/levy/duty etc. becomes applicable after the date of Bidder's offer but before opening of the price Bid, the Bidder/ Supplier/Vendor must convey its impact on his price duly substantiated by documentary evidence in support of the same before opening of price bid. Claim for any such impact after opening the price bid will not be considered by BHEL for reimbursement of tax or reassessment of offer.</p> <p><b>4.3 Income Tax:</b></p> <p><b>TDS/TCS</b> as applicable under Income Tax Act, 1961 or rules made thereunder shall be deducted/collected from Supplier/Vendor's bill.</p> <p><b>4.4 Supplier HSN Code &amp; Applicable GST % (To be filled by Supplier)</b>_____</p>	
05	<p><b>MATERIAL DISPATCH CLEARANCE CERTIFICATE (MDCC):</b></p> <p>MDCC shall be issued by BHEL. No material shall be dispatched by supplier unless and until Material Dispatch Clearance Certificate (MDCC) issued by BHEL Site. In case any material is dispatched without MDCC and any loss is incurred by Supplier/Vendor for any reason whatsoever, BHEL shall not be responsible in any manner to compensate the supplier in this regard.</p>	
06	<p><b>INSPECTION / INSPECTION &amp; TESTING AT SUPPLIERS WORKS:</b></p> <p>Inspection and testing requirements are to be carried out as per the specification and BHEL/Customer approved Drawing, Technical specification &amp; QP and all test certificates are to be submitted in complete set. Inspection call to be raised in CQIR portal or submitted to BHEL.</p> <p>Inspection notice period:</p> <p>For TPI inspector visit to vendor works, a minimum of 3 days' notice period is required.</p> <p>For Joint Inspection, vendor shall raise inspection call at least 7 days prior to the proposed date of inspection at vendor works.</p> <p>BHEL reserves the right to inspect the material during manufacturing and also to get tested the material under dispatch from third party. The test results of third party test shall be final and binding on the Supplier/Vendor.</p> <p>BHEL will reserve the right to inspect/test the material during/after manufacturing at suppliers' works, and/or at BHEL Site. In case of rejection at any stage, Supplier/Vendor shall be liable to replace the materials at his own cost.</p>	
07	<p><b>DELIVERY:</b></p> <p><b>120 days from Manufacturing Clearance (including Manufacturing, Inspection, Packing, Forwarding and delivery at project site/stores) for each purchase order.</b></p> <p><b>NOTE:</b></p> <p>a) If the delivery of supply as detailed above gets delayed beyond the delivery period, the Supplier/Vendor shall request for a delivery extension and BHEL at its discretion may extend the</p>	

	<p>Contract. However, if any 'Delivery extension' is granted to the Supplier/Vendor for completion of supply, due to backlog attributable to the Supplier/Vendor, then it shall be without prejudice to the rights of BHEL to impose LD for the delays attributable to the Supplier/Vendor.</p> <p>b) In case BHEL increase the quantity during currency of the contract in line with quantity variation clause, delivery extension shall be given for supply of these additional quantity.</p>	
08	<p><b>TRANSIT INSURANCE:</b></p> <p>Transit Insurance of material is in BHEL scope.</p>	
09	<p><b>PAYMENT TERMS:</b></p> <p>a)</p> <p>i) <b>FOR NON MSME Bidders</b>, 100% payment shall be released within 90 days from the date of material acceptance subject to submission of billing documents as mentioned in sl. no. 10 below.</p> <p>ii) <b>FOR MSE Bidders</b>, 100% payment shall be released within 45 days from the date of material acceptance subject to submission of billing documents as mentioned in sl. no. 10 below.</p> <p>iii) <b>FOR MEDIUM ENTERPRISES Bidders</b>, 100% payment shall be released within 60 days from the date of material acceptance subject to submission of billing documents as mentioned in sl. no. 10 below.</p> <p>However, GST amount shall be reimbursed in line with compliance to Cl. No. 4 (Taxes &amp; Duties) above.</p> <p>b) <b>NO INTEREST PAYABLE TO CONTRACTOR</b></p> <p>No interest shall be payable on the security deposit or any other money due to the Supplier.</p>	
10	<p><b>DOCUMENTS REQUIRED FOR BILL PROCESSING:</b></p> <p>The following documents are required to be sent with Material Dispatch/Billing Documents:</p> <ul style="list-style-type: none"> <li>• Original Tax Invoice (As per Cl. No. 4 above).</li> <li>• Copy of LR</li> <li>• Warranty Certificate</li> <li>• Duplicate for Transporter</li> </ul>	
11	<b>BANK DETAILS FOR EMD &amp; PERFORMANCE SECURITY SUBMISSION: Not Applicable</b>	
12	<b>EARNEST MONEY DEPOSIT: Not Applicable</b>	
13	<b>PERFORMANCE SECURITY: Not Applicable</b>	
14	<p><b>BREACH OF CONTRACT, REMEDIES AND TERMINATION:</b></p> <p><b>14.1</b> The following shall amount to breach of contract:</p> <ol style="list-style-type: none"> <li>I. Non-supply of material/ non-completion of work by the Supplier/Vendor within scheduled delivery/ completion period as per contract or as extended from time to time.</li> <li>II. The Supplier/Vendor fails to perform as per the activity schedule and there are sufficient reasons even before expiry of the delivery/ completion period to justify that supplies shall be inordinately delayed beyond contractual delivery/ completion period</li> <li>III. The Supplier/Vendor delivers equipment/ material not of the contracted quality.</li> <li>IV. The Supplier/Vendor fails to replace the defective equipment/ material/ component as per guarantee clause.</li> <li>V. Withdrawal from or abandonment of the work by the Supplier/Vendor before completion as per contract.</li> <li>VI. Assignment, transfer, subletting of Contract by the Supplier/Vendor without BHEL's written permission resulting in termination of Contract or part thereof by BHEL.</li> <li>VII. Non-compliance to any contractual condition or any other default attributable to Supplier/Vendor.</li> <li>VIII. Any other reason(s) attributable to Vendor towards failure of performance of contract. In case of breach of contract, BHEL shall have the right to terminate the Purchase Order/ Contract either in whole or in part thereof without any compensation to the Supplier/Vendor.</li> <li>IX. Any of the declarations furnished by the contractor at the time of bidding and/ or entering into the contract for supply are found untruthful and such declarations were of a nature</li> </ol>	

- that could have resulted in non-award of contract to the contractor or could expose BHEL and/ or Owner to adverse consequences, financial or otherwise.
- X. Supplier/Vendor is convicted of any offence involving corrupt business practices, antinational activities or any such offence that compromises the business ethics of BHEL, in violation of the Integrity Pact entered into with BHEL has the potential to harm the overall business of BHEL/ Owner.

**Note-** Once BHEL considers that a breach of contract has occurred on the part of Supplier/Vendor, BHEL shall notify the Supplier/Vendor by way of notice in this regard. Contractor shall be given an opportunity to rectify the reasons causing the breach of contract within a period of 14 days.

In case the contractor fails to remedy the breach, as mentioned in the notice, to the satisfaction of BHEL, BHEL shall have the right to take recourse to any of the remedial actions available to it under the relevant provisions of contract.

