



Ref. Enquiry No.: PE/PG/PA1/E-6962/2022

<b>DUE DATE</b>
<b>07-05-2022</b>
<b>BY 11:00 AM</b>

Dear Sir/ Ma'am

**SUBJECT: OPEN TENDER ENQUIRY FOR CABLE TRAYS & ACCESSORIES FOR 3x800MW PATRATU TPP PHASE-1 AS PER TECHNICAL SPECIFICATION NO: PE-TS-434-507-E021.**

BHEL invites your offers design, manufacture, assembly, testing and inspection at vendor's/sub vendor's works, packing and despatch to site of **CABLE TRAYS & ACCESSORIES** as described in various sections of this specification no. **PE-TS-434-507-E021**.

S. No.	PROJECT	ITEM DESCRIPTION	TECHNICAL SPECIFICATION NO.
1	3x800MW PATRATU TPP PHASE-1	CABLE TRAYS & ACCESSORIES	PE-TS-434-507-E021

Your offer shall be submitted in two parts (Part-I & Part-II) strictly as per Clause-2.0 of the "Instructions to Bidders" of GCC Rev. 07, in sealed cover for the below mentioned equipment/system.

**Note:** 1. Detailed tender documents have been uploaded at the following websites.

- <https://www.bhel.com/>
- [www.bhelpem.com](http://www.bhelpem.com)
- <https://eprocurebhel.co.in>
- Corrigenda, addenda, amendments, time extensions, clarifications etc. to the tender will be hosted only on [www.bhelpem.com](http://www.bhelpem.com), [www.bhel.com](http://www.bhel.com) & <https://eprocurebhel.co.in> under subject tender reference. Bidders are requested to visit our websites from time to time to keep themselves updated.
- Your best quotation/offer for the above requirement, in line with enquiry terms and conditions, should be submitted online via e-procurement portal (<https://eprocurebhel.co.in>). It shall be the responsibility of the bidder to ensure that the tender is submitted **via e-PROCUREMENT SYSTEM (<https://eprocurebhel.co.in>) on or before the due date by 11:00 AM. Part-I bids shall be opened at 04:00 P.M on the due date through e-procurement Portal (<https://eprocurebhel.co.in>).**

2. In case bidders are not interested to quote, please send us the regret by e-mail or letter.

**ENQUIRY TERMS AND CONDITIONS:**

- Offers should be submitted separately in two parts **online through e-procurement system** as follows:  
**Part-I: TECHNO-COMMERCIAL BID**                      **Part-II: PRICE BID**  
For detailed instructions, please see Pg. 1-15 of "Instructions to Bidders" of GCC Rev. 07.
- Bidders to note that following form the part of tender documents & will become a part of the Order / Contract after its finalisation:
  - General Conditions of Contract (GCC) Rev. 07 comprising of Instructions to Bidders and General Commercial Terms & Conditions.
  - Technical Specification
  - Special Conditions of Contract

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**Ref. Enquiry No.: PE/PG/PA1/E-6962/2022**

- d. Enquiry/NIT Letter with Terms & Conditions
  - e. Technical PQR
  - f. Integrity Pact
  - g. Format for Local Content Certification
  - h. Format of Land Border Certificate
  - i. NTPC's Main & Sub-Supplier Questionnaire
3. Tenders shall be submitted strictly in accordance with the requirements of the above-mentioned tender documents. Bidders to submit their offers strictly in line with the form available at e-procurement portal. Deviations (Technical as well as Commercial), if any, shall be listed out separately in Annexure-II of GCC Rev-07 along with reasons for taking such deviations in the bidding format in E-Procurement portal (NIC portal). Any deviations (Technical as well as Commercial) not mentioned in the Annexure-II shall not be considered. Bidders to note all the points mentioned in "Notes" of Annexure-II of GCC Rev.07. Any hidden conditions/deviations mentioned elsewhere in offer and standard pre-printed terms & conditions of the tenderers shall not be considered valid.
4. In case of joint bidding, Bidders shall be required to furnish scope matrix which should be clearly defined between them along with the offer for the complete scope as per NIT.
5. Unsolicited fresh/revised bids shall not be entertained.
6. Prices shall be Firm till completion of contract.
7. If any bidder has mentioned the term "Not Applicable" / "not required" / "not quoted" in BHEL price format, the same to be substantiated by the bidder. If such item is required to be supplied for system completion in future, same will be supplied free of cost by the successful bidder.
8. Purchaser shall be under no obligation to accept the lowest or any other tender and shall be entitled to accept or reject any/all tender(s) in part or full without assigning any reason whatsoever.
9. Tenderers must enclose the Quality Plan in the prescribed format, for approval. Equipment will be dispatched only after Purchaser's/Owner's inspection of the hold points specified in the approved Quality Plan and issue of Material Dispatch Clearance Certificate (MDCC).
10. **Bidder to note that this is a conditional Open Tender (Indian) enquiry. Hence, Reverse Auction (Part-II) Opening shall be subject to following criterion:**
- i. Techno-commercial qualification / recommendation of bidder by BHEL-PEM.
  - ii. Approval of bidder by Customer: - Approval shall be taken up by BHEL with customer based on the credentials / reference list. Hence, Bidders are requested to submit the following (as part of their credentials) on or before Part-I opening:
    - Reference list indicating P.O. details, customer name, P.O. date, execution date etc.
    - Performance certificate issued by the clients.
    - NTPC's Main & Sub-supplier questionnaire (enclosed with enquiry) and submit all the supportive documents against details furnished therein (signed & stamped on each page)
  - iii. Pre-Qualifying Requirements: - Bids of only those bidders shall be evaluated who meet the Technical and Financial pre-qualifying requirements, as applicable.

