

Enqslno	Materialcode	Enquiry 3890051E : Item Description	Set No	Qty	Unit	Dely dt	Destination	Bidders' Response
1	RFW803160001	BUTTERFLY VALVE 50NPD LEVER TYPE, BODY A 126B, TRIM HASTELLOY-C, AS PER ANNEX UERE I-A SPEC REF MA\FGD-BFV\001.REV00	Set-I A	24	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
2	RFW803160002	BUTTERFLY VALVE 80NPD LEVER TYPE BODY A1 26B, TRIM HASTELLOY-C, AS PER ANNEX UERE I-A SPEC REF MA\FGD-BFV\001.REV 00	Set-I A	8	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
3	RFW803160003	BUTTERFLY VALVE 100NPD LEVER TYPE, BODY A126B, TRIM HASTELLOY-C, AS PER ANNEX UERE I-A SPEC REF MA\FGD-BFV\001.REV0 0	Set-I A	4	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
4	RFW803160004	BUTTERFLY VALVE 150NPD LEVER TYPE, BODY A126B, TRIM HASTELLOY-C, AS PER ANNEX UERE I-A SPEC REF MA\FGD-BFV\001.REV0 0	Set-I A	11	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
5	RFW803160005	BUTTERFLY VALVE 200NPD WHEEL WITH GEAR, BODY A126B, TRIM HASTELLOY-C, AS PER ANNEXUERE I-A SPEC REF MA\FGD-BF V\001.REV00	Set-I A	5	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
6	RFW803160006	BUTTERFLY VALVE 250NPD WHEEL WITH GEAR, BODY A126B, TRIM HASTELLOY-C, AS PE R ANNEXUERE I-A SPEC REF MA\FGD-BFV \001.REV00	Set-I A	6	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
7	RFW803160007	BUTTERFLY VALVE 350NPD WHEEL WITH GEAR, BODY A126B, TRIM HASTELLOY-C, AS P ER ANNEXUERE I-A SPEC REF MA\FGD-BFV \001.REV00	Set-I A	4	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
8	RFW803160008	BUTTERFLY VALVE 500NPD WHEEL WITH GEAR, BODY A126B, TRIM HASTELLOY-C, AS PE R ANNEXUERE I-A SPEC REF MA\FGD-BFV \001.REV00	Set-I A	2	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
9	RFW803160009	BUTTERFLY VALVE 50NPD LEVER TYPE BODY A1 26B, TRIM A351-CF8M, AS PER ANNEXUE RE I-B SPEC REF MA\FGD-BFV\001.REV0 0	Set-I B	6	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
10	RFW803160010	BUTTERFLY VALVE 80NPD LEVER TYPE BODY A1 26B, TRIM A351-CF8M, AS PER ANNEXUE RE I-B SPEC REF REF MA\FGD-BFV\001: REV00	Set-I B	6	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
11	RFW803160011	BUTTERFLY VALVE 125NPD LEVER TYPE BODY A 126B, TRIM A351-CF8M, AS PER ANNEXUE RE I-B SPEC REF MA\FGD-BFV\001:REV0 0	Set-I B	2	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
12	RFW803160012	BUTTERFLY VALVE 150NPD LEVER TYPE BODY A 126B, TRIM A351-CF8M, AS PER ANNEXUE RE I-B SPEC REF MA\FGD-BFV\001:REV0 0	Set-I B	18	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
13	RFW803160013	BUTTERFLY VALVE 200NPD WHEEL WITH GEAR, BODY A126B,TRIM A351-CF8M, AS PER ANNEXUERE I-B SPEC REF MA\FGD-BFV\001:REV0 0	Set-I B	6	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
14	RFW803160014	BUTTERFLY VALVE 50NPD LEVER TYPE BODY A2 16-WCB, TRIM 13CR, AS PER ANNEXUERE I - C SPEC REF MA\FGD-BFV\001:REV0 0	Set-I C	2	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
15	RFW803160015	BUTTERFLY VALVE 100NPD LEVER TYPE BODY A 216-WCB, TRIM 13CR, AS PER ANNEXUERE I - C SPEC REF REF MA\FGD-BFV\001: REV00	Set-I C	1	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
16	RFW803160016	BUTTERFLY VALVE 150NPD LEVER TYPE BODY A 216-WCB, TRIM 13CR, AS PER ANNEXUERE I - C SPEC REF REF MA\FGD-BFV\001: REV00	Set-I C	8	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
17	RFW803160017	BUTTERFLY VALVE 200NPD WHEEL WITH GEAR, BODY A216-WCB, TRIM 13CR, AS PER AN ANNEXUERE I-C SPEC REF MA\FGD-BFV\001.REV 00	Set-I C	8	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
18	RFW803160018	BUTTERFLY VALVE 300NPD WHEEL WITH GEAR, BODY A216-WCB, TRIM 13CR, AS PER AN ANNEXUERE I-C SPEC REF REF MA\FGD-BFV\001 .REV00	Set-I C	4	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
19	RFW803170001	BUTTERFLY VALVE 50NPD BODY A126B, TRIM HASTELLOY-C, AS PER ANNEXUERE I-D SPEC REF MA\FGD-BFV\001:REV0 0	Set-I D	72	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
20	RFW803170002	BUTTERFLY VALVE 65NPD BODY A126B, TRIM HASTELLOY-C, AS PER ANNEXUERE I-D SPEC REF MA\FGD-BFV\001:REV0 0	Set-I D	2	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
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28	RFW803170010	BUTTERFLY VALVE 100NPD BODY A126B, TRIM A351-CF8M, AS PER ANNEXUERE I- E SPEC REF MA\FGD-BFV\001:REV0 0	Set-I E	6	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
29	RFW803170011	BUTTERFLY VALVE 125NPD BODY A126B, TRIM A351-CF8M, AS PER ANNEXUERE I- E SPEC REF MA\FGD-BFV\001:REV0 0	Set-I E	4	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
30	RFW803170012	BUTTERFLY VALVE 150NPD BODY A126B, TRIM A351-CF8M, AS PER ANNEXUERE I- E SPEC REF MA\FGD-BFV\001:REV0 0	Set-I E	54	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
31	RFW803170013	BUTTERFLY VALVE 50NPD BODY A216-WCB, TRI M 13CR, AS PER ANNEXUERE I-F SPE C REF MA\FGD-BFV\001: REV00	Set-I F	4	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
32	RFW803170014	BUTTERFLY VALVE 100NPD BODY A216-WCB, TR IM 13CR, AS PER ANNEXUERE I-F SPEC REF MA\FGD-BFV\001:REV 00	Set-I F	2	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
33	RFW803170015	BUTTERFLY VALVE 150NPD BODY A216-WCB, TR IM 13CR, AS PER ANNEXUERE I-F SPEC REF MA\FGD-BFV\001:REV0 0	Set-I F	2	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
34	RFW803170016	BUTTERFLY VALVE 200NPD BODY A216-WCB, TR IM 13CR, AS PER ANNEXUERE I-F SPEC REF MA\FGD-BFV\001:REV0 0	Set-I F	4	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
35	RFW803180001	BUTTERFLY VALVE SIZE 100NPD BODY A126B, TRIM A351-CF8M, AS PER ANNEXUERE I- G SPEC REF MA\FGD-BFV\001:REV 00	Set-II	4	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
36	RFW803180002	BUTTERFLY VALVE SIZE 200NPD BODY A126B, TRIM A351-CF8M, AS PER ANNEXUERE I- G SPEC REF MA\FGD-BFV\001:REV0 0	Set-II	4	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
37	RFW803180003	BUTTERFLY VALVE 80NPD BODY A216-WCB, TRI M 13CR, AS PER ANNEXUERE I-H SPEC REF MA\FGD-BFV\001:REV0 0	Set-II	2	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	
38	RFW803180004	BUTTERFLY VALVE 150NPD BODY A216-WCB, TR IM 13CR, AS PER ANNEXUERE I-H SPEC REF MA\FGD-BFV\001:REV0 0	Set-II	2	NO	20-Jun-19	DOCK OFFICE/ROD/BHELICHENNAI SEAPORT	

Enq sno	Material code	ENQUIRY 3890051E - Item Description	Set No	Qty	Unit	Quoted Currency	Exchange Rate	Unit rate in Quoted Currency	Unit rate in INR	Total rate in INR
1	RFW803160001	BUTTERFLY VALVE 50NPD LEVER TYPE, BODY A 126B, TRIM HASTELLOY-C, AS PER ANNEX UERE I-A SPEC REF MAI-FGD-BFV:001:REV00	Set-I A	24	NO					
2	RFW803160002	BUTTERFLY VALVE 80NPD LEVER TYPE BODY A1 26B, TRIM HASTELLOY-C, AS PER ANNEX UERE I-A SPEC REF MAI-FGD-BFV:001:REV 00	Set-I A	8	NO					
3	RFW803160003	BUTTERFLY VALVE 100NPD LEVER TYPE, BODY A126B, TRIM HASTELLOY-C, AS PER ANNEX UERE I-A SPEC REF MAI-FGD-BFV:001:REV0 0	Set-I A	4	NO					
4	RFW803160004	BUTTERFLY VALVE 150NPD LEVER TYPE, BODY A126B, TRIM HASTELLOY-C, AS PER ANNEX UERE I-A SPEC REF MAI-FGD-BFV:001:REV0 0	Set-I A	11	NO					
5	RFW803160005	BUTTERFLY VALVE 200NPD WHEEL WITH GEAR, BODY A126B, TRIM HASTELLOY-C, AS PER ANNEXUERE I-A SPEC REF MAI-FGD-BF Y:001:REV00	Set-I A	5	NO					
6	RFW803160006	BUTTERFLY VALVE 250NPD WHEEL WITH GEAR, BODY A126B, TRIM HASTELLOY-C, AS PE R ANNEXUERE I-A SPEC REF MAI-FGD-BFV :001:REV00	Set-I A	6	NO					
7	RFW803160007	BUTTERFLY VALVE 350NPD WHEEL WITH GEAR, BODY A126B, TRIM HASTELLOY-C, AS P ER ANNEXUERE I-A SPEC REF MAI-FGD-BFV :001:REV00	Set-I A	4	NO					
8	RFW803160008	BUTTERFLY VALVE 500NPD WHEEL WITH GEAR, BODY A126B, TRIM HASTELLOY-C, AS PE R ANNEXUERE I-A SPEC REF MAI-FGD-BFV :001:REV00	Set-I A	2	NO					
9	RFW803160009	BUTTERFLY VALVE 50NPD LEVER TYPE BODY A1 26B, TRIM A351-CF8M, AS PER ANNEXUE RE I-B SPEC REF MAI-FGD-BFV:001:REV0 0	Set-I B	6	NO					
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15	RFW803160015	BUTTERFLY VALVE 100NPD LEVER TYPE BODY A 216-WCB, TRIM 13CR, AS PER ANNEXUERE I -C SPEC REF REF MAI-FGD-BFV:001:REV00	Set-I C	1	NO					
16	RFW803160016	BUTTERFLY VALVE 150NPD LEVER TYPE BODY A 216-WCB, TRIM 13CR, AS PER ANNEXUERE I -C SPEC REF REF MAI-FGD-BFV:001:REV00	Set-I C	8	NO					
17	RFW803160017	BUTTERFLY VALVE 200NPD WHEEL WITH GEAR, BODY A216-WCB, TRIM 13CR, AS PER AN NEXUERE I-C SPEC REF MAI-FGD-BFV:001:REV 00	Set-I C	8	NO					
18	RFW803160018	BUTTERFLY VALVE 300NPD WHEEL WITH GEAR, BODY A216-WCB, TRIM 13CR, AS PER AN NEXUERE I-C SPEC REF REF MAI-FGD-BFV:001 :REV00	Set-I C	4	NO					
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27	RFW803170009	BUTTERFLY VALVE 80NPD BODY A126B, TRIM A351-CF8M, AS PER ANNEXUERE I- E SPEC REF MAI-FGD-BFV:001:REV0 0	Set-I E	2	NO					
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29	RFW803170011	BUTTERFLY VALVE 125NPD BODY A126B, TRIM A351-CF8M, AS PER ANNEXUERE I- E SPEC REF MAI-FGD-BFV:001:REV0 0	Set-I E	4	NO					
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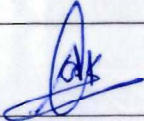
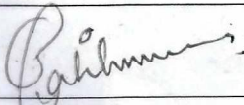
TECHNICAL SPECIFICATION FOR BUTTERFLY VALVE

CONFIDENTIAL

CUSTOMER : M/s. BIFPCL Bangladesh
PROJECT : Maitree 2X660MW
APPLICATION : FLUE GAS DESULPHURIZATION SYSTEM
Spec REF : MAI- FGD-BFV-001-REV 00



BHARAT HEAVY ELECTRICALS LIMITED
(A GOVT OF INDIA UNDERTAKING)
Flue Gas Desulphurization Group
Ranipet

Prepared	Checked	Approved
		
ASHISH KUSHWAHA DM - FGD	KABILASH K M SR ENGR. - FGD	KESAVAN V DGM-FGD
R00 dated 05-04-2019		



BUTTERFLY VALVES

MAI- FGD-BFV-001-REV 00

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6.0	MATERIAL OF CONSTRUCTION
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**1.0 PROJECT INFORMATION:**

a.	Owner	BIFPCL (BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (PVT.) LIMITED), Bangladesh
b.	Buyer	BHEL, Ranipet
c.	Process/Application	Flue Gas Desulphurization

Bangladesh-India Friendship Power Company (Pvt.) Ltd. (BIFPCL) is a 50: 50 Joint Venture Company of Bangladesh Power Development Board, Bangladesh (BPDB) and NTPC Limited, India (NTPC), incorporated under the laws of Bangladesh. BPDB is a statutory body constituted under the Bangladesh Water and Power Development Board Order 1972, and is vested with a significant portion of the generation and distribution of electricity in Bangladesh. NTPC Limited is a Maharatna company incorporated under the Indian Companies Act, and as India's largest power company, has a diversified portfolio covering the entire value chain of the power generation business. Pursuant to the implementation agreement dated April 20, 2013, as entered into between the Government of the People's Republic of Bangladesh, and BIFPCL, and the power purchase agreement also dated April 20, 2013, as entered into between BIFPCL and BPDB, BIFPCL has entrusted BHEL the development of the Coal fired 2x660 MW Maitree Super Thermal Power Project on Turnkey Basis at Rampal, Dist.-Bagerhat, Bangladesh, on the bank of river Possur, Bangladesh, for the purposes of supply and sale of electric power to BPDB. Wet Limestone FGD System is also envisaged by customer in this project to control SO₂ Emissions from the power plant. For the purposes of setting up the Wet Limestone FGD System for 2x660 MW Coal fired Power project at Rampal, BHEL is inviting bids from suitably qualified Bidders for Wet Dry Washing System, pursuant to and in accordance with these bidding documents.

A) SITE CONDITIONS

1.	Ambient Temperature and Relative Humidity		
a.	Average Site Condition ASC		
	Ambient Temperature	:	27.3 deg C
	Ambient Humidity	:	87%
	Ambient Pressure	:	1007.6 mbar
b.	Summer Site condition SSC		

	Ambient Temperature	:	36.9 deg C
	Ambient Humidity	:	60%
	Ambient Pressure	:	1007.9 mbar
c.	Winter Site condition WSC		
	Ambient Temperature	:	12.2 deg C
	Ambient Humidity	:	100 %
	Ambient Pressure	:	1017.2 mbar
d.	Reference Site condition RSC		
	Ambient Temperature	:	31 deg C
	Ambient Humidity	:	88%
	Ambient Pressure	:	1007 mbar
2.	Design ambient conditions for Electrical Systems		
a.	Maximum Design temperature (outdoor)	:	45 deg C
b.	Maximum daily average ambient shade temperature	:	38 deg C
c.	Maximum monthly average temperature (in the shade)	:	34.6 deg C
d.	Maximum annual average temperature (in the shade)	:	27.3 deg C
e.	Maximum design temperature of the electrical equipment installed indoors in air conditioned rooms	:	40 deg C
f.	Maximum design temperature of the electrical equipment installed indoors in non-air conditioned rooms	:	45 deg C
g.	Minimum design temperature	:	0 deg C
3.	Plant Elevation	:	+5.0 m above sea level
4.	Wind Load	:	As per Bangladesh National Building code-2012, Part-6,

			Chapter 2.4
a.	Basic Wind speed, three-second gust at 10m above ground in exposure C, having a return period of 50 years	:	73 m/s, Exposure category-"C"
5.	Seismic Load	:	Seismic Zone 1 as determined by Bangladesh National Building code (BNBC-2012)

Note:

1. Reference site conditions shall apply for the Guarantee Values
2. Equipment and Material must be suitable for the range of ambient site conditions. In particular, the saline atmosphere has to be considered.

B) PROJECT LOCATION AND APPROACH

a.	State/Division	Khulna
b.	District	Bagerhat district
c.	Place	Moithara Village, Rampal Upazila
d.	Location	Latitude- 22 deg 37" 0" to 22 deg 34" 30"N Longitude- 89 deg 32'0"E to 89 deg 34'5"E

C) APPROACH TO SITE:

The nearest town Khulna is at a distance of 23 km from project site. The site is connected by road from Mangla- Khulna Highway. Nearest Domestic airport is Jessor, Bangladesh at a distance of about 107 KM and international airport is Dhaka at a distance of 263 KM, Bangladesh. The Bidder shall acquaint himself by a visit to the site, if felt necessary, with the conditions prevailing at site before submission of the bid. The information given above is for general guidance and shall not be contractually binding on the Owner. Bidders shall obtain clarifications/ information, if any, before submitting their offers, regarding scope of work, facilities available at sites, etc. No additional claim shall be entertained by BHEL in future, on account of non-acquaintance of above. All relevant site data/ information as may be necessary shall have to be obtained/ collected by the Bidder.

2.0 INTENT OF SPECIFICATION

This specification together with the attendant Technical Data Sheet and other specifications/attachments to inquiry / order defines the minimum requirements for butterfly valves along with their accessories /auxiliaries for use in the process of Flue gas Desulphurization (FGD) system handling flue gas and oxidation air. Bidder shall make all possible efforts to comply strictly with the requirements of this specification and other specifications/attachments to

inquiry/order.

In case, deviations are considered essential by the Bidder (after exhausting all possible efforts), these shall be separately listed in the Bidder's proposal under separate section, titled as "List of Deviations/Exceptions to the Enquiry Document (Annexure-IV)". Deviation shall be listed separately for each document with cross reference to Page No./Section/Clause No./Para etc. of the respective document supported with proper reasons for the deviation for purchaser's consideration. Any deviation, not listed under the above section, even if reflected in any other portion of the proposal, shall not be considered applicable. No deviation or exception shall be permitted without the written approval of the purchaser.

The design, material, construction, manufacture, inspection, testing and performance of valves shall comply with all currently applicable statutes, regulations and safety codes in the locality where the valves will be installed. The valves shall conform to the latest editions of applicable codes and international standards as mentioned elsewhere. Nothing in this specification shall be construed to relieve the Bidder of his responsibility. Compliance to this specification shall not relieve the Bidder of the responsibility of furnishing equipment and accessories/auxiliaries of proper design, materials and workmanship to meet the specified start up and operating conditions.

In case the Bidder considers requirement of additional instrumentation, controls, safety devices and any other accessories/auxiliaries essential for safe and satisfactory operation of the equipment, he shall recommend the same along with reasons in a separate section along with his proposal and include the same in his scope of supply. The Bidder shall offer only proven design in successful operation.

3.0 STANDARDS AND CODES

The valves shall conform to the latest editions of applicable codes and international standards as mentioned elsewhere. Valves in general shall conform to the requirements of the following standards:

- Design code: Double flanged/ wafer type of low Leakage rate confirming to AWWA C-504 Class 150 B/ EN 593 Class PN 10.
- Valves inspection test: AWWA C-504 Class 150 B (Bubble tight) /EN 12266 Rate A (No visible weeping or formation of drops or bubbles).
- Valve shall be provided with locking arrangement (with locks) in open or close condition. Further, butterfly valves of size 200 mm & above shall be provided with worm/worm wheel reduction unit.
- All the flanges and counter flanges shall conform to ANSI B 16.5 CL 150.

4.0 SPECIFICATION FOR DESIGN / CONSTRUCTION / MATERIAL PARTICULARS

- 4.1. All valves shall be suitable for the service conditions i.e flow, temperature and pressure at which they are required to operate.
- 4.2. The valves as well as all accessories shall be designed for easy disassembly and maintenance.
- 4.3. Valves to be installed outside shall be required to have the stem properly protected against atmospheric corrosion
- 4.4. The valves supplied shall be suitable for process water, limestone slurry, gypsum slurry, clarified water and air application and the operating and design conditions are provided in valve list enclosed.
- 4.5. The valves shall be designed for the design pressure/temperature of the system on which it is installed and in accordance with AWWA-C-504, ASME B 16.34 or any other approved equivalent international standard latest edition.
- 4.6. The seals, both on the body (sleeve) and on the disc shall be of the material specified. Necessary shaft seal shall be provided and adequately designed to ensure no leakage across the seal. This seal shall be designed so that they will allow replacement without removal of the valve shaft. The sealing ring on the disk shall be continuous type and easily replaceable.
- 4.7. For all types of valves, the design with shaft eccentric to the disc is preferred. The shaft shall be solid type and shall pivot on bushings. Bushings/sleeve type bearings shall be contained in the hub of valve body. The bearing shall be self-lubricated type with low coefficient of friction and should not have any harmful effect on water and on valve components. Bearing should not be exposed to slurry medium.
- 4.8. The design of the shaft shall be such that it will safely sustain maximum differential pressure across the closed valve. The shaft and any key (taper pin etc.) for transmitting the torque between shaft and disc shall be capable of withstanding the maximum torque required to operate the valve. However, the shaft diameter shall not be less than the minimum shaft diameter specified in relevant code. Necessary Torque Calculation and the torque class selected on the basis of the same shall be furnished to the Employer for information.
- 4.9. The disc shall rotate from the full open to the tight shut position. The disc shall be contoured to ensure the least possible resistance to flow and shall be suitable for throttling operation. While the disc is in the throttled position, valve shall not create any noise or vibration. The operating mechanism shall be mounted directly on or supported from the valve body.
- 4.10. All valves shall be complete with: position indicator (located in a visible place), arrow indicating the flow direction; adjustable mechanical stop limiting devices to prevent over travel of valve disc in open/close position; all valves shall be "tight shut off" and with locking device open/close position.
- 4.11. Valves-200 NB and above shall also be provided with gear operator arrangement suitable for manual operation. Manual operation of valve shall be through worm & worm wheel gear arrangement having totally enclosed gearing with hand wheel diameter and gear ratio designed to meet the required operating torque (35kgm max at handwheel). It shall be designed to

- hold the valve disc in intermediate position between full open and full closed position without creeping or fluttering. Adjustable stops shall be provided to prevent over travel in either direction.
- 4.12. Limit and torque switches (wherever applicable) shall be enclosed in water tight enclosures along with suitable space heaters for motor actuated valves, which may be either for On-Off operation or inching operation with position transmitter.
- 4.13. Valves supplied for vent application shall be of full body design.
- 4.14. All valves shall be provided with embossed name plate giving details such as tag number, type, size etc. Bidder has to provide valve tag as per Valve KKS coding as per Annexure- Plant and equipment Identification. Valve KKS/ tag no. shall be provided by BHEL during design stage.
- 4.15. The actuator-operated valves shall be designed on the basis of the following :
- (1) The internal parts shall be suitable to support the pressure caused by the actuators;
 - (2) The valve-actuator unit shall be suitably stiff so as not to cause vibrations, misalignments, etc.
 - (3) All actuator operated valves shall be provided with manual override. When force on handwheel exceeds 35 kgm, suitable gearing mechanism shall be provided.
 - (4) All actuators operated valves shall open/ close fully within time required by the process but not later than 10 seconds after actuators starts.
- 4.16. The maximum temperature to be considered for the valve design is 100°C

5.0 SCOPE OF SUPPLY

- a) Valves mounted with pneumatic/electric actuator, manual override, Limit switch, solenoid valve, Air filter regulator fitted with all tubing & fittings, Limit switch & solenoid valve wired with terminal Junction box as per specification.
- b) Actuator as per the specification.
- c) Limit switch – 2 Nos. for each Pneumatic/Electric actuator valves as per the spec.

6.0 MATERIAL OF CONSTRUCTION

Material of Butterfly valves per enclosed Annexure – I or its equivalent. Material for counter flanges shall be the same as for the piping.

7.0 END CONNECTIONS

End connection for Butterfly valves shall be as per enclosed **Annexure-I**.

8.0 PROOF OF DESIGN TEST (TYPE TEST) FOR BUTTERFLY VALVES

Proof of Design (P.O.D.) test certificates shall be furnished by the bidder for all applicable size-ranges and classes of Butterfly valves supplied by him, in the absence of which actual P.O.D. test shall be conducted by the bidder in the presence of Employer's representative. All valves that are designed and manufactured as per AWWA-C-504 shall be governed by the relevant clauses of P.O.D test in AWWA-C-504. For Butterfly valves designed and manufactured to EN-593 or equivalent, the P.O.D. test methods and procedures shall generally follow the guidelines of AWWA-C-504 in all respect except that Body & seat

hydro test and disc-strength test shall be conducted at the pressures specified in EN-593 or the applicable code. Actuators shall also meet requirements of P.O.D. test of AWWA-C-504.

9.0 SPECIFICATION FOR ELECTRICAL ACTUATOR

- | | |
|---|--|
| a) Type | : Electrical actuator |
| b) Make | : Rotork/Antrieb/Auma/ Limit torque |
| c) Failure position (power failure) | : stay put |
| d) Local Position Indicator | : To be provided. |
| e) Hand wheel for manual opn | : Required |
| f) Actuator torque | : Vendor to specify |
| g) Actuator Protection Class | : IP-68 |
| h) Actuator Thrust | : Vendor to specify |
| Actuator travel time for 90 +10 degree: Vendor to specify | |
| Power supply | : 415 V, 3Phase-50 HZ |
| Working current of actuator | : Vendor to specify |
| Stall current of actuator | : Vendor to specify |
| Torque switch / rating | : 2 NOS, 2 NO+2NC contacts suitable for
24V DC/230V AC, min 5A for 24 V DC |
| Limit switch for open/close feed back: | |
| Control box (3φ) | : Integral starter required with PLC, remote manual
operation from operator work stn. |

Electric actuators with integral starters along with associated accessories etc shall be supplied on as required basis compatible for Valves to meet the functional and the other specification requirements. The actuators shall be totally enclosed weatherproof with IP-68 degree of protection. All actuator settings including torque, limit shall be possible without opening the actuator cover and LCD indication for actuator alarms, status, valve position indication and diagnostic information shall be available integral to actuator body.

415 V, 3 phase 3 wire power supply shall be given to the actuator from switch board as applicable through a switch fuse unit. The motor shall be squirrel cage induction motor, class F insulated suitable for Direct On Line (DOL)starting. Single Phasing Protection, Over heating protection through Thermostat (as applicable) and wrong phase sequence protection shall be provided over and above other protection features standard to bidder's design. The Position/ Limit measurement shall be done using absolute encoders which will give information of position/ limit in both the directions. Electronic measurement of torque shall be provided. Open/Close command, open/ close status and disturbance monitoring signal (common contact for Overload, Thermostat, control supply failure, L/R selector switch at local & other protections operated) shall be provided hardwired.

Also refer, enclosed specification for LT Electric Actuator, FGD 4229.

Actuator drives

As far as applicable the above "Technical conditions for low voltage motors" shall apply.

In addition, all actuators for valves, dampers etc are to be fitted with socket and plug of well-established make to IEC 60309 or equivalent for the power

cable connection. For the control cable connection separate socket and plug shall be provided.

Self-cooling at respective ambient temperature conditions is mandatory. Fan cooling is not accepted.

Actuators shall have integrated starters. Regulation type shall be continuous modulation type (min. 3000 starts per minutes).

LIMIT SWITCHES:

- a) Quantity /valve : 2 nos for close / open indication
- b) No. of Contacts : DPDT (2NO+2NC contacts)
- c) Contact Rating : 24V DC / 230V AC
- d) Protection : Weather proof IP 65.
- e) Limit Switch Box : Limit Switch terminals shall be brought out to a Terminal Box

SPECIFICATION FOR PNEUMATIC ACTUATOR (Open/close)

- a) Type : Rotary actuator (Quarter turn)
Pneumatic (spring return/ Double acting)
- b) Make : Rotex/Elomatic/Virgo/flowserve
Bray/Any renowned make
- c) MOC : As per International standard only.

	Single acting spring return		
		NC	NO
d)	Air Action	open	close
e)	Air failure	close	open

- f) time of operation : less than 10 seconds
- g) cylinder design air Pressure : 4 Kg/sq.cm
- h) Air Connection :As per enclosed data sheet-Annexure-I
- i) Local Position Indicator : To be provided.
- j) Hand wheel for manual opn : Required
- k) Actuator travel time : Vendor to specify
- l) Actuator Protection Class : IP-65 (Min)
- m) Actuator Thrust : Vendor to specify
- n) Spring range (kg/cm²) : Vendor to specify
- o) Speed adjustment for actuator operation : To be provided to facilitate speed adjustments both during opening & closing by means of flow control valve

- p) Solenoid valve type : 3/2 way or 5/2 way, 24V DC power supply, ex. proof, 3/8" NPT pneumatic connection, 3/8" NPT Electrical connection. Solenoid Valve Energised as per the requirement.
- q) Air filter regulator with auto drain : Size of filter shall be 25 Micron, Filter material shall be sintered bronze/ equivalent, Body shall be aluminium, and 3/8" NPT Pneumatic connection shall be envisaged.

LIMIT SWITCHES:

- a) Quantity /valve : 2 nos DPDT
- b) No. of Contacts : DPDT (2NO+2NC contacts)
- c) Contact Rating : 24V DC / 230V AC
- d) Protection : Weather proof IP 65.
- e) Limit Switch Box : Limit Switch and solenoid valve with suitable cable gland & wiring shall be brought out to a Terminal / Junction Box IP 55.

10.0 PAINTING OF VALVES:

The detailed painting procedure is enclosed in **Annexure-V**

11.0 DOCUMENTS / DETAILS ALONG WITH BID

The following information / documents shall be submitted along with the offer

- Duly filled up data sheet along with seal and sign shall be submitted in the enclosed format as per **Annexure-I**. Then only offer shall be considered for evaluation.
- Detailed assembly drawing with overall dimensions.
- Valve cross sectional drawings with Bill of Material including the material specifications.
- Valve drawings of each drive (Pneumatic,Electrical,Manual) for maximum size to be submitted along with the offer.
- Valve Regulation Characteristic Curve.
- POD test certificate.
- Cv calculation.
- List of applicable standards for shop test.
- Reference list of projects wherever the offered model supplied.
- Typical Quality plan for supply of the above equipments.
- Annexure – Plant and equipment identification, duly sealed and signed by bidder.

- l. Valves Catalogues.
- m. List of commissioning spares.
- n. Recommended spares list for 3 year O&M along with item wise price.
Recommended spares shall not be considered for L1 evaluation.
- o. Any deviation shall be specifically mentioned in the enclosed deviation format **Annexure-IV**.

In case of any deviation, the Bidder shall indicate the deviation, clause by clause in the deviation format attached in **Annexure-IV**. If there is no deviation “**NIL**” statement shall be furnished. In the absence of **Annexure-IV**, it will be construed that the bid confirms strictly to the specification. Acceptance or rejection of the offer with or without deviations (either fully or partially) is sole discretion of the purchaser without seeking further clarification from the bidder.

NOTE: Bidders to note that failing to submit the above documents, the bid shall be considered as incomplete and liable for rejection.

12.0 DOCUMENTS / SERVICE AFTER ORDER

12.1. The following documents are to be submitted for BHEL's approval.

- Duly filled up data sheet in the enclosed format.
- Detailed assembly drawing with overall dimensions.
- Valve cross sectional drawings with Bill of Material including the material specifications.
- C_v Calculation
- Quality plan
- Actuator Data sheet to be submitted after P.O

12.2. The following are to be submitted to BHEL's review and acceptance.

- Material test certificate
- Hydraulic & Leak test certificates
- Performance guarantee certificate
- Erection manual
- O&M manuals

13.0 DOCUMENTATION

- a. The documentation during bid and post order stage shall meet the following requirements.
- b. All documents and drawings shall be submitted in English.
- c. Unless agreed otherwise, Ten (10) hard copies and five (05) sets of electronic copies of all documents are to be submitted in the English language. In addition, One (1) copy of operation and maintenance manuals shall be translated into "Bangla" and provided as paper copies and in electronic format. Electronic Copies shall be submitted in primary original data format (e.g. DOC, XLS, DWG) as well as in a printable non-proprietary document format (e.g. PDF).
- d. Hard copies of all documents and drawings during bid stage to be submitted in duplicate.
- e. Hard copies of all documents for approval to be submitted in triplicate.

- f. Hard copies of all final documents, drawings, manual etc., shall be submitted in bound folder in duplicate.
- g. Soft copies of all final documents in MS office in the form of CD-1 set.
- h. Soft copies of all final drawings in AutoCAD, latest version in the form of CD-1 set.

14.0 ELIGIBILITY

Bidders who are having manufacturing facility of Butterfly valves are eligible to quote. Previous Inspection/ test reports of the same have to be submitted along with offer.

15.0 INSPECTION

The valves shall be inspected at Vendor's works by BHEL/ BHEL's Authorised agency as per the procedure submitted by the Vendor.

16.0 WARRANTY:

The warranty period shall begin on the date of issuance of the provisional acceptance certificate for the unit – 1 (23.08.2020) and for the unit – 2 (23.02.2021) and shall end after twenty-four (24) months respectively. Provided that the successful bidder shall extend the provisions of this warranty to cover all repaired and replacement parts furnished under the warranty obligations hereunder, subject to the warranty period for the same being for a period of 24 months from the date on which replacement or renewal work is completed.

In case of failure of the equipment to meet the guarantee, BIFPCL/BHEL reserves the right to reject the equipment. However, BIFPCL/BHEL reserves the right to use the equipment until new equipment supplied by bidder meets the guaranteed requirement.

17.0	PACKING AND FORWARDING
1.	Packing shall be as per relevant clause of product packing specification – Annexure-VII-PE:TS: 888:100:A001 (Sea worthy packing)-8.4-Packing of Goods in Wooden crates/cases/Boxes-8.4.2- Cases with Lining-Packing Category IV
2.	Cardboard containers shall be enclosed in a solid wooden container.
3.	Equipment and process materials shall be packed and semi-knocked down, to the extent possible, to facilitate handling and storage and to protect machine surfaces from oxidation. Each container, box, crate or bundle shall be reinforced with steel strapping in such a manner that breaking of one strap will not cause complete failure of packaging. The packing shall be of best standard to withstand rough handling and to provide suitable protection from tropical weather while in transit and while awaiting erection at the site.
4.	Equipment and materials in wooden cases or crates shall be properly cushioned to withstand the abuse of handling, transportation and storage. Packing shall include preservatives suitable to tropical conditions. All machine surfaces and bearings shall be coated with oxidation preventive compounds. All parts subject to damage when in contact with water shall be coated with suitable grease and wrapped in heavy asphalt or tar impregnated paper.
5.	Crates and packing material used for shipping will become the property of owner.(BIFPCL)



BUTTERFLY VALVES

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6.	Packaging or shipping units shall be designed within the limitations of the unloading facilities of the receiving ports and the ship will be used. It shall be the bidder's responsibility to investigate these limitations and to provide suitable packaging and shipping to permit transportation to site.
7.	Packing (tare) shall be part of the equipment cost and shall not be subject to return. The packing should ensure integrity and cohesiveness of each delivery batch of equipment during transportation. In case of equipment assemblies and unit's delivery in the packing of glass, plastics or paper the specification of packing with the material and weight characteristics are to be indicated.
8.	Each package should have the following inscriptions and signs stenciled with an indelible ink legibly and clearly: - Destination - Package Number - Gross and Net Weight - Dimensions - Lifting places - Handling marks and the following delivery marking
9.	Each package or shipping units shall be clearly marked or stenciled on at least two sides as follows. BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (Pvt) LIMITED 2X660 MW MAITREE SUPER THERMAL POWER PROJECT BANGLADESH EPC CONTRACTOR: BHARAT HEAVY ELECTRICALS LIMITED, INDIA" In addition, each package or shipping unit shall have the symbol painted in red on at least two sides of the package, covering one fourth of the area of the side.
10.	Each part of the equipment which is to be shipped as a separate piece or smaller parts packed within the same case shall be legibly marked to show the unit of which it is part, and match marked to show its relative position in the unit, to facilitate assembly in the field. Unit marks and match marks shall be made with steel stamps and with paint.
11.	Each case shall contain a packing list showing the detailed contents of the package. When any technical documents are supplied together with the shipment of materials no single package shall contain more than one set of such documents. Shipping papers shall clearly indicate in which packages the technical documents are contained.
12.	The case number shall be written in the form of a fraction, the numerator of which is the serial number of the case and the denominator the total number of case in which a complete unit of equipment is packed.
13.	Wherever necessary besides usual inscriptions the cases shall bear special indication such as "Top", "Do not turn over", "Care", "Keep Dry" etc. as well as indication of the center of gravity (with red vertical lines) and places for attaching slings (with chain marks)
14.	Marking for Safe handling: To ensure safe handling, packing case shall be marked to show the

	following: - Upright position - Sling position and center of Gravity position - Storage category - Fragile components (to be marked properly with a clear warning for safe handling)
15.	Each crate or package is to contain a packing list in a waterproof envelope. All items are to be clearly marked for easy identification against the packing List. All cases, packages etc. are to be clearly marked on the outside to indicate the total weight where the weight is bearing and the correct position of the slings are to bear an identification mark relating them to the appropriate shipping documents. All stencil marks on the outside of cases are either to be made in waterproof material or protected by shellac or varnish to prevent obliteration in transit.
16.	The packing slip shall contain the following information: - Customer name, Name of the equipment, Purchase Order number with Date, Address of the delivery site, Name and Address of the Sender, Serial Number of equipment/item, BHEL item Code, Gross Weight and Net weight of Supplied items.
17.	Prior to transport from manufacturer's work to destination, components of the unit shall be completely cleaned to remove any foreign particles. Flange faces and other machined surfaces shall be protected by an easily removable rust preventive coating followed by suitable wrapping.
18.	All necessary painting, corrosion protection & preservation measures shall be taken as specified in painting schedule. Supplier shall consider the coastal environment zone which is defined as "very severe" during final finishing/shipping.
19.	Successful bidder shall furnish the detail packing /shipment box details with information like packing box size, type of packing, weight of each consignment, sequence no. of dispatch, no. of consignment for each deliverable item against each billing break up units/ billable blocks. Without these details the BBU shall not be approved during detail engineering. Also, complete billing break-up with above mentioned details shall be submitted within 10days of LOI.
20.	All items/equipment shall be dispatched in properly packed condition (i.e. no item shall be dispatched in loose condition such that it becomes difficult to store/identify its location at site at a later stage).
21.	Cases which cannot be marked as above shall have metal tags with the necessary markings on them. The metal tags shall be securely attached to the packages with strong steel binding wire. Each piece, Skid, Case or package shipped separately shall be labelled or tagged properly.