#### **14.2 Remedies in case of Breach of Contract.**

- i. Wherein the period as stipulated in the notice issued under clause 14.1 has expired and Supplier/Vendor has failed to remedy the breach, BHEL will have the right to terminate the contract on the ground of "Breach of Contract" without any further notice to contractor.
- ii. Upon termination of contract, BHEL shall be entitled to recover an amount equivalent to 10% of the Contract Value for the damages on account of breach of contract committed by the Supplier/Vendor. This amount shall be recovered by way of encashing the security instruments like performance bank guarantee etc available with BHEL against the said contract. In case the value of the security instruments available is less than 10% of the contract value, the balance amount shall be recovered from other financial remedies (i.e. available bills of the Supplier/Vendor, retention amount, from the money due to the Supplier/Vendor etc. with BHEL) or the other legal remedies shall be pursued.
- iii. wherever the value of security instruments like performance bank guarantee available with BHEL against the said contract is 10% of the contract value or more, such security instruments to the extent of 10% contract value will be encashed. In case no security instruments are available or the value of the security instruments available is less than 10% of the contract value, the 10% of the contract value or the balance amount, as the case may be, will be recovered in all or any of the following manners:
- iv. In case the amount recovered under sub clause (a) above is not sufficient to fulfil the amount recoverable then; a demand notice to deposit the balance amount within 30 days shall be issued to Supplier/Vendor.
- v. If Supplier/Vendor fails to deposit the balance amount within the period as prescribed in demand notice, following action shall be taken for recovery of the balance amount:
  - a) from dues available in the form of Bills payable to defaulted Supplier/Vendor against the same contract.
  - b) If it is not possible to recover the dues available from the same contract or dues are insufficient to meet the recoverable amount, balance amount shall be recovered from any money(s) payable to Supplier/Vendor under any contract with other Units of BHEL including recovery from security deposits or any other deposit available in the form of security instruments of any kind against Security deposit or EMD.
- vi. In-case recoveries are not possible with any of the above available options, Legal action shall be initiated for recovery against defaulted supplier/Vendor.
- vii. It is an agreed term of contract that this amount shall be a genuine pre-estimate of damages that BHEL would incur in completion of balance contractual obligation of the contract through any other agency and BHEL will not be required to furnish any other evidence to the Supplier/Vendor for the purpose of estimation of damages.
- viii. In addition to the above, imposition of liquidated damages, debarment, termination, de-scoping, short-closure, etc., shall be applied as per provisions of the contract.

#### **Note:**

1) The defaulting Supplier/Vendor shall not be eligible for participation in any of the future enquiries floated by BHEL to complete the balance work. The defaulting contractor shall mean and include:

- (a) In case defaulted Supplier/Vendor is the Sole Proprietorship Firm, any Sole Proprietorship Firm owned by same Sole Proprietor.
- (b) In case defaulted Supplier/Vendor is The Partnership Firm, any firm comprising of same partners/ some of the same partners; or sole proprietorship firm owned by any partner(s) as a sole proprietor.



	<p><b>LD against delay in executed supply in case of Termination of Contract:</b></p> <p>LD against delay in executed supply shall be calculated in line with LD clause no. 18.0 below, for the delay attributable to Supplier/Vendor. For limiting the maximum value of LD, contract value shall be taken as Executed Value of supply till termination of contract.</p> <p>Method for calculation of “LD against delay in executed supply in case of termination of contract” is given below.</p> <p>i. Let the time period from scheduled date of start of supply till termination of contract excluding the period of Hold (if any) not attributable to contractor = T1</p> <p>ii. <b>Let the value of executed supply till the time of termination of contract= X</b></p> <p>iii. Let the Total Executable Value of supply for which inputs/frontr were made available to Supplier/Vendor and were planned for execution till termination of contract = Y</p> <p>iv. Delay in executed supply attributable to Supplier/Vendor i.e. <math>T2=[1-(X/Y)] \times T1</math></p> <p>v. LD shall be calculated in line with LD clause (clause 18.0) of the Contract for the delay attributable to Supplier/Vendor taking “X” as Contract Value and “T2” as period of delay attributable to Supplier/Vendor.</p>																
15	<p><b>BILL TO/ SHIP TO ADDRESS:</b></p> <p><b>BHEL Trichy Tamilnadu</b></p>																
16	<p><b>GUARANTEE/WARRANTY:</b> All materials shall be defect free and shall be replaceable free of cost during guarantee period. The items shall be guaranteed for a period of 18 months from the date of supply or 12 months from the date of usage / commissioning, whichever is earlier.</p> <p>No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period, it may lead to rejection of offer.</p>																
17	<p><b>MICRO AND SMALL ENTERPRISES (MSE):</b></p> <p>Any Bidder falling under MSE category shall furnish the following details &amp; submit documentary evidence/ Govt. Certificate etc. in support of the same along with their techno-commercial offer.</p> <table><tr><td>Type under MSE</td><td>UDYAM No</td><td>SC/ST Owned</td><td>Women Owned</td><td>Others (Excluding SC/ST/Women)</td></tr><tr><td>Micro</td><td></td><td></td><td></td><td></td></tr><tr><td>Small</td><td></td><td></td><td></td><td></td></tr></table> <p>Note: If the bidder does not furnish the above, offer shall be processed construing that the bidder is not falling under MSE category.</p> <p>a) MSE suppliers can avail the intended benefits in respect of the procurements related to the Goods and Services only (Definition of Goods and Services as enumerated by Govt. of India vide Office Memorandum F. No. 21(8)/2011-MA dtd. 09/11/2016 office of AS &amp; DC, MSME) only if they submit along with the offer, attested copies of either Udyam Registration. Date to be reckoned for determining the deemed validity will be the last date of Technical Bid submission. Non-submission of supporting document in NIC portal will lead to consideration of their bids at par with other bidders. No benefits shall be applicable for this enquiry if the above required documents are not uploaded at the time of bid submission. Documents submitted by the bidder shall be verified by BHEL for rendering the applicable benefits.</p> <p>As per the public procurement policy notified by the central government, micro and small enterprises quoting within the price band of L1 +15% shall be allowed to supply a portion of the requirement up to 25% of the tender value subject to condition that such enterprises bring down their price to L1 price where L1 price is from other than a micro and small enterprise. If L1 offer is from a micro / small enterprise, this provision will not be applicable.</p>	Type under MSE	UDYAM No	SC/ST Owned	Women Owned	Others (Excluding SC/ST/Women)	Micro					Small					
Type under MSE	UDYAM No	SC/ST Owned	Women Owned	Others (Excluding SC/ST/Women)													
Micro																	
Small																	
18	<p><b>LIQUIDATED DAMAGE:</b></p> <p>Liquidated Damages, wherever referred under this Tender/Agreement, shall mean and refer to the damages, not in the nature of penalty, which the contractor agrees to pay in the event of delay in delivery of supplies, breach of contract etc. as the case may be.</p> <p>Liquidated Damages leviable upon the Supplier/Vendor is a sum which is agreed by the parties as a reasonable and genuine pre-estimate of damages which will be suffered by BHEL on account of delay/breach on the part of the Supplier/Vendor.</p>																