Ref. Enquiry No.: PE/PG/PA1/E-6962/2022

- iv. Offered item should mandatorily conform to Govt. PP-MII (Make In India) , Govt. MOP(Ministry of Power) , & Govt. MOF (Ministry of Finance) orders & provisions relevant/applicable to this tender.

Bidders to ensure that Third party/customer issued certificates being submitted as proof of PQR qualification should have verifiable details of documents/certificate issuing authority such as name & designation of issuing authority and its organisation contact number and email id etc. In case the same found not available, Purchaser has right to reject such document from evaluation.

11. **Delivery Schedule:** - " Four (04) months from drgs. /docs. approval in CAT-I issued by BHEL. Successful bidder to make 1st submission of drawing/docs within time period as mentioned below. Vendor to re-submit drawing/documents within 7 days, after incorporating BHEL comments. In case there are delays in drawing/docs submission and resubmission, that much delay would be reduced from delivery period.

BHEL Drawing No	Drawing Title	Primary/ Secondary	BHEL Inputs	Drg. Schedule for Vendors
PE-V0-XXX-507-E902	QUALITY PLAN FOR CABLE TRAYS & ACCESSORIES	Primary	NIL	R-0 within 14 days from PO & subsequent revisions within 10 days of comments received from BHEL. BHEL shall furnish comments / approval on each submission within 18 days from receipt.
PE-V0-XXX-507-E011	TECHNICAL DATA SHEET FOR CABLE TRAYS & ACCESSORIES	Primary		
PE-V0-XXX-507-E012	GA DRG. OF CABLE TRAYS & ACCESSORIES	Primary		
PE-V0-XXX-507-E013	BOQ OF COUPLER PLATE, NUT BOLT AND WASHER, TRAY COVER ACCESSORIES (FLATS, PIPES, etc.)	Secondary		

Note: All the Drg/docs (both primary & secondary) shall be considered for Cat-I approval of Drg/Doc.

**Further Following to be noted:**

- A. Vendor to start manufacturing activities only after obtaining specific manufacturing clearance from BHEL Purchase group.
- B. The end period specified is for completion of the deliveries. Deliveries to start progressively so as to meet the completion schedule.
- C. The delivery conditions specified are for contractual LD purposes, however BHEL may ask for early deliveries without any compensation thereof.
12. Contract Performance Bank Guarantee shall be 5% of order/contract value (excluding taxes, duties & freight) as per Cl. no. 11.2 of 'General Commercial Terms & Conditions' of GCC Rev07.

In case any benefit with respect to BG reduction is provided by the end customer for Patratu project, then similar benefit shall be passed onto the bidders for subject tender as well.

Bidders to compile the following clause for timely submission of BG: -

"Bidder agrees to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder.



**Ref. Enquiry No.: PE/PG/PA1/E-6962/2022**

Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT/contract, from the bills along with due interest "

13. Evaluation shall be done on Total Cost to BHEL basis (excluding GST) on lump-sum basis with necessary loading, as applicable

"In course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective bidders. In case more than one bidder happens to occupy L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss/ draw of lots, in the presence of respective bidder(s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situation shall be final and binding."

14. Bidder has to note, 'BHEL shall be resorting to Reverse Auction (RA) (Guidelines as available on [www.bhel.com](http://www.bhel.com)) for this tender. RA shall be conducted among the techno-commercially qualified bidders. Price bids of all techno commercially qualified bidders shall be opened and same shall be considered for RA. In case any bidder(s) do(es) not participate in online Reverse Auction, their sealed envelope price bid along with applicable loading, if any, shall be considered for ranking'  
Vendors to note that above RA clause will supersede clause no 13 of "Instruction to Bidders "of GCC Rev 07.