18.0

All pages to be duly signed by bidder with seal & date

ANNEXURE I-A,I-B,I-C

Data sheet for Maitree Butterfly Valve Manual operation																																		
Enq sl no	Materialcode	ANNEXURE & TECH SPECIFICATION:MAI-FGD-BFV-001 Rev 00	Butterfly Valve Size (NPD)	Operation/ Actuation	Body Matl (only international standards shall be accepted)	TRIM (Disc)- only international standards shall be accepted	Stem/ Shaft- only international standards shall be accepted	End Conn Wafer/Double Flange Flat Faced	Lining (minimum 4 mm thick)	Working Pressure in bar	Body Test Pressure in bar	Seat Test Pressure in bar	Hydrostatic Test Duration for body & seat in seconds	Leakage class as per AWWA C-504 Class 150 B (Bubble tight) /EN 12266 Rate A (No visible weeping or formation of drops or bubbles)	Qty in Nos	Minimum face to face dimension in mm (including rubber thickness) as per AWWA C504 Class 150B	Vendor to fill up the below mentioned details, otherwise offer shall not be considered for evaluation:																	
																									Valve Mounting	Position Indicator & Locking Arrangement				Fasteners	Raw Material	Paint	Documents	
																	material of body seat ring	material of Disc seal clamping ring	material of Seal mounting & other fasteners in the flowpath shall be of same material as Disc- vendor to confirm	Solid Shaft Dia as per AWWA C 504	body Shell thickness as per AWWA C504 Class 150B	Disc thickness	valve flange drilling ,thickness ,PCD as per ASME 16.5 CL 150	CV		Worm & Worm wheel Gear box Make & Model No.	Weight of valve including Gear box and Handwheel	valve mounting orientation shall be Horizontal/ inclined/ 360°orientation - Vendor to confirm	valve shall be provided with position indicator - Vendor to confirm					valve shall be provided with flow directionindicator - Vendor to confirm
1	RFW803160001	I-A	50	LEVER	A126B	HASTELL OY-C (C22 / C276)	Super Duplex 2507	WAFER	EPDM	10	15	11	15	zero	24	43								-										
2	RFW803160002		80	LEVER	A126B	HASTELL OY-C (C22 / C276)	Super Duplex 2507	WAFER	EPDM	10	15	11	60	zero	8	50.8								-										
3	RFW803160003		100	LEVER	A126B	HASTELL OY-C (C22 / C276)	Super Duplex 2507	WAFER	EPDM	10	15	11	60	zero	4	57.2								-										
4	RFW803160004		150	LEVER	A126B	HASTELL OY-C (C22 / C276)	Super Duplex 2507	WAFER	EPDM	10	15	11	60	zero	11	71.4								-										
5	RFW803160005		200	WHEEL WITH GEAR	A126B	HASTELL OY-C (C22 / C276)	Super Duplex 2507	WAFER	EPDM	10	15	11	120	zero	5	74.6																		
6	RFW803160006		250	WHEEL WITH GEAR	A126B	HASTELL OY-C (C22 / C276)	Super Duplex 2507	WAFER	EPDM	10	15	11	120	zero	6	79.4																		
7	RFW803160007		350	WHEEL WITH GEAR	A126B	HASTELL OY-C (C22 / C276)	Super Duplex 2507	Double Flange Flat Faced	EPDM	10	15	11	300	zero	4	203																		
8	RFW803160008		500	WHEEL WITH GEAR	A126B	HASTELL OY-C (C22 / C276)	Super Duplex 2507	Double Flange Flat Faced	EPDM	10	15	11	300	zero	2	203																		
9	RFW803160009	I-B	50	LEVER	A126B	A351-CF8M	Duplex 2205	WAFER	EPDM	10	15	11	15	zero	6	43								-										
10	RFW803160010		80	LEVER	A126B	A351-CF8M	Duplex 2205	WAFER	EPDM	10	15	11	60	zero	6	50.8								-										
11	RFW803160011		125	LEVER	A126B	A351-CF8M	Duplex 2205	WAFER	EPDM	10	15	11	60	zero	2	64.3								-										
12	RFW803160012		150	LEVER	A126B	A351-CF8M	Duplex 2205	WAFER	EPDM	10	15	11	60	zero	18	71.4								-										
13	RFW803160013		200	WHEEL WITH GEAR	A126B	A351-CF8M	Duplex 2205	WAFER	EPDM	10	15	11	120	zero	6	74.6																		
14	RFW803160014	I-C	50	LEVER	A216-WCB	13CR	13CR	WAFER	EPDM	10	15	11	15	zero	2	43								-										
15	RFW803160015		100	LEVER	A216-WCB	13CR	13CR	WAFER	EPDM	10	15	11	60	zero	1	57.2								-										
16	RFW803160016		150	LEVER	A216-WCB	13CR	13CR	WAFER	EPDM	10	15	11	60	zero	8	71.4								-										
17	RFW803160017		200	WHEEL WITH GEAR	A216-WCB	13CR	13CR	WAFER	EPDM	10	15	11	120	zero	8	74.6																		
18	RFW803160018		300	WHEEL WITH GEAR	A216-WCB	13CR	13CR	WAFER	EPDM	10	15	11	120	zero	4	85.7																		

ANNEXURE I-D, I-E, I-F

[illegible]

ANNEXURE I-G,I-H

Data sheet for Maitree Butterfly Valve along with Pneumatic Actuator																			
Engg slno		Vendor to fill up the below mentioned details, otherwise offer shall not be considered for evaluation:																	
Materialcode		Actuator																	
ANNEXURE & TECH SPECIFICATION:MAI-FGD-BFV-001 Rev 00		Valve Mounting																	
Butterfly Valve Size (NPD)		Position Indicator & Locking																	
Operation/ Actuation		Pneumatic fittings (Min 3/8 inch) - vendor may allowed to increase fitting of all item, if required to achieve 10 sec opening / closing time																	
Body Matl (only international standards shall be accepted)		Terminals																	
TRIM (disc) only international standards shall be accepted		Fasteners																	
Stem/ Shaft- only international standards shall be accepted		Raw Material																	
End Connection		Paint																	
Lining (minimum 4mm thick)		Docu ments																	
Working Pressure in bar																			
Body test Pressure in bar																			
Seat test Pressure in bar																			
Hydrostatic Test Duration for body & seat in seconds																			
Leakage class as per AWWA C-504 Class 150 B (Bubble tight) /EN 12266 Rate A (No visible weeping or formation of drops or bubbles)																			
Qty in Nos																			
Minimum face to face dimension in mm (including rubber thickness) as per AWWA C504 Class 150B																			
Default valve position																			
Air action/ S olenoid valve energise																			
valve Torque at the shaft																			
Actuator Torque with minimum 1.25 safety factor																			
actuator output torque																			
material of body seat ring																			
material of Disc seal clamping ring																			
material of Seal mounting & other fasteners in the flowpath shall be of same material as Disc- vendor to confirm																			
Solid Shaft Dia as per AWWA C 504																			
body Shell thickness as per AWWA C504 Class 150B																			
Disc thickness																			
valve flange drilling ,thickness ,PCD as per ASME 16.5 CL 150																			
CV																			
fail safe																			
Weight of valve along with actuator																			
Actuator make & model																			
Actuator Cylinder Bore selected for required torque with 4 kg/ sqcm (minimum) air pressure (gauge)																			
Actuator Cylinder Stroke																			
Spring tension adjustment/ stroke adjustment, if any in the actuator																			
Time of open /close (less than 10 seconds)																			
Actuator Drive type (Scotch yoke/ Rack & Pinion)																			
Cylinder port size minimum 3/8 inch NPT (ensure time of open/ close with 10 seconds)																			
Quick exhaust valve minimum 3/8 inch NTP (time of open/ close with 10 sec exhaust)																			
Manual override provision - hydraulic or gear box with hand wheel																			
Manual override torque on rim of wheel- max 35 kgm																			
Cylinder made up of (Metallic only) (FRP not acceptable)																			
Seal for actuator cylinder shall be of viton																			
Actuator mounting flange as per ISO 5211																			
Instrument air required for actuator (m3/hr)																			
valve mounting orientation shall be Horizontal/ inclined/ 360°orientation - Vendor to confirm																			
valve shall be provided with position indicator. -Vendor to confirm																			
valve shall be provided with flow direction indicator -Vendor to confirm																			
valve shall be provided with locking device in open/ close position -Vendor to confirm																			
over travel stopper, if applicable shall be provided -Vendor to confirm																			
Pneumatic piping SS 304 or PVC sheathed copper tube (minimum 3/8 inch) -Vendor to confirm																			
Air filter regulator (maximum filter element 25micron bronze filter) (minimum 3/8 inch)-Metal bowl with mechanical/ Auto drain -Vendor to confirm																			
Solenoid valve (minimum 3/8 inch)- 24 V DC -Vendor to confirm																			
limit switch -DPDT -2 Nos.- Vendor to confirm																			
All wiring with suitable cable glands from solenoid valves & from limit switch shall be terminated at the junction box (IP 55). Junction box shall be mounted on the cylinder itself. Schematic of wiring diagramof Limit switch, solenoid valve & JB shall also be provided. -Vendor to confirm																			
All fasteners shall be of ISO / international standard -Vendor to confirm																			
All Ferrous materials A29/A36/A283 (only international standards acceptable) -Vendor to confirm																			
Painting shall be as per enclosed specification: - Blast Cleaning SA2.5. One coat of Zinc Epoxy, 80 micron per coat. One/two coats of epoxy high solid, total dft of 160 micron. One coat of 2-component polyurethane paint, 50 micron per coat. Total film thickness 290 micron -Vendor to confirm																			
GA of valve assembly with sectional view &BOM along with enquiry to be submitted in PDF & Auto CAD format -Vendor to confirm																			



ANNEXURE-III
DATA SHEET (TYPICAL) FOR ELECTRIC ACTUATOR

1) ACTUATOR

A	Make					
b)	Model					
c)	Type					
d)	Torque rating					
F)	Operating time for opening					
	Operating time for closing					
g)	Accessories offered					
a)	Type of stay put					
i)	Actuator torque					
j)	Actuator Protection Class					
k)	Actuator Thrust					
l)	Actuator travel time for 90					
m)	Power supply					
n)	Working current of actuator					
o)	Stall current of actuat					

2) LIMIT SWITCH

a)	Make					
b)	Type					
c)	Quantity					
d)	Contact rating					
e)	Reset type					

NOTE:

Vendor should fill up the “Vendor’s Confirmation column” and submit a signed copy of this specification with his offer.

Vendor’s Signature & Seal



BUTTERFLY VALVES

MAI- FGD-BFV-001-REV 00

ANNEXURE-IV

FORM FOR TECHNICAL DEVIATIONS (If any)

SL. NO	SEC / CLAUSE NO.	SPECIFICATION	STATEMENT OF DEVIATIONS/VARIATIONS	REASON FOR DEVIATION	COST OF WITHDRAWAL

Date:

Signature & seal of the Bidder

	BUTTERFLY VALVES
MAI- FGD-BFV-001-REV 00	

ANNEXURE-V **PAINTING PROCEDURE**

Surface prepara tion	Primer Coat		Intermediate Coat		Finish coat			Total DFT µm (min)
	Paint	No of Coats /DFT	Paint	No of Coats	Paint	No of Coats	Shade	
Blast cleaning SA2.5	Zinc Epoxy Primer	1 Total DFT = 80 µm	Epoxy high Solid	1-2 Total DFT= 160 µm	2-Comp Polyure thane	1 Total DFT= 50 µm	As per medium handled	290

Color/Shade Codes

SL NO	DESCRIPTION ALONG WITH MEDIUM	BASE	BAND/ RING	LETTERING
1	PIPING- Non-flammable liquids & solids (like ash, slurry application)	Signal brown, RAL 8002	Signal black, RAL 9004	Signal White, RAL 9003
2	PIPING- Water	Signal green, RAL 6032		Signal White, RAL 9003
3	PIPING-AIR	Signal White, RAL 9003		Signal Black, RAL 9004

Date:

Signature & seal of the Bidder

**BUTTERFLY VALVES****MAI- FGD-BFV-001-REV 00****ANNEXURE-VI****DATA SHEET (TYPICAL) FOR PNEUMATIC ACTUATOR****1) ACTUATOR**

a)	Make					
b)	Model					
c)	Type					
d)	Torque rating					
e)	Air consumption					
f)	Operating time for opening					
	Operating time for closing					
g)	Accessories offered					
h)	Type of stay put					
i)	Air Connection					

2) LIMIT SWITCH

a)	Make					
b)	Type					
c)	Quantity					
d)	Contact rating					
f)	Reset type					

Date:**Signature & seal of the Bidder**

ANNEXURE –B
GENERAL TERMS & CONDITIONS
(FOR GUIDANCE TO THE SUPPLIERS)

A] Submission of Offer

a) Invitation for bid

Tenders are invited through electronic mode from eligible suppliers in case of open tenders and from suppliers to whom the enquiry is addressed in case of Limited / Single Tender.

The offers shall be posted into the system before the date and time specified in the tender.

The offer shall be sent on single part / two part / three part basis as specified in the main tender document.

Bids shall be submitted through e-Procurement portal, <https://bhel.abcprocure.com> of M/s e-Procurement Technologies, Ahmedabad who is our solution provider.

b) Hardware and Software requirements for participating in e-tender

Requirement for participating in e-Procurement is as under:

- i) A Computer with internet connectivity (Internet Explorer 9.0 (32-bit Browser only) & above)
- ii) Digital Signature Certificate (Class 3- SHA2-2048 BIT- with both Signing and Encryption component separately).
- iii) JAVA (Version 1.8 Update 45).
- iv) Steps for Hardware and software configuration is detailed at <https://bhel.abcprocure.com/EPROC/> under title “Minimum system requirements and Settings Document for BHEL User and Bidders”.

c) Instructions for Registered Suppliers

For all types of tenders (Single / Limited / Open) an automated email alert regarding issue of the Tender will be sent by the e-procurement portal to all Suppliers registered with BHEL, Ranipet for the item/s for which the tender is issued.

In case of open tenders, Registered suppliers with registered DSC will have to login with their user id/password & DSC and search for the Open Tender. To participate in event and to submit bid, a bidder needs to agree the terms and conditions.

Registered suppliers without DSC will have get their profiles approved by mapping DSC after login.

To know the procedure for obtaining Digital Signature Certificate (DSC), suppliers who are not having the DSC are advised to visit our website www.bhel.com → Tender Notifications → Sample Checklist.

d) Instructions for new suppliers wishing to bid against open tenders

New, unregistered suppliers wanting to bid against open tender/s will have to first register themselves in <https://bhel.abcprocure.com> as new supplier by clicking the “Register” button.

After entering the Income Tax Permanent Account Number (PAN) details and pressing “Enter”, they have to select the respective BHEL Unit for which they want to participate in the Open Tender and also fill up other relevant Company information as a one-time activity. On successful registration, your profile will be approved by the authorized officer and you can login to portal and can participate in the procurement event.

To participate in a tender, you need to login to the portal. You must be an approved registered user. If you are not a registered user, you can register yourself by clicking upon the “Register” link. You need to have a valid vendor code and password to login to the portal. Enter your Vendor code, password and click on Login button after Login, you need to select your digital signing and encryption certificates certificate. The DSC will be approved by M/s e-Procurement Technologies/ Authorised officer of BHEL.

As required by the tender, the necessary documents have to be filled-in online, in the provided template. Additional documents required are to be scanned and uploaded as .pdf file. Suppliers are advised to take note that the maximum space that is provided for uploading the documents that are to be attached is 300 MB. However the size of an individual document cannot exceed 10 MB. For any clarification on submission of offer on line, attention of the Supplier/s is invited to our document “Bidder Manual for BHEL Bidders” hosted in the home-page of the e-procurement portal. During normal business hours, helpline maintained by the service provider M/s e-Procurement Technologies is available for clarifying any doubts of supplier/s. The helpline numbers are +91-79-40270599/508/560/590/513 and email id is: Bhel.Support@abcProcure.com . Bidder can also refer to “Bidder Manual for BHEL Bidders” hosted in the home-page of the e-procurement portal <https://bhel.abcprocure.com>.

Typical documents that would be required as part of tender submission would be

- a) **Complete technical Offer** with details, catalogues, as applicable.
- b) **Un-priced bid** (i.e. Bid without the Price) as per given format, if any.
- c) **Filled-in BHEL’s Standard Terms & Conditions** as per Annexure enclosed with the Tender Document,
- d) **Deviation summary** submitted in two parts – giving the summary of technical deviations separately and the commercial deviations separately, if any and
- e) **Supporting documents** to substantiate equivalent material specifications / sections, where quoted for.
- f) Where asked for, **Client list** with their full address including detail of contact person with phone no., fax no. & e-mail ID (if any) to whom the same / similar items are supplied in the past two years. The date of supply may also be indicated, against each client.
- g) Suppliers can also upload their credentials by way of submission of Performance certificate/s issued by their customer/s detailing the quantity supplied and specification along with the un-priced PO copies and proof of supply along with the offer.

Technical acceptance of offer by BHEL shall be based on the evaluation of offer and the submitted documents.

- h) **Bidders who are not already registered with BHEL Ranipet** are requested to submit the Supplier Registration Form (SRF) online (<http://supplier.bhel.in/>) for evaluating and registering as an approved vendor. The Supplier Development Cell (SDC) of BHEL, Ranipet would process the SRF for evaluation / registering the Supplier. Don’t send hardcopies of SRF to BHEL-Ranipet, **only** online submission is accepted. This registration process is a separate / parallel activity and do not mix-up with submission offers.

Note

- (i) The materials offered, shall conform to the specification and scope attached in the tender.
- (ii) In case the offered materials are not conforming to the Enquiry material Specification, such offers would not be considered for evaluation and would be rejected.

Where equivalent specifications are offered, considering such offers will be at the sole discretion of BHEL. Wherever alternative standards / specifications are offered by Bidder, the Bidder shall provide sufficient documentary evidence to ensure equivalence to the designated standards / specifications, failing which the offer would be considered as not technically acceptable and hence shall stand rejected.

(iii) All taxes and duties payable as extra to the quoted price should be specifically stated in offers (as appearing in the online template).

Offer/s from within India shall be submitted along with the applicable HS Number and the applicable Goods & services Tax (GST) for each quoted item, failing which the purchaser will not be liable for payment of such taxes and duties. Our GST No: **33AAACB4146P2ZL**.

(iv) The un-priced bid shall be used to indicate relevant commercial terms such as scope of freight and insurance, applicability of duties and taxes etc. All Commercial terms are to be indicated clearly in the offer.

(vi) No changes shall be entertained once the bid is opened unless otherwise specifically agreed to in writing by BHEL.

(vii) Money values other than for those items appearing in the un-priced bid template shall not be indicated anywhere in the un-priced bid.

(viii) Time required for inspection (at Supplier's works), should be clearly given in terms of numbers of working days.

(x) **Offers sent by FAX / E-mail:** would not be entertained.

(xi) 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.

(xii) Registration process for items required by BHEL is always open at <https://supplier.bhel.in>. Prospective suppliers (including MSEs & owned by SCs/STs) may visit this site and apply for registration in the respective Unit.

Price Bid in conformance with the specification and terms as given in the Un-Priced bid document.

Caution on submission of price bids thru EPS:

The suppliers are severely cautioned to note that the price bid document accepts the price in figures only. It does not allow the supplier to write the value by words. Therefore all care shall be exercised by the supplier while filling in the figures. Once the price bid is opened no option is available for the supplier to retract the offer under any grounds. If a supplier, for any reason whatsoever approaches BHEL with a request for change in the price, it would be treated as going back on the offer submitted. In such cases, action would be initiated by BHEL for suspending further business dealings with such suppliers as per policy of BHEL which prevails at that point of time.

Foreign / Overseas suppliers are hereby informed that offers with differential currencies are not permitted for a given tender document.

Note

(i) The price break-up should be in line with technical specification / scope of the tender. (Cost of material, packing charges, forwarding charges, freight and insurance charges shall be shown appropriately, as applicable).

- (ii) Unless otherwise specified as a part of the tender condition, No Price Variation Clause will be entertained and No advance payment will be made by BHEL.
- (iii) In case, there is a discrepancy in the term quoted in techno-commercial bid and price bid, the term as per the techno-commercial bid (Part I) shall hold good and the commercial term quoted in the Price Bid (Part II) shall not be considered.
- (iv) In their own interest, all Tenderers are advised to double check their prices, applicable duties and taxes.
- (v) The quotation should be valid at least for a period of 90 days from the tender opening date.
- (vi) Indian bidders should submit the prices in Indian Rupees only.
- (vii) Foreign bidders may submit their bid in foreign currency. The currency for quoting shall be selected from the drop-down menu provided.
- (x) Indian Suppliers shall quote on FOR Destination basis only. Destination is BHEL, Ranipet Stores or BHEL Project Site as specified in the tender requirement. Foreign Suppliers shall quote on CFR Chennai Seaport Delivery and Insurance will be in BHEL's scope. No other delivery terms shall be acceptable. Shipment shall be arranged by the Seller on *Liner in / Liner out basis*. As per Government of India guidelines, BHEL Ranipet being a Government of India Undertaking the Bill of Lading shall be made with the Shipper as "Government of India". This shall be specifically confirmed by the Bidder.
- (xi) Where the cargo is containerized, Container washing charges, stuffing charges and / or any other such charges would be to the account of the supplier, where the containers are to be stuffed at the works of the supplier.

B] Opening of Offers

a) **Tenders can be submitted up to 1400 Hours on tender opening due date. Part I will be opened on the same day at 1430 Hours. Results of the tender opening will be available for viewing for upto 7 days from the date of opening.**

b) Requests by Bidders for extension of due date will not be entertained by BHEL.

c) Price Bid opening will be done through e-mode / Reverse Auction method (English method) which will be decided after techno-commercial bid evaluation is completed. All tenderers would have to specifically give their acceptance for this in their bid/s.

Note

- (i) Bids including all enclosures and supporting documents like catalogues, pamphlets, etc., shall be provided in ENGLISH language only.
- (ii) In exceptional circumstances, at its option, BHEL may consider extending the due date/s for the tender openings for reasons such as (but not limited to) paucity of offers etc. However, sufficient notice would be given by BHEL for such extension.
- (iii) Deviations shall be summarized and provided in a "Deviation Statement", listing the points and the deviation against each point.
- (iv) BHEL reserves the right to increase or decrease the tendered quantity and to order on more than one vendor at the lowest acceptable price to BHEL. In ordering on more than one source, the ratio of quantity split will be as specified in the tender terms.

If not explicitly specified, BHEL reserves the right to split the quantity of the enquiry as follows: 70% quantity being ordered on the original lowest bidder (L1) and balance 30% on the next higher bidder/s excluding H1, who accepts the L1 price. However, the final decision to split the order rests with BHEL only.

In the event that the other than L1 suppliers do not accept the L1 price, then the balance will be reverted to the original L1 and the original L1 shall be bound to accept the balance of the enquiry quantity kept reserved for order splitting. This decision would be given by BHEL within 60 days of the price bid opening.

Notwithstanding the quantum of split that may be indicated in the main body of the enquiry, bidders are advised to note that the splitting of the orders will be decided by BHEL after the evaluation of the techno-commercial and price bids.

(v) Offers for part quantities on item level basis are not acceptable to BHEL. While tenderers can quote for some or all the tendered items, no supplier shall quote for partial quantity of any given enquiry item. Such partial offer would not be considered in the enquiry for that item. Suppliers are to note that the evaluation unless otherwise specified will be on item level and not for the tendered items as a whole.

C] Evaluation of Offers

a) The price bids including the impact price (if any) of the technically acceptable offers alone shall be opened.

b) Offers with pre-conditions (like conditional discounts) for price are liable to be not considered / rejected. For evaluation such conditions would be removed and only the base offer would be considered for evaluation and comparison.

d) In the event of any change in scope / quantity arising out of the discussions, offerers would be given a chance to submit their revised offer / Impact bids. The option for the revised offer / impact offer will be triggered by BHEL. The Supplier then will have the facility to feed-in the revised price / impact price as per the provision given by BHEL. The impact price can be positive or negative (or nil). The impact price option shall contain only the price addition / deletion for such change in the scope / quantities, over and above the original scope and price quoted. The original price quoted would remain unchanged. The total price would then be computed by the arithmetic addition of the original price and the impact price. Where BHEL gives the option of submitting the revised offer, the impact would be computed as the arithmetic difference of the revised price and the original price.

e) For evaluating the overseas offers, CFR Chennai Sea Port price quoted will be taken into account. The cost to BHEL will be arrived at by loading the applicable customs duty project wise, insurance charges, inland transportation charges to BHEL stores and LC charges etc.,

f) Deleted.

g) BHEL reserves the right to reject without assigning any reasons / load any offer with factors other than already specified for such offers having deviations to BHEL Specifications, Standard Terms & Conditions at its discretion. The decision of BHEL in this regard shall be final.

h) BHEL reserves the right to reject an offer due to unsatisfactory performance during tender finalisation / execution of a contract at any of BHEL projects / units in the past or if unsatisfactory performance report is received from the party/s referenced by the supplier at any time during tender finalisation.

- i) BHEL reserves the right to operate Purchase / Price preference to Government of India Undertakings, which shall be given as per the guidelines of Government of India given from time to time and / or relax the Terms and Conditions of the tender.
- j) For the purpose of comparing prices, tender prices shall be converted to Indian rupees and the conversion shall be made by using the TT Selling rate of State Bank of India (SBI) prevailing on the date of opening of Techno-Commercial / Unpriced bids. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken. This exchange rate will be followed till placement of order. Tenderers may please note that even if an impact price is taken as in (d) for purpose of price evaluation and arriving at the rank; the exchange rate will be taken as explained above.
- k) Unless otherwise specified, evaluation will be on individual line item basis only and ordering will be on respective L1 vendors.
- l) BHEL reserves the right to conduct negotiations on the “Price” and “Other Commercial Terms and Conditions” with the lowest ranked offerer at any time after the bid opening but before the release of the Purchase Order and If so required by BHEL, Supplier may have to share their costing sheet with BHEL.
- m) Bidders are required to confirm in writing in their techno-commercial document that other than themselves (the bidder) none of its group companies, concerns or affiliates etc., are participating in the tender either directly or indirectly or through any other agency under the same proprietor / common partner(s)/ common Directors. If during the evaluation of the bids it is found that the bidder has submitted the offer in violation of this condition then all the offers received from the group companies would stand rejected. If such relationship is found at a later date where the Purchase Order has been issued, then BHEL would cancel the Purchase Order and initiate suitable action/s under the contract/s including but not limited to invoking the Risk Purchase clause of the order and other applicable legal provisions / guidelines of BHEL including guidelines on suspension of business dealings. (Please see clause L sub-clause c).
- n) For this procurement, Public Procurement (Preference to Make in India), Order 2017 dated 15.06.2017 & 28.05.2018 and subsequent orders issued by the respective nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT.

In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable.

Preference to Make in India including counter offering will be as per the Public Procurement (Preference to Make in India), Order 2017 available in the following link

http://dipp.nic.in/sites/default/files/publicProcurement_MakeinIndia_15June2017.pdf

http://dipp.nic.in/sites/default/files/Revised-PPP-MII-Order-2017_28052018.pdf

D] Execution of the Order

a) BHEL will have the option to pre-inspect the materials at Supplier's works by BHEL's own inspector or by third party agency appointed by BHEL or BHEL's end customer/s. The mere act of the pre-dispatch inspection (PDI) does not absolve the Supplier from giving the specifications as agreed upon in the Purchase Order. In the case of inspection being carried out by a third party inspector (TPI) as per the extant practice, the TPI would forward the Inspection Report (IR) along with Test Certificates and other related documents to the Quality Assurance (QA) Department of BHEL. The QA department after scrutinising the report/s submitted by the TPI would issue the Material Dispatch Clearance Certificate (MDCC). Suppliers are hereby

informed that materials should be dispatched only after getting the MDCC, failing which the materials may be rejected on receipt at BHEL Stores.

b) In the case of overseas suppliers Inspection call for carrying out the inspection shall be given 30 days before the scheduled contract delivery date. The Inspection date/s given by the Supplier shall be on firm basis. For local Suppliers the Notice period of Inspection shall be 10 working days.

c) Deviations, if any pointed out by the visiting Inspection team of BHEL shall be corrected and the items as per specification shall be dispatched on or before the contract delivery date after getting the MDCC.

d) The final inspection for acceptance will, however be carried out at BHEL's works at Ranipet.

e) The contract delivery date is the date of receipt at BHEL Stores for suppliers in India, applicable in the case of FOR Destination Contracts.

For ex-works contracts or FOR dispatching station indigenous contracts, the date of the Lorry way bill issued by the authorised transport carriers of BHEL / Railway Receipt / Courier Way bill / Airway bill or any such dispatch documents of carriage approved by BHEL would be considered as the Contract Delivery Date. In the case of CFR contracts with overseas suppliers, the B/L date shall be taken as the Contract Delivery Date

f) Travel & other local stay cost for the Inspectors sent by BHEL will be to BHEL account, but other Inspection Charges, if any shall be to the account of the Seller only.

g) The supplier shall arrange for packing suitably in all respects for normal transport by sea / rail / road and Materials shall be suitably protected against effect of tropical salt laden atmosphere in the event of shipment being delayed at ports / store yards and as per BHEL TDC.

h) Foreign suppliers shall dispatch on CFR agreed Sea-Port basis, according to the contract conditions. Indian suppliers shall dispatch on free delivery (door-delivery) at BHEL stores basis only. Unloading the materials at BHEL Stores would be to the account of BHEL only.

i) In the event of any short supply, it shall be the responsibility of the supplier to deliver such short supplied/ missing items on Free-of-Cost basis at BHEL stores, including customs clearances at Indian Ports in the case of foreign suppliers.

k) Terms of payment:

k.1) For Indigenous Suppliers: Unless otherwise agreed to by BHEL, the standard payment terms of BHEL shall be: For non-MSE suppliers 100% payment made directly through EFT within 90 days from the date of receipt and acceptance of materials at BHEL Stores, Ranipet or 90 days from the date of acknowledgement of receipt of materials at destination specified. If any supplier asks for payment terms other than the above specified, then suitable loading on cost will be considered. **Loading of any deviation in the payment terms w.r.t tender terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation sought by bidders.**

k.2) For MSE vendors (under Micro & Small category alone) 100% payment will be made within 45 days from the date of receipt and acceptance of materials at BHEL Stores, Ranipet or 45 days from the date of acknowledgement of receipt of materials at destination specified.

l) NOTE:

Where the destination specified is other than BHEL Stores Ranipet, for claiming payment, Supplier has to submit proof of receipt of the materials at the destination by furnishing a copy of the acknowledged despatch document (LR/RR/Courier receipt etc.) .

If the Bidder is bidding for the first time and wants to be considered as an MSE then, the Bidder shall submit document evidencing that they are an MSE along with a certificate from a Chartered Accountant certifying the status of their Unit / Works clearly specifying the address of the works which is to be considered as MSE and send the same to BHEL, Ranipet either before the tender opening date or upload it as a part of the tender document in the e-procurement portal. Where the document is submitted electronically a hard copy shall invariably be sent within a reasonable period (not exceeding 30 days) from the bid opening date for the purpose of BHEL's records. If the hard copy is not received within this specified time, then the supplier would be treated as a non-MSE. BHEL will not be responsible for any postal / courier / delivery delays.

For approved vendors the status as on the date of the bid opening as available with BHEL Ranipet's records shall be used for reckoning the status of the Bidder as an MSE or otherwise.

Offer/s received without these documents will be treated as non-MSE and order finalization will be done based on this premise. Documents submitted after Bid-opening will not be considered in this tender. This provision for MSE will apply subject to the condition that the participating MSE meets the tender requirements.

For approved suppliers, in case of any change in the MSE status, it shall be the responsibility of the Bidder to notify the change as a part of the Bid document. If at a later date it comes to the knowledge of BHEL, Ranipet that the change in the status has not been intimated by the Bidder and the order is obtained under the premise of an MSE then BHEL would cancel the pending order against this tender and take necessary steps for suspension of the business dealing with the Bidder as per the procurement policy of BHEL. Similarly if a supplier claims MSE status after the Part I bid opening, then the same would not be considered in the tender.

In case after the bid opening it is seen that no MSE has become L1, then depending on the nature of the item, if it is not possible to split the tendered items / quantities on account of reasons like customer contract requirements of supplying one make for a given project or technical reasons like the tendered item being a system etc. then BHEL would not counter offer the L1 prices even though there may be MSE bidders within the +15% band of L1.

Other concessions for MSEs / Reserved sectors (Also for women owned MSEs and MSEs owned by SC/STs)

In addition to the concessions specified above, MSE suppliers will be eligible for such other concessions as per the MSME Act 2006 and any other benefits / concessions that may be announced by the Government of India from time to time.. However, such concessions as applicable at the time of tender opening alone will be applicable. Any concessions advised after tender opening will not be considered for the current tender.

Items that are reserved for MSE and for any other items for which reservations for Indian manufacturers are notified by the Govt. Of India, such concessions as prevailing on the date of tender opening shall apply as a part of this tender conditions.

ii) Foreign Suppliers "100% thru' irrevocable & unconfirmed LC at sight within 3 weeks from the PO date through any one of our Bankers listed elsewhere in the tender conditions for 100% value (less Agency Commission, if any) valid up to the PO delivery period and 15 days thereafter for negotiation. All bank charges in India to BHEL's account and all other charges outside India to Supplier's account. **BHEL would load the price of foreign suppliers in order to bring them on common platform as per Indigenous**

Suppliers on the account of differential payment terms to Indigenous Suppliers. Loading of payment terms will be “Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation compared to indigenous suppliers i.e. 90 days.

m) Any incidence of tax like Income tax, Goods & Services Tax (GST) and Withholding any other similar tax / duties /levies imposed by the Government of India, or the State Government, where the BHEL Unit is located, deductible at Source, during the tenure of the Order shall be deducted by BHEL and necessary certification of the deduction (Tax deduction at Source) would be given. This is subject to the supplier fulfilling the necessary documentation as specified by the Government of India. (e.g. Tax Residency Certificate, PAN Number etc.)

n) The Guarantee period shall start from the “Date of receipt and acceptance of the materials at BHEL Stores.”

E] Liquidated Damages Clause:

BHEL will levy penalty as Liquidated Damages (LD), for delay in delivery. The damages shall be at the rate of ½% per week or part thereof subject to a maximum of 10% PLUS applicable Goods & Services Tax (GST). The contract delivery date for purpose of L.D is the date of receipt at BHEL Stores for suppliers in India for F.O.R. Destination Contract and the date of dispatch clearance given by BHEL for overseas suppliers. For ex-works or F.O.R dispatching station contracts, the date of the dispatch document will be reckoned as the date of delivery for computing the LD. Supplier shall deduct the applicable LD from the first payment when raising the claim for the same. The applicable LD if any would be communicated by BHEL along with the dispatch clearance. It is taken by BHEL that Foreign Suppliers have confirmed their acceptance to BHEL for opening the LC for value which is the value of the order reduced by the applicable LD. The LD would apply on the undelivered portion only. In case of reasons attributable to BHEL for the delay in delivery (for e.g. delay in arranging the pre-inspection) then the delivery time would be reset to the extent of the time delay attributable to BHEL, with waiver of the LD. Delivery being the essence of BHEL’s contract requirements, unless otherwise specified the LD would apply on the undelivered portion of the contracted items. **In the event that a Supplier does not accept the LD condition above, the offer would be loaded to the extent of the shortfall with respect to upper limit specified above.**

F) Miscellaneous

i) Role of Principals and Agents:

BHEL will deal directly with indigenous manufacturers only.

BHEL strongly discourages the engagement of Agents in India by foreign principals, to deal with BHEL, in BHEL’s tenders.

BHEL will not enter into any correspondence with an Indian Agent.

The Indian Agent will not be extended the privilege given to the principals, such as that of attending the tender openings, attending technical discussions, commercial discussions or price negotiations and such like.

In case, in spite of the above, a foreign principal insists on engaging an Indian Agent, It is made clear by BHEL that:

It is the sole responsibility of the foreign principal to ensure the Agent does not represent any other foreign principal in a given tender.

An undertaking to this effect shall be given by the foreign principal that his / her Agent does not represent any other foreign principal in the tender. This document shall form a part of the techno-commercial offer.

A Principal shall authorise only one Agent to quote against each BHEL's tender. In the event a Principal authorises more than one agent to quote against a BHEL's tender, then all such offers will be rejected by BHEL in that tender. Principals are also advised to include BHEL's tender Number / Reference in their authorisation issued to the Agent.

If at any stage of the tender, BHEL finds that an Indian Agent has represented more than one foreign principal, all such offers of and all the foreign principals would be disqualified summarily in the tender inquiry.

BHEL will only give an intimation of notice of the disqualification. No correspondence would be entertained by BHEL, on their decision. Such decision of BHEL shall be irrevocable, firm and final and shall be binding on the tenderer.

BHEL, due to business reasons would ban, would have banned Indian agents from dealing with BHEL.

Any foreign principal who engages such a banned agent, or an employee of the banned agency, or any other person connected with the banned agency, at any time during the tender proceedings, would be disqualified from the tender proceedings. The decision of BHEL in this regard shall be final and be binding on the OEM.

Hence in their own interests, prospective tenderers may check with BHEL, the status of their proposed agent vis-à-vis BHEL.

In view of the requirement of BHEL, it is strongly suggested that in their own interest, foreign principals may desist from engaging any Indian agent and deal with BHEL directly and it is stressed that any Main producer proposing to deal with BHEL by engaging and through an Indian Agent does so at their own risk.

BHEL shall in no way be responsible for any consequences that may arise to the foreign principal on account of the antecedents / actions of their Indian Agent.

In the event of the foreign principal engaging an Indian Agent:

a) The Supplier shall furnish an authenticated copy of the Agency Agreement with his agent detailing the precise relationship between them and their mutual interest in the business along with techno-commercial bid.

b) The Supplier shall furnish original authorization letter for the Indian Agent. The letter shall contain name, contact person, complete postal address including phone, fax and e-mail ID. It shall also spell out the type of services to be rendered by Indian Agent.

c) Indian Agent & Agency commission: An Indian Agent can represent only one Foreign Manufacturer against a particular Tender. The CFR price quoted by the foreign bidder shall include the agency commission. However, the agency commission component payable to their Indian Agents shall be shown separately in the Offer, either as a lump-sum or as a percentage of the quoted price. This will be paid by BHEL in Indian Rupees, on satisfactory receipt & acceptance of the materials. For calculation of Rupee equivalent of Agency Commission, exchange rate as prevailing on the date of Purchase Order will be taken and

d) For all discussions, technical clarification and negotiations etc. only the principal would be authorized for interaction with BHEL. The Agent shall not be a party to the discussions / negotiations and would not be normally allowed to participate.

ii) Terms & Conditions of Letter of Credit (L/C) for overseas suppliers (indicated for acceptance).

a) Unconfirmed irrevocable Letter of Credit at Sight only will be opened by BHEL. Confirmation of L/C is not preferred by BHEL. Also L.C will be opened in Lots in line with the staggered delivery.

b) All Bank charges out side India are to the Supplier's account and within India to BHEL's account.

c) In case of L/C extension caused by delays attributable to the Supplier, the L/C extension / commitment charges are to be borne by the Supplier.

iii) Other terms & conditions for letter of credit: - Documents for negotiation

a) Signed Commercial invoice in quadruplicate, for a value not exceeding the draft amount, quoting the import Licence No and certifying goods evidencing shipment of the merchandise are as per Applicant's Purchase Order. The amount of invoice after deducting Indian Agent's commission, if any, should not exceed the Credit amount. (The Indian agent's commission, if any, is payable in India in Indian rupees only.)

b) Certificate of Country of Origin, from the country of manufacture, issued by the Chamber of Commerce.

c) One set of Original and two sets of Non-negotiable copies of 'signed', 'unmarked', 'clean on board' Ocean Bill of Lading, showing Shipper as "Government of India" Account M/s. Bharat Heavy Electrical Ltd, Unit: BHEL, Ranipet as consignee (The opening bank should not be notified as consignee), marked freight payable / prepaid at destination.

d) Packing list in 4 copies in English, indicating Size wise Number of bundles / pieces shipped and weight.

e) Certified copy of the fax / e-mail sent by the beneficiary to the applicant giving the following particulars of shipment, as the insurance is to be arranged by the Applicant in India: (a) Purchase Order Number & date; (b) Bill of Lading Number & date (c) Name of vessel; (d) Port of Loading; (e) Number of bundles / pieces and weight; (f) Invoice Number, date and value (g) Purchase Order item number's despatched. The cable / fax is to be sent within 2 working days of shipment.

f) Beneficiary's certificate showing the relevant airmail / courier reference no. and date that the following clauses have been complied with:

1] Beneficiary to forward by Registered Airmail / Courier one complete set of original documents and one set of non-negotiable documents within 3 working days of obtaining shipping documents to Regional Manager (ROD), Bharat Heavy Electricals Ltd, 6th Floor, EVR Periyar Bldg. No 690 (Old 474), Anna Salai, Nandanam, Chennai-600035. India. (Phone: +91-24330931, 24330253; e-mail: pbbwar@bhel.in)

2] Beneficiary to courier at his cost 3 copies of complete set of non-negotiable documents to the Officer who released the Purchase Order.

3] Declaration by the Supplier certifying that the contents in each case are not less than those entered in the invoices / packing list and that the invoicing for the supplies effected is strictly in accordance with agreed rates as stipulated in the Purchase Order.