	<p>If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the original/re-fixed delivery period(s) specified in the contract/PO, the Buyer/BHEL will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever.</p> <p>Date of reckoning LD shall be vehicle entry date.</p>													
19	<p><b>INTEGRITY PACT (IP):</b> Not Applicable</p> <p>a) IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Supplier/Vendor are handled in a fair, transparent and corruption free manner. Following Independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.</p> <table border="1"> <tr> <th>Sl No</th><th>IEM</th><th>E Mail</th></tr> <tr> <td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td></tr> <tr> <td></td><td></td><td></td></tr> </table> <p>b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/ three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this Pact would be a preliminary qualification.</p> <p>c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any complaint arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.</p> <p><b>Note:</b>  <i>No routine correspondence shall be addressed to the IEM (phone/ post/ email) regarding the clarifications, time extensions or any other administrative queries, etc. on the tender issued. All such clarification/ issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are as per Clause no. 21 below.</i></p>	Sl No	IEM	E Mail										
Sl No	IEM	E Mail												
20	<p><b>PREFERENCE TO MAKE IN INDIA:</b></p> <p>For this procurement, the local content to categorize a Supplier/Vendor as a Class I local supplier/ Class II local Supplier/Non-Local Supplier and purchase preferences to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the Bid, the same shall be applicable even if issued after issue of this Bid, but before opening of Part-II bids against this Bid.</p> <p><b>23.1 Compliance to Restrictions under Rule 144 (xi) of GFR 2017:</b></p> <p>I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. The Competent Authority for the purpose of this Clause shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).</p> <p>II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.</p> <p>III. "Bidder from a country which shares a land border with India" for the purpose of this Clause means: -</p> <ol style="list-style-type: none"> <li>An entity incorporated established or registered in such a country; or</li> <li>A subsidiary of an entity incorporated established or registered in such a country; or</li> <li>An entity substantially controlled through entities incorporated, established or registered in such a country; or</li> <li>An entity whose beneficial owner is situated in such a country; or</li> </ol>													

	<p>e. An Indian (or other) agent of such an entity; or  f. A natural person who is a citizen of such a country; or  g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.</p> <p>IV. The beneficial owner for the purpose of (III) above will be as under:</p> <ol style="list-style-type: none"> <li>1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.</li> </ol> <p>Explanation</p> <ol style="list-style-type: none"> <li>a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent of shares or capital or profits of the company.</li> <li>b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements.</li> </ol> <ol style="list-style-type: none"> <li>2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership.</li> <li>3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person has ownership of or entitlement to more than fifteen percent of the property or capital or profits of the such association or body of individuals.</li> <li>4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;</li> <li>5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership. <ol style="list-style-type: none"> <li>(i) The bidder shall provide undertaking for their compliance to this Clause, in the format provided in Annexure-13.</li> <li>(ii) Registration of the bidder with Competent Authority should be valid at the time of submission of bids and at the time of acceptance of the bids</li> </ol> </li> </ol>	
21	<p><b>Settlement of Dispute:</b></p> <p>If any dispute or difference of any kind whatsoever shall arise between BHEL and the Supplier/Vendor, arising out of the contract for the performance of the work whether during the progress of contract termination, abandonment or breach of the contract, it shall in the first place referred to Designated Engineer for amicable resolution by the parties. Designated Engineer (to be nominated by BHEL for settlement of disputes arising out of the contract) who within 60 days after being requested shall give written notice of his decision to the contractor. Save as hereinafter provided, such decision in respect of every matter so referred shall forthwith be given effect to by the Supplier/Vendor who shall proceed with the work with all due diligence, whether he or BHEL desires to resolve the dispute as hereinafter provided or not.</p> <p>If after the Designated Engineer has given written notice of this decision to the party and no intention to pursue the dispute has been communicated to him by the affected party within 30 days from the receipt of such notice, the said decision shall become final and binding on the parties. In the event the Supplier/Vendor being dissatisfied with any such decision or if amicable settlement cannot be reached then all such disputed issues shall be resolved through conciliation in terms of the BHEL Conciliation Scheme 2018 as per Clause 21.1</p> <p><b>21.1 Conciliation:</b></p> <p>Any dispute, difference or controversy of whatever nature howsoever arising under or out of or in relation to this Agreement (including its interpretation) between the Parties, and so notified in writing by either Party to the other Party (the "Dispute") shall, in the first instance, be attempted to be resolved amicably in accordance with the conciliation procedure as per BHEL Conciliation Scheme 2018. The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in - "Procedure for conduct of conciliation proceedings" (as available in <a href="http://www.bhel.com">www.bhel.com</a>)).</p>	

**Note:** Ministry of Finance has issued OM reference No. 1/2/24 dated 03.06.2024 regarding “Guidelines for Arbitration and Mediation in Contracts of Domestic Public Procurement. In the said OM it has been recommended that Government departments/ Entities/agencies are to encourage mediation under the Mediation Act. 2023. The said Act has not yet been notified by the Government. Therefore, the clause “Settlement of Disputes” shall be modified accordingly as and when the Mediation Act 2023 gets notified.

## **21.2 ARBITRATION:**

21.2.1 Except as provided elsewhere in this Contract, in case Parties are unable to reach amicable settlement (whether by Conciliation to be conducted as provided in Clause 14.1 herein above or otherwise) in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the Contract; or, the respective rights and liabilities of the Parties; or, in relation to interpretation of any provision of the Contract; or, in any manner touching upon the Contract (hereinafter referred to as the ‘Dispute’), then, either Party may, refer the disputes to **Madras High Court, Arbitration Centre (MHCAC)** and such dispute to be adjudicated by Sole Arbitrator appointed in accordance with the Rules of said Arbitral Institution.

21.2.2 A party willing to commence arbitration proceeding shall invoke Arbitration Clause by giving notice to the other party in terms of section 21 of the Arbitration & Conciliation Act, 1996 (hereinafter referred to as the ‘Notice’) before referring the matter to arbitral institution. The Notice shall be addressed to the Head of the Unit, BHEL, executing the Contract and shall contain the particulars of all claims to be referred to arbitration with sufficient detail and shall also indicate the monetary amount of such claim including interest, if any.

21.2.3 After expiry of 30 days from the date of receipt of aforesaid notice, the party invoking the Arbitration shall submit that dispute to the Arbitral Institution- **Madras High Court, Arbitration Centre (MHCAC)**- and that dispute shall be adjudicated in accordance with their respective Arbitration Rules. The matter shall be adjudicated by a Sole Arbitrator who shall necessarily be a Retd Judge having considerable experience in commercial matters to be appointed/nominated by the respective institution. The cost/expenses pertaining to the said Arbitration shall also be governed in accordance with the Rules of the respective Arbitral Institution. The decision of the party invoking the Arbitration for reference of dispute to **Madras High Court, Arbitration Centre (MHCAC)**- for adjudication of that dispute shall be final and binding on both the parties and shall not be subject to any change thereafter. The institution once selected at the time of invocation of dispute shall remain unchanged.

21.2.4 The fee and expenses shall be borne by the parties as per the Arbitral Institutional rules.

21.2.5 The Arbitration proceedings shall be in English language and the seat of Arbitration shall be **Trichy**.

21.2.6 Subject to the above, the provisions of Arbitration & Conciliation Act 1996 and any amendment thereof shall be applicable. All matters relating to this Contract and arising out of invocation of Arbitration clause are subject to the exclusive jurisdiction of the Court(s) situated at **Trichy**.

21.2.7 Notwithstanding any reference to the Designated Engineer or Conciliation or Arbitration herein, a. the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree. Settlement of Dispute clause cannot be invoked by the Contractor, if the Contract has been mutually closed or ‘No Demand Certificate’ has been furnished by the Contractor or any Settlement Agreement has been signed between the Employer and the Contractor.

21.2.8 It is agreed that Mechanism of resolution of disputes through arbitration shall be available only in the cases where the value of the dispute is less than Rs. 10 Crores.