4] Declaration to the effect that all other documents as per purchase order has been couriered to the Purchase order releasing authority

5) The carrying steamer should be seaworthy, less than 25 years of age and approved by Lloyds / Classification Societies / General Insurance Corporation of India from time to time and

6) Copy of Dispatch Clearance / Instruction issued by BHEL.

iv) Documents to be sent directly to the Purchaser prior to shipment

- a) Manufacturer's Original Internal Inspection / Test certificate in triplicate.
- b) Manufacturer's Original Guarantee certificate as per Purchase Order. The material shall be guaranteed for a period of 12 months from the date of acceptance of the materials at BHEL stores or 18 months from the date of dispatch whichever is earlier. The acceptance would be evidenced by the Stores Receipt Voucher (SRV) which will be raised by BHEL.
- c) Inspection / Test Certificate issued by BHEL / Inspection agency specified in the Purchase Order. In the event that Inspection prior to dispatch is not carried out by the Engineers of BHEL, the Inspection certificate of the third party so authorized by BHEL and
- d) Any other documentation as specified in the Purchase Order.

v) Conditions for transportation:

- a) All shipping documents shall show the Purchase Order Number & Date, Import Licence Number & Date, and Letter of Credit Number & Date.
- b) Transshipment is to be avoided.
- c) Loading on deck is not permitted. The transport document must not contain a provision that goods may be carried on deck.
- d) A transport document which is produced or appearing to have been produced by reprographic, automated or computerized systems or as carbon copy will be accepted as an original document provided that it is marked as original and is ink-signed.
- e) The transport document must contain all the conditions of carriage on the original document.
- f) The transport document must not indicate the place of destination as being different from the port of discharge.
- g) The transport document must not contain the indication 'intended' or similar qualification in relation to the vessel or other means of transport or port of loading or port of discharge.
- h) The transport document must be issued by the carrier or his agent and not by any freight forwarder.
- i) Transport documents bearing reference by stamp or otherwise, to costs additional to the freight charges are not acceptable.
- j) The Bills of Exchange must be dated and presentation of documents for negotiation must not be later than 15 days after the date of shipment and in any case not later than the expiry date of the Credit.
- l) Indian suppliers shall dispatch the materials on freight prepaid and on door-delivery basis (FOR Destination – Destination: BHEL Stores) and
- m) In the event there is a delay by the Supplier in negotiating / submitting the document, any demurrage / wharfage arising out of the same shall be to the account of the Supplier and shall be deducted from the final payment. Also, in such cases, the Supplier shall authorize the Steamer / Shipping agent / transporter to freely release the consignment to BHEL by providing a “Surrender Bill of Lading”. Over-seas Suppliers have to give a No-Objection Certificate to BHEL, authorizing BHEL to get the Delivery Order from the Steamer

Agent without producing the Original Bill of Lading. This is required to ensure avoidance of incidence of demurrage at Chennai Sea-port that may arise in case of delayed presentation of documents by the Seller.

G) Reverse auction (RA) / on-line bidding on internet:

1. *"BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. Bidders shall give their acceptance with their offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of the bids, in case BHEL decides to go for RA."*

2. *Those bidders who have given their acceptance to participate in Reverse Auction will have to necessarily submit 'Process compliance form' (to the designated service provider) as well as 'Online sealed bid' in the Reverse Auction. Non-submission of 'Process compliance form' or 'Online sealed bid' by the agreed bidder(s) will be considered as tampering of the tender process and will invite action by BHEL as per extant guidelines for "Suspension of Business Dealings with Suppliers/ Contractors (as available on www.bhel.com)."*

3. The philosophy followed for reverse auction shall be English Reverse (No ties).

4. For the proposed reverse auction, technically and commercially acceptable bidders only shall be eligible to participate.

5. BHEL will engage the services of a service provider who will provide all necessary training and assistance before commencement of on line bidding on internet.

6. In case of reverse auction, BHEL will inform the bidders the details of Service Provider to enable them to contact & get trained.

7. Business rules like event date, time, bid decrement, extension etc. also will be communicated through service provider for compliance.

8. Bidders have to fax the Compliance form (annexure IV) before start of Reverse auction. Without this, the bidder will not be eligible to participate in the event.

9. Reverse auction will be conducted on scheduled date & time.

Note: Decision to go for RA or not will be on case to case basis.

10. At the end of Reverse Auction event, the lowest bidder value will be known on auction portal.

11. The lowest bidder has to fax/e-mail the duly signed and filled-in prescribed format for price breakup including that of line items, to the Service provider within two working days of Auction without fail.

12. Bidders are be required to read the "Terms and Conditions" section of the auctions site of Service provider, using the Login IDs and passwords given to them by the service provider before reverse auction event. Bidders should acquaint themselves of the „Business Rules of Reverse Auction“, which will be communicated before the Reverse Auction.

13. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines, shall be initiated by BHEL and the results of the RA scrapped/ aborted.

14. The Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party.
15. The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with their offer. The envelope sealed price bid of successful L1 bidder in RA, if conducted, would also be opened after the RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. It is considered that the bidder having submitted their offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rate/s.
16. If it is found that L1 bidder has quoted higher in the online sealed bid in comparison to the envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com)."
17. The calculation sheet e.g. excel sheet (which will help to arrive at 'Total Cost to BHEL') will be communicated to respective bidders of RA by BHEL. In line with the NIT terms, BHEL will provide the calculation sheet (e.g., EXCEL sheet) which will help to arrive at "Total Cost to BHEL" like Packing & forwarding charges, Taxes and Duties, Freight charges, Insurance, Goods & Services Tax (GST) and loading factors (for non-compliance to BHEL standard Commercial terms & conditions) for each of the bidder to enable them to fill-in the price and keep it ready for keying in during the Auction.]
18. This calculation sheet will be finalized based on the evaluation criteria specified in the NIT.
19. Suppliers are required to submit their best price bid in a separate sealed cover along with techno-commercial bid. After evaluation of Techno-Commercial Bids:
- a) In case BHEL decides not to conduct RA, the envelope sealed price bids of all techno-commercially qualified bidders, along with price impact, if any, would be opened and processed as per extant the internal Purchase/ Works Policy as applicable to BHEL.
 - b) In case BHEL decides to conduct RA, business rules of RA will be sent to service provider.(See Annexure for Model General Business Rules of RA.)
20. Generally the start price for the RA would be the lowest of
- a) Lowest online sealed bid and
 - b) Internal Estimate of BHEL
- Note: Wherever more than one lowest online sealed bids are identical and lower than the estimate, the start price, would be that price arrived by reducing the lowest online sealed bid by maximum of one decrement.*
21. Reverse auction process would deemed to have started upon receipt of 'Online Sealed Bids' from the bidders within the prescribed time frame as per Business Rules.
22. After receipt of 'online sealed bids', the start price & bid decrement will be decided by BHEL and the same would be communicated to the service provider, to start the bidding process.
23. Only those bidders who have submitted the 'online sealed bid' within the scheduled time would be eligible to participate further in RA process. However, the H1 bidder (whose quote is highest in online sealed bid) will not be allowed to participate in further RA process provided minimum three bidders are left after removal of H1 bidder. In case of tie for H1 bid (identical online sealed bids), 15 minutes additional time

would be provided and all the participating bidders would be informed by mail/ message on bidding screen to enable bidders submit revised online sealed bids so as to break the tie.

24. If the lowest online sealed bid is the starting price, then the lowest bidder in online sealed bid shall be shown as current L1 automatically by the system. System would have the provision to indicate this bid as current L1 for further bidding.

25. If the start price is lower than the lowest online sealed bid, on acceptance of such start price by any bidder, this bid would be indicated as current L1 for further bidding.

26. In case of no further bidding, RA will be deemed to have been successful with current L1 bidder.

27. All bidders who had given online sealed bid would be able to see their rank and L1 price and their ranking L1, L2 etc. would be based on their last quoted price irrespective of quote received in RA or online sealed bid.

28. RA shall be treated as failed in the following scenarios:

a) In cases where the start price is (a) estimate or (b) one decrement (maximum) lower than the lowest of the online sealed bids and no bidder accepts the start price.

b) In cases where the number of online sealed bids are less than four before removal of highest bidder.

c) In cases of tie among H1 bidders, even after extension of submission of online sealed bids once by 15 minutes.

d) Wherever, the evaluation is done for individual line items, RA shall be treated as failed only for those line item(s) for which any of the above a), b) or c) satisfies.

29. In cases of failure of RA, sealed envelope price bids (of item(s) for which RA has failed) of all the techno-commercially qualified bidders would be opened and the tender would be processed accordingly. However, the envelope sealed bid(s) of techno-commercially acceptable bidder(s) who had agreed to participate in the RA and had failed to submit the online sealed bid would not be opened.

30. After declaring L1 upon completion of RA, the envelope sealed price bid of L1 bidder would also be opened for placement of order on lower of the two bids (RA closing price & envelope sealed price) and the offers would be processed as per extant their internal Purchase/ Works policy provisions of BHEL. Action as per NIT terms would be taken if online sealed bid is higher than the envelope sealed bid.

31. Relative position of bidders (for usage in cases of predefined splitting the quantities) would also include bidders who have given 'online sealed bids' but have not given further bids in auction. In case of splitting requirement, H1 bidder may be considered for counter offer if the pre-stated (NIT) numbers of suppliers do not accept the counter offer. However, principle of splitting to N-1 bidder would be maintained.

32. In case H1 bidder happen to be MSE and was removed from further bidding but is within L1 + 15% band, then this bid would be considered and to be processed in line with 'Public Procurement Policy for Micro & Small Enterprises (MSEs) order, 2012'.

33. For providing preference to domestically manufactured Electronic Products, in accordance with Department of Electronics and Information Technology (DeitY) Gazette Notification No. 33(3)/2013-IPHW dated 23.12.2013 and its related notifications issued from time to time, H1 bidder removed from further bidding would be considered for counter-offer to meet domestic bidder requirement for the item(s) under procurement.

34. In case BHEL decides not to go for Reverse Auction for the tender enquiry, the Price bids and price impacts, if any, already submitted and available with BHEL would be opened as per BHEL's standard practice.

35. In case of enquiry through e-Procurement, the sealed electronic price bid (e-bid) would be treated as sealed envelope price bid.

Note: In order to bring more transparency and to address any queries of Bidders on Reverse Auction, an abridged version of BHEL's "Common Guidelines for conducting Reverse Auction (RA)" has been hosted in BHEL's web site www.bhel.com under the links "Supplier Registration Page" and "Tender Notification". All Bidders are requested to visit the link and familiarize themselves with BHEL's RA procedures and guidelines before submission of their bid/s. Submission of Bid shall mean that the Bidder has read and understood BHEL's RA procedures and the bid is in agreement with the same.

H] Force Majeure

If at any time during the currency of this contract, the performance in whole or in part, by either party of any obligations under this contract shall be prevented or delayed by reason, of any war, hostilities, acts of the public enemy, civil commotion, sabotage, fires, explosions, epidemics, quarantine, restrictions or acts of GOD (hereinafter referred to as events), then provided notice of happening of any such events is given by either party to other within ten days from the date of occurrence thereof, neither party shall reason of such events be entitled to terminate this contract nor shall either party have any such non performance and delay is resumed as soon as practicable after such events has come to an end or ceased to exist. If the performance in whole or part of any obligation under this contract is prevented or delayed by reason or any such event claims for extension of time shall be granted for period considered reasonable by the purchaser subject to prompt notification by the seller to the purchaser of the particulars of the events and supply to the purchaser if required of any supporting evidence. Any waiver of time in respect of partial installment shall not be deemed to be a waiver of time in respect of remaining deliveries.

I] Cancellation of Order:

In the event of non-performance of the contract by the Supplier, BHEL reserves the right to cancel the order with issue of a written notice. BHEL would provide a curing period of 30 days, for the Supplier to rectify the situation. If the Supplier fails to rectify the reason/s that led to the issue of cancellation notice by BHEL, then the cancellation order would be issued automatically by BHEL, without further recourse to the Seller. BHEL will not pay any cancellation charges or any other charges / damages to the Supplier, arising out such cancellation. In the event of the non-performance of the supply contract, by the Supplier, the rights of BHEL include, in addition to cancelling the order, to take alternate purchase action at the cost and risk of the supplier. The additional expenditure to be incurred by BHEL in such alternate purchase would be to the account of the supplier. (Risk Purchase). This remedy would be in addition to the invoking of the CEBG on grounds of failure of the Supplier in executing the Contract and any other legal remedies." BHEL reserves the right to initiate the alternate purchase action at the cost and risk of the erring supplier by issue of a simple notice of intention for the alternate purchase action duly sent by any electronic means and / or by a letter. The cancellation of the order would not be a pre-condition for initiation of the alternate purchase action.

J] Contract Execution Bank Guarantee:

To demonstrate the fidelity of the successful bidder, in executing the Contract, on receipt of the Letter of Intent / Purchase Order, the Supplier shall arrange to provide a contract execution bank guarantee (CEBG). The format of the CEBG is a part of this enquiry. The format may be downloaded and necessary stamping may be obtained from the Banker towards submission of the CEBG. The indigenous suppliers have to provide the CEBG from any one of the Nationalized Banks, listed in the annexure to these terms. Overseas suppliers can submit the CEBG from any of the reputed International / National Bankers. However the CEBG is to be confirmed by any of the Bankers listed by us. In the event of failure by the Supplier to execute the contract either fully or partially, BHEL would encash the entire CEBG. The CEBG shall be valid for the period covering the agreed delivery date of the order with a further claim period of 3 months on the last specified delivery date. In the event of the failure of delivery BHEL would proceed with encashing the CEBG without reference to the Supplier. In the event of BHEL granting extension of the delivery dates, then the CEBG validity shall also be got extended by the Supplier to the extent of the extended delivery times together with the claim period as specified elsewhere. **The CEBG shall be for a value of 2% of the Purchase order.**

Suppliers who are all already registered with BHEL and having a vendor performance rating of A or A+ grade would be exempted from submission of CEBG.

Performance Bank Guarantee

Where ever so required, the Supplier shall arrange to provide a Performance bank guarantee (PBG). The indigenous suppliers have to provide the PBG from any one of the Nationalized Banks, listed in the tender terms. Overseas suppliers can submit the PBG from any of the reputed International / National Bankers. However the PBG shall be confirmed by any of the Bankers listed by us. The PBG shall guarantee the performance of the equipment / materials / items supplied and shall cover the guarantee period. The PBG shall have a claim period of 3 months in addition to the guarantee period. In the event of failure of the supplies made within the guarantee period, BHEL would encash the entire PBG. **The PBG shall be for a value of 10% of the Purchase order.**

The supplier/s have to get the PBG format (pre-printed) from BHEL and get the same stamped by the Banker. Change of PBG terms either by the supplier's Banker or by the supplier, after servicing of the order is not acceptable. Similarly PBG prepared by the supplier (typed by them) will also not be acceptable to BHEL. The pre-printed form issued by BHEL shall be used for making the PBG.

K] Post-order submission of documents for approval

In the event of the release of Letter of Intent (LoI) / Purchase order/s (PO) against this tender, Bidders have to submit the applicable documents as called for in the tender / LoI / PO/s, such as drawings, data sheets, design calculations etc. These documents for approval have to be submitted within the agreed timelines between BHEL and Bidder. Normally the time period for submission for approval is 15 days from the date of receipt of the LoI / PO by the supplier. The actual time period within which the documents have to be submitted for approval would be specified in the LoI / PO.

Such documents would be subjected to evaluation and approval by BHEL and / or by BHEL's customer / Consultant / Customer's Consultant. Bidders have to give their specific acceptance for this.

After approval of such documents and after getting clearance from BHEL, only the items ordered can be taken up for manufacture.

Any changes required by BHEL / Customer etc. in the documents submitted for approval shall be incorporated by the Bidder and no extra cost would be payable by BHEL for such changes.



In the event that the Bidder does not carry out the required corrections, then the LoI / PO would be liable for cancellation by BHEL and BHEL would resort to alternate purchase action at the risk and cost of the Bidder under the Risk Purchase Condition of the Purchase Order.

Note: After receiving the LoI / PO, supplier shall also forward the acknowledgement / acceptance of the LoI / PO by signing and returning the second copy of the LoI / PO as the token of acceptance.

L] Others

a) In case of any contradiction in the terms and conditions given here and elsewhere in the other documents of the tender, it shall be the responsibility of the tenderer to get it clarified from BHEL. The officer authorized to provide such clarifications is the tender issuing officer.

b) Alterations to the conditions of the Tender can be done only by the authorized officer, at any time before the date and time of tender opening and would be duly communicated through a corrigendum.

c) Suspension of Business dealings with Suppliers:

(i) Before submitting offer, prospective bidders are advised to visit our web-site www.bhel.com / supplier registration to familiarize themselves with BHEL's policy and procedures of Suspension of Business Dealings with Suppliers.

Submission of offer shall be deemed to be evidence of the Bidder to have read and understood the above said policy.

ii) Treatment of Banned / Under-performing Vendors:

Any supplier who has been put on "Hold" or "Banned" from having business dealings with BHEL, Ranipet or any other unit of BHEL shall not submit their offer against this tender. If any such offers are received they would be summarily rejected and sent back. During the processing of tender, if any unit of BHEL puts a supplier on "Ban" then further processing of the offer will not be taken up and in case an order is placed, BHEL, Ranipet may resort at their discretion to cancel the PO either fully or partially.

If any of the supplier who is supplying similar material to BHEL, Ranipet has a Vendor Performance Rating (VPR) score of 'C' or below, then offer given by such parties will not be considered for ordering in this tender.

If any of the Bidders have unexecuted order/s with BHEL and if in such orders, the deliveries have been delayed beyond a reasonable period (say 30 days of agreed delivery period), the offer of such Bidders will also be liable for rejection.

Offers of such of those bidders against whom action for suspension of business dealings has been initiated by BHEL, Ranipet or any other Units/Division of BHEL will also not be considered in this tender.

d) Fraud Prevention Policy:

The 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 <http://www.bhel.com> and shall immediately bring to the notice of BHEL Management about any fraud or suspected fraud as soon as it comes to their notice.

e) Applicability of Integrity Pact:-

IP is a tool to ensure that activities and transactions between the Company and its Bidders/ Contractors are handled in a fair, transparent and corruption free manner. A panel of 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.



Sl	IEM	Address	Phone & Email
1.	Shri.D.R.S Chaudhary, IAS (Retd.)	E-1/164,Arera Colony Bhopal 462016 (M.P.)	dilip.chaudhary@icloud.com
2.	Shri Pravin Tripathi, IA & AS (Retd.)	D-243, Anupam Gardens, Lane IB, Sarai, Sainik Farms, New Delhi – 110 068.	pravin.tripathi@gmail.com

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.

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 the IEM(s).All correspondence with the IEMs shall be done through email only.

Note:

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 provided below:

For all clarifications/ issues related to the tender, please contact:

Name: (1) (2)

Dep't:

Address:

.....

Phone:(Landline/Mobile) (1) (2)

Email:

Fax:

Integrity Pact are applicable for all the BHEL enquiries whose estimated value is equal to or more than Rupees 05 Crores.

Copy of Integrity Pact with applicable nominated IEM is attached along with the tender documents for ready reference of Suppliers.

f) If any Supplier attempts to bribe, or pay commission, gift or any advantage or bring in undue influence either by himself or on his behalf any one including a stranger to the tender, in addition to instituting legal proceedings as per the extant laws prevailing, will disqualify the supplier from this tender and all future tenders of BHEL. Decision of the Purchaser would be final in this matter.

g) The laws governing this transaction shall be the laws in India.

h) Wherever not specified, Inco terms 2010 shall be used to interpret the Commercial terms and conditions and

i) In the event of an order, Supplier shall agree to settlement of disputes or differences, if any, by way of arbitration, in accordance with the “Rule of Arbitration” of the Indian Council of Arbitration.

The language in the tender documents downloaded by the Bidders shall at no point of time be changed, altered or modified in any manner by the Tenderer. If such changes are made by any tenderer, it shall be considered as tampering with BHEL’s terms and the offer shall be summarily rejected, whenever it is noticed by BHEL. Such Bidders would be disqualified from the Bidding Process and their offers would be forfeited / Bank Guarantees invoked. They would also not be allowed to participate in future tenders of BHEL.

M. Conditions for rejection of offers:

Following is the list of situations which would lead to rejection of offer/s.

This list is not exhaustive but only indicative.

BHEL reserve the right to reject one or all offers without assigning any reason. The decision of BHEL will be final in this regard.

1. *If the offer fails to meet the technical requirements/specifications of the tendered item/s.*
2. *If the offer does not meet the commercial terms & conditions, such as but not limited to delivery period specified in the tender, Delivery terms, payment terms, Liquidated damages, Risk Purchase, cancellation clause etc., including the load factors specified in the tender.*
3. *If the bidder fails to respond to clarification sought, within a reasonable period. In case of doubts / lack of clarity on the technical and commercial offer of the bidder, BHEL will seek clarifications. Bidders are required to respond completely to such BHEL’s queries within 3 working days unless otherwise agreed to in writing by BHEL for period beyond 3 days. If supplier fails to respond within 3 working days or maximum 2 working days on a reminder thereon, the offer of such bidders will be automatically dis-qualified in the tender without further recourse to informing the bidder.*
4. *If any of the conditions listed below are applicable to the bidder, the offer is liable to be rejected:*

If any

- Debt recovery / Winding up Proceedings are initiated against the Company in Courts / Debt Recovery Tribunals (DRTs),
 - Proceedings are there against the Company in National Company Law Tribunal (NCLT) with respect to Insolvency and Bankruptcy Code (IBC) or otherwise,
 - Any proceedings are there against the Company under the “Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest (SARFAESI) Act,
 - Any restructuring proceedings are underway for the Company under Corporate Debt Restructuring (CDR), Strategic Debt Restructuring (SDR) or otherwise,
 - Divestment / demerger proceedings are underway for the Company under the Companies Act.
 - If action under guidelines of suspension of business dealings (Ref AA/MM/SB/01 Rev 02 dt 22.07.2016) and its latest revisions has been initiated against the company/bidder.
5. *Failure to sign & accept the Integrity Pact (where applicable). Bidders are hereby informed that the contents of the Integrity Pact are firm and fixed and cannot be changed.*

The above list is not exhaustive but is indicative only.

N. Special Note:

BHEL is a Government of India Undertaking. Its procurement practices are governed by the (Internal) Purchase Policy issued by the management of the company and as per Annexure B applicable at the time of finalising the order against this tender.

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Record of Revisions:

Revision No.	Revision Date	Modification
01	17.08.2016	Payment terms for Foreign suppliers modified wrt loading- Clause k.ii
02	29.08.2016	Treatment of banned vendors – Para 3 added - Clause L.ii
03	14.09.2016	Opening of offers – clause B – sub clause ‘b’ included and existing clause ‘b’ renamed as ‘c’.
04	14.09.2016	Opening of offers – Note – sub clause (ii) modified
05	12.10.2016	Clause N. Special Note added
06	22.10.2016	Clause G Reverse Auction modified. Annexure on General Business Rules for Reverse Auction appended Role of Principals added under ‘Miscellaneous’
07	20.01.2017	Clause L (e) is modified. Clause L (f ,g ,h) renumbered.
08	24.02.2017	Clause F(c) modified.
09	08.07.2017	Clause M, Point 4 is added – regarding the financial health of the Bidder - as a criterion for disqualification.
10	20.07.2017	Duties and Taxes replaced with GST; Applicability of GST for LD inserted in Clause E; Treatment of poor performing current vendors inserted in clause L.c.(ii)
11	25.07.2017	Clause A.Note (iii) CST etc., replaced with GST; Clause C.f Deleted;
12	15.09.2017	Clause M, Point 5 inserted regarding Integrity Pact
13	21.03.2018	Clause A, Point xi inserted regarding Overwriting in Price Bids
14	28.05.2018	Clause A, a),b),c),d) amended for M/s E-Procurement technologies, https://bhel.abcprocure.com . Clause A, (f, g, h) – modified. Clause M, Point 4, - regarding suspension of business dealings inserted.
15	23.07.2018	Clause L,(e)- Applicability of Integrity Pact – modified.
16	31.08.2018	Clause C,(n)- Preference to Make in India – added.
17	04.12.2018	Clause C,(n)- Preference to Make in India & Clause K.2 Note - MSE concessions– modified.
18	13.02.2019	Clause C,(n)- Preference to Make in India – modified. Page no 9 Clause o – Extended credit period - removed.

ANNEXURE

Model General Business Rules for Reverse Auction

This has reference to tender no {tender number....date...}. BHEL shall finalise the Rates for the supply of {item name} through Reverse Auction mode. BHEL has made arrangement with M/s. {Service provider}, who shall be BHEL's authorized service provider for the same. Bidders should go through the instructions given below and submit acceptance of the same.

The technical & commercial terms are as per (a) BHEL Tender Enq. No. {...} dated {...}, (b) Bidders' technical & commercial bid (in case of two part bid) and (c) subsequent correspondences between BHEL and the bidders, if any.

1. Procedure of Reverse Auctioning

- i. Online Sealed Bid: This duration of online sealed bid will be {...} minutes. All bidders to submit their online sealed bids during this period.
- ii. Online Reverse Auction: The 'opening price' i.e. start price for RA and 'bid decrement' will be decided by BHEL.
- iii. If BHEL decides the lowest online sealed bid as the starting price, then the lowest bidder in online sealed bid shall be shown as current L1 automatically by the system and no acceptance of that price is required. System shall have the provision to indicate this bid as current L1.
- iv. Bidders by offering a minimum bid decrement or the multiples thereof can displace a standing lowest bid and become "L1" and this continues as an iterative process.
- v. After the completion of the online reverse auction, the Closing Price (CP) shall be available for further processing.

2. Schedule for Reverse Auction: The Reverse Auction is tentatively scheduled on {date}: and the duration of online sealed bid will be {...} minutes. All bidders to submit their online sealed bids during this period.

- Online Sealed Bid:-

- {Start Time:
- Close Time: }

- Online Reverse Auction:-

- {Start Time:
- Close Time: }

3. Auction extension time:

If a bidder places a bid in the last {...} minutes of closing of the Reverse Auction and if that bid gets accepted, then the auction's duration shall get extended automatically for another {...} minutes, for the entire auction (i.e. for all the items in the auction), from the time that bid comes in. Please note that the auto-extension will take place only if a bid comes in those last {...} minutes and if that bid gets accepted as the lowest bid. If the bid does not get accepted as the lowest bid, the auto-extension will not take place even if that bid might have come in the last {...} minutes. In case, there is no bid in the last {...} minutes of closing of Reverse Auction, the auction shall get closed automatically without any extension. However, bidders are advised not to wait till the last

minute or last few seconds to enter their bid during the auto-extension period to avoid complications related with internet connectivity, network problems, system crash down, power failure, etc.

The above process will continue till completion of Reverse Auction.



Complaints/ Grievances, if any, regarding denial of service or any related issue should be given in writing thru e-mail/ fax to M/s. {Service provider} with a copy to BHEL within 15 minutes prior to initial closing time of Online Reverse Auction.

4. Bid price: The Bidder has to quote the {.....} Price inclusive of Packing & Forwarding charges, all the routine & type tests as per tender scope, GST, Freight (bidder to provide original Freight paid receipt), insurance charges, etc. including loading (if indicated by BHEL due to deviations in technical/ commercial terms) for the Items specified. Details are as shown in Excel Sheet for calculation of total cost to BHEL (To be specified by Unit as per NIT conditions).

5. Bidding currency and unit of measurement:

Bidding will be conducted in *Indian Rupees per Unit* of the material as per the specifications {...}

In case of foreign currency bids, exchange rate (TT selling rate of State Bank of India) as on scheduled date of tender opening (Part-I bid) shall be considered for conversion in Indian Rupees. If the relevant day happens to be a Bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken.

6. Validity of bids: Price shall be valid for {... days} from the date of reverse auction. These shall not be subjected to any change whatsoever.

7. Lowest bid of a bidder: In case the bidder submits more than one bid, the lowest bid at the end of Online Reverse Auction will be considered as the bidder's final offer to execute the work.

8. Bidders shall be assigned a Unique User Name & Password by M/s. {Service provider}. Bidders are advised to change the Password and edit the information in the Registration Page after the receipt of initial Password from M/s. {Service provider} to ensure confidentiality. All bids made from the Login ID given to the bidders will be deemed to have been made by the bidders/ bidders' company.

9. Post auction procedure: BHEL will proceed with the Lowest Bid in the Reverse Auction for further processing.

10. Any commercial/ technical loading shall be intimated to bidders prior to RA. The excel sheet provided in this regard shall cover all these aspects. Commercial/ technical loading if any, shall be added by the respective bidder in its price during online sealed bid & Online Reverse Auction. Modalities of loading & de-loading shall be separately intimated to the bidders. The responsibility for correctness of total cost to BHEL shall lie with the bidders.

11. Computerized reverse auction shall be conducted by BHEL (through M/s. {Service Provider}), on pre-specified date, while the bidders shall be quoting from their own offices/ place of their choice. Internet connectivity shall have to be ensured by bidders themselves.

During the RA process if a bidder is not able to bid and requests for extension of time by FAX/ email/ phone then time extension of additional 15 minutes will be given by the service provider provided such requests come before 5 minutes of auction closing time. However, only one such request per bidder can be entertained. Despite this extension if bidder fails to upload his prices due to extreme case of failure of Internet connectivity, (due to any reason whatsoever may be) it is the bidders' responsibility/ decision to send fax communication immediately to M/s. {Service provider}, furnishing the price the bidder wants to bid online with a request to the service provider to upload the faxed price online so that the service provider will upload that price online on behalf of the Bidder. It shall be noted clearly that the concerned bidder communicating this price to service provider has to solely ensure that the fax message is received by the service provider in a readable/ legible form and also the Bidder should simultaneously check up with service provider about the clear receipt of the price faxed. It shall also be clearly understood that the bidder shall be at liberty to send such fax communications of prices to be uploaded by the service provider only within the closure of Bid time and under no circumstance it shall be allowed beyond the closure of Bid time /reverse auction. It shall also be noted that the service provider should be given a reasonable required time by the bidders, to upload such prices online and if such required time is not available at the disposal of the Service provider at the time of receipt of the fax message from the bidders,

the service provider will not be uploading the prices and either BHEL or the service provider are not responsible for this unforeseen circumstances. In order to ward-off such contingent situation bidders are requested to make all the necessary arrangements/ alternatives whatever required so that they are able to circumvent such situation and still be able to participate in the reverse auction successfully. Failure of power or loss of connectivity at the premises of bidders during the Reverse auction cannot be the cause for not participating in the reverse auction. On account of this, the time for the auction cannot be extended and neither BHEL nor M/s. {Service provider} is responsible for such eventualities.

12. Proxy bids: Proxy bidding feature is a pro-bidder feature to safeguard the bidder's interest of any internet failure or to avoid last minute rush. The proxy feature allows bidders to place an automated bid in the system directly in an auction and bid without having to enter a new amount each time a competing bidder submits a new offer. The bid amount that a bidder enters is the minimum that the bidder is willing to offer. Here the software bids on behalf of the bidder. This obviates the need for the bidder participating in the bidding process until the proxy bid amount is decrementally reached by other bidders. When proxy bid amount is reached, the bidder (who has submitted the proxy bid) has an option to start participating in the bidding process.

The proxy amount is the minimum amount that the bidder is willing to offer. During the course of bidding, the bidder cannot delete or change the amount of a proxy bid. Bids are submitted in decrements (decreasing bid amounts). The application automates proxy bidding by processing proxy bids automatically, according to the decrement that the auction originator originally established when creating the auction, submitting offers to the next bid decrement each time a competing bidder bids, regardless of the fact whether the competing bids are submitted as proxy or standard bids. However, it may please be noted that if a manual bid and proxy bid are submitted at the same instant manual bid will be recognized as the L1 at that instant. In case of more than one proxy bid, the system shall bid till it crosses the threshold value of 'each lowest proxy bid' and thereafter allow the competition to decide the final L1 price. Proxy bids are fed into the system directly by the respective bidders. As such this information is privy only to the respective bidder(s).

13. Bidders are advised to get fully trained and clear all their doubts such as refreshing of screen, quantity being auctioned, tender value being auctioned etc. from M/s. {Service provider}.

14. M/s. {Service provider}, shall arrange to demonstrate/ train the bidder or bidder's nominated person(s), without any cost to bidders. M/s. {Service provider}, shall also explain the bidders, all the business rules related to the Reverse Auction. Bidders are required to submit their acceptance to the terms/ conditions/modalities before participating in the Reverse Auction in the process compliance form as enclosed. Without this, the bidder will not be eligible to participate in the event.

15. Successful bidder shall be required to submit the final prices (L1) in prescribed format (Annexure-VI) for price breakup including that of line items, if required, quoted during the Online Reverse Auction, duly signed and stamped as token of acceptance without any new condition (other than those already agreed to before start of auction), after the completion of auction to M/s. {Service provider} besides BHEL within two working days of Auction without fail.

16. Any variation between the final bid value and that in the confirmatory signed price breakup Document will be considered as tampering the tender process and will invite action by BHEL as per extant guidelines for suspension of business dealings (as available on www.bhel.com).

17. Bidders' bid will be taken as an offer to execute the work/ supplies of the item as per enquiry No. {...} dt. {...}. Bids once made by the bidder, cannot be cancelled/ withdrawn and bidder shall be bound to execute the work as mentioned above at bidder's final bid price. Should bidder back out and not execute the contract as per the rates quoted, BHEL shall take action as per extant guidelines for suspension of business dealings (as available on www.bhel.com).

18. Bidders shall be able to view the following on their screen along with the necessary fields during Online Reverse Auction:

- a. Leading (Running Lowest) Bid in the Auction (only total price of package).
- b. Bid Placed by the bidder.
- c. Start Price.



- d. Decrement value.
- e. Rank of their own bid during bidding as well as at the close of auction

19. BHEL's decision on award of contract shall be final and binding on all the Bidders.

20. BHEL reserves the right to extend, reschedule or cancel the Reverse Auction process at any time, before ordering, without assigning any reason, with intimation to bidders.

21. BHEL shall not have any liability to bidders for any interruption or delay in access to the site irrespective of the cause. In such cases, the decision of BHEL shall be binding on the bidders.

22. Other terms and conditions shall be as per bidder's techno-commercial offers and other correspondences, if any, till date.

23. If there is any clash between this business document and the FAQ available, if any, in the website of M/s. {Service provider}, the terms & conditions given in this business document will supersede the information contained in the FAQs. Any changes made by BHEL/ service provider (due to unforeseen contingencies) after the first posting shall be deemed to have been accepted if the bidder continues to access the portal after that time..

24. Bidder shall not divulge either his Bids or any other exclusive details of BHEL to any other party. If the Bidder or any of his representatives are found to be involved in Price manipulation/ cartel formation of any kind, directly or indirectly by communicating with other bidders, action as per extant BHEL guidelines for suspension of business dealings (as available on www.bhel.com), shall be initiated by BHEL.



RA price confirmation and breakup
(To be submitted by L1 bidder after completion of RA)

To
- M/s. Service provider
- Postal address

CC: M/s BHEL

BOILER AUXILIARIES PLANT
INDIRA GANDHI INDUSTRIAL COMPLEX
RANIPET – 632406
TAMILNADU
INDIA.

Sub: Final price quoted during Reverse Auction and price breakup

Dear Sir,

We confirm that we have quoted.

Rs.{ _____ in value & in words _____ } for item(s) covered under tender enquiry
No. {...} dt.{...}

Total price of the items covered under above cited enquiries is inclusive of {Packing & forwarding, GST, freight and insurance charges up to {.....}
District,{.....} State and Type Test Charges etc., [exclusive of Goods & Services tax (GST)],
other as
per NIT}

as our final landed prices as quoted during the Reverse Auction conducted today {date} which will
be valid for a period of { ____ in nos. & in words ____ } days.

The price break-up including that of line items is as given below.

Total	=====
	- Rs.in value & in words
	=====

Thanking you and looking forward to the valuable order from BHEL.

Yours sincerely,
For _____
Name:
Company:
Date:
Seal:



Sl.No	Annexure-C to Enquiry 3890051E / 15042019 for Commercial Terms and Conditions	SUPPLIER COMMENTS: REQUESTED TO OFFER EITHER CONFIRMED OR ACCEPTED OR REMARKS IF ANY DEVIATION IS TAKEN
1	Terms of Delivery- Indigenous Suppliers : FOR Destination: Destination is DOCK OFFICE/ROD/CHENNAI SEAPORT as indicated in the enquiry header (Cost, Packing, Forwarding ,Freight & Insurance etc., are in Supplier's scope i.e. included in the quoted prices.)	
2	Terms of Delivery -Foreign Supplies : CFR Chennai Seaport (Cost, Packing, Forwarding & Freight etc., are in Supplier's scope i.e. included in the quoted prices). Insurance in BHEL Scope.	
3	Delivery Period: To mention clearly the exact delivery period as it attracts contractual penalty on delays.Delivery is the essence of the contract.	
4	Terms of payment for Indigenous Suppliers: 90% payment will be made directly thru' EFT within 45 day for MSE Vendors and 90 days for Non-MSE Vendors from the date of receipt and acceptance of materials at DOCK office/ROD/BHEL/Chennai Seaport . Balance 10% will be released after successful completion Erection and Commissioning. If E & C not completed on or before 23.08.2020 for Unit-I and 23.02.2021 for Unit-II then 10% payment will be released within 45 days from the date of 23.08.2020. If any supplier is asking for payment terms other than the above specified, then suitable loading on cost will be considered. Loading of any deviation in the payment terms w.r.t tender terms will be "MCLR rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation sought by bidders. (For details Pl ref Annexure-B-General Terms and conditions.).	
5	Terms of Payment for Foreign Suppliers: "90% thru' irrevocable & unconfirmed LC at sight within 3 weeks from the date of submission of negotiable documents and LC will be established within 3 months prior to PO delivery date through any one of our Bankers listed elsewhere in the tender conditions for 100% value (less Agency Commission, if any) valid upto the PO delivery period and 15 days thereafter for negotiation. Balance 10% will be released after successful completion Erection and Commissioning. If E & C not completed on or before 23.08.2020 for Unit-I and 23.02.2021 for Unit-II then 10% payment will be released within 45 days from the date of 23.08.2020. All bank charges in India to BHEL's account and all other charges outside India to Supplier's account. BHEL reserves the right to load the price of foreign suppliers in order to bring them on common platform as per Indigenous Suppliers on the account of differential payment terms to Indigenous Suppliers. Loading of payment terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the periods of relaxation compared to indigenous suppliers i.e. 45days / 90days. Other than BHEL preferred payment term, any demurrage or any penalty arising out of delay in submission of documents or any other financial implications encountered by the act of bidder/s or supplier/s during the clearance of the goods at customs/ports, will be borne by the bidder/supplier and will be deducted from the supply invoice.	
6	Whenever there is an Indian Agent to represent a Supplier, it is mandatory to give the details of services to be rendered by Indian Agent and / or the details of agreement between Supplier and Agent. Supplier to indicate the Agency Commission payable. Indian Agency Commission will be paid only in Indian Rupees, calculated at the rate of exchange prevailing on the date of price bid opening. This is payable on satisfactory completion of the contract. Agency agreement copy shall be submitted along with Annexure-C without fail. Note: In order to maintain sanctity of the tender system, it is mandatory that one Agent cannot represent two Suppliers or quote on their behalf in a particular tender enquiry. If any Agent represents more than one Suppliers all such offers will be rejected.	
7	Contract Execution Bank Guarantee (CEBG): The Supplier shall submit a BG for 2% of the contract value valid for the agreed delivery period + 3 Months. Attached CEBG Format is to be signed and submitted along with Annexure-C as a token of acceptance. Please note no deviation is allowed.	
8	PERFORMANCE BANK GUARANTEE (10% OF ORDER VALUE): REQUIRED for a period of 24+3 months from the date of acceptance of material at DOCK Office/ROD/BHEL/Chennai Seaport (including 3 months retention period). If any supplier is asking for any deviation or non-acceptance, then suitable loading on cost will be considered (on 10% value for 27 months). Loading of any deviation w.r.t tender terms will be "Base rate of State Bank of India (SBI) (as applicable on the date of bid opening: Techno-commercial bid opening in case of two part bids) + 6%, will be considered for loading for the relaxation sought by bidders.	
9	OFFER Validity: Minimum 90 days shall be offered from the date of Technical Bid opening and is must and no deviation is acceptable.	
10	Clientele List: Supplier to submit detailed clientele list with their full address including detail of contact person with phone no., fax no. & e-mail ID as per respective clause of Annexure - B (General terms and Conditions).	