21.2.9 In case the disputed amount Claim, Counter claim including interest is Rs. 10 crores and above, the parties shall be within their rights to take recourse to remedies other than Arbitration, as may be available to them under the applicable laws after prior intimation to the other party. Subject to the aforesaid conditions, provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications or re-enactment thereof as amended from time to time, shall apply to the arbitration proceedings under this clause.

21.2.10 In case, multiple arbitrations are invoked (whether sub-judice or arbitral award passed) by any party to under this contract, then the cumulative value of claims (including interest claimed or awarded) in all such arbitrations shall be taken in account while arriving at the total claim in dispute for the subject contract for the purpose of clause 14.2.9. Disputes having cumulative value of less than 10 crores shall be resolved through arbitration and any additional dispute shall be adjudicated by the court of competent jurisdiction.

	<p><b>21.3 In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:</b></p> <p>In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs)/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs &amp; Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD (Administrative Mechanism for Resolution)</p>	
<b>22</b>	<p><b>JURISDICTION</b></p> <p>Subject to clause 21 of this contract, the Civil Court having original Civil Jurisdiction at Tiruchirappalli, Tamilnadu shall alone have exclusive jurisdiction in regard to all matters in respect of the Contract.</p> <p><b>GOVERNING LAWS</b></p> <p>The contract shall be governed by the Law for the time being in force in the Republic of India.</p>	
<b>23</b>	<p><b>FORCE MAJEURE</b></p> <p>23.1 "Force Majeure" shall mean circumstance which is:</p> <ol style="list-style-type: none"> <li>beyond control of either of the parties to contract,</li> <li>either of the parties could not reasonably have provided against the event before entering into the contract,</li> <li>having arisen, either of the parties could not reasonably have avoided or overcome, and</li> <li>not substantially attributable to either of the parties and Prevents the performance of the contract, such circumstances include but shall not be limited to: <ol style="list-style-type: none"> <li>War, hostilities, invasion, act of foreign enemies.</li> <li>Rebellion, terrorism, revolution, insurrection, military or usurped power, or civil war.</li> <li>Riot, commotion or disorder by persons other than the contractor's personnel and other employees of the contractor and sub-contractors.</li> <li>Strike or lockout not solely involving the contractor's personnel and other employees of the contractor and sub-contractors.</li> <li>Encountering munitions of war, explosive materials, ionizing radiation or contamination by radio-activity, except as may be attributable to the contractor's use of such munitions, explosives, radiation or radio- activity.</li> <li>Natural catastrophes such as earthquake, tsunami, volcanic activity, hurricane or typhoon, flood, fire, cyclones etc.</li> <li>Epidemic, pandemic etc.</li> </ol> </li> </ol> <p>23.2 The following events are explicitly excluded from Force Majeure and are solely the responsibilities of the non-performing party: a) any strike, work-to-rule action, go-slow or similar labour difficulty (b) late delivery of equipment or material (unless caused by Force Majeure event) and (c) economic hardship.</p> <p>23.3 If either party is prevented, hindered or delayed from or in performing any of its obligations under the Contract by an event of Force Majeure, then it shall notify the other in writing of the occurrence of such event and the circumstances thereof within 15 (fifteen) days after the occurrence of such event.</p> <p>23.4 The party who has given such notice shall be excused from the performance or punctual performance of its obligations under the Contract for so long as the relevant event of Force Majeure continues and to the extent that such party's performance is prevented, hindered or delayed. The Time for Completion shall be extended by a period of time equal to period of delay caused due to such Force Majeure event.</p> <p>23.5 Delay or non-performance by either party hereto caused by the occurrence of any event of Force Majeure shall not</p> <ol style="list-style-type: none"> <li>Constitute a default or breach of the Contract.</li> <li>Give rise to any claim for damages or additional cost expense occasioned thereby, if and to the extent that such delay or non-performance is caused by the occurrence of an event of Force Majeure.</li> </ol> <p>23.6 BHEL at its discretion may consider short closure of contract after 1 year of imposition of Force Majeure in line with extant guidelines. In any case, Supplier/Vendor cannot consider deemed short-closure after 1 year of imposition of Force Majeure.</p>	

24	<b>Non-Disclosure Agreement:</b> The bidders shall enter into the Non-disclosure agreement separately. (Annexure 7 attached).					
25	<b>Cartel Formation</b>  The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.					
26	<b>Fraud Prevention Policy</b> Bidder along with its associate /collaborators /sub-contractors /sub-vendors / consultants / service providers shall strictly adhere to BHEL Fraud Prevention Policy displayed on BHEL website <a href="http://www.bhel.com">http://www.bhel.com</a> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.					
27	<b>Suspension of Business Dealings with Suppliers / Contractors:</b> The offers of the bidders who are under suspension as also the offers of the bidders, who engage the services of the banned firms / principal / agents, shall be rejected. The list of banned firms is available on BHEL website <a href="http://www.bhel.com">www.bhel.com</a> .  If any bidder / supplier / contractor during pre-tendering / tendering / post tendering / award /execution / post-execution stage indulges in any act, including but not limited to, mal-practices, cheating, bribery, fraud or and other misconduct or formation of cartel so as to influence the bidding process or influence the price or tampers the tendering process or acts or omits in any manner which tantamount to an offence punishable under any provision of the Indian Penal Code, 1860( Bhartiya Nyaya Samhita 2023) or any other law in force in India, or does anything which is actionable under the Guidelines for Suspension of Business dealings, action may be taken against such bidder / supplier / contractor as per extant guidelines of the company available on <a href="http://www.bhel.com">www.bhel.com</a> and / or under applicable legal provisions. Guidelines for suspension of business dealings is available in the webpage: <a href="http://www.bhel.com/vender_registration/vender.php">http://www.bhel.com/vender_registration/vender.php</a> .					
28	<div>Bid should be free from correction, overwriting, using corrective fluid, etc. Any interlineation, cutting, erasure or overwriting shall be valid only if they are attested under full signature(s) of person(s) signing the bid else bid shall be liable for rejection. In the event of any Technical or Commercial queries, the same may please be addressed to the following BHEL concerned before Part I opening-</div> <table><tr><td>Kevin Ark Kumar</td><td>Sala Manasa</td></tr><tr><td>0431-2578109</td><td>0431-2574366</td></tr></table>	Kevin Ark Kumar	Sala Manasa	0431-2578109	0431-2574366	
Kevin Ark Kumar	Sala Manasa					
0431-2578109	0431-2574366					
29	<b>Order of Precedence:</b> In the event of any ambiguity or conflict between the Tender Documents, the order of precedence shall be in the order below:  a. Amendments/Clarifications/Corrigenda/Errata etc. issued in respect of the tender documents by BHEL. b. Buyer Added Bid Specific ATC c. Bid Technical Conditions of Contract (TCC) d. GTC					
30	<b>Note:</b>  1. In the event of our customer order covering this tender being cancelled /placed on hold /otherwise modified, BHEL would be constrained to accordingly cancel / hold / modify the tender at any stage of execution. 2. BHEL may negotiate the L1 rate, if not meeting our budget / estimated cost. BHEL may re-float the tender opened, if L1 price is not acceptable to BHEL even after negotiation. Any deviation from the conditions specified in TECHNO-COMMERCIAL TERMS AND CONDITIONS - Annexure-A, will lead to rejection of offer. 3. Any change in applicable rates of Tax or any other statutory levies (Direct / Indirect) or any new introduction of any levy by means of statute and its corresponding liability for the deliveries beyond the agreed delivery date for reasons not attributable to BHEL will be to vendors account. BHEL will not reimburse the same and any subsequent claim in this respect will be summarily rejected. 4. BHEL reserves its right to reject an offer due to unsatisfactory past performance by the respective Vendor in the execution of any contract to any BHEL project / Unit.					

	<p>5. The offers of the bidders who are under suspension and also the offers of the bidders, who engage the services of the banned firms /principal/agents, shall be rejected. The list of banned firms is available on BHEL web site <a href="http://www.bhel.com">www.bhel.com</a>.</p> <p>6. Recovery / deduction as applicable as per Direct and Indirect taxes as notified by Govt. Of India from time to time will be made and information/certificate for such deduction/recoveries shall be provided by BHEL to the vendor.</p>	
<b>31</b>	<p><b>Enclosure:</b></p> <p>Annexure-1: Check List.</p> <p>Annexure-2: Offer forwarding letter / tender submission letter</p> <p>Annexure-3: No Deviation Certificate</p> <p>Annexure-4: Declaration regarding Insolvency/ Liquidation/ Bankruptcy Proceedings</p> <p>Annexure-5: Declaration by Authorized Signatory</p> <p>Annexure-6: Declaration by Authorized Signatory regarding Authenticity of submitted Documents</p> <p>Annexure-7: Non-Disclosure Certificate</p> <p>Annexure-8: Integrity Pact</p> <p>Annexure-9: Declaration confirming knowledge about Site Conditions</p> <p>Annexure-10: Declaration reg. Related Firms &amp; their areas of Activities</p> <p>Annexure-11: Declaration for relation in BHEL</p> <p>Annexure- 12: Declaration reg. minimum local content in line with revised public procurement</p> <p>Annexure- 13: Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017</p> <p>Annexure-14: Bank Account Details for E-Payment</p> <p>Annexure-15: Power of Attorney for submission of tender.</p> <p>Annexure-16: Proforma of Bank Guarantee for Earnest Money.</p> <p>Annexure-17: Proforma of Bank Guarantee for Performance Security.</p> <p>Annexure-18: List of Consortium Bank.</p>	
<p style="text-align: right;">Signature and seal</p>		

ANNEXURE- 1CHECK LIST

NOTE: - Suppliers are required to fill in the following details in their Letterhead and no column should be left blank

A	Name and Address of the Supplier		
B	GSTN No. the Supplier (Place of Execution of Contract / Purchase Order)		
C	Details of Contact person for this Tender	Name: Mr./ Ms. Designation: Telephone No: Mobile No: Email ID:	
D	EMD DETAILS		
E	DESCRIPTION	APPLICABILITY (BY BHEL)	ENCLOSED BY BIDDER
i.	Whether Pre - Qualification Criteria is understood and provided proper supporting documents.	Applicable	YES / NO
ii.	Whether all pages of the Tender documents including annexures, appendices etc are read and understood	Applicable	YES / NO
iii.	Audited Balance Sheet and profit & Loss Account for the last three years	Not Applicable	YES / NO
iv.	Copy of PAN Card & GST registration	Applicable	YES / NO
v.	Submission of MSE certificate as specified in Tender	If Applicable	YES / NO
vi.	Offer forwarding letter / tender submission letter as per Annexure 2	Not Applicable	YES / NO
vii.	Submission of Certificate of No Deviation as per Annexure 3	Applicable	YES / NO
viii.	Declaration regarding Insolvency/ Liquidation/ Bankruptcy Proceedings as per Annexure 4	Applicable	YES / NO
ix.	Declaration by Authorized Signatory as per Annexure 5	Not Applicable	YES / NO
x.	Declaration by Authorized Signatory regarding Authenticity of submitted Documents Annexure 6	Not Applicable	YES / NO

xi.	Submission of Non-Disclosure Certificate as per Annexure 7	Not Applicable	YES / NO
xii.	Submission of Integrity Pact as specified in Tender as per Annexure 8	Not Applicable	YES / NO
xiii.	Declaration confirming knowledge about Site Conditions as per Annexure 9	Not Applicable	YES / NO
xiv.	Declaration reg. Related Firms & their areas of Activities as per Annexure 10	Applicable	YES / NO
xv.	Declaration for relation in BHEL as per Annexure 11	Applicable	YES / NO
xvi.	Declaration reg. minimum local content in line with revised public procurement as per Annexure 12	Applicable	YES / NO
xvii.	Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017 as per Annexure 13	Applicable	YES / NO
xviii.	Bank Account Details for E-Payment as per Annexure 14	Applicable	YES / NO
xix.	Power of Attorney for submission of tender as per Annexure 15	Not Applicable	YES / NO
xx.	Proforma of Bank Guarantee for Earnest Money as per Annexure 16	Not Applicable	YES / NO

NOTE strike off 'YES' or 'NO', as applicable. Tender not accompanied by the prescribed above applicable documents are liable to be summarily rejected.

DATE :

Sign. of the AUTHORISED SIGNATORY  
(With Name, Designation and Company seal)



**ANNEXURE - 2****OFFER FORWARDING LETTER / TENDER SUBMISSION LETTER**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

-----  
-----  
Offer Reference No: .....

Date: .....

To,

(Write Name &amp; Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Submission of Offer against GeM Bid No: .....

Having examined the tender documents against your GeM Bid No. \_\_\_\_\_ dated \_\_\_\_\_ and having understood the provisions of the said tender documents and having thoroughly studied the requirements of BHEL related to the work tendered for, in connection with \_\_\_\_\_ (name of work & project site), we hereby submit our offer for the proposed work in accordance with terms and conditions mentioned in the tender documents, at the prices quoted by us and as per the indicated delivery schedule.

Should our Offer be accepted by BHEL for Award, I/we further agree to furnish 'Performance Security' for the work as provided for in the Tender Conditions within the stipulated time as may be indicated by BHEL.

I/We further agree to execute all the works referred to in the said Tender documents upon the terms and conditions contained or referred to therein and as detailed in the appendices annexed thereto.

I/We have deposited herewith the requisite Earnest Money Deposit (EMD) as per details furnished in the Check List.

**Authorised Representative of Bidder**

Signature:

Name:

Address:

Place:

Date:

**ANNEXURE- 3**

**CERTIFICATE OF NO DEVIATION**

(To be Typed & submitted in the Letter Head of the Company/Firm of Bidder)

-----  
-----  
To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Subject: **No Deviation Certificate**

Ref: 1) GeM Bid No: .....  
2) All other pertinent issues till date

We hereby confirm that we have not changed/ modified/materially altered any of the tender documents as downloaded from the website/ issued by BHEL and in case of such observance at any stage, it shall be treated as null and void.

We also hereby confirm that we have neither set any Terms and Conditions and nor have we taken any deviation from the Tender conditions together with other references applicable for the above referred GeM Bid.

We further confirm our unqualified acceptance to all Terms and Conditions, unqualified compliance to Tender Conditions.

We confirm to have submitted offer in accordance with tender instructions and as per aforesaid references.

Thanking you,

Yours faithfully,

**(Signature, date & seal of authorized  
representative of the bidder)**

Date:  
Place:

**ANNEXURE- 4****UNDERTAKING**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

-----  
-----  
**To,**

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir/Madam,

**Sub: DECLARATION REGARDING INSOLVENCY/ LIQUIDATION/ BANKRUPTCY PROCEEDINGS**

**Ref:** GeM Bid Specification No:

I/We, \_\_\_\_\_ declare that,

I/We am/are not admitted under insolvency resolution process or liquidation under Insolvency and Bankruptcy Code, 2016, as amended from time to time or under any other law as on date, by NCLT or any adjudicating authority/authorities.