Sl.No	Annexure-C to Enquiry 3890051E / 15042019 for Commercial Terms and Conditions	SUPPLIER COMMENTS: REQUESTED TO OFFER EITHER CONFIRMED OR ACCEPTED OR REMARKS IF ANY DEVIATION IS TAKEN
11	Sealed bid : Supplier confirmation required. No reverse auction is applicable for this tender. The sealed price bids alongwith the impact price bids arising out of techno commercial discussions already available with BHEL only will be opened. Please note that no impact price due to non-conductance of RA will be accepted.	
12	Test Certificate: To be submitted. With Chemical and Mechanical properties and dimensions as per Standards and our Technical Delivery Conditions and shall be as per Annexure Q	
12	QP: Specific conformation to Submission of manufacturer/vendor quality plan for our review and approval and shall be as per annexure Q	
13	Guarantee Certificate : Please conform furnishing guarantee certificate in BHEL format for 12 months from the date of commissioning or 18 months from the date of last despatch whichever is earlier.	
14	Warranty shall be as per clause 16.0 of technical specification MAI FGD BFV 001 REV 00	
15	Inspection before despatch: Inspection before despatch at supplier's works by BHEL / BHEL appointed Inspection agency / Customer / Customer appointed inspection agency. And other details shall be as per Annexure Q.	
16	Liquidated Damages (LD) : The applicable LD shall be at the rate of 0.5% per week to maximum of 10% for the undelivered portion and for the deliveries made beyond the agreed Delivery Period. Delivery being the essence of BHEL's contract requirements, in the event that a Supplier does not accept the above LD condition, the offer would be loaded to the extent of the shortfall with respect to upper limit specified above. Date of material receipt at our stores (Day Book date) will be considered as the 'Delivery date as mentioned in purchase order.	
17	Risk Purchase Clause (as per clause-I of Annexure-B) (Supplier Confirmation Required) and as per Terms and Conditions. Non acceptance to risk purchase clause may leads to rejection of offer. Hence bidders are requested to accept risk purchase clause and no clarification on this will be entertained.	
18	GST in % (FOR INDIGENOUS SUPPLIER): To be indicated by the supplier.GST invoice is required for availing Input Tax Credit and conformation to pass on ITC.	
19	GSTIN of the supplier/Works	
20	HSN Code(S) of the items offered	
21	Firm Price: Prices shall be kept firm till completion of supplies and acceptance of materials at BHEL stores.	
22	Supplier Registration Form- Online submission is to to be done and soft copy of the same to be uploaded along with Technical Bid by new vendors.	
23	MSE / Non MSE Status with proof for indigenous suppliers.	
24	For Foreign Offers -Manufacturers' Name and address:	
25	For Foreign Offers - Country of Origin:	
26	For Foreign Offers - Mills Letter of Authority	
27	For Foreign Offers- Agency Agreement	
28	Approximate weight and cubage of the consignment.	
29	It is mandatory to incorporate the following details in the Bill of Lading for Foreign Suppliers Import & export Code (IEC) of importer : BHEL, Ranipet IEC No: 0588138690/38	
30	It is mandatory to incorporate the following details in the Bill of Lading for Foreign Suppliers GST Identification No (GSTIN) of importer;	
31	It is mandatory to incorporate the following details in the Bill of Lading for Foreign Suppliers Official email id of importer (to be used for correspondence by shipping lines and Customs).	
32	Contact details of bidders: Contact person/Designation/Mobile No/Email ID/Fax No/Phone No etc.,	
33	Pointwise conformation/acceptance or comments to our technical specification is must and Each page shall be signed BY THE BIDDER and affixed official seal.	
33	The contractual delivery period will be reckoned from the date of LOI, which shall be binding on the contract. Suppliers shall quote their best delivery period. Delivery is the essence of all contracts for BHEL. Before opening the Price Bid, based on the commercial bids received, if required, BHEL shall fix a reasonable delivery period, which would be generally the modal value of the deliveries quoted by the tenderers in the Bid. Bidders, who at the time of tender opening (Opening of Commercial Bids) have quoted for a delivery higher than the delivery required by BHEL, would have to accept the delivery period advised by BHEL. Such of those suppliers, who quote for higher than this delivery (i.e. do not meet BHEL delivery requirement) would not be considered for Price Bid Opening.	

Sl.No	Annexure - F to Enquiry proposal 3890051E / 15042019 for Foreign Company / Principal / Mill / Manufacturers	Supplier Comments with necessary supporting documents
1	Name and Address of the Company	
2	Contact Details of Company : Contact person / Designation / Mobile No / Email ID / Fax No / Phone No etc.,	
3	Is the company already registered with any of the BHEL units?. If so details may please be given.	
4	Nature of Business and line of products with respective HSN	
5	Production Capacity per Annum with detailed Manufacturing / Testing Facilities. If required supporting documents shall be uploaded	
6	Report from third party business rating agencies like Dun & Brandstreet, Credit Reform etc.,. For any new supplier this document is mandatory and without which submitted offer is liable for rejection.	
7	Experience list / Performance Certificate for Offered / Similar products : Requested to attach list of present customers with name, address and contact details i.e. email/Phone No etc., for offered / similar type and size of item and equipment with whom you have continuous business since last three years.	
8	Framework Confidentiality Agreement cum Undertaking to be submitted along with offer.	
9	If Foreign Company/Principal/Mill/Manufacturers refuses to deal directly with BHEL (to be put on record) and insists on availing the services of an Indian Agent, deed of agency agreement between the Foreign Company / Principal / Mill / Manufacturers and Indian agent should necessarily be submitted. If not submitted offer is liable for rejection.	
10	In cases other than Indian Agents, valid authorisation certificates are to be submitted. However such authorisation certificates will be examined for technical suitability ,quality, guarantee, warranty, after sales support etc., If not submitted, offer is liable for rejection.	
11	For a document in language other than English, a self-attested English translated document to be attached	
12	Dealer / Trader / Distributor / Stockist / Channel Partners / Holding Company / Non-Manufacturer needs to submit an Authorization Certificate, clearly indicating the validity period as well as rights granted by respective Foreign Company / Principal / Mill / Manufacturers to them. i.e. to negotiate / quote / supply / after sales service etc	
13	Quality - Requested to enclose copy of certificate for Quality Management System (QMS) obtained and Table of Contents of quality manual.	
14	If not certified for ISO 9001, requested to enclose copy of Company owned Quality Management System or written down procedure	
15	Banker's Certificate- Requested to enclose banker's certificate certifying credit worthiness.	

Sl.No	Annexure-Q to Enquiry 3890051E / 15042019	##Specific confirmations by the manufacture
1	Quality Plan Requirement:	
1a.	(i) MQP (Manuafcutering Quality Plan) shall be submitted in attached format for BHEL/Customer review & approval. Typical MQP is attached for indicative purposes for guidance & use.	
1b.	(ii) MQP shall invariably cover w.r.t Inward inspection including on Raw materail Procurement, In process and Final inspection in elaborated way/details.	
1c.	(iii) Bidder shall also to give specific confirmation that on need basis, their competent officials shall visit to BHEL/customer for finalization of Quality plan including test procedure/methodology during preaward / post award approval / detailed engineering in the event of an order.	
1d.	(iv) No deviation on BHEL/Customer approved MQP is acceptable.	
1e.	(v) Bidder shall agree to submit all cross referred documents other than codes/standrads to BHEL/Customer/Consultant.	
2	Important Notes shall be included in MQP : (a) Latest revision of Standard s & Specification shall apply. Only International Standards are applicable. Indian & Chinese Standards are not applicable (b) Materials shall be procured in compliance to Functional Technical Specification. (c) Inspection shall be in compliance with Approved Quality Control Procedure for the Product. (d) NDT shall be carried out by Qualified Personnel with compliance to Approved NDT Procedures and Acceptance Norms, as per ASME Section V. (e) Gauges and measuring Instruments, with valid calibration only shall be used. (f) Cleaning and Painting of products shall be carried out as per Approved Painting Schedule. (g) Finished Products shall be packed to comply with Approved Packing Schedule. (h) Welding shall be carried out by Qualified Personnel with compliance to Approved NDT Procedures and Acceptance Norms, as per ASME Section V.	
3	Domastic / Inland Inspection will be carried out by BHEL/BHEL apointed Third Party Inspection Agency (TPIA) / Customer/Customer Apointed Inspection Agency/Consulatnat. This is applicable for all Stage inspection and Final Inspection identified as "W" - Witness or "CHP" - Customer Hold Point as per customer approved Quality Plan/ Technical specification / Approved Drawing/ Approved Data sheet / Scheme / PID / PFD / SLD (Process Instrumentaion Diagram / Process Flow Diagram / Single Line Diagram) etc (As applicable).	
3	Inspection Agency for Foreign Bidders and also for Indian Bidder but importing from Foreign Sources: (1) Any one of the flollowing Third Party Inspection Agency (TPIA) shall be appointed by the bidder and same shall be furnished by the bidder in techno commercial bid itself. (2) The details of TPIA with contact details like Name of the official, Phone no, Email id shall also to be submitted during pre/post award. However cost for such inspection agency shall be borne by the bidder only. Inspection charges for such inspection agency shall be indicated separately so that if BHEL/Customer is undertaking the inspection by on their own , then these charges non claimable by the bidder. List of TPIA 1.M/s Bureau Veritas 2.M/s TUV-Nord 3.M/s TUV-SUD 4.M/s TUV Rheinland 5.M/s Lloyds Register 6.M/s SGS 7.M/s Germanischer Lloyds 8.M/s QUEST 9.M/s Certification Engineers International 10.M/s Intertek 11.M/s IR Class Systems and Solutions 12.M/s DNV 13. M/s Fichtner 14. M/s ABS Inspection Services	

Sl.No	Annexure-Q to Enquiry 3890051E / 15042019	##Specific confirmations by the manufacture
4	Stage Inspection during manufacturing Process : Stage Inspection during manufacturing shall be carried out as per approved quality plan and all necessary documents shall be provided for review,verification and clearanace for further processing. This inspection call shall be given well in advance (atleast 2 weeks before) to TPI/Bidder's own inspection agency to avoid delay in the manufacturing processes.	
5	Inspection before despatch for domestic supplier : Inspection before despatch at supplier's works shall be carried out by BHEL/BHEL appointed Inspection agency. Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet .	
6	Inspection at Foreign Source/Supplier: (a) As in sl no: 3. shall be ensured without fail (b) No materail / items shall be despatched without getting the written communication from BHEL / Customer inspection carried out by BHEL/BHEL apointed Third Party Inspection Agency (TPIA) / Customer/Customer Apointed Inspection Agency/Consulatnat. This is applicable for all Stage inspection and Final Inspection identified as "W" - Witness or "CHP" - Customer Hold Point as per customer approved Quality Plan/ Technical specification / Approved Drawing/ Approved Data sheet / Scheme / PID / PFD / SLD (Process Instrumentaion Diagram / Process Flow Diagram / Single Line Diagram) etc (As applicable). Inspection before despatch for Foreign supplier : Inspection before despatch at supplier's works shall be carried out by bidder appointed inspection agencies having international presence at vendors and or vendor's sub vendor works. Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet by TPIA mentioned in Sl no: 03 at supplier's cost.	
7	Painting shall be done strictly as per BHEL/Customer approved painting schedule / scheme only. Paint Thickness / Paint shade shall be ensured as per BHEL / Customer approved painting schedule / specification / data sheet etc. No deviation is acceptable unless otherwise accepted by BHEL/Customer in writing. Any conflict if any among BHEL / Customer approved painting schedule / Spec / data sheet etc shall be brought to the notice to BHEL well in adavnce before proceding including the BOI being procured for assy / skid like motors etc	
8	Specific conformation for document package in the event of an order (2 Hard copies & soft copy in PDF file) is to be given containing the following with proper linkages (i) Index Sheet (ii) MQP/RQP/Endorsement Sheet (As applicable) (iii) TCs identified by BHEL/ Customer for record for "CHP" / "W" and Verification portion ("V") as given in approved QP. (iv) Final inspection report + TC including Chemical + Mechnaical + HT + NDT etc (v) Third party Inspection report + TC (vi) Customer CHP/ MDCC (vii) Type test / Performance Test reports conducted (viii) Type test / Performance Test approval/ clearance obtained from BHEL/Customer (ix) BOM with As Build Drgs with actual make / rating used with BHEL/customer approved drawings.	
9	Packing / Seaworthy Packing shall be as per BHEL Packing schedule / approved drg / sketch. This shall be ensured to take care tarnsit / handling / transhipment in Road / Sea / Air. Photographs are to be submitted for BHEL review before despatching the material as per contract conditions.	
10	Outsourcing of test facilities: Bidder shall ensure all the testing facilities in house. However If any of the test facilities are not available with successful bidder, then bidder shall ensure the same at NABL accreadted third party lab / Govt / Govt Lab for major testing such as NDT, Electrical & Mechanical testing.	
11	Important Note: No deviation on the above requirement 01 to 10 is acceptable w.r.t Quality Requirement and those offers not meeting these specific customer requirement is liable for rejection and hence the bidder shall submit all the required documentary evidences in the offer itself.	
12	## Necessorily to be filled up by the bidder at the time of offer itself otherwise the offer may not be considered w.r.t Quality Requirement being customer specific requirement.	

TERMS AND CONDITIONS FOR INDIGENOUS OFFERS

- a) **Quotations :** Each Tender should be sent in duplicate in a sealed cover. Inner cover should be sealed with tenderer's distinctive seal and superscribed with correct Tender No., item of supply and due date of opening. Tender should not be addressed to any individual's names but only by designation and shall be addressed to
Manager/Purchase, BHARAT HEAVY ELECTRICALS LIMITED, BOLIER AUXILIARIES PLANT, INDIRA GANDHI INDUSTRIAL COMPLEX, RANIPET, VELLORE DISTRICT - 632406, INDIA.
- b) Tenders should be neatly typewritten and should be free from CORRECTION AND ERASURES. Corrections, if any, must be attested. All amount shall be indicated both in words as well as in figures. Where there is difference between amount quoted in words and figures, amount quoted in words shall prevail.
- c) Price should be net F.O.R. destination inclusive of risk in transit and remain valid for 90 days from the due date.
- d) If any Sales Tax is payable as extra to the quoted price it should be specifically stated in quotation failing which the purchaser will not be liable for payment of Sales Tax. Our TIN No. 33024364741 & CST Number 1141686.
- e) Products with I.S.I certification marks will be preferred.
- f) The applicable rate of excise duty shall be clearly indicated in the quote itself.
- g) The tenderer shall fill up the specification Deviation Disposition Report either NIL or the deviation taken by the tenderer against the Tender specification.
2. **Samples :** Wherever possible samples should be submitted separately whether specifically requested or not, so as to reach the purchase on or before the due date of the enquiry. They should be clearly marked with the Enquiry No. and the date on the outside cover to facilitate identification.
3. **Packing and Marking :** The supplier shall arrange for securely protecting and packing the stores to avoid loss or damages during transit.
4. **Terms of Payment :** Payment will be made within 45 days for MSME (Small / Micro) Vendors and 90 days for others after receipt and acceptance of materials at BHEL Stores or receipt of site acknowledgment in case of direct to site items of satisfactory receipt of materials at site. Where required by the purchase, the successful tenderer must send the operation and maintenance manuals, test certificates, drawings, etc., as called for, for the materials ordered. These should be sent immediately after despatch of the materials and a statement to that effect should be made in the invoice. Failure to comply with this provision will result in delay in payment of the bills. Goods despatched either by V.P.P. or by the documents presented through bank will not be accepted unless agreed to by the Purchaser.
The transporter's copy of Excise Invoice should accompany the material. The Original Invoice alongwith other documents shall be (a) routed through bank or (b) directly sent to us as called for in the contract. One set of the Advance copies of the above documents shall be sent to Manager / Finance (Stores Bill section), BHEL, BAP, RANIPET - 6 and one set to Manager / Purchase BHEL, BAP, RANIPET - 6.
5. **Liquidated Damages :** It is clearly understood among the parties to the contract that "Time is the essence of the contract". Therefore, the delivery of the goods specified in the purchase order should be made within the time limit prescribed. Where the seller supplies or despatches the goods, beyond the delivery period specified, the Purchaser will have no obligation to accept the goods, if accepted, liquidated damages at the rate of 1/2% of the value of goods delayed for each week of delay or part thereof will be levied without prejudice to any other relief or compensation due to the purchaser under any other condition of this contract.
6. **Risk Purchase :** Alternatively, the purchaser at his option will be entitled to purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the time stipulated as aforesaid or if the same were not available, the best and the nearest available substitute therefor. The supplier shall be liable for any loss which the purchaser may sustain by reason of such risk purchases in addition to penalty at the rate mentioned in Clause 5 above.
7. **Preferential Delivery :** It should be noted that if a contract is placed on higher tenderer as a result of this invitation to tender in preference to the lowest acceptable offer in consideration to the earlier delivery, the seller will be liable to pay to the purchaser the difference between the contract rate and that of the lowest acceptable tender on the basis of final price F.O.R. destination including all elements of freights, sales tax, duties and other incidentals in case of failure to complete supplies in terms of such contract within the date of delivery specified in the tender and incorporated in the contract.
8. **MODVAT CREDIT :** If any Excise duty is payable, the chapter head/sub - head reference and the rate of duty should be quoted. If the tenderer is availing MODVAT credit for his input materials, the effect of proforma credit should be passed on the purchaser. Tender under "MODVAT" shall be preferred.
9. **General :** a) The Purchaser reserves the right to split up the tender and place for individual items with different tenderers and also increase the quantity.

TERMS AND CONDITIONS FOR FOREIGN OFFERS

Offer : Offer in ENGLISH LANGUAGE AND IN TRIPPLICATE IN A SEALED COVER superscribing the enquiry number and due date shall be submitted addressed to: THE MANAGER / PURCHASE, BHARAT HEAVY ELECTRICALS LIMITED, BOLIER AUXILIARIES PLANT, INDIRA GANDHI INDUSTRIAL COMPLEX, RANIPET - 632 406, TAMIL NADU, INDIA.

Offers should be firm for net FOB / FCA nearest Sea / air port price and C & F Chennai Port Price indicating the shipping specifications and the earliest delivery in the respect of others from overseas suppliers.

Documents :

- (i) Offers should be accompanied by detailed technical literature, catalogue and detailed dimensional drawing in ENGLISH and in DUPLICATE, or otherwise the offers will not be considered.
- (ii) In case overseas suppliers route their accredited selling agents, a letter of authority should be furnished mentioning the name and address of their selling agents, who are authorised to bid, negotiate and conclude a contract on their behalf.

Agency Commission : In respect of offers from overseas suppliers, agency commission, if any, payable to their agents in India shall invariably be shown separately in the proforma invoice and this will be paid by us in India, in Indian Rupees, on satisfactory completion of the contract.

Spare : The tenderer should quote separately for spares that are required for two years trouble free operation. The spares offer should accompany the offer of main equipment, otherwise the quotation will be overlooked.

Validity : The offers for main equipment and spares shall be kept open for acceptance for 90 days (Ninety days) for the date of opening of the tender.

Test Certificates, Operating and Maintenance Manuals : The tenderer shall clearly mention in their offer that Test Certificates and Operating and Manuals, etc., as called for in technical specification, in the required number of copies will be provided at no extra cost. If any amount is payable as extra, the same shall be indicated separately in the offer.

Terms and payment : In the event of an order the purchaser will arrange for an unconfirmed irrevocable letter of credit against presentation of documents. Under, no circumstances confirmed irrecoverable letter of credit will be established by the purchaser.

General :

- (i) Preference will be given to suitable indigenous or ex-stock imported offers, failing which imported offers from incoming consignment against the indigenous supplies "Stock and sale Licence" will be accepted, if Stock and sale licence is not available with the indigenous suppliers, the same shall be indicated in their offer.
- (ii) The offer should reach us on or before 14.00 Hours of date of tender opening. The offer will be opened at 14.30 hours on the due date in the presence of the tenderers who may like to be present.
- (iii) **BANK GUARANTEE (if applicable) :** The supplier in the event of an order, should furnish a Bank Guarantee from an approved Bank at no extra cost in a proforma which will be supplied to the supplier, along with the order, for an amount equivalent to 10% of the value of the contract. The Bank Guarantee should remain in full force and effect during the period that would be taken of successful completion of the contract and shall continue to be enforceable till 12 months from the date of receipt of consignment at purchaser's site or 18 months from the date of last shipment at the port of Delivery, whichever is earlier.
- (iv) **INCOTERMS :** The definition for terms shall be as per Incoterms 2010
- (v) **PLEASE QUOTE YOUR RATE FOR ALL THE FOLLOWING CONDITIONS.**
 - (a) FOB on at sight L.C.
 - (b) On C & F Chennai Port India with at sight L.C.
 - (c) Rate on credit basis with rate of interest and period of credit.
 - (d) Rates with suppliers credit.

		Manufacturer Name & Address:		MANUFACTURING QUALITY PLAN										
				ITEM:			QP NO: REV. NO: DATE:		PROJECT: Maitree Super Thermal Power Project, Rampal, Bagerhat-Bangladesh (2X660 MW) PACKAGE: EPC PACKAGE MAIN SUPPLIER: BHEL, BAP RANIPET					
						Page 1 of 2								
S.NO	COMPONENTS & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY			REMARKS
					M	C/B			D		M	C	B	
1	2	3	4	5	6		7	8	9	D*	** 10			11

1.0	RAW MATERIAL													
1.1			MAJOR						TC	√	P	V	-	
2.0	BOUGHT OUT ITEMS													
	MOTOR	TYPE & ROUTINE TEST	MAJOR	PERFORMANCE PARAMETER	100%	100%	PRQA:550/LATEST (AS PER BHEL STANDARD PROCEDURE)		REPORT	√	P	V	-	
3.0	INPROCESS INSPECTION													
				MT/PT	100%	100%	ASME SEC V	ASME SEC V	REPORT	√	P	W	-	
				MEASUREMENT	100%	100%	DRAWING	DRAWING	DR	√	P	W	V	
5.0	FINAL													

		LEGEND: * RECORDS, IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION.				DOC.NO.: REV. CAT.	
MANUFACTURER/ SUB-SUPPLIER		MAIN-SUPPLIER		** M: MANUFACTURER/SUB-SUPPLIER C: MAIN SUPPLIER, B: BIFPCL			
SIGNATURE				P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE, CHP: BIFPCL SHALL IDENTIFY IN COLUMN "B" AS 'W'		FOR BIFPCL USE	
						REVIEWED BY	
						APPROVED BY	
						APPROVAL SEAL	



		Manufacturer Name & Address:	MANUFACTURING QUALITY PLAN												
			ITEM:			QP NO: REV. NO: DATE:		PROJECT: Maitree Super Thermal Power Project, Rampal, Bagerhat-Bangladesh (2X660 MW) PACKAGE: EPC PACKAGE MAIN SUPPLIER: BHEL, BAP RANIPET							
S.NO		COMPONENTS & OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORDS		AGENCY			REMARKS
						M	C/B			D	M	C	B		
1		2	3	4	5	6		7	8	9	D*	** 10		11	

	INSPECTION													
5.1	IDENTIFICATION, PAINTING & PRESERVATION	COMPLIANCE TO COMPANY STANDARD	MINOR	VISUAL	100%	100%	AS PER APPD PAINTING SCHEDULE	AS PER APPD PAINTING SCHEDULE		√	P			

RECORD OF REVISION

REV NO	DATE	DESCRIPTION
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		LEGEND: * RECORDS, INDENTIFIED WITH “TICK” (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER/SUB-SUPPLIER C: MAIN SUPPLIER, B: BIFPCL P: PERFORM W: WITNESS AND V: VERIFICATION. AS APPROPRIATE, CHP: BIFPCL SHALL IDENTIFY IN COLUM “B” AS ‘W”		DOC.NO.:	REV.....	CAT.....	
MANUFACTURER/ SUB-SUPPLIER	MAIN-SUPPLIER						
SIGNATURE			FOR BIFPCL USE	REVIEWED BY	APPROVED BY	APPROVAL SEAL	



Online SRF Submission Procedure

Following are the formalities to be completed by your company for registration purpose.

NOTE: BEFORE PROCEEDING FOR ONLINE REGISTRATION " PLS READ STEPS FOR FILLING UP ONLINE REGISTRATION FORM - HELP MENU" - DETAILS ATTACHED WITH THIS MAIL

With effect from 01.04.2015 onwards, we have migrated to online Supplier Registration Form (SRF) as per our Corporate guidelines. **Supplier Registration Form (SRF)** is to be fed in our BHEL website portal – **ie., PDF documents of SRF and its annexure as called for shall be signed by authorized signatory & uploaded in portal.**

We request to visit our Web Site : www.bhel.com and click under heading "Supplier Registration" and fill up the **"Supplier Registration Form"** which is available in the Online Supplier Registration Portal.

Or else, copy the following URL Link and paste in the web link address: http://www.bhel.com/vender_registration/vender.php and proceed with.

Or else, type directly as <http://203.129.195.108>

Click the button "search material" on the home page of supplier registration portal and search thoroughly your required material / product

*After completing the material search then proceed for User Id & Password for filling up the details of registration requirements. **Note: If you are an already registered supplier with any of our BHEL Unit - pls select "existing permanent supplier" or else select "New Registration" and then proceed accordingly.***

Please note that for a foreign suppliers' there is a separate format to be filled in, which may be taken care suitably.

After successful submission of SRF along with all annexures as called for thro' online i.e., authorized signatory signed pdf documents of SRF and its annexures are to be uploaded thro' online portal and confirm the same in **"form dispatch"** area ie., registration part-4 – wherein supplier has to confirm that all the documents were submitted "online" and click the button **"confirm"**. After clicking confirmation button, the same will be appearing against BHEL Ranipet for registration.

Looking for a long successful & sustaining business association with BHEL.

VOLUME IIB

**TECHNICAL SPECIFICATION
FOR
SEAWORTHY PACKING FOR EXPORT JOBS**

SPECIFICATION NO. PE-TS-888-100-A001



**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NEW DELHI, INDIA**

	TITLE TECHNICAL SPECIFICATION FOR SEAWORTHY PACKING FOR EXPORT JOBS	SPECIFICATION NO. PE-TS-888-100-A001	
		VOLUME II B	
		SECTION D	
		REV. NO. 0	DATE 10/08/2010
		SHEET 1	OF 52

1.0 Purpose

The purpose of this specification is to describe minimum packing requirements for the different items/equipment for all export Project and also to define marking and shipping requirements during transportation by ship, road and air for all export jobs.

2.0 SCOPE

For export jobs, sea worthy packing capable of performing all necessary functions like prevention of damage to the contents, sufficient to support frequent handling and lengthy period of outdoor storage in adverse weather conditions are required. Workmanship and materials used shall be of high standard meeting the technical requirements and in accordance with best commercial export packing practices. Vendor shall be responsible for sea worthy export packing, however it shall meet the minimum requirements specified herein. Equivalent or better packing methods may be deployed subject to approval of the BHEL/Purchaser. Vendor shall submit the packing procedure for its equivalent for purchaser's approval during detailed engineering.

The scope this specification is to define VENDOR's responsibilities in terms of:

- Preservation of the GOODS/items/equipments before packing.
- Packing of the GOODS for road, rail, sea and/or air transportation to desired destination i.e. project site
- Making cases/crates
- Chemical Treatment/Fumigation before packing to prevent fungus, damage due to termite, borer, rats, etc.
- Marking of cases/crates.
- Other Services required.

3.0 Application

This specification is applicable to all the goods to be transported to project site and requires to be in transit for longer duration. *However, for "Misc cable erection items", "Fire sealing system" & "Exothermic welding material", the packing requirements shall be as per the procurement specification.*

4.0 Definitions

- "BHEL" : Main EPC vendor
- "OWNER" : Customer for a particular export project.
- "VENDOR" : Company(ies)/VENDOR(s) to whom the BHEL has placed Purchase Order for GOODS/ items/system/package.
- "GOODS": means all or part of the articles, material, equipment supplies including technical documentation, as described in the Purchase Order, to be supplied by VENDOR.
- "PACKER": Packaging Company to whom VENDOR intends to sub-contract the packing in case they do not have own packing capability/facilities .
- "FREIGHT FORWARDER" : Means the Company responsible for performing freight forwarding activities.

5. General Information

	TITLE TECHNICAL SPECIFICATION FOR SEAWORTHY PACKING FOR EXPORT JOBS	SPECIFICATION NO. PE-TS-888-100-A001	
		VOLUME II B	
		SECTION D	
		REV. NO. 0	DATE 10/08/2010
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The following requirements are intended as minimum requirements, and compliance to these requirements in no way absolves or relieves **VENDOR** of any responsibility or obligation outlined in the Purchase Order. In all circumstances, the packing will be designed and constructed in order to support **GOODS** during transportation as well as to prevent the Goods from damage due to impact, extreme climatic conditions, sun and rain. It must be ensured that the delivery of the **GOODS** to the jobsite by sea, road or air, in good condition.

GOODS shall be export packed in compliance with the best-established practices for international projects, in accordance with the following instructions. In the event of any conflict between these specified requirement and the established practices, specification requirement shall govern.

Due to climatic conditions and the complex transport operation(s), it is essential that protection and packing is of the highest standard. Packing means to efficiently protect the **GOODS** during the total transport operation; from the moment they leave the factory until they are delivered to the jobsite, including handling operations (loading/unloading) and storage.

When **VENDOR** do not have packing capabilities/facilities of their own and therefore intends to sub-contract, **VENDOR** have to inform **BHEL/Purchaser** of the name and address of proposed **PACKER(s)** for approval.

6.0 Criteria for Selection of Packaging

Packages are to be made according to categories, described in articles 8.1 to 8.5, depending on the type of materials, their fragility and size.

These categories have been established for the protection of equipment and material during multi-mode transports, i.e.: combination of overland and sea transport; containerization, air transportation.

In a general manner, the **GOODS** have to be packed in such a way that crates, bundles, pallets can be stored into General Purpose containers, wherever possible.

If **VENDOR** has any doubt about the correct method of protection or packing, he should contact **BHEL/Purchaser** in order to mutually agree on the adequate type of packing to be used.

Materials can be classified in following categories

- Hazardous Material
- Non-Hazardous Material
-

Further to above categorisation, non-hazardous materials can be sub- categorised for selection of packing.

6.1 Hazardous Materials

Though handling of hazardous material may is not applicable in the scope of this specification. All hazardous material must be packed in adherence to the detailed requirement relating to packing, marking and labelling set out in the most recent report of the Board's Standard Advisory Committee on the Carriage of Dangerous Goods in Ships for sea freight, and the Restricted Articles Regulations, laid down by the International Air Transport Association for airfreight.

6.2 Non-Hazardous GOODS

The scope of this specification is to provide necessary guidelines for packing for power plant equipment, components, Pipings & Valves, Fittings, other structural items, electrical items, spare parts and erection materials. The procedure is defined in subsequent paragraphs in details in clause no. 8.0.

	TITLE TECHNICAL SPECIFICATION FOR SEAWORTHY PACKING FOR EXPORT JOBS	SPECIFICATION NO. PE-TS-888-100-A001	
		VOLUME II B	
		SECTION D	
		REV. NO. 0	DATE 10/08/2010
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7.0 Marking Instructions & Despatch details, Storage Code

7.1 Marking Instructions & despatch details

Packages and crates will be marked with indelible black paint, resistant to seawater. Marking must be perfectly legible.

The shipping marks, which will be as per fig-13, shall be stencilled on two sides and one end in clear characters at least 5 centimetres high (where crate size permits, otherwise use optimum size for each package dimension).

When the GOODS are to be shipped in containers then marking may be stencilled on one end only. However, packages must be stowed in a manner that shows these marks.

Crates containing fragile articles must be packed with special precaution against risk of breakage and must be stencilled on all sides "FRAGILE - HANDLE WITH CARE". Where crates are not to be overturned, VENDOR must show on the crates, clear and readily visible identification as per fig-12, to ensure they are kept in the correct position.

Packages/equipment of 2,000 kg or more must be marked with slinging points on all sides, in addition to the centre of gravity marks.

Number packages consecutively i.e. 1 of 10, 2 of 10, etc. Do not duplicate package numbers. VENDOR is responsible for any loss or damage caused by incorrect marking.

All cases/crates shall also be marked with the appropriate international standard graphic symbols for handling as shown in Fig 12.

As a minimum, all cases/crates are to be marked clearly on all four sides with:

- "HANDLE WITH CARE"
- "RIGHT SIDE UP"
- "KEEP DRY"

In the case of packages with a single gross weight totalling 2,000 kg and/or a height of more than 1m, the centre of gravity shall be clearly marked with the symbol on two adjoining sides. For all items of equipment with an eccentric centre of gravity this symbol shall be marked at the bottom, side and top of the package.

The slinging and lashing points shall be marked with a chain symbol.

When packing in cases/crates, these packages shall also have metal corners at the slinging points. (Fig-11)

External front and rear sides of the boxes to be planed for writing instructions.

Dispatch details such as consigner/consignee address, contract and case details, country of origin, port of delivery, stacking instructions shall be written on one side of the boxes. An anodized aluminum plate as per details and specifications given in fig-13 shall be provided on one side of the boxes.

One copy of packing slip wrapped in polyethylene bag covered with aluminum packing slip holder to be nailed on the external surface of the box. One more copy of the packing slip wrapped in polyethylene bag is to be kept inside the box at the pertinent place.

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7.2 Storage Code

The type of storage required is required to be specified, it will be shown on each packaging in **RED colour**.

- X Crates or packages to be stored outdoor without covers
- XX Crates or packages to be stored under tarpaulin
- XXX Crates or packages to be stored in covered or enclosed premises
- XXXX Crates or packages which must be stored in air-conditioned premises

8.0 GUIDELINES FOR PACKING GOODS

8.1 In the subsequent paragraphs details of different types of packings for different types of GOODS are defined. Vendor shall make packing details/procedure based on the guidelines and submit for approval.

8.1.1 Packing for Pipe, Fittings, Flanges and Valves, Structural Steel

Particular attention should be brought to pipe, fittings, flanges, valves and structural steel. Packing categories for piping and fittings will differ according to the diameter and wall thickness of these products. VENDOR shall comply with the following established practice.

IMPORTANT NOTE:

Depending on the project schedule and availability of ocean vessels, the piping and structural steel may be shipped in containers. In this event, VENDOR has to arrange the packages in such a way it allows the stuffing into Open Top in gauge containers.

8.1.2 Pipe

Where practicable, pipe lengths shall be limited to 11.8 meters.

All pipes 2" included and below shall be packed in crates. All pipes to be capped and ends sealed with waterproof tape.

Pipes over 2" up to 6", shall be bundled and banded in bundles of uniform length. Bundling is carried out with U-IRON or traversal planks, joined with threaded connecting rods with locknuts. Quantities and strapping positions depend on the lengths, with a 120 cm spacing to prevent distortion. Bundle weight shall not exceed 2,000 kg. All pipes are to be capped and ends sealed with waterproof tape (tape is not necessary if end caps are of the pre-shrunk or self-sealing type).

Pipes larger than 6" shall be shipped as single lengths with the ends capped. End caps are to be of the recessed type to enable the use of soft faced hooks, but still completely sealing the end and also protecting the weld.

All stainless steel piping must be packed separately in wooden crates. Any banding of bundles is to be with the same material.

8.1.3 Pipe Fittings, Flanges and Valves

All pipe fittings, flanges and valves up to 6", are to be packed in cases/crates. For items over 6", these may be fixed securely to a pallet base and enclosed in a crate, for protection. Where valves have actuators attached, rigidity must be ensured for the valve and actuator. The vulnerable parts of the actuator are to be completely protected within a wooden crate.

All stainless steel fittings, flanges and valves of all sizes, must be packed separately in wooden crates. Any strapping is to be with the same material.

8.1.4 Structural Steel

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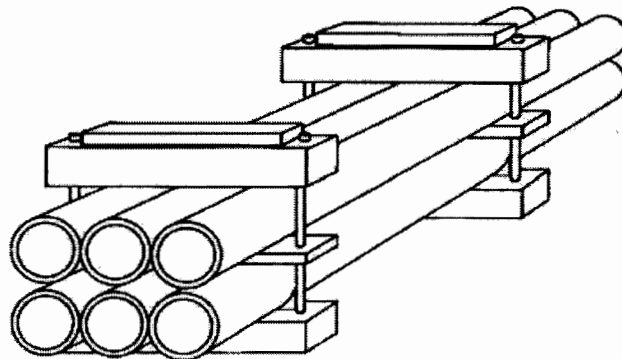
Structural Steel, reinforcing rods, bars, etc., should be packed in bundles of uniform length. Refer to articles 8.1.2, for strapping requirements. Bundle weight not normally to exceed 2,000 kg. Fabricated structures and structural steelwork, etc, should be bundled and packed using wooden beams and long bolting to secure the load.

8.2 Bundling – Packing Category I

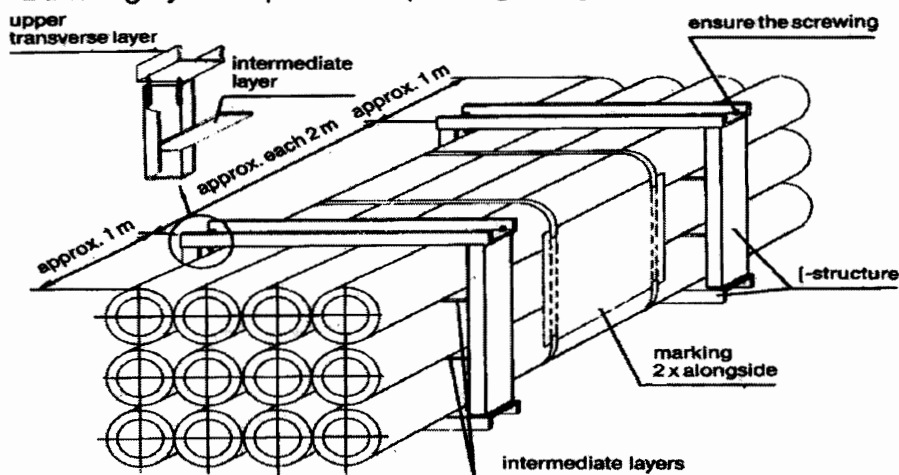
8.2.1 Type of Equipment

Equipment which is not subject to damage by corrosion or mechanical effect, i.e. pipes, piping, structural steel.

Packing category I



Bundling by U-shaped iron – packing category I A



8.2.2 Type of Construction

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- Bundling has to be effected
- By squared timber and threaded rods.
- With an intermediate layer (threaded on tightening bolts) according to the weight of the package.
- Wedge-shaped timbers must be added at the outer points of lower layer.
- Between the bolts a spacer must be nailed.
- The bolts must be secured (e.g. by locking nut).
- If single parts could protrude, an appropriate protection must be installed (flat iron or plates).
- Bundling with steel straps or PVC straps is not accepted.

8.3 Skids, Square Timber Constructions, Casings – Packing (Category II)

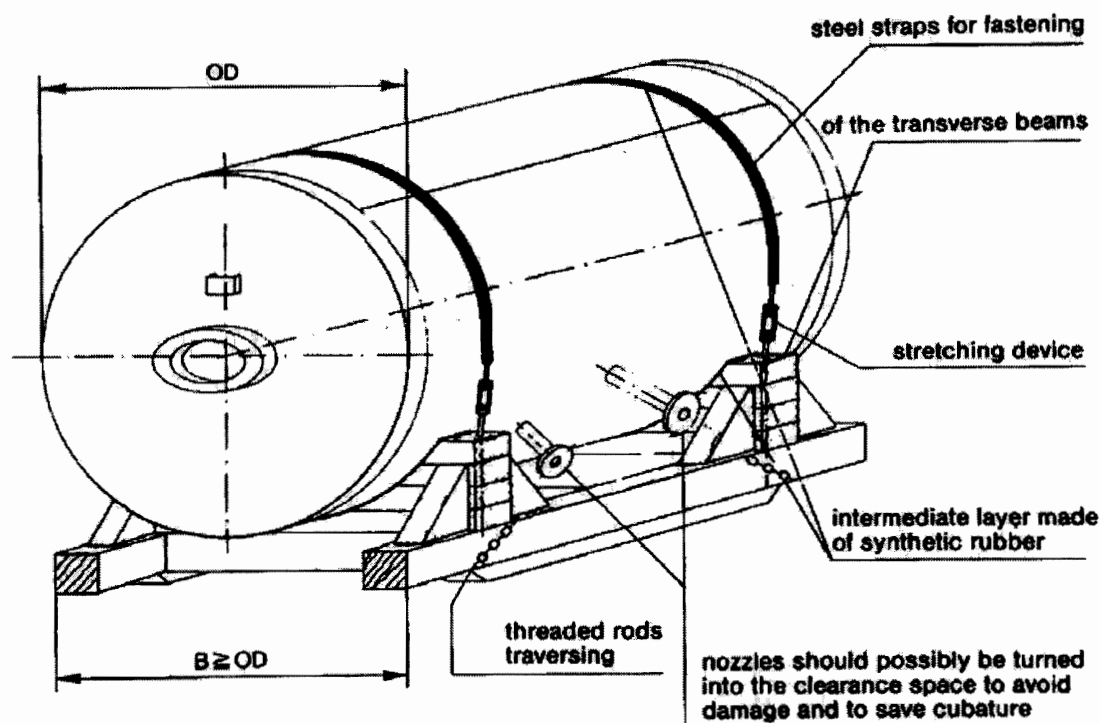
8.3.1 Type of Equipment

Voluminous apparatus, tanks and/or heavy pieces those are not vulnerable to mechanical or corrosive effects.

8.3.2 Type of Construction

- The construction skid can be made of wood or of metal.
- The fastening of the packages on the skid will be made by steel straps (flat iron) which have to be elastically lined, non-slip and securely bolted onto the skids.
- Flange openings have to be closed with gaskets and blind flanges or, if necessary, provided with cover.
- Skid constructions may not be less than the dimensions of the package in length or in width.
- Tanks and apparatus with their own support cradles must be supplied with an anti-slip lining.

PACKING CATEGORY-II



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8.4 Packing of GOODS in Wooden Crates/Cases/Boxes

The construction of wooden crate/cases/boxes shall be as per the details indicated in clause 9.0 & Fig 1 to 11. Details indicated in the sketches for different categories Packing crates/boxes are only for a typical equipment considered for illustration.

8.4.1 Packing Category III

8.4.1.1 Type of Equipment

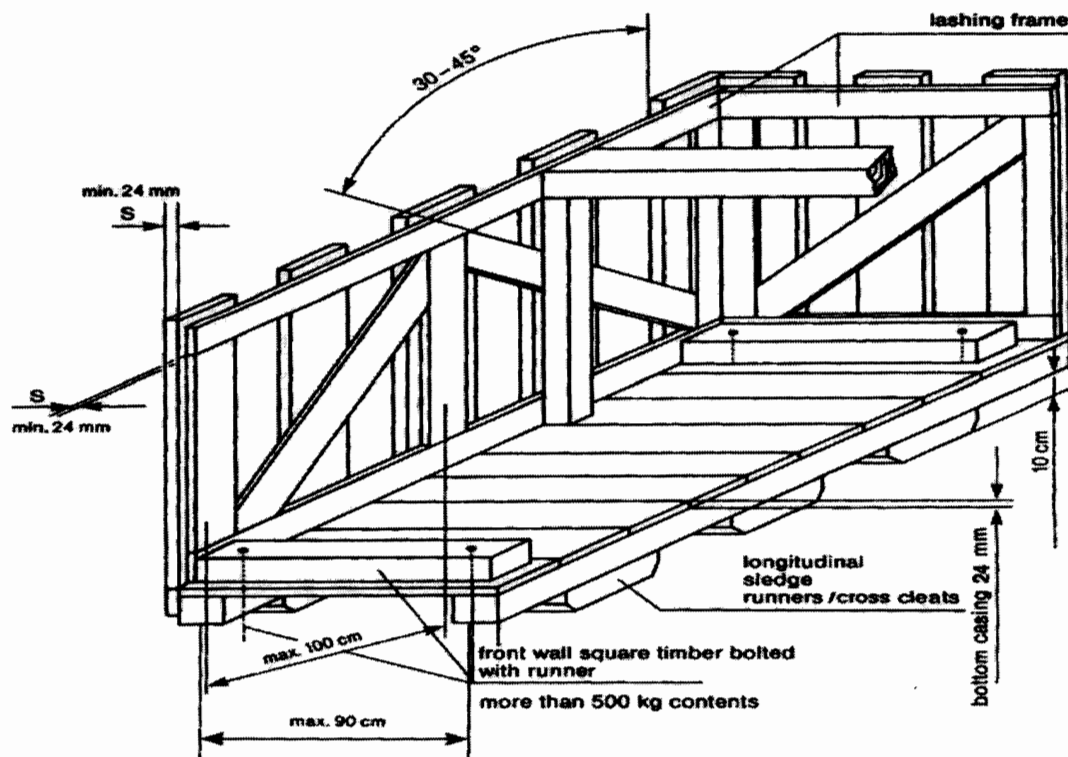
Fabricated equipment, which cannot be transported on cradles; frame-works, prefabricated piping and fittings, mechanical and electrical assemblies. *This type of packing is recommended where many parts of the equipment/component/assembly are not protruding out.*

8.4.1.2 Type of Construction

The equipment must be safely fastened to the bottom with bolts, possibly by the runners or to be spread in such a manner that no protruding parts are possible. For parts, sensitive to rainwater and/or debris, a protection has to be made by a foil cap.

If it is possible that single part could protrude through the front/back side wall, they shall be closed completely. The marking of the package shall be done on plywood plates at the prescribed sides.

Packing Category III



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8.4.2 Cases with Lining – Packing Category IV

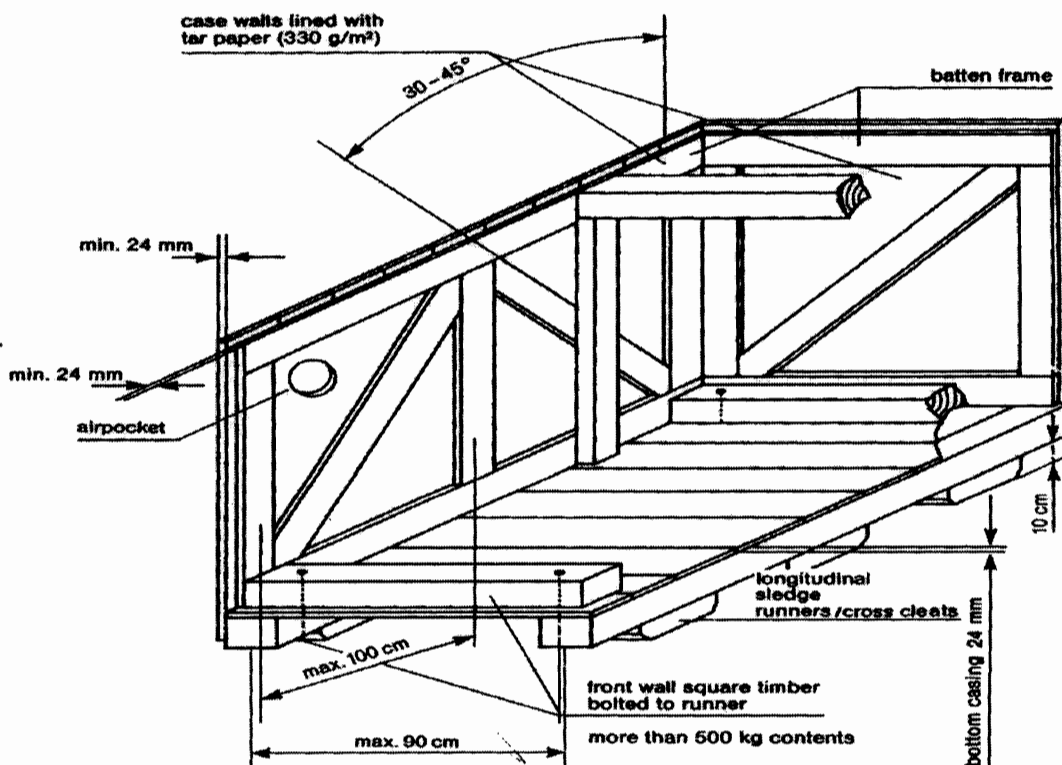
8.4.2.1 Type of Equipment

Recommended for equipment and mechanical parts Equipment sensitive to mechanical damage or parts and components that are particularly at risk of theft or loss; pumps, elbows, flanges, fittings, tools, erection materials, etc.

8.4.2.2 Type of Construction

The same type of construction as article 8.4.1.2, but with all sides completely boarded without space between the boards. Sides to be provided with waterproof lining; fabric-reinforced waterproof tar paper or polyethylene-foils resistant to ultraviolet rays can be used. Polyethylene-foil shall be fixed under the lid cover to avoid penetration of water. At weights of more than 500 kg the longitudinal runner must be bolted to the front all square timber. For ventilation inside the case, an opening in the waterproof lining must be placed between the diagonal battens and diagonal joists.

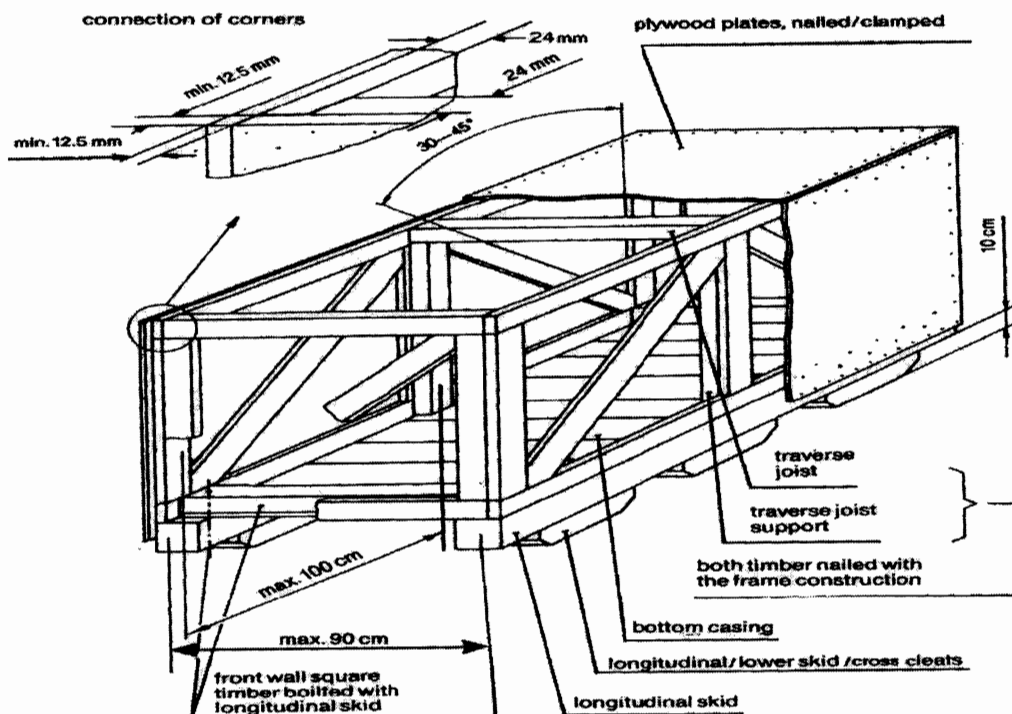
Packing Category IV



8.4.3 Cases with Alternative Surface Materials

8.4.3.1 Plywood Box – Packing Category IV A

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Case constructed of 5 layers of watertight, glued plywood with a total thickness of 12.5 mm. The frame must be constructed from minimum 24 mm timber or as per guide lines given above against clause 8.0, Fig 1 to 11 and must be suitable for the weight and nature of the parts to be packed. Planed square timber must be bolted with longitudinal skid and covered with diagonal joists. If applicable, construction of the cover and sides is to include diagonal bracing. Covers consisting of several layers of plywood are to be sealed with durable elastic putty or additional water-resistant sheets to be fixed.

8.4.4 Case with Barrier Material – Polyethylene Foil – Packing Category V

8.4.4.1 Type of Equipment

Sensitive equipment, simple electrical equipment, insulation materials, fire-resistant materials, with non-corrosion- guarantee for a period up to twelve (12) months.

8.4.4.2 Type of Construction

Preservation by welding in polyethylene-foil with addition of desiccants and if necessary, application of non-corrosive contact agents, otherwise, type of construction as indicated in article 8.4.2.2.

Additional marking:

- Case with desiccants.

8.4.5 Case with Barrier Material – Aluminium Compound Foil – Packing Category VI

8.4.5.1 Type of Equipment

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Electrical equipment such as, switchboards, electric motors, sensitive equipment, with non-corrosion guarantee, for a period up to twelve (12) months.

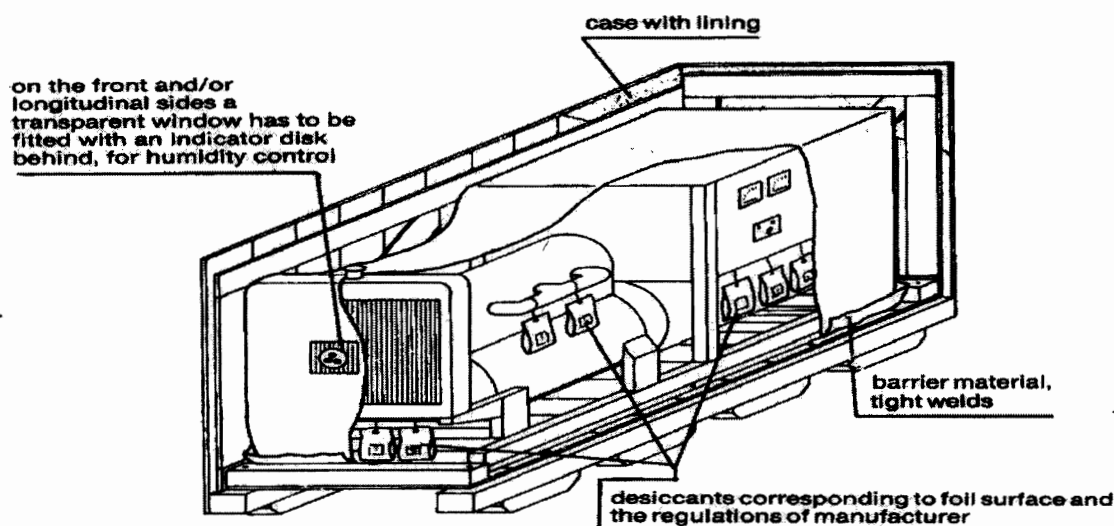
8.4.5.2 Type of Construction

Type of construction as indicated in article 8.4.2.2. Preservation by sealing an aluminium compound foil, with the addition of desiccants. Humidity indicators, if required and installed in the barrier wrapping, shall allow easy control from the outside.

Additional marking:

- Case with desiccants.

Packing Category V/VI



8.4.6 Double Case – Packing Category VII

8.4.6.1 Type of Equipment

GOODS which are of high sensitivity to shock, impact and vibration, for instance, special electrical equipment like computers, switchboards, laboratory instruments

8.4.6.2 Type of Construction

Case construction as indicated in article 8.4.2.2, with additional floating inner packing (case-in-case principle), padding corresponding to weight and sensitiveness. Preservation by sealing in aluminium compound foil with the addition of desiccants. The inner case has to be made of plywood or equivalent material with a thickness of 8-12 mm, depending on the weight of the GOODS to be packed. The inner buckles and/or frame borders have to be dimensioned so that the full stability of the inside case will be reached and no twisting is possible. The inner sides of the inside case will be lined with bituminous kraft paper on all sides (except bottom).

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8.4.7 Cable Drum – Packing Category VIII

8.4.7.1 Type of Equipment

All type of cables, wires, ropes, hoses.

8.4.7.2 Type of Construction

For all type of cables refer clause no. 11.1. For other items (wires, ropes, hoses) new or practically new drums are to be used. Planking of the e drums by use of boards, thickness minimum 20 mm, with additional double steel strapping, nailed, and carefully preserved/protected cable ends prior to packing.

8.4.8 Hazardous Materials – Packing Category IX

8.4.8.1 Type of Equipment

Hazardous materials according to the law are explosives, compressed gases, liquefied gases dissolved under pressure or deeply refrigerated, flammable liquids, flammable solids: substances liable to spontaneous combustion; substances which, on contact with water, emit flammable gases, oxidizing substances, organic peroxides, poisonous (toxic) and infectious substances; radioactive materials, corrosives, miscellaneous dangerous goods.

8.4.8.2 Type of Construction

Hazardous materials shall always be packed and documented separately from any other material. Selection of packaging materials, execution of packing and marking as well as documentation shall always be in compliance with the applicable laws and regulations. Any certificates required for transportation or for authorities to be supplied before shipment of the GOODS.

8.4.9 Wooden Floor as a Transport Support – Packing Category X

8.4.9.1 Type of Equipment

Any materials to be stuffed in containers or on flat racks and that are not stowed on standard pallets or otherwise suitably packed

8.4.9.2 Type of Construction

- Longitudinal internal square timbers bolted to the front wall runners, longitudinal skid.
- Maximum distance between longitudinal runners 90 cm (middle to middle of the runner).
- Full boarding of the floor.
- Attaching of lifting lugs and/or iron ropes for lifting/pulling the units off the transport equipment.
- If applicable, preservation of the equipment by sealing in polyethylene-foil or aluminium compound foil and the addition of desiccants.

8.5 Air Transport Packing

8.5.1 General

Certain types of material may have to be shipped by air from their country of origin. This means of transport will be exceptional, and will be used only:

- For GOODS, which are highly sensitive to shock or vibrations, such as computers, electronic instruments, or those of small dimensions and weight.
- For GOODS urgently required at the module yard(s) and/or jobsite.

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8.5.2 Type of Packing

Depending on the goods to be packed, VENDOR may use one of the following types:

- A triple-corrugated cardboard container made with waterproofed glue and a barrier layer of polyethylene on the outsides to keep out humidity.
- Wooden/cardboard packing cases: the wood being used for the framework and base of the cases, waterproofed triple-corrugated cardboard being used for the sides and top. These cases are of the "Bell" type, and used for material of small or medium dimensions.
- For larger dimensions, plywood cases are acceptable. The timber characteristics, cross-sections and thickness will be systematically determined by the nature of the loads to be packed.

8.5.3 Dimensions

In order to optimize the existing transport facilities (passenger or cargo aircraft), the dimensions of:

- Triple-corrugated containers.
 - Wooden/cardboard packing cases.
 - Plywood cases.
- Are to be adapted to pallets used for air transportation.

9.0 Detailed specification for Wooden Crates/Boxes/Cases and other packing materials

9.1 Technical specification for wood

The wood shall be Fir, Chir, Silver Oak (Gravillea Robusta), chemically treated mango and Pinewood with moisture content not exceeding 50%. The wood shall have flexural and compressive strength, stiffness, shock absorption and nail retention properties. The wood shall be free from common defects such as warp, bone, twist, knot, cracks, splits, end splits, bend, visible sign of infection and any kind of decay caused by insects or fungus, etc. Surface cracks with maximum depth of 3mm are permissible. A continuous crack of any depth all along the length is not allowed.

9.2 Chemical Treatment of Wood:

The wood shall be chemically treated to provide protection against deterioration due to fungi and attack by termites, borers, marine organism and any other kind of infection. It shall be treated only after final processing like cutting, planning, joint grooving, etc.

9.3 TYPE, DESIGN & DIMENSION OF WOODEN PACKING CASES:

9.3.1 PACKING OF EQUIPMENTS

Various mechanical, electrical and C&I equipment e.g. Pumps, motors, equipment skids, heat exchangers, control panels, switch gears, transformers, etc. shall be wrapped in weather proof packing and then secured in wooden packing cases. The construction of wooden packing cases/crates shall be as per details given below and also given in figure 1 to 11.

9.3.1.1 Bottom Frame

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The construction of bottom frame shall be as per Fig-2. The No. of slides/runners for bottom frames shall be selected depending upon the weight and overall dimensions of the load to be carried. The equipment shall be secured by fixing their base frame/plate with the help of bolt and nuts etc. to bottom frame of the wooden packing cases/crates. The equipment not provided with base frame/plate like cylindrical vessels, etc to be secured to the bottom frame of the wooden cases with "C" clamps fabricated from steel channels/ angle iron.

9.3.1.2 TOP FRAME

The construction of top frame shall be as per fig-3.

9.3.1.3 END PANELS

The dimension of the end and lateral panels shall be calculated according to overall dimensions of the items to be packed. Diagonal braces shall be used for packing cases having height exceeding 500mm. Details of bracings shall be as per fig 5 to 9.

9.3.1.4 Sling Plate

To facilitate lifting of cases, longitudinal under slide boards shall be fixed. To avoid damage to the box while lifting sling plates shall be provided. Refer fig-11.

9.3.1.5 Angle Iron Cleats

Angle iron cleats shall be used for strengthening the joints as indicated in fig-10

9.3.1.6 Other Requirements

- The thickness of planks for top, bottom, side and end panels shall be at least 25mm. Planks used for this purpose shall be joined with each other by tongue and groove joint. The groove dimension shall be such that tongue fits tightly into groove to make the joint.
- Runners/slides, traverse bars, etc shall be of single length i.e. without any joint. Planks for sheathing, diagonal bracing etc shall also be of single length up to 2400mm, proper jointing is permitted for planks for sheathing and diagonal bracings.
- Each equipment to be individually covered with double polyethylene petticoat. Sheet thickness of polythene sheet shall not be less than 0.175 mm (175 microns). The sealing shall be such so as not to allow moisture inside.
- The inner surface of 4 sides of shooks shall be nailed with bituminized water proof craft paper. Wherever 2 pieces of kraft paper are used, joint shall have an overlap of minimum 20 mm.
- All the inner sides of the box shall be nailed with bitumen coated HESSIAN POLYTHYLENE KRAFT PAPER. For top frame it shall project on all sides by 100mm and shall be nailed on sides. Wherever 2 pieces of kraft paper are used, joint shall have an overlap of minimum 20 mm.
- For delicate equipment like control panels and switchgears, lighting panels and lighting transformers, suitable cushioning material like rubberised coir (min. 50 mm thick and 100 mm wide) shall be provided on their bottom support and the gap between the panel and casing

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shall be filled with rubberized coir with distance between consecutive supports less than 500 mm (ref fig15). For other equipment suitable support from sides of the casing shall be provided.

- Switchgear cubicles, control panels and control desks shall be packed and shipped in separate convenient sections. The components e.g. circuit breakers relays and instruments etc. which are removed from panels for shipping purpose and shall be separately packed and shipped as per packing instructions in clause 10.4.
- Packing case for control panels and switchgear panels shall be finally covered with GI sheet of minimum thickness of 0.4mm.
- Packing cases shall be bound at edges by nailing MS clamps/brackets at sufficient intervals. Further heavier boxes shall be strapped with C clamps (ref fig-4) fabricated from steel channels/angles and lighter boxes shall be strapped with hoop iron strips.
- Silica gel is used for this purpose to protect contents over sufficiently long time from corrosion. Silica gel shall be indicating type confirming to IS-304 (1979) packed in cotton bags placed at different positions inside the packing for absorbing moisture and shall not come into directly contact with equipment/material inside the package. The quantity of silica gel shall be adequate for storage period of one year, however it shall not be less than 4 gm. per ltr. Volume of case subject to minimum 400 gm. Per case.



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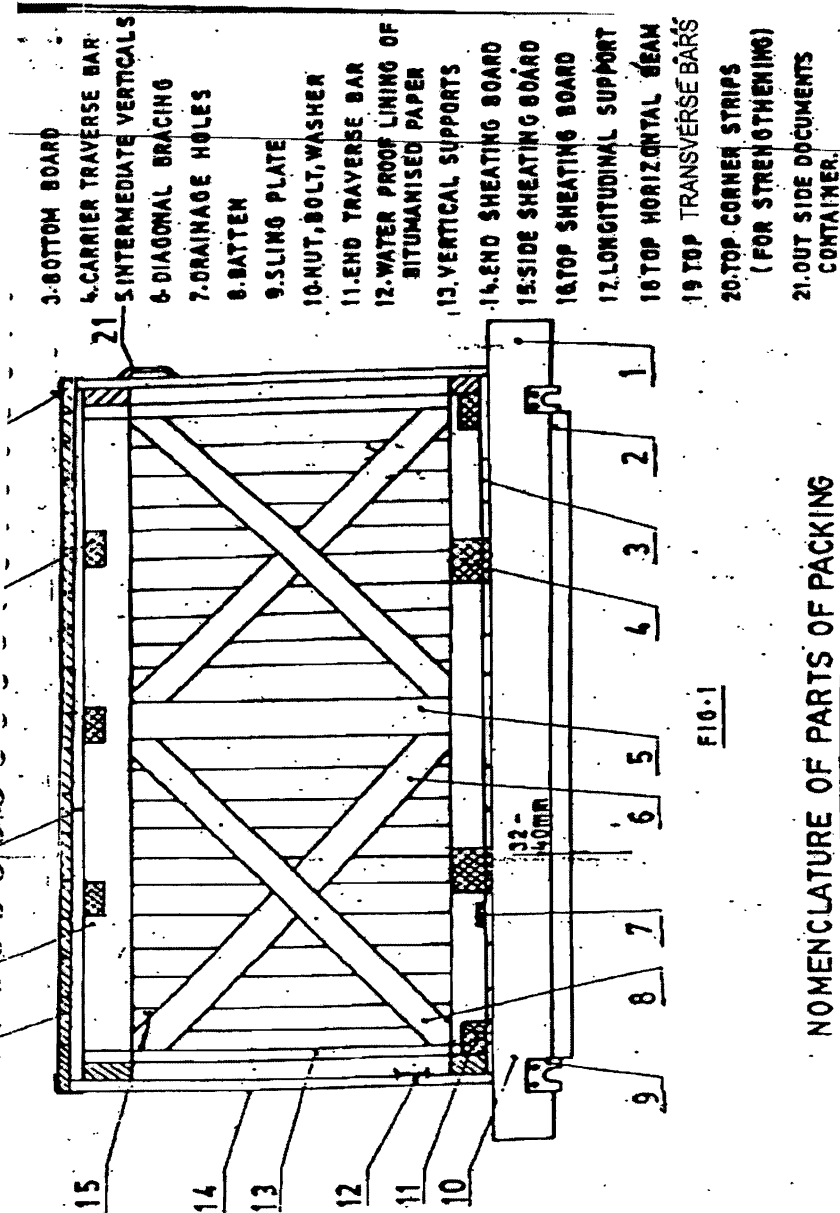
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BOTTOM FRAME ARRANGEMENTS

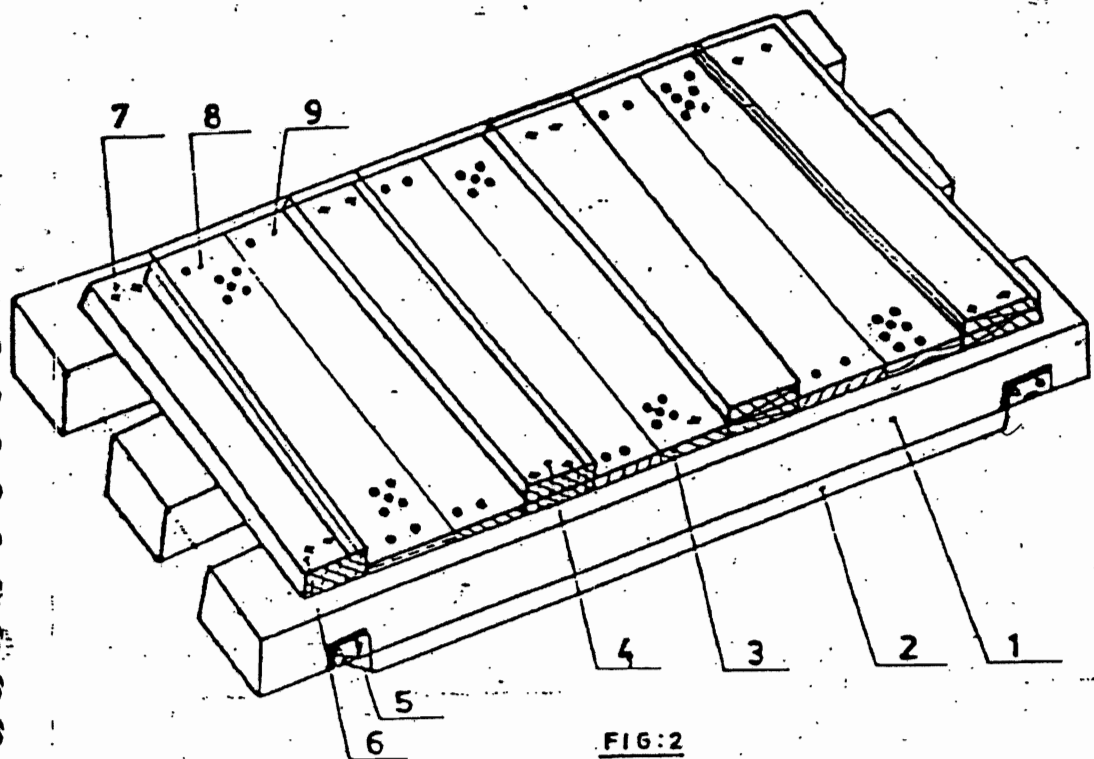


FIG:2

Nos. of slides: Minimum 2 Nos.
For length more than 1800 mm or
load more than 1000kg, Nos. of
slides shall be minimum 3 Nos.
For dimensions of slides, refer Table 1
Cross section of end traverse bar; 100 x 100 mm.
(minimum)

1. SLIDE
2. UNDER SLIDE BOARD
3. BOTTOM BOARD
4. CARRIER TRAVERSE BAR
5. SLING PLATE
6. TRAVERSE BAR
7. BOLT, NUT & WASHER
8. DRAINAGE HOLES
9. NAILS

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TOP FRAME ARRANGEMENT

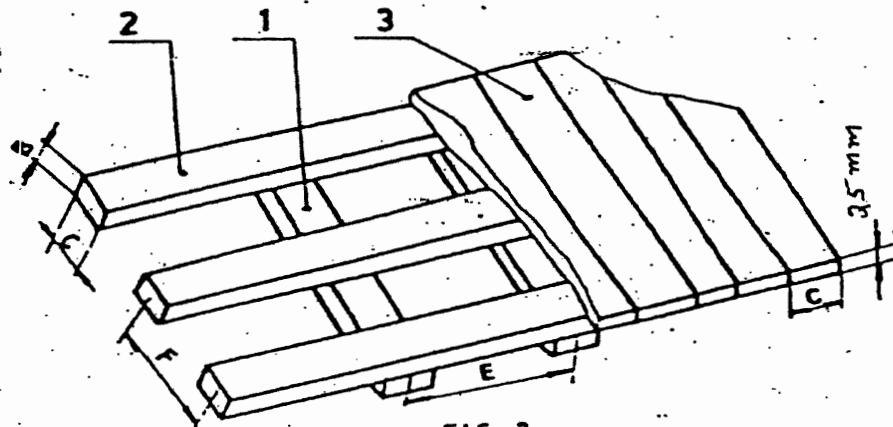
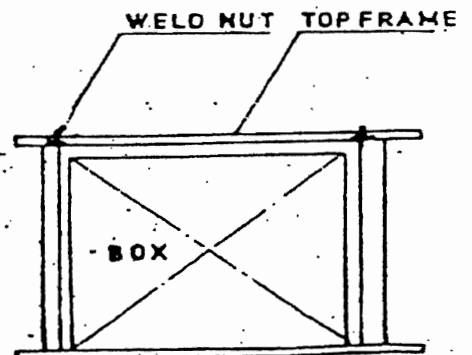
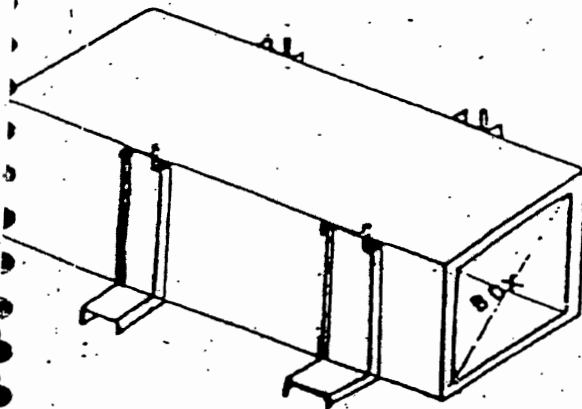


FIG-3

F : 700 to 1000 mm
E : 500 to 900 mm
30 x 100 mm.

- 1 - Traverse Bars
- 2 - Horizontal Soans
- 3 - Top Board

ARRANGEMENT OF C-CLAMPS AROUND CASES



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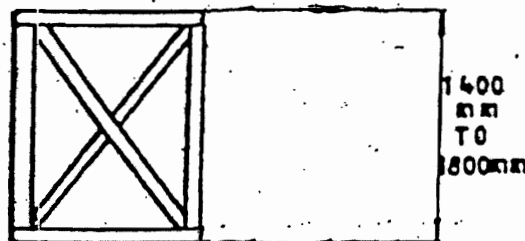
**ARRANGEMENT OF DIAGONAL BRACING AND
HORIZONTAL SUPPORT**

FIG: 6

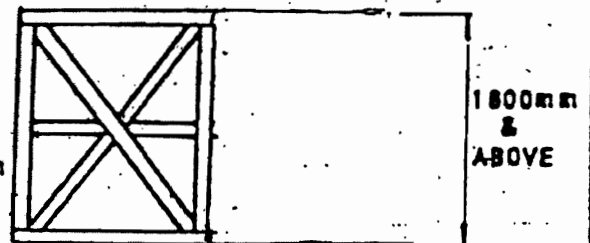


FIG: 8

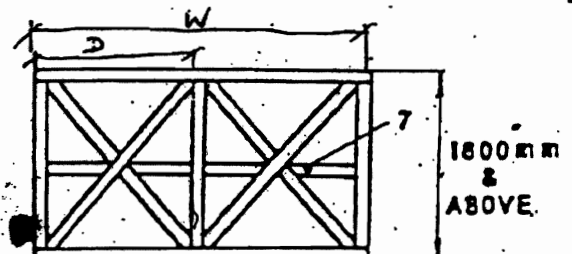


FIG: 7

7- Middle Horizontal Support

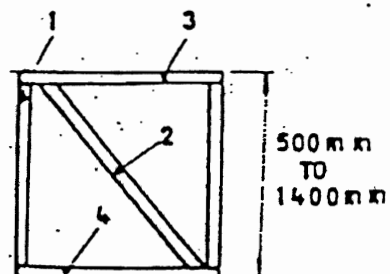


FIG: 5

1- Vertical Support

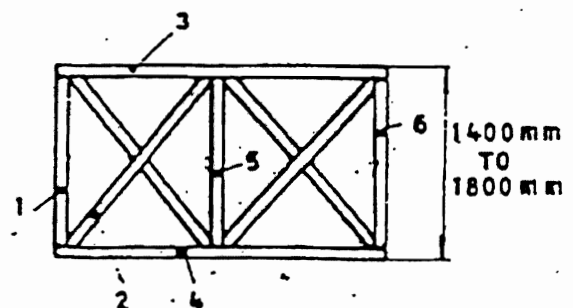


FIG: 7

1, 5, 6 - Vertical Support

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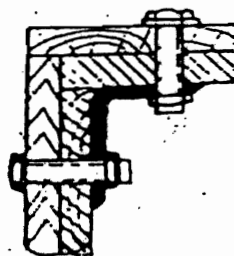
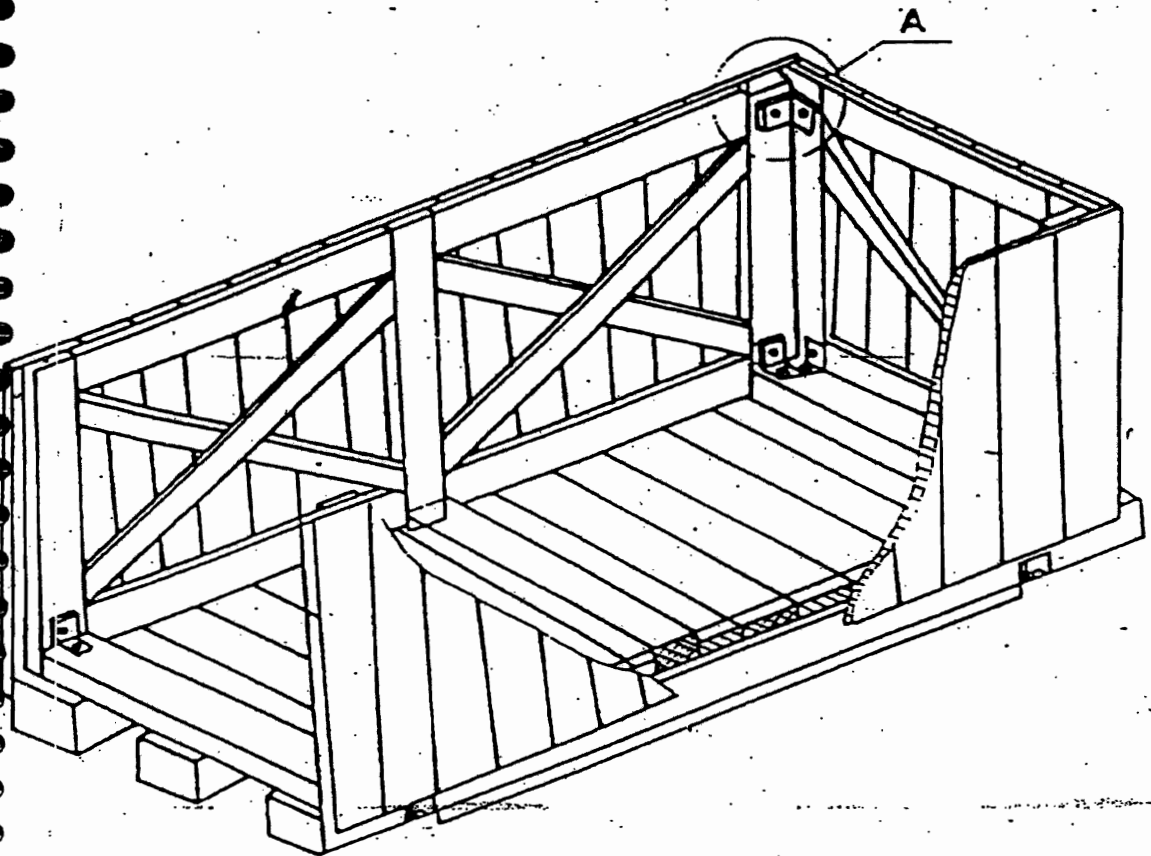
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ARRANGEMENT OF PACKING CASE



DETAIL-A

HOLE DIAMETER
MUST CONFORM
TO BOLT DIA

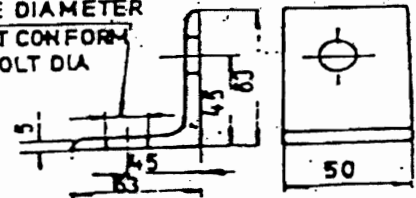


FIG:10

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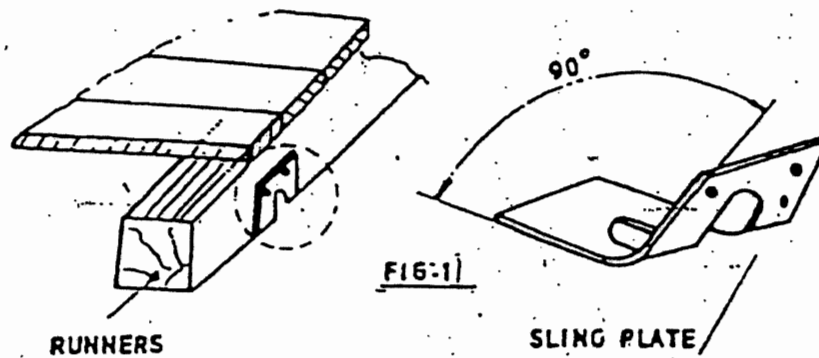
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**ARRANGEMENT OF SLING & PLATE ON
CASES**

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TABLE-1

LOADS	LENGTHS OF SLIDES						
	600	800	1000	1200	1300	1500	2000
	Cross section b x c				c b		
500	50 X 100	50 X 100	50 X 100	50 X 100	75 X 100	75 X 100	100 X 100
800	50 X 100	50 X 100	75 X 100	75 X 100	75 X 100	75 X 100	100 X 100
1000	75 X 100	75 X 100	75 X 100	100 X 100	100 X 100	100 X 110	100 X 150
1500	75 X 100	75 X 100	100 X 100	100 X 100	100 X 100	100 X 150	100 X 150
2000	75 X 100	100 X 100	100 X 100	100 X 150	100 X 150	100 X 150	150 X 150
2500	75 X 100	100 X 100	100 X 150	100 X 150	100 X 150	150 X 150	150 X 150
3000	100 X 100	100 X 150	150 X 150	150 X 150	150 X 150	150 X 150	150 X 150

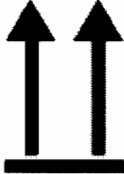
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Table-2

End and side panels	Width of the panel "W"	Distance between longitudinal support (Dimension "D")						
		600	800	1000	1200	1400	1600	1800
		Cross section b x c				Item 1 to 7		
Fig- 5 to Fig-9	600 to 1200	30	30	30	30	30	30	30
		X	X	X	X	X	X	X
	1201 to 1600	100	100	100	130	130	130	130
		30	30	30	30	30	30	30
	1601 to 2000	X	X	X	X	X	X	X
		130	130	130	130	130	130	130
	2001 to 3000	30	30	30	30	30	30	40
		X	X	X	X	X	X	X
	3001 to 4000	130	130	130	130	130	130	150
		40	40	40	40	40	40	40
		X	X	X	X	X	X	X
		150	150	150	150	150	150	150

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INDICATION MARKS ON CASES/BOXES/CRATES

Designation	Symbol	Explanation
Fragile, Handle with care		The symbol should be applied to easily broken cargoes. Cargoes marked with this symbol should be handled carefully and should never be tipped over or slung.
Use no hooks		Any other kind of point load should also be avoided with cargoes marked with this symbol. The symbol does not automatically prohibit the use of the plate hooks used for handling bagged cargo.
Top		The package must always be transported, handled and stored in such a way that the arrows always point upwards. Rolling, swinging, severe tipping or tumbling or other such handling must be avoided.
Keep away from heat (solar radiation)		Compliance with the symbol is best achieved if the cargo is kept under the coolest possible conditions. In any event, it must be kept away from additional sources of heat. It may be appropriate to enquire whether prevailing or anticipated temperatures may be harmful.
Protect from heat and radioactive sources		Stowage as for the preceding symbol. The cargo must additionally be protected from radioactivity.
Sling here		The symbol indicates merely where the cargo should be slung, but not the method of lifting. If the symbols are applied equidistant from the middle or center of gravity, the package will hang level if the slings are of identical length. If this is not the case, the slinging equipment must be shortened on one side.
Keep dry		Cargo bearing this symbol must be protected from excessive humidity and must accordingly be stored under cover. If particularly large or bulky packages cannot be stored in warehouses or sheds, they must be carefully covered with tarpaulins.