**Sign. of the AUTHORISED SIGNATORY  
(With Name, Designation and Company seal)**

Place:

Date:

**ANNEXURE – 5**

**DECLARATION BY AUTHORISED SIGNATORY OF BIDDER**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

-----  
To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: **Declaration by Authorised Signatory**

Ref: 1) GeM Bid Specification No: .....

2) All other pertinent issues till date

I/We, hereby certify that all the information and data furnished by me with regard to the above Tender Specification are true and complete to the best of my knowledge. I have gone through the specifications, conditions, stipulations and all other pertinent issues till date, and agree to comply with the requirements and Intent of the specification.

I further certify that I am authorised to represent on behalf of my Company/Firm for the above mentioned tender and a valid Power of Attorney to this effect is also enclosed.

Yours faithfully,

(Signature, Date & Seal of Authorized  
Signatory of the Bidder)

Date:

Enclosed: Power of Attorney

**ANNEXURE – 6****DECLARATION BY AUTHORISED SIGNATORY OF BIDDER**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

-----  
-----  
To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub : **Declaration by Authorised Signatory regarding Authenticity of submitted documents.**

Ref : 1) GeM Bid No. & Date: .....

2) All other pertinent issues till date

I/We, hereby certify that all the documents submitted by us in support of possession of "Qualifying Requirements" are true copies of the original and are fully compliant required for qualifying / applying in the bid and shall produce the original of same as and when required by Bharat Heavy Electricals Limited.

I / We hereby further confirm that no tampering is done with documents submitted in support of our qualification as bidder. I / We understand that at any stage (during bidding process or while executing the awarded contract) if it is found that fake / false / forged bid qualifying / supporting documents / certificates were submitted, it would lead to summarily rejection of our bid / termination of contract. BHEL shall be at liberty to initiate other appropriate actions as per the terms of the Bid / Contract and other extant policies of Bharat Heavy Electricals Limited.

Yours faithfully,

**(Signature, Date & Seal of Authorized  
Signatory of the Bidder)**

**Date:**

**ANNEXURE- 7****NON-DISCLOSURE CERTIFICATE**

(To be Typed &amp; submitted in the Letter Head of the Company/Firm of Bidder)

-----

I/We understand that BHEL <PS- Region> is committed to Information Security Management System as per their Information Security Policy.

Hence,

I/We

M/s

-----

who are submitting offer for providing services to BHEL <PS- Region> against GeM Bid No..... hereby undertake to comply with the following in line with Information Security Policy of <PS- Region>.

- To maintain confidentiality of documents & information which shall be used during the execution of the Contract.
- The documents & information shall not be revealed to or shared with third party which shall not be in the business interest of BHEL <PS- Region>.

**(Signature, date & seal of Authorized  
Signatory of the bidder)**

**Date:**

**ANNEXURE – 8****INTEGRITY PACT****Between**

Bharat Heavy Electricals Ltd. (BHEL), a company registered under the Companies Act 1956 and having its registered office at "BHEL House", Siri Fort, New Delhi - 110049 (India) hereinafter referred to as "The Principal", which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the ONE PART

**and**

\_\_\_\_\_, (description of the party along with address), hereinafter referred to as "The Bidder/ Contractor" which expression unless repugnant to the context or meaning hereof shall include its successors or assigns of the OTHER PART

**Preamble**

The Principal intends to award, under laid-down organizational procedures, contract/s for

\_\_\_\_\_. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

In order to achieve these goals, the Principal will appoint Independent External Monitor(s), who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

**Section 1- Commitments of the Principal**

1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:-

- 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
- 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through

which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.

1.1.3 The Principal will exclude from the process all known prejudiced persons.

1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

## **Section 2 - Commitments of the Bidder(s)/ Contractor(s)**

2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant Indian Penal Code (IPC) and Prevention of Corruption Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

2.1.4 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.



2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

### **Section 3 - Disqualification from tender process and exclusion from future contracts**

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors", framed by the Principal.

### **Section 4 - Compensation for Damages**

4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/ Bid Security.

4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/ Performance Bank Guarantee, whichever is higher.

### **Section 5 - Previous Transgression**

5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

### **Section 6 - Equal treatment of all Bidders/ Contractors / Sub-contractors**

6.1 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.

6.2 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

### **Section 7 - Criminal Charges against violating Bidders/ Contractors /Subcontractors**

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

## **Section 8 -Independent External Monitor(s)**

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality in line with Non- disclosure agreement.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission,

in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.

8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.

8.9 IEM should examine the process integrity; they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.

8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

8.12 The word 'Monitor' would include both singular and plural.

## **Section 9 - Pact Duration**

9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.

9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

## **Section 10 - Other Provisions**

10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

10.4 Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

10.5 Only those bidders / contractors who have entered into this agreement with the Principal would be competent to participate in the bidding. In other words, entering into this agreement would be a preliminary qualification.

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For & On behalf of the Principal

For & On behalf of the Bidder/ Contractor

(Office Seal)

(Office Seal)

Place-----

Date-----

Witness:\_\_\_\_\_

Witness:\_\_\_\_\_

(Name & Address) \_\_\_\_\_

(Name & Address) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**ANNEXURE – 9****DECLARATION CONFIRMING KNOWLEDGE ABOUT SITE CONDITIONS**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder)

-----  
To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

Sub: Declaration confirming knowledge about Site conditions

Ref: 1) GeM Bid Specification No: .....

2) All other pertinent issues till date

I/We, \_\_\_\_\_ hereby declare and confirm that we have visited the Project Site as referred in BHEL Tender Specifications and acquired full knowledge and information about the Site conditions including Wage structure, Industrial Climate, the Law & Order and other conditions prevalent at and around the Site. We further confirm that the above information is true and correct and we shall not raise any claim of any nature due to lack of knowledge of Site conditions.

I/We, hereby offer to carry out work as detailed in above mentioned Tender Specification, in accordance with Terms & Conditions thereof.

Yours faithfully,

**(Signature, Date & Seal of Authorized  
Representative of the Bidder)**

Date:

Place:

**ANNEXURE – 10****DECLARATION**

Date: \_\_\_\_\_

To,

(Write Name &amp; Address of Officer of BHEL inviting the Tender)

Dear Sir/ Madam,

Sub: **Details of related firms and their area of activities**

Please find below details of firms owned by our family members that are doing business/ registered for same item with BHEL, \_\_\_\_\_ (NA, if not applicable)

1	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
2	Material Category/ Work Description	
	Name of Firm	
	Address of Firm	
	Nature of Business	
	Name of Family Member	
	Relationship	
...		

**Note: I certify that the above information is true and I agree for penal action from BHEL in case any of the above information furnished is found to be false.**

Regards,

(\_\_\_\_\_)

From: M/s \_\_\_\_\_

Supplier Code: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**ANNEXURE – 11****DECLARATION FOR RELATION IN BHEL**

(To be typed and submitted in the Letter Head of the Company/Firm of Bidder failing which the offer of Bidder is liable to be summarily rejected)

-----  
To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

**Sub: Declaration for relation in BHEL**

**Ref:** 1) GeM Bid Specification No: .....

I/We hereby submit the following information pertaining to relation/relatives of Proprieter/Partner(s)/ Director(s) employed in BHEL

**Tick (✓) any one as applicable:**

1. The Proprieter, Partner(s), Director(s) of our Company/Firm DO NOT have any relation or relatives employed in BHEL

OR

2. The Proprieter, Partner(s), or Director(s) of our Company/Firm HAVE relation/relatives employed in BHEL and their particulars are as below:

i.

ii.

**(Signature, Date & Seal of Authorized  
Signatory of the Bidder)**

Note:

1. Attach separate sheet, if necessary.
2. If BHEL Management comes to know at a later date that the information furnished by the Bidder is false, BHEL reserves the right to take suitable against the Bidder/Contractor.



**ANNEXURE – 12**

**DECLARATION REGARDING MINIMUM LOCAL CONTENT IN LINE WITH  
REVISED PUBLIC PROCUREMENT (PREFERENCE TO MAKE IN INDIA), ORDER 2017 DATED 04<sup>TH</sup>  
JUNE, 2020 AND SUBSEQUENT ORDER(S)**

(To be typed and submitted in the Letter Head of the Entity/Firm providing certificate as applicable)

-----  
-----  
To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

**Sub:** Declaration reg. minimum local content in line with Public Procurement (Preference to Make in India), Order 2017-Revision, dated 04<sup>th</sup> June, 2020 and subsequent order(s).

**Ref:** 1) GeM Bid Specification No: .....  
2) All other pertinent issues till date

We hereby certify that the items/works/services offered by..... *(specify the name of the organization here)* has a local content of \_\_\_\_\_ % and this meets the local content requirement for '**Class-I local supplier**' / '**Class II local supplier**' \*\* as defined in Public Procurement (Preference to Make in India), Order 2017-Revision dated 04.06.2020 issued by DPIIT and subsequent order(s).

The details of the location(s) at which the local value addition is made are as follows:

- |          |          |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| ...      |          |

Thanking you,  
Yours faithfully,

**(Signature, Date & Seal of  
Authorized Signatory of the Bidder)**

\*\* - Strike out whichever is not applicable.

**Note:**

1. Bidders to note that above format, duly filled & signed by authorized signatory, shall be submitted along with the techno-commercial offer.
2. In case the bidder's quoted value is in excess of Rs. 10 crores, the authorized signatory for this declaration shall necessarily be the statutory auditor or cost auditor of the company (in the case of companies) or a practising cost accountant or practicing chartered accountant (in respect of suppliers other than companies).
3. In the event of false declaration, actions as per the above order and as per BHEL Guidelines shall be initiated against the bidder.

**ANNEXURE – 13****DECLARATION REGARDING COMPLIANCE TO RESTRICTIONS UNDER RULE 144 (xi) OF GFR 2017**

(To be typed and submitted in the Letter Head of the Entity/ Firm providing certificate as applicable)

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-----

To,

(Write Name & Address of Officer of BHEL inviting the Tender)

Dear Sir,

**Sub:** Declaration regarding compliance to Restrictions under Rule 144 (xi) of GFR 2017

**Ref:** 1) GeM Bid Specification No: .....  
2) All other pertinent issues till date

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that \_\_\_\_\_ (**SPECIFY THE NAME OF THE ORGANIZATION HERE**), is not from such a country/ has been registered with the Competent Authority (*attach valid registration by the Competent Authority, i.e., the Registration Committee constituted by the Dept. for Promotion of Industry and Internal Trade (DPIIT).*

I hereby certify that we fulfil all requirements in this regard and is eligible to be considered.

Thanking you,  
Yours faithfully,

**(Signature, Date & Seal of  
Authorized Signatory of the Bidder)**

**Note:** Bidders to note that in case above certification given by a bidder, whose bid is accepted, is found to be false, then this would be a ground for immediate termination and for taking further action in accordance with law and as per BHEL guidelines.

**ANNEXURE – 14**

**BANK ACCOUNT DETAILS FOR E-PAYMENT**

(To be given on Letter head of the Company /Firm of Bidder, and **ENDORSED (SIGNED & STAMPED)**  
**BY THE BANK** to enable BHEL release payments through Electronic Fund Transfer (EFT/RTGS))

-----

1. Beneficiary Name :
  
2. Beneficiary Account No. :
  
3. Bank Name & Branch :
  
4. City/Place :
  
5. 9 digit MICR Code of Bank Branch :
  
6. IFSC Code of Bank Branch :
  
7. Beneficiary E-mail ID :  
(for payment confirmation)

**NOTE:** In case Bank endorsed certificate regarding above has already been submitted earlier, kindly submit photocopy of the same

**ANNEXURE – 15****POWER OF ATTORNEY for SUBMISSION OF TENDER**

(To be typed on non-judicial stamp paper of minimum Rs. 100/- and Notarized)

KNOW ALL MEN BY THESE PRESENTS, that I/We do hereby make, nominate, constitute and appoint Mr. ...., whose signature given below herewith to be true and lawful Attorney of M/s..... hereinafter called 'Company', for submitting Tender/entering into Contract and inter alia, sign, execute all papers and to do necessary lawful acts on behalf of Company with M/s Bharat Heavy Electricals Ltd, Central Procurement Cell (CPC), in connection with.....vide GeM Bid No: \_\_\_\_\_, dated \_\_\_\_\_.

And the Company do hereby agree to ratify and confirm all acts, deeds, things or proceedings as may be lawfully done by the said attorney and by or on behalf of the company and in the name of the company, by virtue of the powers conferred herein and the same shall be binding on the company and shall have full force and effect.

IN WITNESS WHEREOF, the common seal of the company has been hereunto affixed in the manner hereinafter appearing on the document.

Dated at \_\_\_\_\_, this \_\_\_\_\_ day of \_\_\_\_\_

Director/CMD/Partner/Proprietor

Signature of Mr. .... (Attorney)

Attested by: Director/CMD/Partner/Proprietor

Witness

Notary Public

**ANNEXURE – 16****PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY**

(On non-Judicial paper of appropriate value)

Bank Guarantee No.....

Date.....

**To**

(Employer's Name and Address)

.....

Dear Sirs,

In accordance with the terms and conditions of Invitation for Bids/Notice Inviting Tender No.....<sup>1</sup>(Tender Conditions), M/s. .... having its registered office at .....<sup>2</sup> (hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of.....<sup>3</sup> invited by .....<sup>4</sup>(name of the Employer) through its Unit at .....(

The Tender Conditions provide that the Tenderer shall pay a sum of Rs ..... as Earnest Money Deposit in the form therein mentioned. The form of payment of Earnest Money Deposit includes Bank Guarantee executed by a Scheduled Bank.

In lieu of the stipulations contained in the aforesaid Tender Conditions that an irrevocable and unconditional Bank Guarantee against Earnest Money Deposit for an amount of .....<sup>5</sup> ..... is required to be submitted by the Tenderer as a condition precedent for participation in the said Tender and the Tenderer having approached us for giving the said Guarantee,

we, the .....[Name & address of the Bank]

..... having our Registered Office at

.....(hereinafter referred to as the Bank) being the Guarantor under this

Guarantee, hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer without any demur, merely on your first demand any sum or sums of Rs.

.....<sup>5</sup> (in words Rupees.....) without any reservation, protest, and recourse and without the beneficiary needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor/Contractor/Vendors in any suit or proceeding pending before any Court or Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer shall have no claim against us for making such payment.

We ..... Bank further agree that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend the time of submission of from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Tenderer and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Tenderer or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Tenderer or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Tenderer and notwithstanding any security or other guarantee that the Employer may have in relation to the Tenderer's liabilities.