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Center of gravity		This symbol is intended to provide a clear indication of the position of the center of gravity. To be meaningful, this symbol should only be used where the center of gravity is not central. The meaning is unambiguous if the symbol is applied onto two upright surfaces at right angles to each other.
No hand truck here		The absence of this symbol on packages amounts to permission to use a hand truck on them.
Stacking limitation		The maximum stacking load must be stated as "... kg max.". Since such marking is sensible only on packages with little loading capacity, cargo bearing this symbol should be stowed in the uppermost layer.
Clamp here		Stating that the package may be clamped at the indicated point is logically equivalent to a prohibition of clamping anywhere else.
Temperature limitations		According to regulations, the symbol should either be provided with the suffix "...°C" for a specific temperature or, in the case of a temperature range, with an upper ("...°C max.") and lower ("...°C min.") temperature limit. The corresponding temperatures or temperature limits should also be noted on the consignment note.
Do not use forklift truck here		This symbol should only be applied to the sides where the forklift truck cannot be used. Absence of the symbol on other sides of the package amounts to permission to use forklift trucks on these sides.
Electrostatic sensitive device		Contact with packages bearing this symbol should be avoided at low levels of relative humidity, especially if insulating footwear is being worn or the ground/floor is nonconductive. Low levels of relative humidity must in particular be expected on hot, dry summer days and very cold winter days.

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Do not destroy barrier		A barrier layer which is (virtually) impermeable to water vapor and contains desiccants for corrosion protection is located beneath the outer packaging. This protection will be ineffective if the barrier layer is damaged. Since the symbol has not yet been approved by the ISO, puncturing of the outer shell must in particular be avoided for any packages bearing the words "Packed with desiccants".
Tear off here		This symbol is intended only for the receiver.

FIG-12

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BHEL-PEM-DELHI-INDIA	
CONSIGNEE	
MATERIAL	
CUSTOMER REF.	MO. NO.
DESPATCH ADVICE NOTE NO.	CASE NO.
DIMENSIONS(MM) LXBXH	NET WT -KGS
	GROSS WT -KGS
SPECIAL INSTRUCTIONS	HANDLE WITH CARE -- KEEP DRY DO NOT DROP -- DO NOT TILT

FIG-13: MARKING PLATE



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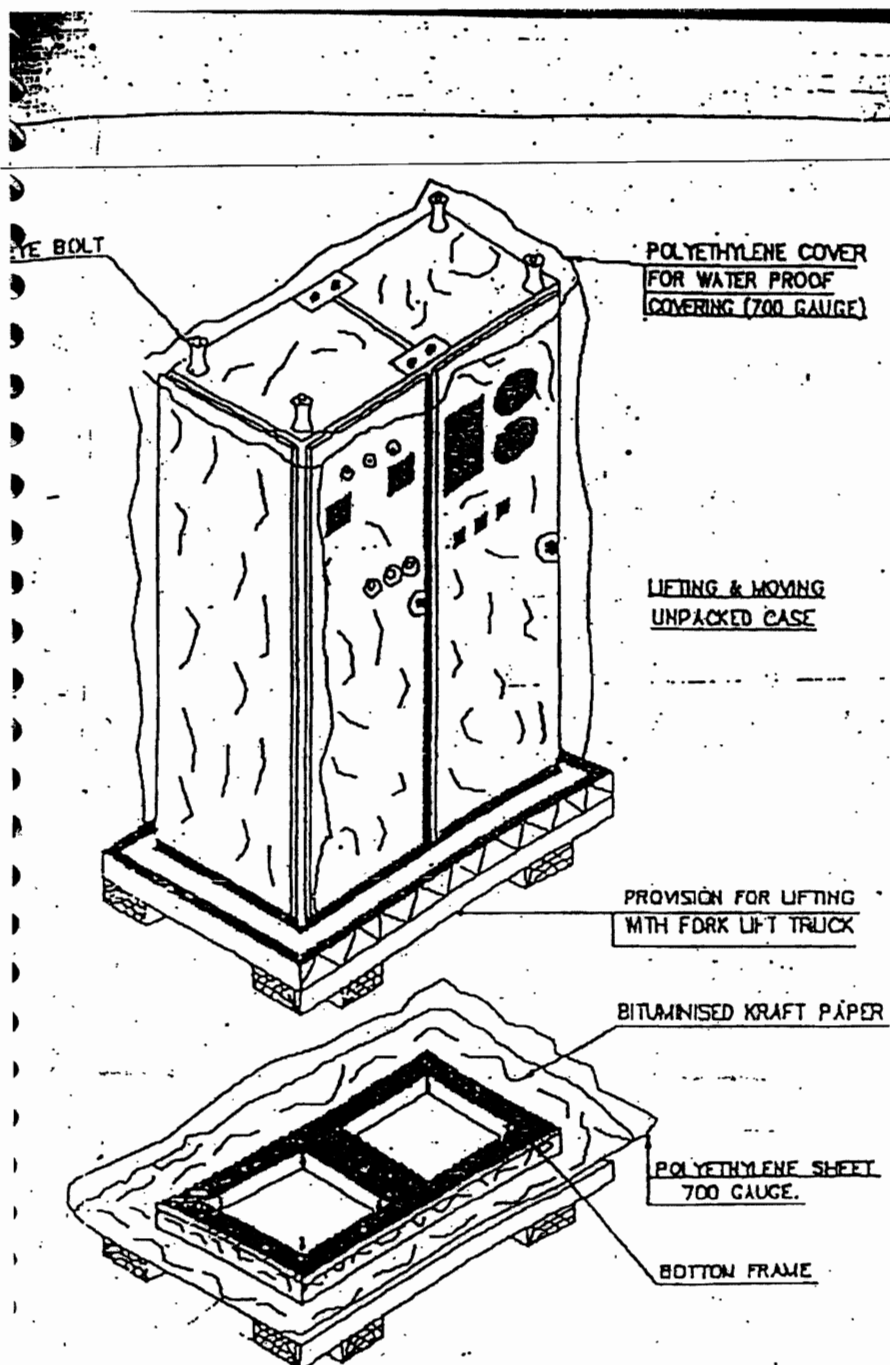


FIGURE-14



TITLE

TECHNICAL SPECIFICATION FOR SEAWORTHY PACKING FOR EXPORT JOBS

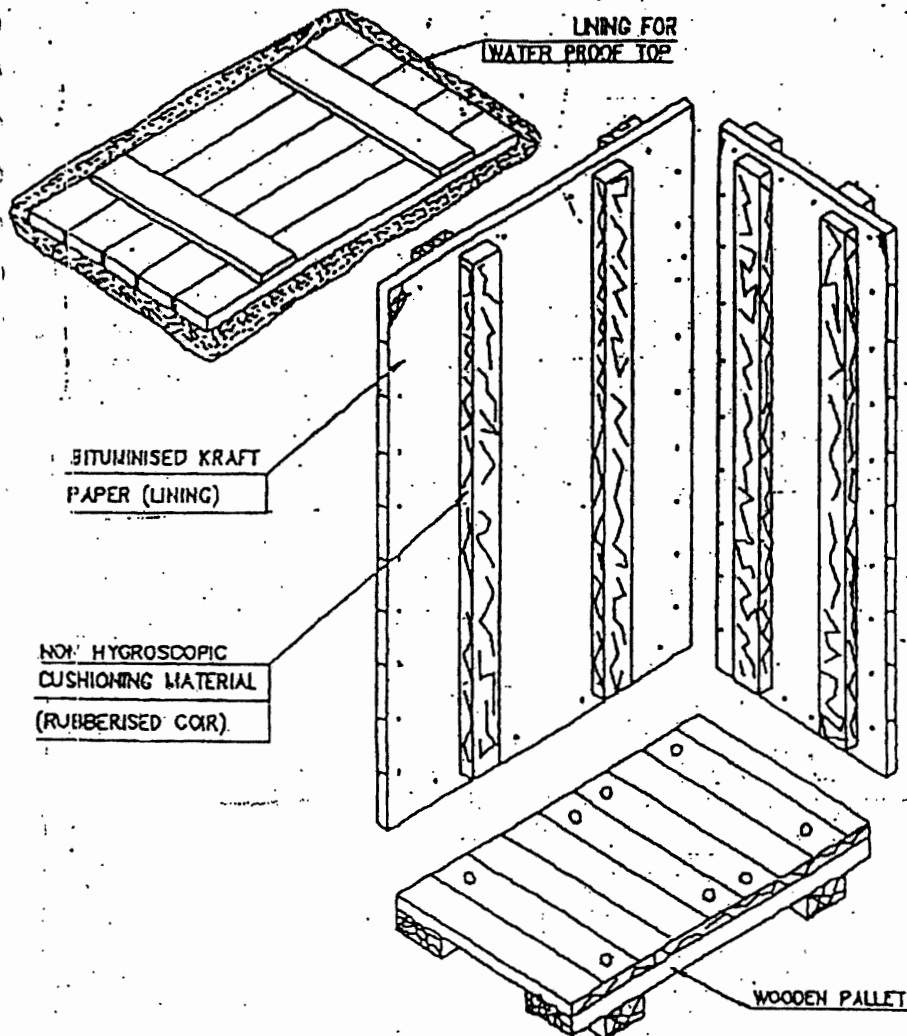
SPECIFICATION NO. PE-TS-888-100-A001

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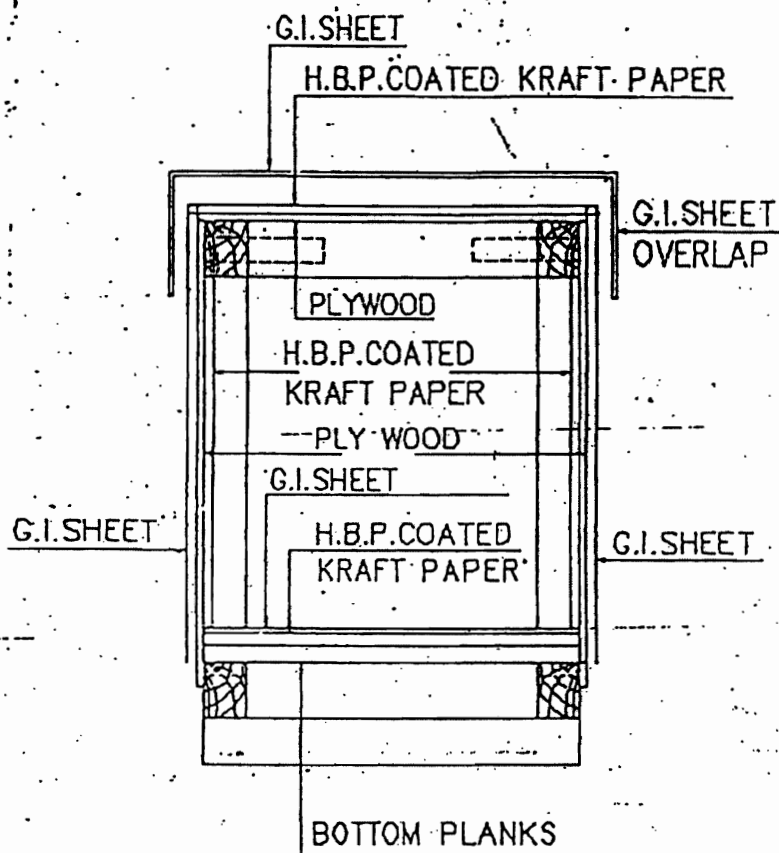
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**FIG-16 : CLOSED PACKING CASE WITH G.I.SHEET
SHOWING LAYERS OF PACKING MATERIALS.**

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10.0 TYPICAL PACKING DETAILS/PROCEDURE FOR MECHANICAL ITEMS

10.1 INSULATION MATERIAL (MINERAL WOOL MATTRESSES)

This specification covers the requirements of seaworthy packing and marking for bonded mineral (rock) wool mattresses having metallic hexagonal wire netting as facing on one or both sides.

10.1.1 TYPE OF CONSTRUCTION

Mattress shall be packed in Polythene (of 0.2 mm thickness) all around and sealed to prevent moisture absorption during transit and storage. Further it shall be wrapped with Bitumen coated Polythene bonded/lined Hessian and stitched and then packed in 5 ply DFC carton box.

Silica gel is used for this purpose to protect contents over sufficiently long time from corrosion. Silica gel shall be of indicating type conforming to IS:304-1979 packed in cotton bags placed at different positions inside the packing for absorbing moisture and shall not come into direct contact with the material inside the package. The quantity of silica gel shall be enough for storage period of one year. However, it shall not be less than 4 gms per litre volume of case subject to minimum of 400 gms per case.

Each mattress as well as the packages shall be serial numbered. Also, printed sheets indicating the nominal thickness, density and wire netting details (i.e. material and size) shall be placed below the wire netting.

Following details shall be legibly written on the packages. The details shall also be typed on a sheet of paper & kept in a sealed Polythene cover, inside the packages

- a) Project Name
- b) Purchase Order No.
- c) Sl. No. of package
- d) Size of mattress (Thickness x Length x Width)
- e) Density
- f) Wire netting material and size
- g) Weight of the package

10.2 INSULATION MATERIAL (ALUMINIUM COIL)

Heavy Gauge Aluminium Coil Packaging are done by Eye-to-Sky packaging or by Eye to eye packaging as per the proven practice being followed by manufacturer of Aluminium sheets.

10.2.1 Type of construction for Eye to Sky packaging

- a. Strapping of coil with polyester strap around circumference at one place.
- b. Putting paper I. D. Edge protector.
- c. Wrapping the coil with VCI stretch film after putting silica gel bags (4 nos.) Inside the coil.
- d. Wrapping the coil with HDPE film.
- e. Covering the coil including its build up & bore with masonite / particle board.
- f. Putting metallic I. D on coil.
- g. Putting O.D edge protector (paper) on coil.

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- h. Putting circumferential polyester strap (3 nos.) & eye polyester strap (4 nos.).
- i. After placing the coil on coil tilter ply wood (10mm thick) of suitable size along with wooden pallet is to be put at the bottom side of the coil.
- j. Coil is to be tilted to eye-to-sky position.
- k. Final strapping with metallic strap to unit coil and skid at 2 places with top cover of plywood.
- l. Fixing the coil with wooden blocks at 4 corners.
- m. Labeling 2 nos.(one metallic & one adhesivetype) For specification, net wt. & gross wt.

10.2.2 Type of construction for Eye to Eye packaging

- a. Strapping of coil with polyester strap around circumference at one place.
 - b. Putting paper I. D. Edge protector.
 - c. Wrapping the coil with VCI stretch film after putting silica gel bags (4 nos.) Inside the coil.
 - d. Wrapping the coil with HDPE film.
 - e. Covering the coil including its build up & bore with masonite / particle board.
 - f. Putting metallic I. D on coil.
 - g. Putting O.D edge protector (paper) on coil.
 - h. Putting circumferential polyester strap (3 nos.) & eye polyester strap (4 nos.).
 - i. Placing of coil on wooden skid Coil is to be tilted to eye-to-sky position.
 - j. Final strapping of coil and skid at 2 places with steel strap. Fixing the coil with wooden blocks at 4 corners.
- Labeling 2 nos.(one metallic & one adhesive type) For specification net wt. & gross wt.

10.3 Packing Procedure for Online Tube Cleaning System and accessories

This procedure is applicable for the shipment of Onload Tube Cleaning System and accessories by sea.

10.3.1 Packing details:

- The Packing case shall be made of treated rubber wood. The design of the case shall be as per Annexure IIIA & IIIB.
- The Equipments shall be placed on the wooden base of the Packing case and fastened if required to arrest the movement of the same.
- Equipment shall be covered by Polythene sheet and inside wall surfaces of the wooden cases also shall be covered by polythene sheet.
- All Nozzles shall be closed with plywood dummies.
- All electrical components assembled or loose shall be covered with polythene sheets along with silica gel pack.
- Silica gel desiccants shall be kept inside each case in sufficient quantities in order to absorb the moisture.

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- Thermocol packing shall be made for glass items like Ball vessel sight glass, Vpiece
- sight glass & pressure gauge.
- Silica gel desiccants shall be kept inside of each case to absorb the moisture.
- A Packing list covered in a polythene envelope shall be fixed inside and outside of each packing case.
- Shipping marks and consignee address shall be painted on the outer surface of the case.
- All handling instruction required for the case like top, sling, rain, handle with care etc, shall be marked on the case as per the symbol attached.
- Machined surface will be applied with Anti rust oil and covered by polyurethane sheet to protect from external oxidation.
- All valves will be closed with dummies to protect the internals and placed in the wooden case which will covered by polyurethane sheet.



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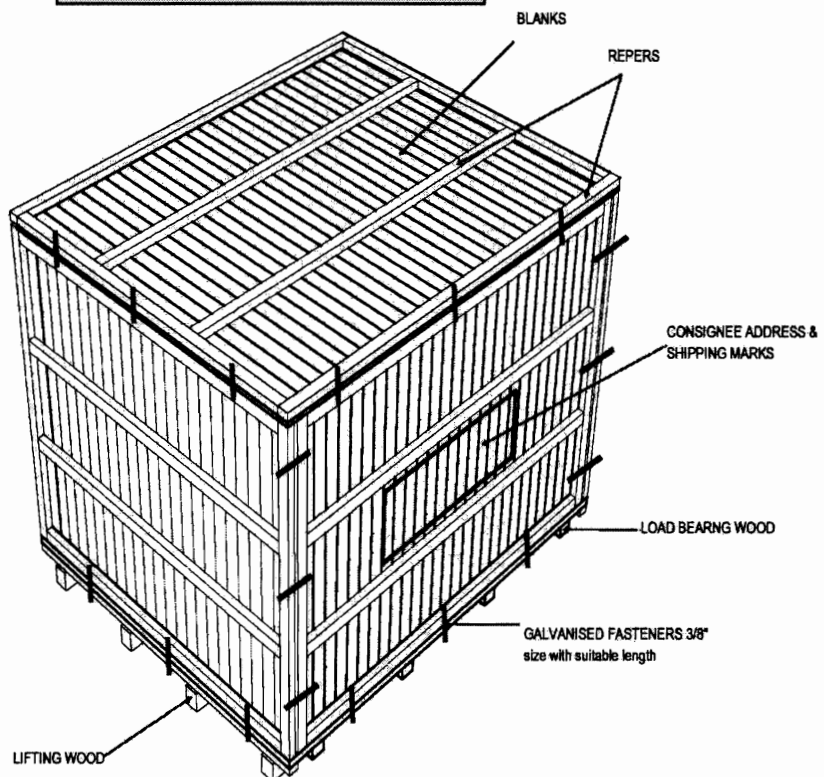
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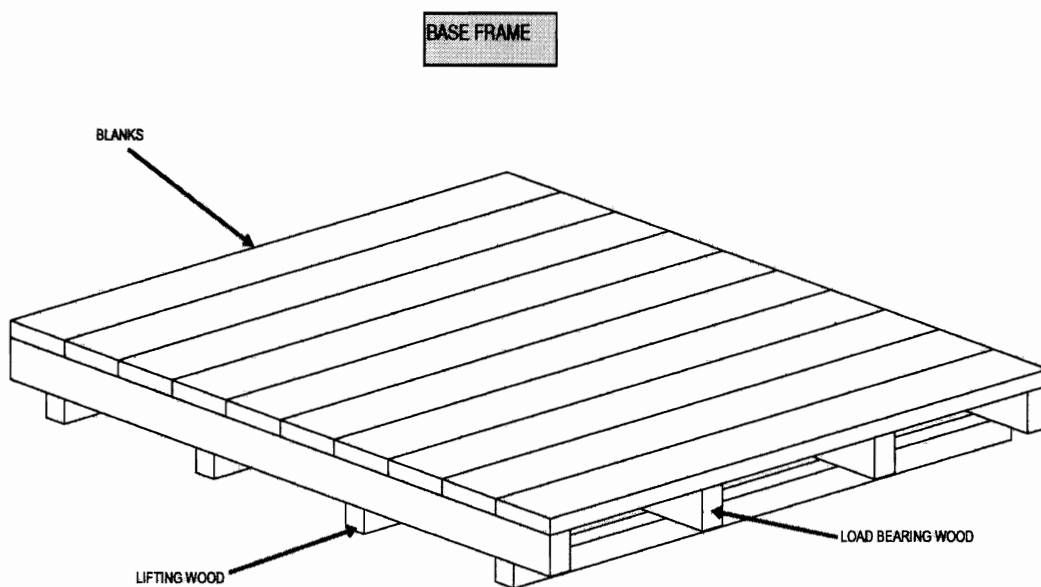
MODEL: FASTNERS TYPE (BASE, SIDE & TOP
ATTACHED WITH BOLT, NUT & WASHER)

This Type of case to be used for
following items:

1. BALL SEPERATOR
2. BALL COLECTOR SKID



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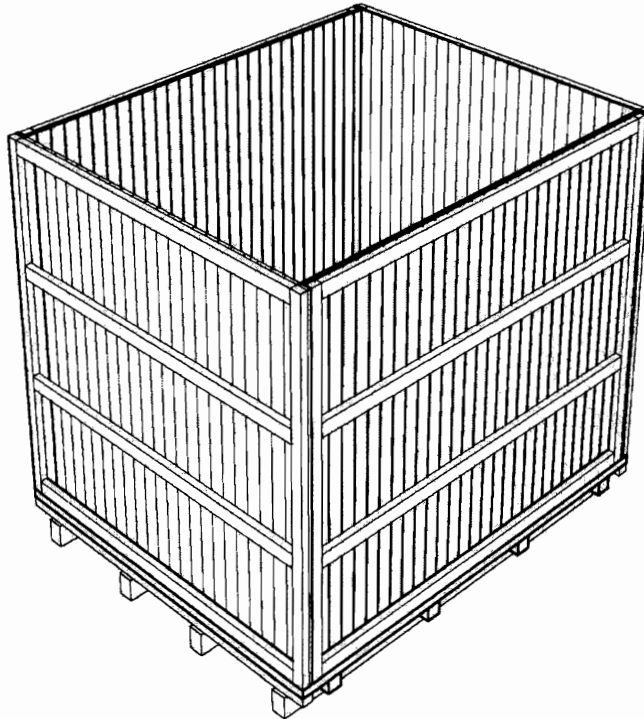
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MODEL: FASTNERS TYPE - WITHOUT TOP





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MODEL: NAILING TYPE
(FRAME & INSIDE REEPER NAILED)

THIS TYPE OF CASE TO BE USED FOR THE
FOLLOWING ITEMS:

1. PUMP SKID
2. CONTROL PANEL
3. LOOSE ITEMS, TOOLS & TACKLES
4. DPMS, BRM
5. SPARES
6. CLEANING BALLS
7. CABLES & ACCESSORIES

Shipping marks & Consignee
Address

BLANKS

LIFTING WOOD

BLANKS

REEPERS

BLANKS

REEPERS

LOAD BEARING WOOD

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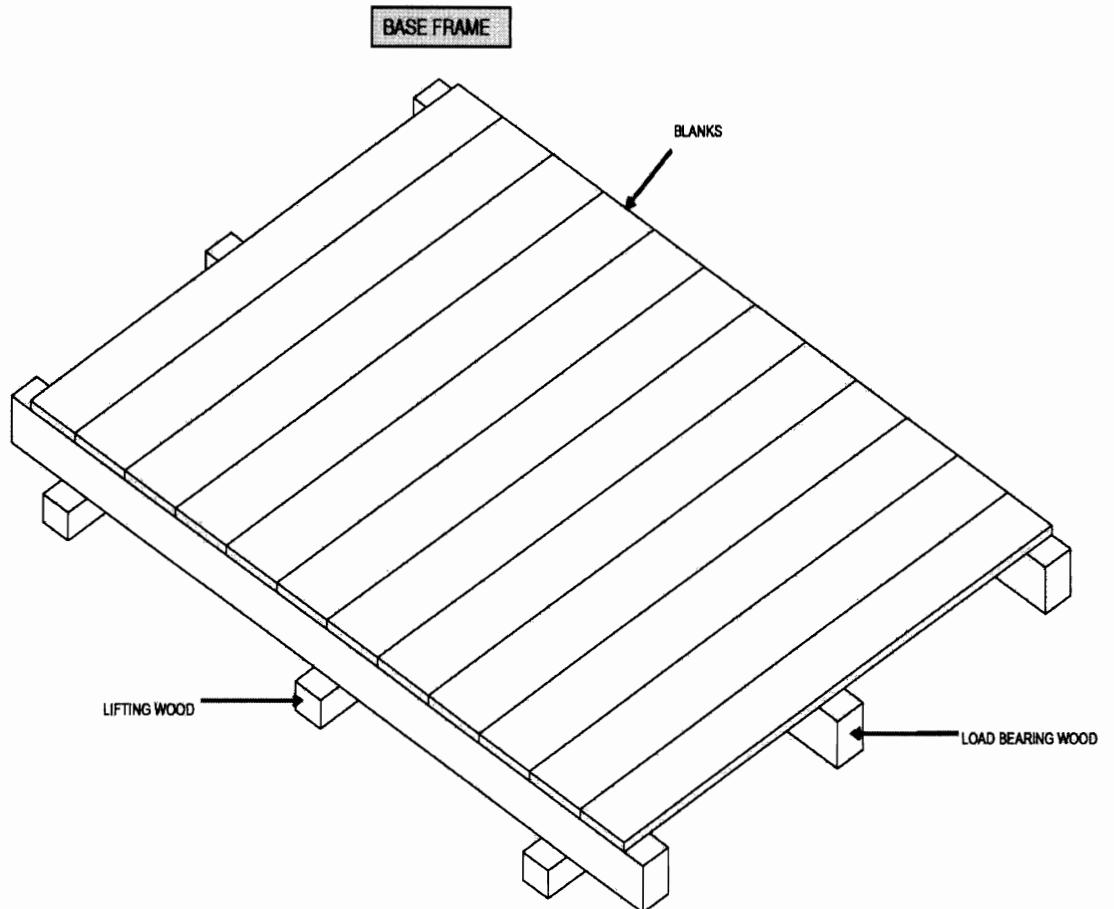
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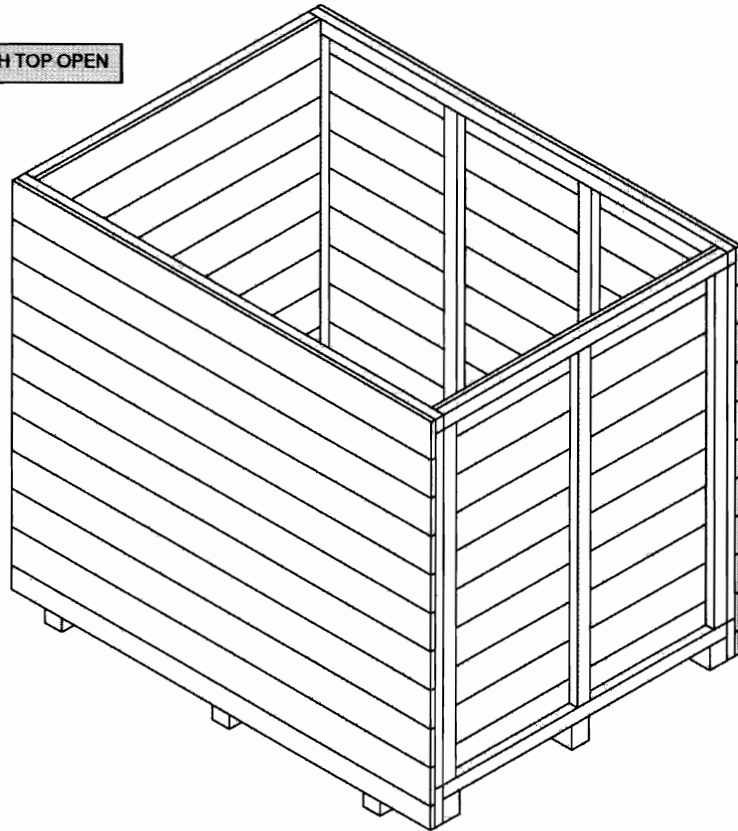
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NAILING TYPE MODEL WITH TOP OPEN



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10.4 PACKING OF LOOSE ITEMS

Loose mechanical, electrical and C&I items e.g. valves, fittings, pressure/temperature gauges/switches, circuit breakers, relays etc shall be individually wrapped using polyethylene sheets/U foam/ thermocol sheets/air bubble sheets depending upon the items and then packed in wooden boxes. The left out spaces and top of the boxes shall be filled with rubberized coir to get proper cushioning effect, Special attention shall be paid to relays, instruments etc for arresting the movements of their operating mechanism during transportation.

The construction of wooden packing cases shall be as per clause 9.3.1 retaining its all features concerning strength of the box. The construction of wooden packing case for electrical and C&I items shall be as per fig-16.

Inner surface of 6 sides of the box shall be lined with bitumen coated hessian polyethylene kraft paper. Rubberized coir of min. 25mm thickness and 100 mm width shall be nailed to inner surfaces of bottom and 4 sides of the boxes.

11.0 PACKING OF ELECTRICAL ITEMS

11.1 CABLES

11.1.1 Type of Equipment
All type of cables..

11.1.2 Type of Construction

New or practically new cable drums made of steel and painted with epoxy resin paint are to be used. Cable ends are carefully protected before packing. Over the cables polyethylene sheet shall be wrapped and then sealed properly. Cable drum can be put in wooden crates for ease in transportation and handling. (Wooden cable drum is also acceptable, however vendor to furnish constructional details for approval).



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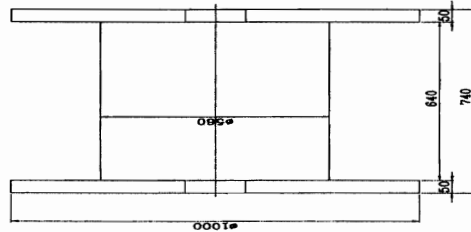
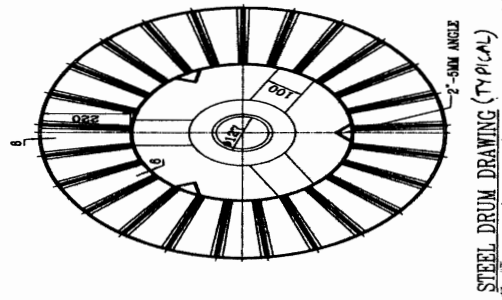
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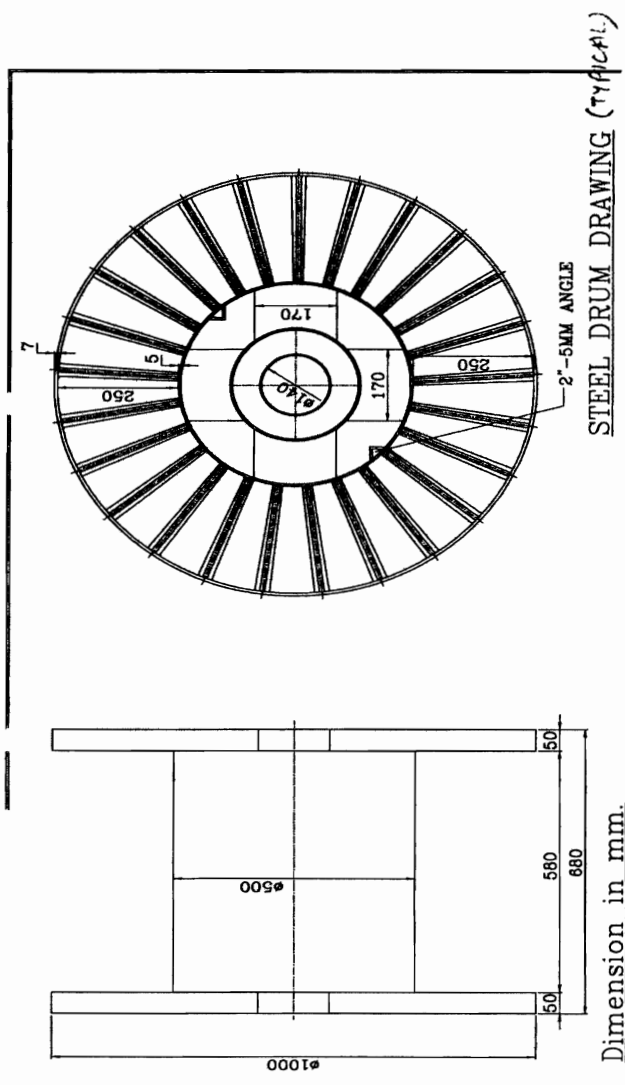
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11.2 PACKING OF CABLE TRAYS & ACCESSORIES AND CABLE TRAY SUPPORT MATERIAL

11.2.1 Cable trays can be packed in wooden boxes as per fig 1 to 11 or in steel boxes. Details of steel box construction is as indicated below.

- 1) All Dimensions are in "mm" unless otherwise stated.
- 2) Packing Box shall be fabricated using 50x50x6mm MS Angle, 50x3mm Flat, 2.5 mm thick C Channel, 1mm & 1.6mm Thick sheet.
- 3) Finish of Packing Box Shall be Galvanized.
- 4) Angle & Channel Section forming part of the Main frame shall be welded thoroughly with each other to give a rigid structure.
- 5) Sheet Section and Flat section shall be bolted/ Riveted/ Welded suitably to the Main frame stated in '4' above.

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- 6) Welding Portion on galvanized surfaces shall be painted with Zinc Rich Paint.
- 7) Dispatch details such as consignor/consignee address, contract and case details, 'country of origin, port of delivery, stacking instructions shall be written on one of the side of boxes. An anodized aluminium plate as per details and specifications given in page 3 of 5 shall be provided on the boxes
- 8) One copy of packing slip wrapped in polythylene bag covered with suitable aluminium .packing slip holder to be nailed on the external surface of the box. One more copy 9f the packing Slip wrapped in polythylene bag to be kept inside the box at the prominent place.
- 9) **INDICATION MARKS ON THE BOXES:** Markings shall be provided on the boxes indicating position of Boxes for handling, storage and nature of consignment. For guidelines referred page 4 of 5. The ink issued for this purpose as well as for marking dispatch instruction shall be indelible/non-washable marking ink.
- 10) Each item as mentioned in BOQ shall be packed & supplied as a set comprising of required numbers of associated fasteners & hardware etc

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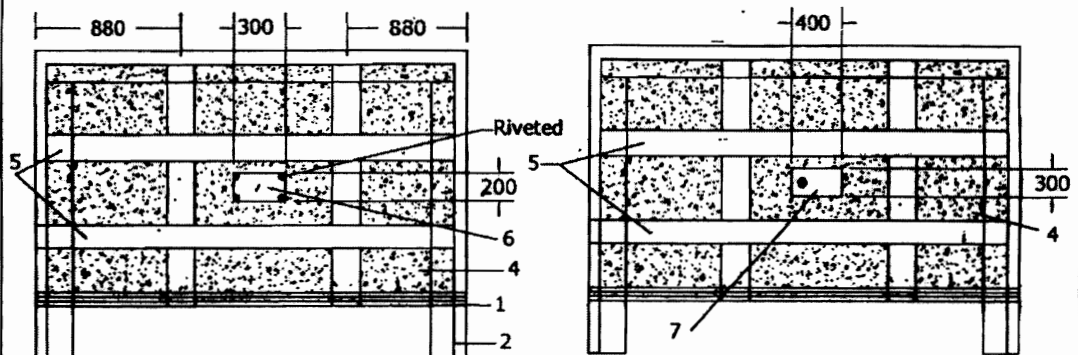
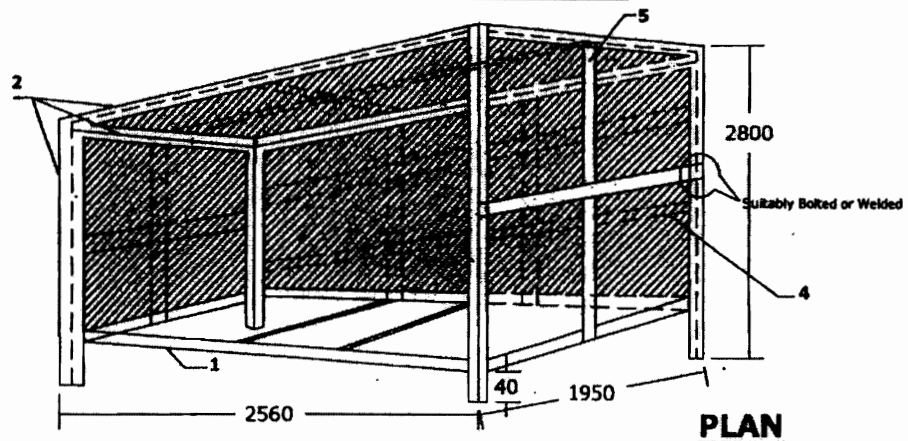
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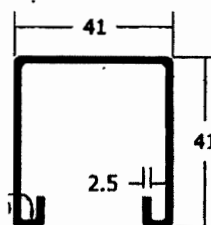
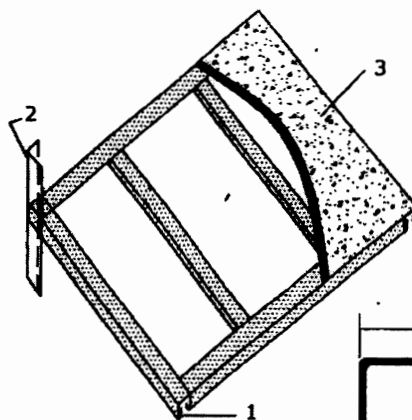
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STEEL PACKING (TYPICAL DETAILS)**Note:**

1. "C" Channel to be used on Bottom Frame.
2. 50x50x6 Angle to be used Vertically on four sides of the Box and Horizontally on four sides on the top Frame.
3. 1.6mm thick sheet (plain) on Bottom Plate.
4. 1.0mm thick sheet to cover top & four sides of BOX.
5. 50x3 Flat as additional cross members to be used Horizontally & Vertically on top & Four Sides of Box.
6. Anodised Aluminium Plate for Marking.
7. Hinged Inspection Window.



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11.3 PACKING FOR STATION LIGHTING SYSTEM

Aspects of packing specific to equipments / items of station lighting system are given here. All other instructions / aspects as per the main specification of export packing which are not covered here shall also be applicable.

11.3.1 For LIGHTING TRANSFORMER, DISTRIBUTION BOARDS, LIGHTING PANELS,

- Construction of packing case for LIGHTING DISTRIBUTION BOARDS, LIGHTING PANELS, TRANSFORMER . shall be EITHER as per FIGURE 1,2,3,5,6,7,8,9,10,11 OR FIGURE 14,15,16.
- Each Panel/Transformer shall be individually covered with double polythene sheet of thickness 175 microns minimum.
- All the 6 inner surfaces of packing shall be nailed with bitumen coated hessian polythene craft paper. Wherever 2 pieces of craft paper are used, the joint shall have minimum overlap of 20mm.

For the top frame it shall be project on all sides by 100mm and shall be nailed on sides .

- The gap between the panels and packing case shall be filled with rubberized coir of thickness 50mm minimum and width 100mm. The distance between two consecutive supports of rubberized coir shall be less than 500mm.
- Silica get packed in cotton bags shall be placed at different positions inside the packing.
- Packing case shall be finally covered with GI sheet of thickness 0.4mm minimum.

11.3.2 For LUMINARIES, RECEPTACLES. EMERGENCY LIGHT, 240/24V TRANSFORMER, CEILING FAN, SWITCH BOARDS, FLEXIBLE CONDUIT, WIRES, EARTH WIRE. JUNCTION BOXES, ERECTION COMMISSIONING SPARES, RECOMMENDED SPARES , ERECTION MATERIAL AND CONSUMABLES

- Construction of packing case for THE ABOVE MATERIAL shall be as per FIGURE 1to11.
- Items placed inside the case shall be covered with double polythene sheet of thickness 175 microns minimum.
- All the 6 inner surfaces of packing shall be nailed with bitumen coated hessian craft paper. wherever 2 pieces of craft paper are used, the joint shall have minimum overlap of 20mm. For the top frame it shall be project on all sides by 100mm and shall be nailed on sides.
- Silica get packed in cotton bags shall be placed at different positions inside the packing.

11.3.3 For CONDUIT PIPE

As per international practice pipes are shipped in open bundles with metal strapping. Packing as per attached figure A shall be provided which is described as following:

- Each bundle shall be wrapped with 2 layers of 175 microns thick polythene sheet.
- Then bundle will be wrapped with bitumen coated hessian craft paper.
- Bundle shall be strapped with steel straps.
- An anodized aluminium packing description plate as per Figure No. 13 shall be provided.

11.3.4 For POLES

Poles will be wrapped with 2 layers of minimum 175 microns thick polythene sheet and then with bitumen coated hessian craft paper, packed as per Figure – C i.e. bundling.

11.3.5 For STRUCTURAL STEEL

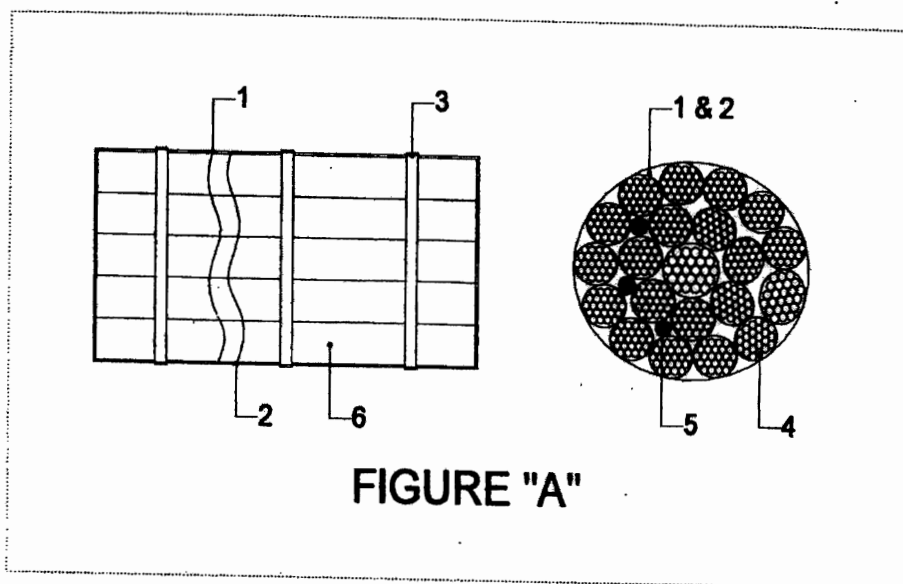
	TITLE TECHNICAL SPECIFICATION FOR SEAWORTHY PACKING FOR EXPORT JOBS	SPECIFICATION NO. PE-TS-888-100-A001	
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Structural steel will be different sizes and shapes. Hence it will be packed as per Figure No. B and described as following :

- a) Each bundle shall be wrapped with 2 layers of 175 microns thick polythene sheet.
- b) Then bundle will be wrapped with bitumen coated hessian craft paper.
- c) Bundle shall be strapped with steel straps.
- d) An anodized aluminium packing description plate as per Figure No. 13 shall be provided.

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PACKING PROCEDURE FOR CONDUIT PIPE



- 1) LAYER OF BITUMEN COATED HESSIAN KRAFT PAPER.
- 2) LAYER OF POLYTHENE SHEET.
- 3) METAL STRAPPING.
- 4) CONDUIT PIPES.
- 5) SILICA GEL POUCHES.
- 6) BUNDLES OF CONDUIT PIPES.

**TITLE****TECHNICAL SPECIFICATION
FOR SEAWORTHY PACKING
FOR EXPORT JOBS**

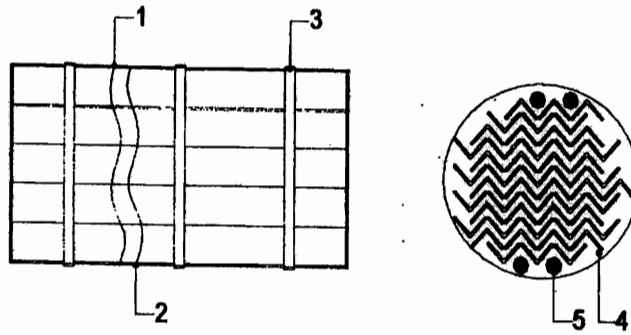
SPECIFICATION NO. PE-TS-888-100-A001

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PACKING PROCEDURE FOR STRUCTURAL STEEL**FIGURE "B"**

- 1) LAYER OF BITUMEN COATED HESSIAN KRAFT PAPER.
- 2) LAYER OF POLYTHENE SHEET.
- 3) METAL STRAPPING.
- 4) STRUCTURAL STEEL.
- 5) SILICA GEL POUCHES.



TITLE

TECHNICAL SPECIFICATION
FOR SEAWORTHY PACKING
FOR EXPORT JOBS

SPECIFICATION NO. PE-TS-888-100-A001

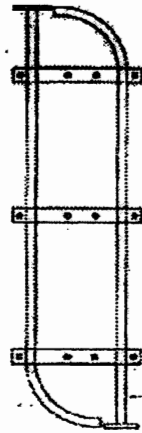
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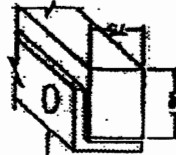
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packing procedure for poles



POLES WRAPPED WITH POLYTHENE SHEET &
EXTRUDING COATED HESSIAN CLOTH



TOP WOODEN BATTEN TO BE
FIXED WITH 150x80x6 MM ON TOP
OF IT FOR TIEING THE ROD
25 MM DIA



BOTTOM WOODEN BATTEN TO BE
FIXED ON 150x80x6 MM ANGLE

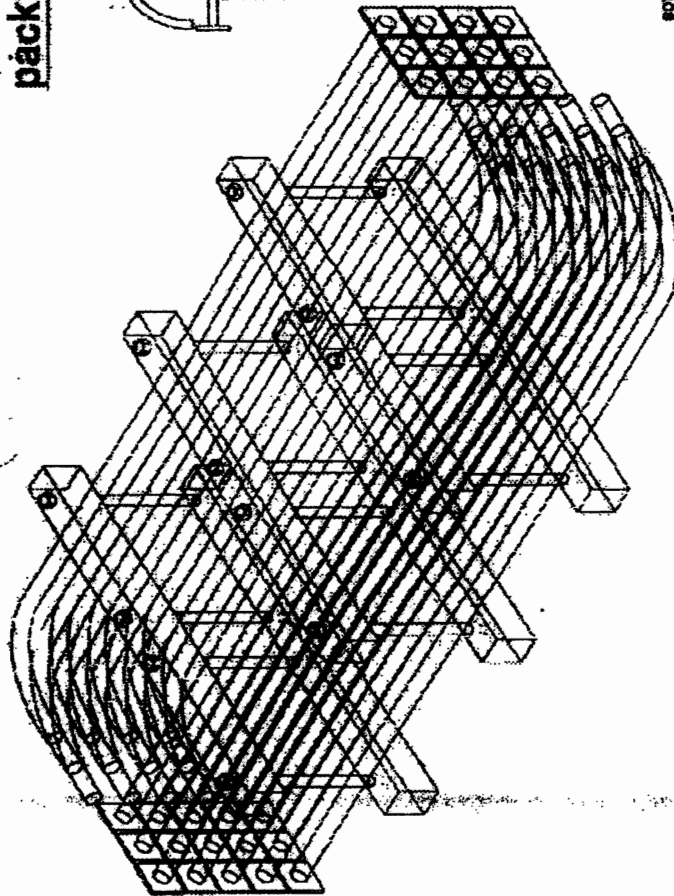


FIGURE "C"

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11.4 PACKING FOR DC BATTERY

The packing procedure for seaworthy packing of DC Battery is defined below, which is capable of withstanding impacts, compression, vibration, toppling, sea water spray, prevention against rust, temperature and extreme atmospheric conditions. Aspects of packing specific to equipments / items of DC Battery are given here. All other instructions / aspects as per the main specification of export packing which are not covered here shall also be applicable.

The packing procedure consists of various stages namely primary packing, cushioning, securing, desiccant, outside packing box, Runners/ sliders/ transverse bars of plywood, etc., provided for each movement.

- a) The packing boxes shall be made up of plywood boxes (thickness 9mm min.) with blocks at the bottom of the box for provision for handling the boxes using the forklift. The packing boxes sizes are generally standardized to half-euro size (capable of handling equipment's weight).
- b) Rubberized coir of 25mm thickness shall be provided as cushioning material at the bottom and thermocole of 20mm shall be provided inside on all four sides. Other than this polyethylene film wrap or cover also will be provided. Left out spaces to be filled with rubberized coir/ thermocol to get cushioning effect.
- c) Silica gel in dust free air permeable cotton/paper bag shall be placed in the packing boxes for storage period of 1 year as per IS 304 (1979)
- d) While packing the cells, transit caps (polypropylene) of red and blue shall be used for big size cells for ensuring that cells does not get damaged during the transport due to vibrations etc.
- e) The battery accessories shall be packed with suitable precautions as follows:
 - i) Copper connectors shall be packed after making bunches with lead wire seals to avoid misplacement.
 - ii) Hardware items shall be packed in polyethylene bags (Thickness $\geq 0.175\text{mm}$) with item slip
 - iii) Battery rack shall be packed in dismantled condition, wrapped with polyethylene sheet
 - iv) For Ni-Cd type battery, electrolyte in solid form for dry cells shall be packed in cans with KOH, LiOH being packed separately.
 - f) Galvanized Steel straps are provided for binding the packing box sides.
 - g) The handling instructions shall be marked in indelible/ non-washable ink, indicating the upright position.

11.5 PACKING OF SERVICE TRANSFORMERS(OIL FILLED) & ACCESSORIES

This instruction is applicable for packing of transformers (oil filled), its accessories and components so as to ensure safe delivery to end user. Aspects of packing specific to equipments / items of transformers(oil filled) are given here. All other instructions / aspects as per the main specification of export packing which are not covered here shall also be applicable.

11.5.01 PACKING DETAILS :

- a) Items shall be packed in case / crates as per the shipping list.
- b) All fragile items and small items shall be packed in cases and to be marked as "Fragile, handle with care Fragile items".
- c) Fragile accessories are to be first packed in their original boxes (VENDOR's packing). Very

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- d small / delicate items such as glass thermometer, door keys shall be packed in separate box.
- d In case original box is found damaged, suitable alternate box or packing method using felt or foam sheet and polythene wrap to be used.
- e These boxes are then placed in identified wooden boxes. Inside of such boxes are lined with a layer of polythene sheet, packing wool / grass and another layer of polythene sheet before placing the boxes. All boxes are then wrapped with this polythene sheet before closing the box. Fragile items shall not be placed loose, one above the other inside the case.
- f All wiring cables, connection flats of non-ferrous materials, CTs, valves bellows shall also be packed.
- g Items like CTs, Oil communicating bushings, insulators, wired equipments and housings such as RTCC Panel, M. Box, Drive Mechanism, thermometers, gauges shall be wrapped in polythene from all around.
- h Buchholz relay and OSR relay openings will be blanked using covers, before putting them in the box
- i Items shall be carefully lowered and arranged inside the crate / case and each item shall be locked from all sides in such a way to avoid its movement in any way. Wooden stoppers and separators shall be provided for this and nailed to the crate / case wood.
- j Wooden planks and batons in contact with fragile items shall be provided with kit foam at the locations of contact.
- k Oil communication bushings shall be packed in separate case on V or U shape wooden felted supports, as in case of condenser bushings.
- l While placing and arranging the items inside the crates / cases, these shall be verified for correctness and then the packing note shall be signed. The cover top of the crate / case shall then be closed.
- m The main equipment like transformer tank shall be packed suitably to prevent any damage during transit / storage. Support structures like frame, header supports etc. shall be crated. Conservator headers shall also be crated. Radiators pipe work and other instruments & components shall be packed in cases. All the cases shall be lined with polythene from inside.

11.6 ALTERNATIVE PACKING CASES FOR CONTROL PANELS AND SWITCH GEARS

For Control and switch gear panels, construction of wooden packing cases may be provided as per fig 14 & 15 and as detailed below.

Thickness of planks for all sides, binding and jointing battens shall be at least 25 mm. Width of the plank shall be at least 125mm and that of binding and jointing planks shall be at least 100mm.

Top frame shall be suitable so that it does not collapse due to sandwiching between slings while lifting. Longitudinal and traverse bars for the bottom wooden pallet to be suitably selected.

Diagonal bracings shall be as per cl 9.3.1.3 and all other requirements shall be as per clauses 9.3.1.4 to 9.3.1.6.

12.0 Containerization

As required by BHEL, the VENDOR shall stuff the GOODS into 20 or 40 foot containers (dry, open top, flat racks, etc.).

The maximum inside dimensions of containers are to be considered:

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- 40 foot containers: 11.80 m x 2.20 m x 2.05 m
- 20 foot containers: 5.80 m x 2.20 m x 2.05m
-

The present definition of containerization is valid for sea containers only. Vendor to check the size of containers before start of packing of equipment.

12.1 Protection of Cases/Crates

Since shipping containers are in general not water tight, packing in contact with the floor of the container shall be raised in order to prevent it from being damaged by the accumulation of water.

12.2 Mechanical Constraints

The mechanical constraints for "general use" closed containers are of a different nature (height of "stacking" being limited inside the containers), the packing for the GOODS may be of a lighter structure. However, it is necessary that the packing be appropriate so as to protect the GOODS on site during the storage period, as required after discharging of the GOOD'S from the containers.

Note:

It is the responsibility of the VENDOR to ensure that the cases/crates are stowed, secured and fastened inside the container. The VENDOR will take all necessary precautions to conform to the maximum weight allowed and the centre of gravity of the container. The securing and fastening of the cases/ crates can be carried out by nailing timbers on the bottom or on the vertical sides of the container.

13.0 Other Services to be provided by Vendor

In addition to the packing and shipping documents, VENDOR must also carry out the following services, which shall be included in his quotation:

Carriage of VENDOR's sub-contracted equipment and material, which must be re-grouped in VENDOR's or PACKER's workshops, whilst waiting for packaging.

BHEL reserves the right to postpone the shipping of the GOODS. In this event, any storage and insurance costs during the first ninety (90) days shall be borne by the VENDOR.

Loading, including lifting, securing, lashing, and stowing, of all cases, crates, or packages onto means of transportation such as, but not limited to, trailers, containers, etc.

14.0 Responsibilities and Guarantees

VENDOR is responsible for the choice of category for packing according to the transport facilities used, and on the basis of the present document. In case of doubt or disagreement regarding the choice, VENDOR must inform BHEL prior to packing and await BHEL's approval. All phases of packaging, marking, loading, etc. will be subject to BHEL inspection.

BHEL reserves the right to reject the packing when the packing does not conform to these instructions and/or when the packing does not ensure perfect protection of the GOODS. VENDOR is responsible for the weights and dimensions declared, and the marking of the packages.

The documents must be in strict conformity with the packing contents.

The packing specified in these "Packing, Marking and Shipping Instructions" is guaranteed for a twelve (12) months storage period after delivery on site.

VENDOR is responsible for providing storage recommendation adapted to the GOODS. According to this guarantee, VENDOR is held responsible in the event of goods becoming

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useless, damaged or broken, as a result of poor packing and/or stowing, or due to corrosion, subsequent to insufficient or inadequate protection. All direct or indirect costs resulting thereof, will be back-charged to VENDOR.

Payment Mechanism at BHEL, Ranipet

(Effective for all tenders issued by BHEL Ranipet from 01 July 2011 onwards unless otherwise notified of change/s in writing given by an authorized official of BHEL, Ranipet)

BHEL, Ranipet's payment mechanism will be as follows: (All Bidders are requested to read this carefully and take note of it before submitting their offer)

All bills of Suppliers processed for payment by BHEL, Ranipet shall pass through the following mile stones:

- (1) Receipt of materials at BHEL, Ranipet Stores (evidenced by the Day-Book Number and Date generated at BHEL Stores, Ranipet) or Receipt of materials at Project Site / Destination specified in the Purchase Order (as evidenced by the acknowledgement given by the Consignee).
- (2) Acceptance of the supplied materials at BHEL Stores, Ranipet. (Proof of evidence: Stores Receipt voucher - Short form "SRV", raised by BHEL Stores, Ranipet referenced by the SRV Number and Date)
- (3) Receipt and Registration of the Bills / Invoices of the Supplier at BHEL, Ranipet Accounts Department. (evidenced by the ABS Number and Date)
- (4) Receipt of clarifications, if any that may be required by BHEL, Ranipet Accounts or Purchase Department, from the Supplier. (As evidenced by the IOM Inward Date)
- (5) Bill processing and passing.
- (6) Payment release.

All these events are transparently available in the SCM web-site of BHEL, Ranipet, { <http://bapscm.bhelrpt.co.in/purc> } which can be viewed by all registered suppliers with a password.

Allowed Time frames:

- A] From DB to SRV: 10 Days
- B] From SRV to ABS: 15 Days
- C] From ABS to Bill Pass: 07 Days (if Stage 4 above is not applicable)

OR

From IOM to Bill Pass: 07 Days (if Stage 4 above is applicable)

- D] From Bill Pass to Payment Release: As per payment terms of the Purchase order.

All Suppliers payment/s would be released based on seniority of receipt of the processed bills at the payment section of BHEL, Ranipet Accounts Department.

The seniority would be based on the sequence of milestone events listed above.

In the sequence of the bill processing the preceding mile-stone seniority will be void, if the subsequent event occurs beyond the permitted time frame between two successive events.

Thus for example:

Start seniority would be with the DB date.

If the SRV date is greater than 10 days of the DB date, then the seniority of the DB date would be replaced by the SRV date.

If the ABS date is greater than 15 days of the SRV date, then the seniority would be reckoned by the ABS date.

If the Bill pass date is greater than 07 days of the ABS date then the seniority would be the date of inward receipt of the IOM.

The logics of these sequence is that SRV, ABS, IOM inward entry are dependent entirely on submission of correct documentation by Suppliers, as called for in the Purchase Order. If the documents are correctly submitted each of the milestone listed above will occur within BHEL, Ranipet within the timelines specified above.

Hence, in their own interest all Suppliers are requested to take note of this process and comply with the same.

Caution: Suppliers' payments would get delayed / affected if they fail to adhere to the submission of the documents specified in the Purchase Order / Contract, since the listed milestone events occurrence are contingent upon the availability of the requisite documents.



**SHIPPING AND PACKAGING INSTRUCTIONS
FOR**

**2 x 660 MW MAITREE SUPER THERMAL POWER
PROJECT, BANGLADESH**

OF

**BANGLADESH-INDIA FRIENDSHIP COMPANY (PVT.) LTD
(BIFPCL)**

Document Revision-0

Approved by	Checked by	Prepared By
Jasvindra Pal Singh/AGM	Akhilesh Kumar/DGM	Sandeep Singh/Dy. Manager
<i>Jasvindra Pal Singh</i> 11/09/17	<i>Akhilesh</i> 11/09/17	<i>Singh</i> 11/09/17

Bharat Heavy Electricals Limited
Maitree Export Project Group
International Operation Division
Integrated Office Complex, Lodhi Road
New Delhi -110003



Ref: IO/MEPG/S&P/01
Date: 12th September 2017

2x660 MW Maitree STPP, Bangladesh: Shipping and Packaging Instructions Rev-0

Following dispatch instructions for effecting supplies under the above contract are being issued for compliance by all the units/region involved in this project.

Sr. No.	Item No.	Details	Action By
A	1	<u>Purchaser's Name and Address:</u> Bangladesh-India Friendship Power Company (Pvt.) Limited (BIFPCL), Level-17, Borak Unique Height, 117, Kazi Nazrul Islam Avenue, Eskaton Garden, Dhaka-1217, Bangladesh Attention: Mr. Ujjwal Bhattacharya Managing Director, BIFPCL Tel : +8823941805 E-mail : cto@bifpcl.com ; md@bifpcl.com	For information
B	1	<u>Delivery Terms:</u> Site Incharge, 2x660 MW Maitree Super Thermal Power Project, PO-Kalekharber, Union-Rajnagar, Upajila-Rampal, Dist: Bagerhat-9343, Bangladesh Contact No.: +8801678582823	Units to ensure proper marking on the boxes so as to Identify the final destination clearly.
C	1	<u>Seller's Name and Address:</u> Bharat Heavy Electricals Limited International Operations Division Lodhi Road, Integrated Office Complex New Delhi –110003, INDIA Through Various Units/Divisions	For information
D	1	<u>Payment Terms for Equipment, Material & Plant Supply:</u> Advance - 15% of the Contract price. Sight Payment - 65 % of total CIF Value of equipment, materials and plant on submission of shipping documents Delivery Payment - 10% of total CIF cost of supply of equipment, materials and plant against receipt cum damage report. PAC - 5% on receipt of Provisional Acceptance Certificate. FAC - 5% on the receipt of Final Acceptance Certificate	All Units

Sr. No.	Item No.	Details	Action By
E	1	<u>Shipping Marks:</u> Each package or shipping unit shall be clearly marked or stenciled on at least two sides as follows: “BANGLADESH-INDIA FRIENDSHIP POWER COMPANY (Pvt.) LIMITED, 2X660 MW MAITREE SUPER THERMAL POWER PROJECT, BANGLADESH” EPC Contractor - Bharat Heavy Electricals Limited, India In addition, each package or shipping unit shall have the symbol painted in red on at least two sides of the package, covering one fourth of the area of the side.	All Units
F	1	<u>Consignee:</u> BOARD BILL/S OF LADING MADE OUT TO THE ORDER OF /OR AIRWAY BILL CONSIGNED TO AND/OR CONSIGNED NOTE FOR TRANSPORT BY TRUCK CONSIGNED TO Managing Director, Bangladesh-India Friendship Power Company (Pvt.) Limited, Level-17, Borak Unique Height, 117, Kazi Nazrul Islam Avenue, Eskaton Garden, Dhaka-1217, Bangladesh Contact No.: +8823941805 ** Any change as per LC shall be taken care of.	All Units
G	1	<u>Notifying Party :</u> DGM(C&M) Bangladesh-India Friendship Power Company (Pvt.) Limited, Level-17, Borak Unique Height, 117, Kazi Nazrul Islam Avenue, Eskaton Garden, Dhaka-1217, Bangladesh Contact No.: +8801678582831 E-Mail:epcmainplant@bifpcl.com ** Any change as per LC shall be taken care of.	All Units
H		Packing Instructions & Inspection Prior to Dispatch by Supplying Units/Sub-Vendors:	
H	1	Packing (tare) shall be part of the Equipment cost and shall not be subject to return. The packing should ensure integrity and cohesiveness of each delivery batch of Equipment during transportation. In case of Equipment assemblies and unit's delivery in the packing of glass, plastics or paper the specification of packing with the material and weight characteristics are to be indicated. Hazardous goods must be packed as per international standards/practice.	All Units/Suppliers
H	2	<u>Special instructions as per BICPCL :</u>	

Sr. No.	Item No.	Details	Action By
H	2.1	All equipment and materials and other Plant shall be suitably coated wrapped, or covered and boxed or crated for export shipment and to prevent damage during handling and storage at the Site. Cardboard containers shall be enclosed in a solid wooden container.	All Units/Suppliers
H	2.2	Equipment and process materials shall be packed and semi-knocked down, to the extent possible, to facilitate handling and storage and to protect bearings and other machine surfaces from oxidation. Each container, box, crate or bundle shall be reinforced with steel strapping In such a manner that breaking of one strap will not cause complete failure of the packaging. The packing shall be of best standard to withstand rough handling and to provide suitable protection from tropical weather while In transit and while awaiting erection at the Site.	All Units/Suppliers
H	2.3	Equipment and materials in wooden cases or crates shall be properly cushioned to withstand the abuse of handling, transportation and storage. Packing shall include preservatives suitable to tropical conditions. All machine surfaces and bearings shall be coated with oxidation preventative compounds. All parts subject to damage when in contact with water shall be coated with suitable grease and wrapped in heavy asphalt or tar impregnated paper.	All Units/Suppliers
H	2.4	Crates and packing material used for shipping will become the property of Employer, but the Contractor will be allowed to use the same for the Work as needed, but the remaining material shall be turned over to Employer upon completion of the Project. Provided however, shippers container used for transportation of material shall be returned to the Contractor.	All Units/Suppliers
H	2.5	Each part of the equipment which is to be shipped as a separate piece or smaller parts packed within the same case shall be legibly marked to show the unit of which it is part, and match marked to show its relative position in the unit, to facilitate assembly in the field. Unit marks and match marks shall be made with steel stamps and with paint.	All Units/Suppliers
H	2.6	Each case shall contain a packing list showing the detailed contents of the package. When any technical documents are supplied together with the shipment of materials no single package shall contain more than one set of such documents. Shipping papers shall clearly indicate in which packages the technical documents are contained.	All Units/Suppliers
H	2.7	The case number shall be written in the form of a fraction, the numerator of which is the serial number of the case and the denominator the total number of case in which a complete unit of equipment is packed .	All Units/Suppliers

Sr. No.	Item No.	Details	Action By
H	2.8	Wherever necessary besides usual Inscriptions the cases shall bear special indication such as "Top", "Do not turn over", "Care", "Keep dry", etc., as well as indication of the centre of gravity (with red vertical lines) and places for attaching slings (with chain marks). For all fragile equipment , unit should take special care to pack and label with additional markings such as “ FRAGILE-HANDLE WITH CARE” , “ LIFTING POINTS” , “ THIS WAY UP” , “ DO NOT STACK” etc. to protect them from damage in transit.	All Units/Suppliers
H	2.9	Cases which cannot be marked as above shall have metal tags with the necessary markings on them. The metal tags shall be securely attached to the packages with strong steel binding wire. Each piece, skid, case or package shipped separately shall be labelled or tagged properly.	All Units/Suppliers
H	3	Each package should have the following inscriptions and signs stenciled with an indelible ink legibly and clearly: Destination: Package number: BHEL/MTR/BD/XXX/YYY/ZZZZZ where XXX stands for Unit abbreviation e.g. HWR , HYD ,EDN, PEM, RPT, PCRI, TBG, PC, JHS,TRY, EPD, ISG etc. and YYY stands for Vendor abbreviation. Following series of ZZZZZ should be used by different Units- HWR (10000), PCRI (17000), RDP(18000), HYD(20000), TBG(25000), PEM (30000), TRY(40000), PC(50000), HPVP(57000), PSER(60000), ISG(70000), BPL(80000), RPT(85000), EPD (90000), JHS(92000), EDN(95000). if first package is dispatched from HWR and vendor named as ABC then package should be numbered as : BHEL/MTR/BD/HWR/ABC/10001 Gross and Net weight: Dimensions: Lifting places: Handling marks and the following delivery marking: CONTRACT No. BIFPCL/EPC-MAIN PLANT/2016/01 PURCHASER: BIFPCL, Bangladesh	All Units/Suppliers
H	4	Completeness of Contents of each packing case:	
H	4.1	Concerned CQA/Unit QC/Third Party Inspection Agency shall verify the completeness of contents of each package w.r.t packing list both in terms of quality and quantity before authorising dispatch of the consignment.	All Units/Suppliers
H	4.2	Packing commensurate with international standards and accepted norms will be ensured by CQA/ Unit QC/Third Party Inspection Agency. Packing has to be sea-worthy and secure. As far as possible, the packing has to be rectangular in shape for optimum space utilization in the ship and economize on shipping costs. Projections on packages are prohibited.	CQA/All Units

Sr. No.	Item No.	Details	Action By
H	4.3	The packing list has to be checked and certified by the Inspection agency with due signatures. All packages shall be enclosed in suitable GI sheets on all sides.	CQA/All Units
H	4.4	No loose items / Gunny bag packing are allowed for shipment. Proper pallets and crates are to be used for packing of Oil drums and Structures.	CQA/All Units
H	5	<u>Routing of Packing Lists:</u> Packing list is an extremely important document, which forms a part of export documentation in connection with the processing of customs formalities. Packing List has to be generated by units/Unit vendors and sent to MEPG and ROD Chennai/Kolkata (both at the same time), two weeks in advance, for processing and obtaining shipping bills' clearances and avoiding any delay at Kolkata/Haldia/Chennai port.	All Units/ suppliers
H	6.1	<u>Advance intimation to ROD- Chennai/Kolkata & MEPG, New Delhi:</u> All supplying units/vendors will give at least 15 days advance intimation to ROD-Chennai/Kolkata & MEPG, New Delhi along with package details before actual dispatches to arrange for storage/shipping arrangements by ROD Chennai/Kolkata/Haldia. Information must be sent to consolidate the details and arrange for shipments in time.	All Units
H	6.2	<u>Telephonic Intimation to ROD Chennai/Kolkata of Movement of Vehicles:</u> Vehicle drivers to be instructed by the units to contact ROD regarding movement of vehicles on daily basis for heavy lifts. Especially 2 days before arrival at Kolkata/Haldia/Chennai so that suitable directives can be given to the driver of the vehicle for further transportation of the goods to either docks or godown.	All Units/suppliers
H	7	<u>Bond or Letter of Undertaking:</u> All units to ensure Corporate indirect taxation guidelines vide letter ref no. AA:Fin:Ind Tax:GST-17 date 10.07.2017 for compliance and CBEC Notification no. 16/2017-Central Tax Dated 07.07.2017 and CBEC Circular No. 4/4/2017-GST Dated 07.07.2017 (Circular/Notifications are enclosed). <u>Sealing of Container:</u> All units to ensure CBEC Circular 26/2017 and Corporate indirect taxation guidelines ref. no. AA:Fin:Ind Tax:GST-14 dated 05.07.2017 in this regard may please be followed(Circular/Notifications are enclosed). <u>Other Procedures w.r.t Export:</u> Various guidelines issued time to time from Corporate indirect taxation regarding export may please be referred and to be followed.	All Units/ suppliers

Sr. No.	Item No.	Details	Action By
H	8	<u>Provision of Inspection Windows on Packages:</u> Unit/Vendors should provide inspection window of size 6" x 4" (glass perplex) for customs examination for all packages (above 1.5 x 1.5 x 1.5 cu m) involving panels of any kind. Care would be taken to ensure that all packages are properly sealed to avoid ingress of moisture, rodents etc. Packing slip folders shall be attached in each box.	All Units/ Suppliers
H	9	<u>Transportation Drawings for Heavy Weight/ODC consignment: For any package/item weighing above 20000 kgs and/or size greater than 12 X 2.5 X 2.5 m :</u> Detailed engineering documents (at least 4 sets) for all items of the above category shall be furnished by respective units to issue shipment enquiries in a proper manner. This would include Turbines ,Transformers, Generators etc. The drawing has to include center of gravity of the item clearly (Units to identify such items and notify MEPG as soon as the engineering documents are released).	All units
H	10	<u>Lifting Beams:</u> All heavy lifts for which safe handling is essential at the port of dispatch shall be accompanied by lifting beam on non-returnable basis	All Units
I	1	<u>Marking for Safe Handling:</u> To ensure safe handling, packing case shall be marked to show the following: • Upright position. • Sling position and Centre of Gravity position. • Storage category. • Fragile components (to be marked properly with a clear warning for safe handling).	All Units/suppliers
J	1	<u>Marine Insurance Policy:</u> Insurance Policy for 110 percent value of the contract covering all risks including war and SRCC from Port of shipment in India/Third country direct dispatches, to site shall be taken by PSER, Kolkata and it shall indicate BIFPCL as co-insured.	PSER/Corporate Insurance
K	Shipping Documentation including those covered by customs requirements:		
K	1	GST Invoice as per approved BBU. Following details to be mentioned in GST Invoice for Export – 1. Forex Bank Account no. for all type of Shipping Bill. 2. Authorized Dealer Code no. with Name of Bank for all type of Shipping Bill. 3. Duty Drawback Account no. with IFS code of Bank for Drawback Shipping Bill. As invoice will be used for export custom clearance details like HS code; CIF value, Freight value, Insurance value, FOB value in FC ; Shipper name ;Manufacturer name; Shipping bill type;	All Units/suppliers

Sr. No.	Item No.	Details	Action By
		POL; POD; DBK serial no ; Advance authorization no ; EPCG License no as applicable should appear on invoice.	
K	2	• Packing List • LR Copy • Fumigation certificate for wooden boxes • MSDS for DGR cargo • CE certificate for DEEC shipping bill cases with original import license • Warranty Certificate • Manufacturer 's Factory Test Certificate/Inspection Waiver Certificate • Quality and Quantity Certificate • Certificate of Origin • MDCC	All Units /Sub-vendors of units
K	3	• Type of Shipping Bills. • All Units have to send their DEEC & EPCG licence details to ROD Kolkata or ROD Chennai as per cargo despatches.	All Units/Region
K	4	Chartered Engineer's Certificate, applicable to be arranged by Units. Care should be taken to ensure that usage of the materials shown in C.E. certificate out of DEPB goods is not disproportionate.	All Units/ROD
K	5	Catalogues/literature/write-up in case of customs endorsement for discharging exports obligation in case of DEEC imports to be made available to ROD before arrival of goods in the city of port of dispatch.	All Units
K	6	Commercial Documents for Customs Clearance at Destination i.e. Bangladesh	MEPG/Dhaka Office
L	1	<u>Full Set of Clean Multimodal Transport Document:</u> Complete set of shipping B/L showing freight prepaid as per the rates of regular shipping lines. In case of Air Freight consignment, one original of AWB is required together with three copies of the same. In case of road transport, one original LR is required with 3 copies of the same.	ROD/ MEPG
M	1	<u>Certified Inspection Certificate Approved by Customer:</u> The certificate signed by BIFPCL inspector (if equipment tested in presence of BIFPCL representative) is to be provided to MEPG . In case the Certificate is signed by BHEL/Third Party Inspection Agency, it is to be provided by Units/ suppliers to MEPG and MEPG will get it approved from BIFPCL.	All Units/ Suppliers
N	Shipping Carrier Specification and related Requirements:		
N	1	Certificate of Freight having been pre-paid as per the regular shipping lines is required on MTDs/BLs.	ROD/ MEPG
N	2	Subject cargo would be generally shipped under the deck. Specific confirmation/clearance of MEPG is needed for shipment on deck except wherever shipment is through Barges.	ROD/ MEPG

Sr. No.	Item No.	Details	Action By
N	3	Vessel age to be restricted as per insurance policy in force. Buyer's Reference (Contract No. BIFPCL/EPC-MAIN PLANT/2016/01 Dated 12.07.2016) is required on BLs.	ROD/ MEPG
N	4	For Third Country Supplies , concerned units will ensure all the above certificates in addition to Certificate of Origin.	All Units/ Suppliers
O	Guidelines for Dispatches from Units/Indian Vendors:		
O	1	<u>All materials to be dispatched under intimation to:</u> 1. For Shipments through Chennai Consignment shall be sent to the following address - Mr Harshal Trivedi, Engineer/Docks Bharat Heavy Electricals Ltd Near Marshalling Yard, Chennai Port trust Chennai 600 001 Ph No 044 25362247/25360446 -Mob 08680850932 E-mail trivedi@bhel.in The couriers /correspondence shall be sent to the following address - Shri S S RAJAN AGM/MS, Bharat Heavy Electricals Ltd Regional Operations Division, EVR Building 6th floor No 690(Old No 474) Anna Salai, Nandanam Chennai 600 035 Mob – 09840997089 E-mail ssrajan@bhel.in 2. For Shipments through Kolkata/Haldia Consignment shall be sent to the following address - (Storage yard to be finalized by ROD Kolkata/freight forwarder and address shall be intimated soon) The couriers /correspondence shall be sent to the following address - Mr. Abhijit Chowdhury , Sr. Engineer Bharat Heavy Electricals Ltd , Regional Operations Division DJ 9/1 SECTOR II , Saltlake , Karunamoyee West Bengal 700091 Mob – 9830441607 E-mail abhijit@bhel.in	All Units/Rod
O	2	<u>Clearing Agents:</u> All materials to be dispatched to Chennai/Kolkata/Haldia on door delivery basis, freight prepaid to the address of the clearing agents(to be specified by ROD, from time to time)	All Units/Rod

Sr. No.	Item No.	Details	Action By
O	3	<u>Customs formalities Period:</u> Packages arriving at the port shall have a minimum time of 3 working days for customs examination and other related formalities in respect of the cargo under shipment. The goods received after arrival of the ship may not be loaded if either sufficient time does not exist or space available in the ship is booked by the carrier for other exporters due to lack of availability of the goods at the port in time for shipment from BHEL. In case, where the committed cargo to the carrier based upon information received from all the units does not reach in time of scheduled shipment at the port of dispatch, MEPG would be within its right to decide the priority of loading as per the project schedule requirements given the condition that adequate space in the ship is not available to accommodate the cargo.	For information
P	1	• <u>Shipping Procedures and ROD Responsibilities:</u> Consolidation of Packages and Storage in Warehouse: ROD Chennai/Kolkata either themselves or through their CHA would ensure following: • Proper storage of goods at an elevated level if store is in open to avoid damages to the consignment during rainy season (All the packages to be covered with a proper tarpaulin in open storage). • All Electrical and C&I items to be stored indoors. • Consolidation of the goods as per summary packing lists. • Check marks and numbers on packages. Carry out the corrections, if necessary. • Label the packages linking to the proposed shipping carrier to ensure that package does not get left out.	ROD

Note:

1. Units/Regions are also requested to refer shipping and packaging instructions provided with Internal Orders and GCC Clause no 65 at contract book no. 6 for compliance.
2. Units/Regions are advised to take necessary actions for compliance of GST related issues and refer information available at GST portal of Corporate Finance.

GUIDELINES ON ACCEPTANCE OF BANK GUARANTEES GIVEN BY VENDORS

1. INTRODUCTION

As a part of the business operations, BHEL is taking Bank Guarantees from its Vendors/contractors/sub-contractors for various purposes. These Bank Guarantees are structured according to the terms of the Tender/ Agreement/ Contract.