This Guarantee shall be irrevocable and shall remain in force upto and including.....<sup>6</sup> and shall be extended from time to time for such period as may be desired by the Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Tenderer but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the .....<sup>7</sup> we shall be discharged from all liabilities under this Guarantee.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at ..... shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

We, ..... Bank lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a. The liability of the Bank under this Guarantee shall not exceed.....<sup>5</sup> .....
- b. This Guarantee shall be valid up to .....<sup>6</sup>

- c. Unless the Bank is served a written claim or demand on or before \_\_\_\_\_<sup>7</sup> all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of  
(Name of the Bank)

Date.....

Place of Issue.....

<sup>1</sup> *Details of the Invitation to Bid/Notice Inviting Tender*

<sup>2</sup> *Name and Address of the Tenderer*

<sup>3</sup> *Details of the Work*

<sup>4</sup> *Name of the Employer*

<sup>5</sup> *BG Amount in words and Figures*

<sup>6</sup> *Validity Date*

<sup>7</sup> *Date of Expiry of Claim Period*

#### **Notes:**

1. Units are advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Contractor/sub-contractor /vendor/ Bank issuing the guarantee.
3. In line with the GCC, SCC or contractual terms, Unit may carry out minor modifications in the Standard BG Formats. If required, such modifications may be carried out after taking up appropriately with the Unit/Region's Law Deptt.
4. **In Case of Bank Guarantees submitted by Foreign Vendors-**
  - a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e., Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
  - b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**



**b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

**b.2 In case, Foreign Vendors intend to provide BG from** Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.

**b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

**ANNEXURE – 17****BANK GUARANTEE FOR PERFORMANCE SECURITY**

(On non-Judicial paper of appropriate value)

Bank Guarantee No:

Date:

To

NAME

&amp; ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at \_\_\_\_\_<sup>1</sup> through its Unit at.....(name of the Unit) having awarded to ( Name of the Vendor / Contractor / Supplier) with its registered office at \_\_\_\_\_<sup>2</sup> hereinafter referred to as the ' Vendor / Contractor / Supplier ', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated .....<sup>3</sup> valued at Rs.....<sup>4</sup> (Rupees -----) / FC.....(in words.....) for .....<sup>5</sup> (hereinafter called the 'Contract') and the Vendor / Contractor / Supplier having agreed to provide a Contract Performance Bank Guarantee, equivalent to .....% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

We, ....., (hereinafter referred to as the Bank), having registered/Head office at ..... and inter alia a branch at ..... being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer any sum or sums upto a maximum amount of Rs -----<sup>6</sup> ( Rupees -----) without any demur, immediately on first demand from the Employer and without any reservation, protest, and recourse and without the Employer needing to prove or demonstrate reasons for its such demand.

Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. \_\_\_\_\_.

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Vendor / Contractor / Supplier in any suit or proceeding pending before any Court or

Tribunal, Arbitrator or any other authority, our liability under this present being absolute and unequivocal.

The payment so made by us under this Guarantee shall be a valid discharge of our liability for payment thereunder and the Vendor / Contractor / Supplier shall have no claim against us for making such payment.

We the .....bank further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/ satisfactory completion of the performance guarantee period as per the terms of the Contract and that it shall continue to be enforceable till all the dues of the Employer under or by virtue of the said Contract have been fully paid and its claims satisfied or discharged.

We .....BANK further agree with the Employer that the Employer shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract or to extend time of performance by the said Vendor / Contractor / Supplier from time to time or to postpone for any time or from time to time any of the powers exercisable by the Employer against the said Vendor / Contractor / Supplier and to forbear or enforce any of the terms and conditions relating to the said Contract and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said Vendor / Contractor / Supplier or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said Vendor / Contractor / Supplier or by any such matter or thing whatsoever which under the law relating to sureties would but for this provision have effect of so relieving us.

The Bank also agrees that the Employer at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Vendor / Contractor / Supplier and notwithstanding any security or other guarantee that the Employer may have in relation to the Vendor / Contractor / Supplier 's liabilities.

This Guarantee shall remain in force upto and including.....<sup>7</sup> and shall be extended from time to time for such period as may be desired by Employer.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Vendor / Contractor / Supplier but shall in all respects and for all purposes be binding and operative until payment of all money payable to the Employer in terms thereof.

Unless a demand or claim under this guarantee is made on us in writing on or before the .....<sup>8</sup> we shall be discharged from all liabilities under this guarantee thereafter.

This Bank Guarantee shall be governed, construed and interpreted in accordance with the laws of India.

Courts at ..... shall alone have exclusive jurisdiction over any matter arising out of or in connection with this Bank Guarantee

We, ..... BANK lastly undertake not to revoke this guarantee during its currency except with the previous consent of the Employer in writing.

Notwithstanding anything to the contrary contained hereinabove:

- a. The liability of the Bank under this Guarantee shall not exceed.....<sup>6</sup>
- b. This Guarantee shall be valid up to .....<sup>7</sup>
- c. Unless the Bank is served a written claim or demand on or before .....<sup>8</sup> all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, \_\_\_\_\_ Bank, have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

For and on behalf of  
(Name of the Bank)

Dated.....

Place of Issue.....

<sup>1</sup> NAME AND ADDRESS OF EMPLOYER i.e., Bharat Heavy Electricals Limited

<sup>2</sup> NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

<sup>3</sup> DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

<sup>4</sup> CONTRACT VALUE

<sup>5</sup> PROJECT/SUPPLY DETAILS

<sup>6</sup> BG AMOUNT IN FIGURES AND WORDS

<sup>7</sup> VALIDITY DATE

<sup>8</sup> DATE OF EXPIRY OF CLAIM PERIOD

#### **Note:**

1. Units are advised that expiry of claim period may be kept 3-6 months after validity date. It may be ensured that the same is in line with the agreement/ contract entered with the Vendor.
2. The BG should be on Non-Judicial Stamp paper/e-stamp paper of appropriate value as per Stamp Act prevailing in the State(s) where the BG is submitted or is to be acted upon or the rate prevailing in the State where the BG was executed, whichever is higher. The Stamp Paper/e-stamp paper shall be purchased in the name of Vendor/Contractor/Supplier /Bank issuing the guarantee.
3. In line with the GCC, SCC or contractual terms, Unit may carry out minor modifications in the Standard BG Formats. If required, such modifications may be carried out after taking up appropriately with the Unit/Region's Law Deptt.
4. **In Case of Bank Guarantees submitted by Foreign Vendors-**
  - a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e.

Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.

**b. From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**

**b.1** In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter-Guarantee by Foreign Bank in favour of the Indian Bank's (BHEL's Consortium Bank) branch in India. It is advisable that all charges for issuance of Bank Guarantee/ counter-Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.

**b.2 In case, Foreign Vendors intend to provide BG from** Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at **sl.no. b.1** will required to be followed.

**b.3** The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). The BG Format provided to them should clearly specify the same.

**ANNEXURE – 18****LIST OF CONSORTIUM BANK**

<b>Sl. No.</b>	<b>NAME OF THE BANK</b>
1	State Bank of India
2	Canara Bank
3	IDBI Bank Limited
4	ICICI Bank Limited
5	HDFC Bank Limited
6	Axis Bank
7	IndusInd Bank Limited
8	Bank of Baroda
9	Exim Bank
10	Indian Bank
11	Punjab National Bank
12	Union Bank of India
13	Yes Bank Limited
14	RBL Bank Ltd.
15	Standard Chartered Bank
16	Indian Overseas Bank
17	Kotak Mahindra Bank Limited
18	Federal Bank Limited
19	Hongkong and Shanghai Banking Corporation Ltd