2. TYPES OF BANK GUARANTEES TAKEN FROM VENDORS/CONTRACTORS/ SUB-CONTRACTORS BY BHEL

Generally, following types of Bank Guarantees are being taken by BHEL-

i. Bank Guarantees for Earnest Money Deposit

EMD is to be paid by tenderers for securing fulfilment of any obligations in terms of the NIT. In case of total EMD amount is more than Rs.20 lakh, the amount in excess of Rs.20 lakh may be accepted in the form of Bank Guarantee from scheduled bank. The Bank Guarantee in such cases shall be valid for atleast six months.

ii. Bank Guarantee (in lieu of Security Deposit):

Security Deposit is to be collected from the successful Bidder. In addition to other modes of furnishing Security Deposit, Bank Guarantee from Scheduled Banks can be submitted in lieu of Security Deposit by the contractors/sub-contractors/vendors, subject to the compliance with the provisions of Works Policy/Purchase Policy and/or Tender Conditions/ Extant Guidelines

iii. Bank Guarantee against Mobilization Advance/ Initial/ Milestone linked payment:

Normally, no advance payment shall be made to Contractor/ sub-contractors/vendors. Mobilization advance payment in exceptional circumstances shall be interest bearing and secured through Bank Guarantee/s and shall be limited to a maximum of 5% of the Contract Value. The Bank Guarantee shall be for 110% of the value of advance so as to enable recovery of not only principal but also the interest portion.

iv. Performance Bank Guarantee:

These Bank Guarantees may be taken as guarantee for successful performance/ completion of the Contract.

v. Bank Guarantee for Supply of Free Issue Material

BHEL Units sub-contract their jobs to Ancillaries and other fabricators by issuing materials free of cost on returnable basis. Though these fabricators are under contractual obligation to ensure safety of BHEL material and to return the same after carrying out the assigned job, to safeguard BHEL's interest, Bank Guarantee is to be taken in favour of BHEL.

vi Bank Guarantee (For release of Liquidated Damages Amount):

Sometimes, Bank Guarantee against release of Liquidated Damages (LD) is also being obtained by BHEL. In such cases, Bank Guarantee should be valid till the LD issues are settled.

(Compliance with the provisions of Works Policy/Purchase Policy and/or Tender Conditions/ Extant Guidelines may be ensured)

3. STANDARD FORMATS

The following standard format for Bank Guarantees for both Indian and foreign contractors/sub-contractors/vendors which can be used by the Units/Regions are enclosed-

- a. Proforma of Bank Guarantee for Earnest Money Deposit (**Annexure A**)
- b. Proforma of Bank Guarantee in lieu of Security Deposit (**Annexure B**)
- c. Proforma of Bank Guarantee (to secure Advance/ Initial/ Milestone linked payment) (**Annexure C**)
- d. Proforma of Bank Guarantee (Performance) / Contract Execution (**Annexure D**)
- e. Proforma of Bank Guarantee (For release of Liquidated Damages Amount) (**Annexure E**)
- f. Proforma of Bank Guarantee for Supply of Free Issue Material (**Annexure F**)

4. ACCEPTANCE OF BANK GUARANTEES ISSUED BY CONSORTIUM BANKS

List of Banks in BHEL's Consortium of Banks enclosed at **Annexure 1**. For getting Bank Guarantees issued in BHEL's favor preference shall be given to Consortium Banks. As such, Units should insist their contractors/sub-contractors/vendors to submit Bank Guarantees issued by any of the BHEL's Consortium Banks. Therefore, the List of the Consortium Banks along with the Standard Bank Guarantee Format (forming part of these Guidelines) should also form part of the Tender/ Contract document issued by BHEL. (Units may regularly check Corporate Finance- FSD Site (<http://intranet.bhel.in/FSD>) for updated List of Consortium Banks).

5. ACCEPTANCE OF BANK GUARANTEES ISSUED BY NON-CONSORTIUM BANKS

In case any contractors/sub-contractors/vendors expresses difficulty in obtaining Bank Guarantees from any of the BHEL's Consortium Banks and offer to submit Bank Guarantee from any other Nationalized/Public Sector/Private Sector/Foreign Banks, the same may be accepted subject to the following conditions-

A. NETWORTH OF THE BANK ISSUING THE BANK GUARANTEE

- i. In respect of Banks having Net Worth below Rs.500 crores- Exposure Limit is NIL.
- ii. In respect of Banks having Net Worth between Rs.500 to Rs. 2000 crores (As per Latest Annual Report)-The overall exposure limit (at the Unit/Region Level) should not exceed Rs.10 crores for all the non-Consortium Banks put together.
- iii. In respect of Banks having Net Worth above Rs. 2000 crores (As per Latest Annual Report)-The overall exposure limit (at the Unit/Region Level) should not exceed Rs.30 crores for all the non-Consortium Banks put together.

Units/ Regions may insist their contractors/sub-contractors/vendors to provide a Certificate from the concerned Bank along with a Copy of latest Annual Report as supporting documents for Net Worth of the Bank. Additionally, in case required, the figure for Net Worth may be cross checked with the Corporate Office/ Head Office of the concerned Bank. In case, the abovementioned limits have already been exhausted or sufficient balance is not available, the same may be intimated suitably to the contractors/sub-contractors/vendors beforehand.

B. TYPE OF BANKS ISSUING THE BANK GUARANTEE

- i. Bank Guarantee submitted by domestic contractors/sub-contractors/vendors from non-consortium banks-
 1. **Nationalized/ other Public Sector Banks:** Bank Guarantees issued by Nationalized/ other Public Sector Banks (which are not in BHEL's Consortium) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city in which the Unit is located. i.e. Demand can be presented at the Branch located in the town/city in which the Unit is located.
 2. **Private Sector Banks:** Bank Guarantees issued by Private Sector Banks (which are not in BHEL's Consortium) can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city in which the Unit is located i.e. Demand can be presented at the Branch located in the town/city in which the Unit is located. However, Units may prefer Nationalized/Public Sector Banks over Private Sector Banks in respect of Bank Guarantees issued by non-consortium banks.

3. **Foreign Banks (BG issued by Branches in India):** Bank Guarantees issued by Foreign Banks (which are not in BHEL's Consortium) 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.

4. **Bank Guarantees submitted by Foreign Vendors**

- a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks which are not in BHEL's Consortium (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** 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 (BHEL's Consortium Bank). **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). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.

C. Co-Operative Banks/ Financial Institutions: Bank Guarantees issued by Co-Operative Banks/ Financial Institutions is **not to be accepted** under all circumstances.

6. **OTHER IMPORTANT ISSUES-**

- i) **BG Text Related Issues-** Bank Guarantees should be clear and precise and should clearly specify the following:
1. The name and address of the applicant i.e Vendor
 2. The name and address of the beneficiary i.e BHEL. It must be ensured that the concerned Unit's name is clearly mentioned in the Bank Guarantee.
 3. The name and address of the guarantor Bank and Branch
 4. A reference number or other information identifying the underlying contract
 5. A reference number or other information identifying the issued guarantee.
 6. The amount or maximum amount payable and the currency in which it is payable
 7. The validity period/date of expiry of the guarantee including Claim period
 8. Claim is payable without demur, protest or proof and merely on demand from BHEL. BG should be unconditional
 9. It should clearly specify the place of Invocation
 10. Presently, there is no legal requirement for getting signatures of Witnesses on the Bank Guarantees. Therefore, BHEL may not insist for the same.
 11. In case of cutting/ overwriting on the Bank Guarantee have been properly authenticated under signature and seal of the executing Bank.

ii) Confirmation of genuineness/authenticity of the Bank Guarantee

Following safeguards in respect of all Bank Guarantees (including Extensions/ Amendments) issued by any of the Banks (including Consortium Banks) are required to be taken :

- a. The prescribed format in which BGs are acceptable from the contractors/sub-contractors/vendors may be formed part of the tender document. On receipt of the Original Bank Guarantee by BHEL, the same may be verified verbatim with the Bank Guarantee format provided by BHEL.

- b. **Use of Structured Financial Messaging System (SFMS) for Sending and receiving Bank Guarantee Instruments**

Structured Financial Messaging System (SFMS) has been/ is being implemented by the Banks as per the Ministry of Finance's instructions for Sending and receiving Bank Guarantee and also Inland Letter of Credit Instruments. The SFMS provides a platform for secure communication within the Bank and between Banks. As such, SFMS can prove to be an excellent IT enabled platform for getting secure confirmations from the Banks in respect of Bank Guarantees issued in favor of BHEL. Therefore, Units should insist the contractors/sub-contractors/vendors to provide the Bank Guarantees from Banks which are already SFMS Compliant.

Under SFMS System, a separate advice of the Bank Guarantee (via SFMS IFN 760COV) to be sent to the Advising bank (Beneficiary's Bank) through SFMS by the Issuing Bank (Applicant's Bank), after which the paper Bank Guarantee would become operative. Similar process to be followed for bank guarantee amendment also and separate advice (via SFMS IFN 767COV) is sent to the Advising Bank. It must be ensured that the Issuing and Advising Bank must be SFMS enabled. The details of Advising Bank / Beneficiary Bank (i.e. IFSC Code & Branch address) have to be provided to the BG issuing Bank along with the application for the Application/Request for issuance of Bank Guarantee.

At the time of application for issuance of a Bank Guarantee, the applicant has to furnish Beneficiary's Bank Branch IFSC, Branch Name and address to the Issuing Bank. In this regard, details of those Banks in BHEL's Consortium may be provided to the contractors/sub-contractors/vendors which have waived Advising Charges for advising the Bank Guarantees (where BHEL is beneficiary) through SFMS. Corporate Office will share the details of those Banks from time to time

- c. In case, any contractors/sub-contractors/vendors show their inability to submit the Bank Guarantee from Issuing Bank which is SFMS Compliant, Units may accept paper Bank Guarantee sent to BHEL directly by the issuing Bank under Registered Post (A.D) /Speed Post/Courier/By Hand. However, a declaration as to List of Vendor Banks along with a confirmation that none of their Banks are SFMS compliant may be obtained. Such a requirement shall be clearly specified in the Tender Document/ Contract
- d. In exceptional cases, BGs received through the contractors/sub-contractors/vendors can be accepted. When a Bank Guarantee is directly received through the contractors/sub-contractors/vendors, the Issuing Branch should be requested to immediately send a confirmation that the said Bank Guarantee has been issued by them or send by Registered Post (A.D) an unstamped duplicate copy of the Bank Guarantee directly to BHEL with a Covering Letter. This will enable BHEL to compare the same with the original BG and ensure that the same is in order.
- e. **Further Verification in respect of Bank Guarantees not advised through SFMS**
As an additional measure of abundant precaution, all the Bank Guarantees received (not advised through SFMS) should be independently verified by BHEL and on receipt of the Original Bank Guarantee, the Issuing Bank may be requested to provide-
 1. Immediate Confirmation over email.

2. The possibility of getting confirmation through digitally signed secured emails from issuing Banks may be explored.
3. Thereafter, Banker may be requested to either provide the Confirmation Letter stating that the said Bank Guarantee has been issued by them and signed by their authorized employees in line with the financial authority/ powers given to these employees, or send by Registered Post (A.D) an unstamped duplicate copy of the Bank Guarantee directly to BHEL with a Covering Letter. Further, a confirmation may be obtained from the Bank that Bank Guarantee has been issued on a Stamp Paper of appropriate value.

All efforts shall be made by the Unit to obtain the confirmation as above within 10 days of receipt of the Bank Guarantees by BHEL.

f. **Additional Safe-guards for all Bank Guarantees (including advised through SFMS)**

The following additional safeguards may please be taken care at the Unit/ Region level in respect of all Bank Guarantees (including Extensions/ Amendments) issued by any of the Banks (including Consortium Banks) to ensure protection of BHEL's interest-

1. Stamp paper related i

- a. Wherever, e-stamping has been made compulsory, it is to be ensured that the Bank Guarantees has been issued in serially numbered security forms/ e-stamping. Verification of e-stamp can be done on-line <http://www.shcilestamp.com> (STOCK HOLDING CORPORATION OF INDIA LIMITED (SHCIL)).

An e-Stamp can be verified online by clicking on verify e-Stamp certificate and entering the following details-

- 1.State
- 2.Certificate Number (UIN)
3. Stamp Duty Type (Description of Document)
4. Certificate Issue Date

- b. 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 is executed, whichever is higher.

- c. To ensure that the Stamp Paper is issued in the name of the Issuing Bank or in the name of the Contractor/sub-contractor/ vendor.

2. To ensure that the Bank Guarantees has been issued in serially numbered security forms.
3. As per RBI Guidelines, all Bank guarantees issued for Rs.50,000/- and above should be signed by two officials jointly. Further, the name, designation and code numbers of the officer/officers signing the guarantees should be mentioned under the signature(s) of officials signing the bank guarantee.

- g. **Authorized Officials for dealing with Banks in respect of Bank Guarantees-** Units/Regions to assign responsibility for verification, timely renewal and timely encashment/ invocation of the Bank Guarantees to one or more Finance Executives depending upon the volume of work at the Unit/Region. **All correspondence with the Banks for matters related to Bank Guarantees are required to be carried out by Finance executives only**

iii) **Other issues**

a. **Addition of jurisdiction Clause in the Bank Guarantee-**

If required, Units/ Region may include the following jurisdiction Clause for dispute resolution at local level

" Any claim or dispute arising under the terms of this-Guarantee shall be-subject to the exclusive jurisdiction of-the court at _____ (Unit or HQ Location for ex. in case of PSWR - "Nagpur" /PSNR- Delhi, PSER- Kolkata/ PSSR0-Chennai) only.

However, it may be noted that the exclusive jurisdiction can form a part of the Bank Guarantee formats but it has to be seen that the Court upon whom the exclusive jurisdiction is being conferred must otherwise have jurisdiction for this clause to be effective under law.

iv) Safe Custody of Bank Guarantees-

Following steps may be taken by the concerned Finance Officials to ensure safety of Bank Guarantees-

1. Safe custody of the Bank Guarantees shall be the responsibility of Finance executive(s)
2. On receipt of the Bank Guarantee, the complete details of the Bank Guarantee should be entered in BG Register (physical register and also in separate file in soft form) **(As per Format at Annexure 2)** maintained centrally at the Unit/ Region/site. The data entered in the Register should be duly verified by the concerned official/officials.
3. Periodic physical verification and reconciliation of the Paper Bank Guarantees should be done with the BG Register.
4. Original Bank Guarantees including Extensions must be kept in safe Custody in **“Fire Proof”** Cabinets/ Cash Chests.

v) Long Duration Bank Guarantees

In case of Long Duration Bank Guarantees, it is advisable that only Bank Guarantees with validity for full period of the contract may be accepted by BHEL.

vi) Expiry Period and Claim Period

It may be ensured that the Expiry/Validity date and Claim date mentioned in the Bank Guarantee is in line with the Contract with the vendor.

Further, there should be an adequate gap, preferably 3-6 months, in the Expiry date and Claim Period so as to ensure that sufficient time is available with BHEL to submit Invocation Claim, if required under the Bank Guarantee. BHEL can claim the amount from the bank for the act which has happened before the validity (expiry) date but within the claim period. However, it is advisable that the Invocation Claim may be submitted within the Expiry date.

In this regard, it is to be noted that unless the Bank receives a written claim or demand on or before the Expiry date (in case there is no separate claim date) or Claim date (in case both Expiry date and claim date are included in the text) mentioned in the Bank Guarantee, all the rights of BHEL under the Bank Guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under the said Bank Guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

vii) Extension of the Bank Guarantee-

In case of non-fulfillment or non-completion of the Contractual Commitments by the concerned contractor/sub-contractor/vendor, action for extension of the validity of the Bank Guarantee should be taken atleast 60 days before the Expiry date and in accordance with the terms and conditions of the Bank Guarantee. Commercial/Executing Agency/Construction Manager of the Unit/Region/site concerned should intimate the custodian i.e. Unit's Finance of the Bank Guarantees sufficiently in advance for the action to be taken for Extension of the Bank Guarantee. In case, no response is received by Unit's Finance 60 days before the Expiry Date from the concerned Commercial/Executing Agency/Construction Manager, the concerned Finance Official may take action for extension to ensure that BHEL's interest is safeguarded.

In this regard following points are required to be ensured-

- a. Request for Extension of the validity is to be lodged atleast 60 days before the Expiry Date mentioned in the Bank Guarantee.
- b. The letter seeking extension should be addressed to the contractor/sub-contractor/vendor as the extension is normally done by the Bank on the request of the Applicant (Contractor/sub-contractor/Vendor). The same should be sent through Registered Post with A.D/ Speed Post. Courier/By hand with a copy to the Issuing Bank with a request to invoke Bank Guarantee in case the same is not extended before expiry date and this should be treated as a Provisional Claim.
- c. Regular follow-up with the contractor/sub-contractor/vendor through email/FAX for extension of BG need to be ensured.

- d. In case the extension of the validity is not done 15 days before the expiry date, immediate action for Invocation of the Bank Guarantee should be taken by sending Final Invocation Claim to the Issuing Bank at the place of issue or such other place as is specified in the guarantee with a copy to the contractor/sub-contractor/vendor. All provisions in respect of Invocation Claim as per **Para viii** is required to be followed

viii) Invocation Claim

In event of Breach by the contractor/sub-contractor/vendor (s) of the terms and conditions of said Contract or failure of the contractor/sub-contractor/vendor to perform the said Contract for which the Bank Guarantee has been given or in case of failure of the contractor/sub-contractor/vendor to extend the validity of the Bank Guarantee (as per Para vii), the concerned Unit shall take immediate action for lodgment of Claim with the Issuing Bank's Branch for Invocation of Bank Guarantees. Commercial/Executing Agency/Construction Manager of the Unit/Region/site concerned should intimate the custodian of the Bank Guarantees sufficiently in advance for the action to be taken for invocation of the Bank Guarantee.

In this regard, following points may please be ensured-

- a. Invocation Claim is to be lodged well before the Expiry date (in case there is no separate claim date) or Claim date (in case both Validity date and claim date are included in the text) mentioned in the Bank Guarantee.
- b. Invocation Claim is to be typed on BHEL Letter Head with full Postal Address of BHEL's Unit. It should also contain contact details of BHEL's dealing official.
- c. Invocation Claim is to be sent at the place of issue or such other place as is specified in the guarantee. Correctness of Issuing Bank's Address may be ensured before sending the Invocation Claim.
- d. The scanned copy of the Invocation letter may be sent immediately through email followed by sending the Invocation letter by Speed Post/ Registered Post (with Acknowledgement Card)/ By Hand (to be got personally acknowledged) to ensure timely receipt by the Bank's Branch mentioned in the Bank Guarantee. The Acknowledgement/Receipts should be positively obtained and the same should be preserved as evidence of sending Invocation Claim well in time. Confirmation of receipt of the Invocation Letter may be obtained through email or over phone.
- e. Invocation letter should clearly specify the Bank Guarantee Number.
- f. A demand may be made for an amount less than the full amount available (partial demand). Further, more than one demand (multiple demands) upto the total value of Bank Guarantee may be made by BHEL within the validity period. **However, it may be ensured that demand should not be made for more than the amount available under the guarantee as the Bank will consider it a non-complying demand and may not act on the same.**
- g. **It may be noted that Banks, as per the regulations, are required to promptly honour the guarantees issued by them as and when Bank Guarantees are invoked in accordance with the terms and conditions of the guarantee deeds. Payment should be made to the beneficiaries without delay and demur.**

Under a Bank Guarantee, the Bank undertakes to pay to the beneficiary, any money so demanded notwithstanding any dispute or disputes raised by the of the contractor/sub-contractor/vendor(s) in any suit or proceeding pending before any Court or Tribunal relating thereto and the Banks liability is absolute and unequivocal. As such, the Banks cannot delay and deny honoring the invocation Claim.

Therefore, all steps should be taken to ensure timely payment by the Bank.

- h. In case, the Bank does not act and pay within three working days from the date of presentation of Final Claim/ Demand, the matter may be immediately escalated to the Regional Office of that Bank's Branch and thereafter to their Head Office under intimation to Corporate Office. In case of no response, matter may be referred to Ombudsman, RBI etc.

- i. After one month, if the amount is still not paid, unit may consider filling a legal case against the bank **in consultation with the Corporate Law Department.**

(Formats for Extension Letter /Invocation Claims are as per Format at Annexure G (1ST Letter), Annexure H (Reminder Letter), Annexure I (Final Claim/Invocation Letter) and Annexure J (Invocation Letter))

ix) Return of Bank Guarantee

a. After Expiry Period

The Expired Bank Guarantees which are not further required by BHEL due to fulfillment of the Contractual Commitments by the concerned of the contractor/sub-contractor/vendor may be returned to the concerned Bank under intimation to the Vendor/Contractor within 3 months from the date of expiry after ensuring completion of all the activities. The same is to be done on the specific recommendation/ approval of Commercial/Executing Agency/Construction Manager of the Unit/Region/site concerned.

b. Within Validity Period

In case, any Bank Guarantee is to be returned by BHEL due to fulfillment of the Contractual Commitments by the concerned of the contractor/sub-contractor/vendor within its validity period, the same has to be done on the specific recommendation/ approval of Commercial/Executing Agency/Construction Manager of the Unit/Region/site concerned after performing due-diligence.

x) Use of software

For timely and automatic alert in respect of Bank Guarantees due for expiration, use of software application is advisable. In case, the software is not available at a Unit, the same may be developed in a time bound manner.

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. 1(Tender Conditions), M/s. having its registered office at 2 (hereinafter referred to as the 'Tenderer'), is submitting its bid for the work of..... 3 invited by 4.(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 5 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. 5 (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 _____ 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 _____ we shall be discharged from all liabilities under this 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 _____
- b) This Guarantee shall be valid up to _____
- c) Unless the Bank is served a written claim or demand on or before _____ 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 _____

¹ Details of the Invitation to Bid/Notice Inviting Tender

² Name and Address of the Tenderer

³ Details of the Work

⁴ Name of the Employer

⁵ BG Amount in words and Figures

⁶ Validity Date

⁷ 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.

PROFORMA OF BANK GUARANTEE (in lieu of SECURITY DEPOSIT)

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 _____¹ through its Unit at _____ (name of the Unit) having agreed to exempt (Name of the Vendor / Contractor / Vendors) with its registered office at _____² (hereinafter called the said "Contractor" which term includes vendors), from demand under the terms and conditions of the Contract reference No. _____ dated _____³ valued at Rs. _____⁴ (Rupees -----)⁴ (hereinafter called the said Contract), of Security Deposit for the due fulfilment by the said Contractor of the terms and conditions contained in the said Contract, on production of a Bank Guarantee for Rs. _____⁵ (Rupees _____ only),

we _____ (indicate the name and address of the Bank) having its Head Office at _____ (address of the head Office) (hereinafter referred to as the Bank), , at the request of _____ [Contractor(s)], being the Guarantor under this Guarantee, do hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer, , an amount not exceeding Rs. _____ without any demur, immediately on 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 Contractor(s) in any suit or proceeding pending before any Court or Tribunal or 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 Contractor(s) shall have no claim against us for making such payment.

We, 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 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 & the Employer certifies that the terms and conditions of the said Contract have been fully and properly carried out by the said contractor(s) or acceptance of the final bill or discharge of this guarantee by the Employer, whichever is earlier. This guarantee shall initially remain in force upto and including _____⁶ and shall be extended from time to time for such period as may be desired by the Employer. Unless a demand or claim under this guarantee

is made on us in writing on or before the _____⁷, we shall be discharged from all the liability under this guarantee thereafter.

We, _____ (indicate the name of the 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 contractor(s) 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 contractor(s) 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 any reason of any such variation or extension being granted to the said contractor(s) or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said contractor(s) 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 Contractor and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's liabilities.

This Guarantee shall not be determined or affected by liquidation or winding up, dissolution or change of constitution or insolvency of the Contractor 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. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).

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 _____⁵
- b) This Guarantee shall be valid up to _____⁶
- c) Unless the Bank is served a written claim or demand on or before _____⁷ 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.

Date _____ Day of _____
for _____ (indicate the name of the Bank) _____

(Signature of Authorised signatory)

¹ ADDRESS OF THE EMPLOYER. I.e Bharat Heavy Electricals Limited

² ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER .

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ BG AMOUNT IN FIGURES AND WORDS

⁶ VALIDITY DATE

⁷ 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& 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& (BHEL& 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.

BANK GUARANTEE FOR ADVANCE

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited¹ (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 _____¹ through its Unit at _____ (name of the Unit) having awarded to _____² (Name of the Vendor / Contractor / Supplier), with its registered office at _____² (hereinafter called "the Vendor/Contractor/Supplier" which expression shall include its successors and permitted assigns) a contract Ref No _____ dated _____³ valued at Rs _____ (Rupees -----) / FC _____ (in words _____) for _____⁴ (hereinafter called the 'Contract')

AND WHEREAS the Employer has agreed to advance to the Vendor/Contractor/Supplier, a sum of Rs _____ (Rupees _____ only), equivalent to _____% of the said value of the Contract (hereinafter called "the said Advance"), upon the condition, that the said Advance shall be secured by a guarantee for Rs/ FC ----- (Rupees/ FC -----)⁵ from a Bank as hereinafter appearing.

We, _____, (hereinafter referred to as the Bank), having registered/Head office at _____ and 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 but not exceeding Rs/FC ----- (Rupees/FC -----) without any demur, merely on your first demand 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 hereunder 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 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 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 _____⁶ and shall be extended from time to time on the request of the Employer 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 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 hereof. However, unless a demand or claim under this Guarantee is made on us in writing on or before the _____⁷ we shall be discharged from all liabilities under this 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 _____⁵
- b) This Guarantee shall be valid up to _____⁶
- c) Unless the Bank is served a written claim or demand on or before _____⁷ 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 _____.

¹ NAME AND ADDRESS OF THE EMPLOYER. i.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF VENDOR /CONTRACTOR / SUPPLIER

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE AND PROJECT/SUPPLY DETAILS

⁵ BG AMOUNT IN FIGURES AND WORDS

⁶ VALIDITY DATE

⁷ 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 exceptional circumstances where advance payment is to be made to a vendor and the Unit has contractually agreed with the Contractor/ Vendor for periodic reduction in Advance Bank Guarantee, if required the following clause may be added in the BG Text-

The liability under this Guarantee shall stand reduced proportionally on periodic basis, in accordance with the value of effected shipment/dispatches/services completed on written confirmation by BHEL.

5. 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.

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& 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 _____¹ through its Unit at _____ (name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) with its registered office at _____² 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 _____³ valued at Rs _____⁴ (Rupees -----)/FC _____ (in words _____) for _____⁵ (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 -- _____⁶ (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 _____⁷ 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 _____⁸ we shall be discharged from all liabilities under this guarantee thereafter.

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 _____⁶
- b) This Guarantee shall be valid up to _____⁷
- c) Unless the Bank is served a written claim or demand on or before _____⁸ 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 _____.

¹ NAME AND ADDRESS OF EMPLOYER I.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE

⁵ PROJECT/SUPPLY DETAILS

⁶ BG AMOUNT IN FIGURES AND WORDS

⁷ VALIDITY DATE

⁸ 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.

BANK GUARANTEE FOR RELEASE OF AMOUNTS WITHHELD/LIQUIDATED DAMAGES AMOUNT

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the 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 _____¹ through its Unit at _____ (name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) incorporated under the _____ having its registered office at _____² (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 _____³ valued at Rs _____ (Rupees _____)/FC _____ (in words _____) for _____⁴ (hereinafter called the 'Contract')

And Whereas the Vendor/Contractor/Supplier has per Contract should have completed the work/ supplies under the contract by _____ (date)

And Whereas as per terms and conditions of the Contract, the Employer is entitled to levy Liquidated Damages (LD) for delays/ shortfall in performance and the Employer has withheld an amount of Rs _____ by way of LD as per the Contract.

Now, on the request of the Vendor/Contractor/Supplier the Employer having agreed to release the amount of Rs _____ withheld from the Vendor's/Contractor's/Supplier's invoices as Liquidated damages under the terms and conditions of the Contract on production of a Bank Guarantee for Rs. _____ (Rupees _____ only).⁵

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 a maximum amount of Rs _____ (Rupees _____) without any demur, merely on a 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 on 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/closure of the Contract/settlement of the issues regarding imposition of liquidated damages 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 _____⁶ 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 _____⁷ we shall be discharged from all liabilities under this guarantee thereafter.

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 _____⁵
- b) This Guarantee shall be valid up to _____⁶
- c) Unless the Bank is served a written claim or demand on or before _____⁷ 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 _____.

¹ NAME AND ADDRESS OF THE EMPLOYER I.e Bharat Heavy Electricals Limited.

² NAME AND ADDRESS OF THE VENDOR /CONTRACTOR / SUPPLIER.

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ CONTRACT VALUE AND PROJECT/SUPPLY DETAILS

⁵ BG AMOUNT IN FIGURES AND WORDS

⁶ VALIDITY DATE

⁷ 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.

BANK GUARANTEE FOR SUPPLY FREE ISSUE MATERIAL

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of Bharat Heavy Electricals Limited¹ (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 _____¹ through its Unit at _____ (name of the Unit) having awarded to _____² (Name of the Vendor / Contractor / Supplier), with its registered office at _____² (hereinafter called "the Vendor/Contractor/Supplier" which expression shall include its successors and permitted assigns) a contract Ref No _____ dated _____³ valued at Rs _____ (Rupees -----) / FC _____ (in words _____) for _____⁴ (hereinafter called the 'Contract')

AND WHEREAS the Employer having agreed as per the terms and conditions of the Contract to supply free issue material costing Rs. _____ for the manufacture/fabrication of the equipment at the 'Contractor/Supplier/Fabricator's' site on furnishing of a Bank Guarantee for Rs./FC _____ (Rupees/FC _____)⁵ in the manner hereinafter specified for the due safeguard of the free issue material, 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 but not exceeding Rs/FC ----- (Rupees/FC -----) without any demur, merely on a 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 'Contractor/Supplier/Fabricator' in any suit or proceeding pending before any Court or Tribunal or 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 'Contractor/Supplier/Fabricator' 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 and till the reconciliation of the free issue material has been carried out 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 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 'Contractor/Supplier/Fabricator' 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 Contractor/Supplier/Fabricator 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 'Contractor/Supplier/Fabricator' or for any forbearance, act or omission on the part of the Employer or any indulgence by the Employer to the said 'Contractor/Supplier/Fabricator' 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 Contractor/Supplier/ Fabricator and notwithstanding any security or other guarantee that the Employer may have in relation to the Contractor's/Supplier's/ Fabricator's liabilities.

This Guarantee shall remain in force upto and including _____⁶ 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 Contractor/ Supplier/ Fabricator 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 _____⁷ we shall be discharged from all liabilities under this guarantee thereafter.

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 _____⁵
- b) This Guarantee shall be valid up to _____⁶
- c) Unless the Bank is served a written claim or demand on or before _____⁷ 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 _____.

¹ NAME AND ADDRESS OF THE EMPLOYER. i.e Bharat Heavy Electricals Limited

² NAME AND ADDRESS OF THE CONTRACTOR / SUPPLIER/ FABRICATOR .

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ PROJECT/SUPPLY DETAILS AND CONTRACT VALUE

⁵ BG AMOUNT IN FIGURES AND WORDS

⁶ VALIDITY DATE

⁷ 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.

Format of Letter for Extension/ Invocation of Bank Guarantees

Ref No

Dated

To

The Branch Manager

(Mention complete correct postal address of the BG issuing Bank Branch)

Dear Sir,

Sub: Bank Guarantee No dated issued by your bank valid upto for Rs
 in favor of M/s. BHEL. (Units name) on behalf of. (name of contractor/ vendor/ supplier etc.)

We refer to the above mentioned Bank Guarantee (BG) issued by your bank at the request of (Name of the contractor/ vendor/ supplier etc) towards.... (Nature of the BG issued) bank guarantee in favour of M/s. BHEL. (Unit's name) expiring on (validity date and the claim period). The said BG has to be kept valid till the full settlement/performance of the contractual terms and conditions entered into with (name of the contractor/ vendor/ supplier etc.). We have requested..... (name of the contractor! vendor/ supplier etc.) to get the above said BG extended for a period of Months i.e. upto (dd/mrn/yy).

In case the validity period of the said BG is not extended within 15 days before the expiry date i.e. and received by us on or before ... or in case the bank is not in a position to extend the validity period of the BG for whatever reasons, then this communication shall be treated as **invocation** of the above said BG and also as our demand on you to pay us the amount of Rs (Rupees .. only) by means of Demand Draft/Banker's Cheque payable at (name of place)/ through RTGS (as per details attached) being the proceeds of the BG immediately on the date of expiry of the said BG, without any further intimation to you.

Please note that unless we revoke the claim under the above said BG in writing, your bank is liable to make the payment of the full amount of the BG forthwith to BHEL on

In the event this Bank Guarantee is extended for a period of at leasté é é months and such letter of extension, duly executed on non-judicial Stamp Paper of requisite value, is received by us, this claim may be treated as withdrawn. It is requested that the extended Bank Guarantee should be send directly to BHEL.

This without prejudice to our rights under the guarantee and under the law.

Kindly acknowledge receipt of this letter.

Yours sincerely

FOR & ON BEHALF OF BHEL

(Authorised Signatory)

Copy forwarded to: (should be known to the bank).

The Officer concerned (name)

MIS

(Name of the contractor /vendor/ supplier etc. with Complete Postal Address).

Please arrange to extend the BG upto..... as advised by BHEL in our letter dated

(Separate letter also to be sent to the contractor /vendor/ supplier etc. well in advance) latest by..... under intimation to us, failing which this letter be treated as notice of invocation).

Notes:

- 1) To be typed on BHEL's Letter Head with full Postal Address of BHEL's Unit.
- 2) To be sent to the bank by Registered Post with Acknowledgement Due / scanned copy through email as well as through fax / Courier/ by hand (to be personally acknowledged) 60Days prior to the date of expiry of the BG in question and/or in accordance with the terms and conditions of the Guarantee deed.
- 3) Bank's acknowledgement of receipt of Extension/Claim letter should be positively obtained and the same should be preserved.

Format of Reminder letter to be sent to BG issuing bank atleast 15 days before expiry date of the BG in case the extended BG is not received in terms of contract from the issuing bank.

Ref No

Dated

To, .
The Branch Manager
(Mention complete correct postal address of the BG issuing Bank/branch)

Dear Sir,

Sub: Bank Guarantee No Dated issued by your bank valid upto for
Rs in favour of M/s. BHEL (unit's name) on behalf of (name
of contractor/ vendor/supplier etc.)

Please refer to our earlier letter No Dated requesting you to extend the above
Bank Guarantee (BG) for a period of Month(s) i.e. upto (date).

Till date we have neither received any advice from your bank nor received the extended BG in original as
requested by us in our letter dated (date).

In case the said BG is not extended as requested by us in our letter dated , this letter shall also be treated
as **demand for invocation** of the said BG. The amount of Rs (Rupees only) be paid to
BHEL positively on the date of expiry of the BG itself by way of Demand Draft/ Bankers cheque payable at
(name of place).

This without prejudice to our rights under the guarantee and under the law.

Kindly acknowledge receipt of this letter.

Yours sincerely

For & on behalf of BHEL
(Authorised Signatory)

Copy forwarded to:
The Officer concerned(name)
M/s
(Name of the contractor/ vendor/ supplier etc. with complete postal address) for information and necessary
action

Notes:

- (1) To be typed in BHEL Letter Head with full Postal Address of BHEL's Unit.
- (2) To be sent to the bank by Registered Post with Acknowledgement Due/ scanned copy through
email as well as through fax / Courier/ by hand (to be personally acknowledged) atleast 15 days
prior to the date of expiry of the BG in question and/ or in accordance with the terms and
conditions of the guarantee deed.
- (3) Bank's acknowledgement of receipt of Extension/Claim letter should be positively obtained and
the same should be preserved.

Format of third and final invocation letter to be sent to BG Issuing Bank five days before the of expiry of the BG, in case BG is not extended in terms of contract from by issuing bank.

Ref No

Dated

To,
The Branch Manager
(Mention complete correct postal address of the BG issuing Bank/branch)

Dear Sir,

Sub: Invocation of Bank Guarantee No Dated issued by your bank valid upto for Rs
in favour of M/s. BHEL. (unit's name) on behalf of (name of contractor/ Vendor/ supplier etc.)

Please refer to our earlier letter No Dated and letter dated wherein it was requested to extend the above said Bank Guarantee (BG) failing which to pay BHEL the amount of the BG by way of a Demand Draft/ Bankers Cheque.

Your bank has failed to renew the above BG till today as requested by BHEL. As already informed to you that the Contractor has failed to fulfill/ perform the said contract and in view of the same, we hereby demand and lodge our claim against the abovementioned Bank Guarantee for the payment of Rs (Rupees only). Please arrange to pay the amount by means of a Demand Draft/ Bankers' Cheque/ Through RTGS (as per details attached) today itself.

You are requested to immediately meet your obligation under the Bank Guarantee and make the payment.

Kindly acknowledge receipt of this letter.

Yours sincerely,
For & on behalf of BHEL
(Authorised Signatory)

Note:

- 1) To be typed in BHEL Letter Head with full Postal Address of BHEL unit.
- 2) To be sent to the bank by Registered Post with Acknowledgement Due/ scanned copy through email as well as through fax / Courier/ by hand (to be personally acknowledged) atleast 5 days prior to the date of expiry of the BG in question and/ or in accordance with the terms and conditions of the guarantee deed.
- 3) Bank's acknowledgement of receipt of claim letter should be obtained positively and the same should be kept on records.
- 4) This letter will also be taken by an authorized BHEL's official to the bank and acknowledgement is to be received positively. The matter is required to be followed up by the concerned official and efforts to be made for getting the payment immediately.

Format of Letter for Invocation of Bank Guarantees

Ref No
 Dated

To
 The Branch Manager
(Mention complete correct postal address of the BG issuing Bank Branch)

Dear Sir,

Sub: Bank Guarantee No dated issued by your bank valid upto for Rs in favor of M/s. BHEL. (Units name) on behalf of. (name of contractor/ vendor/ supplier etc.)

We refer to the above mentioned Bank Guarantee (BG) issued by your bank at the request of (Name of the contractor/ vendor/ supplier etc) towards.... (Nature of the BG issued) Bank Guarantee in favour of M/s. BHEL. (Unit's name) expiring on (date including the claim period).

We do hereby lodge our claim/ demand in terms of the Bank Guarantee and call upon you to immediately pay us Rs. (Rupees only) by means of Demand Draft/Banker's Cheque payable at (name of place)/ Through RTGS (as per details attached)

Kindly acknowledge receipt of this letter.

Yours sincerely

FOR & ON BEHALF OF BHEL
 (Authorised Signatory)

Notes:

- 1) To be typed in BHEL Letter Head with full Postal Address of BHEL's Unit.
- 2) To be sent to the bank by Registered Post with Acknowledgement Due/ scanned copy through email as well as through fax / Courier/ by hand (to be personally acknowledged) sufficiently in advance before the date of expiry of the BG in question and/ or in accordance with the terms and conditions of the Guarantee Deed.
- 3) Bank's acknowledgement of receipt Claim letter should be positively obtained and the same should be preserved.
- 4) This letter will also be taken by an authorized BHEL's official to the bank and acknowledgement is to be received positively. The matter is required to be followed up by the concerned official and efforts to be made for getting the payment immediately.

List of Consortium Banks (As on 22.02.2017)			
	Nationalised Banks		Nationalised Banks
1	Allahabad bank	19	Vijaya Bank
2	Andhra bank		Public Sector Banks
3	Bank of Baroda	20	IDBI
4	Canara Bank		Foreign banks
5	Corporation bank	21	CITI Bank N.A
6	Central bank	22	Deutsche Bank AG
7	Indian Bank	23	The Hongkong and Shanghai Banking Corporation Limited
8	Indian Oversea Bank	24	Standard Chartered Bank
9	Oriental bank of Commerce	25	J P Morgan
10	Punjab National Bank		
11	Punjab & Sindh Bank		Private banks
12	State Bank of India	26	Axis Bank
13	State Bank of Hyderabad	27	The Federal Bank Limited
14	Syndicate Bank	28	HDFC
15	State Bank of Travancore	29	Kotak Mahindra Bank
16	UCO Bank	30	ICICI
17	Union Bank of India	31	Indusind Bank
18	United Bank of India	32	Yes Bank

ANNEXURE 2**BANK GUARANTEE REGISTER**

SL.N O	DATE OF RECEIPT	NAME OF THE BANK ALONG WITH BRANCH	ISSUE DATE	VENDOR/ CONTRACTOR	PURCHASE ORDER/CONTRACT AGREEMENT/WOR K ORDER NO	AMOUNT OF BANK GUARANTEE TO BE FURNISHED AS PER TERMS AND CONDITIONS	AMOUNT OF BANK GUARANTEE FURNISHED	ORIGINAL VALIDITY	EXTENDED PERIOD OF VALIDITY	ORIGINAL CLAIM DATE	EXTENDED PERIOD OF CLAIM DATE	DATE OF RETUR N	PARTICUL ARS OF LETTER NO. WITH WHICH RETURNE D
1	2	3	5	6	7	8	9	10	11	12	13	14	15