The Bidders has to quote the Single Price (i.e. Total Cost to BHEL excluding GST) in Reverse Auction. Price are to be inclusive of Packing & Forwarding charges, all the routine & type tests as per tender scope, Freight as applicable, including loading (if any). De-loading (if any) shall be done in line with NIT terms. Link for RA guidelines to be followed as: <https://www.bhel.com/guidelines-reverse-auction-2021>.

15. Quantity variation shall be applicable as plus 30 percent of the contract value.
16. The nature of package is "Non-divisible".
17. Bidders have to comply the Instructions to Packing List enclosed.
18. CIF is not applicable.

**19. Govt. of India's Public Procurement Policy – Preference to Make in India Clause: -**

Bidders have to note, "For this procurement, the local content to categorize a supplier as a Class I Local Supplier / Class II Local Supplier / Non Local supplier and Purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), (PPP-MII) Order 2017 dt. 16/09/2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT."

Regarding verification of local content, the local supplier at the time of tender, bidding or solicitation shall be required to provide certification as per para 9 of PP-MII order revision dated 16.09.2020.

**Both Class-I & Class-II local suppliers are eligible to bid in this tender.**

Regarding verification of local content, the local supplier at the time of tender, bidding or solicitation shall be required to provide certification as per para 9 of PP-MII order revision dt. 16.09.2020 & Ministry of Power Order no. A-1/2021-FSC-Part (5) dt. 16.11.2021.



**Ref. Enquiry No.: PE/PG/PA1/E-6962/2022**

Minimum Local Content required for qualifying a bidder as Class 1 Local Supplier shall be 50% for this package.

20. This item/package /system falls under the list of items defined in para 3 of ministry of finance guideline dtd. 20.09.16 (Procurement of items related to Public safety, Health, Critical Security operations & Equipment's etc.) & hence criteria of prior experience/Turnover shall be same for all the bidders including start-up/MSME.
21. As per Department of Expenditure (DoE) OM No. 6/9/2020-PPD dt. 24/08/2020, it is mandatory for all the bidders to provide their GeM Seller ID.
22. MSME / Start-up Vendors to submit applicable documents along with their offer for availing the benefits as per GOI guidelines. Further PEM is already registered with RXIL (TReDS) Platform. You are requested to get registered with RXIL (TReDS) Platform to avail the facility as per GOI guidelines.
23. Bidders to comply the following orders & circulars (considering respective subsequent orders/circulars also): -
  - ensure compliance to Ministry of Power (MoP) Order No. 25-11/6/2018-PG dt. 02/07/2020 & Order No. 11/05/2018-Coord. dt. 23/07/2020, if applicable.
  - ensure compliance of Ministry of Finance (MoF) Order (Public Procurement No. 1 & 2) F. No. 6/18/2019/PPD dt. 23/07/2020.
  - to submit "Model Certificate for Tenders" as per Annexure-III of Ministry of Finance (MoF) Order (Public Procurement No. 1 & 2) F. No. 6/18/2019/PPD dt. 23/07/2020.

Note: Subsequent orders/circulars to be checked and to be complied.

24. For bidders (who are not registered with BHEL-PEM) -Online Registration Portal is operational in BHEL. Registration in BHEL-PEM is not mandatory for this tender. However, Non-registered Vendors, who wish to apply for registration with BHEL-PEM, can apply through Online Registration Portal available at [www.bhelpem.com](http://www.bhelpem.com) → vendor section → Online Supplier Registration. All credentials and/or documents duly signed and stamped related to registration may be uploaded on the website and submit the application for registration.
25. All corrigenda, addenda, amendments, time extensions, clarifications etc. to the tender will be hosted on BHEL websites only
  - (a) <https://eprocurebhel.co.in/nicgep/app>
  - (b) <https://www.bhel.com/>
  - (c) <https://pem.bhel.com/>

Bidders are requested to visit our websites from time to time to keep themselves updated. Bidders may go through the Sellers' manual & Help documents provided on E-Procurement Portal website & obtain required Digital Signature Certificate for participating in the subject Tender. For Bidders' convenience, the Helpdesk Nos. of E-Procurement (NIC) Portal is available at website i.e. <https://eprocurebhel.co.in/nicgep/app>.

26. If any bidder uploads price bid in the unpriced section (techno-commercial attachment page) of the tender in e- Procurement (NIC portal), in that case bidder(s) shall only be responsible for such mistake and any



**Ref. Enquiry No.: PE/PG/PA1/E-6962/2022**

consequences thereof. Hence all bidders are requested to be more careful at the time of uploading the Unpriced and Price Bid for Part-I and Part-II respectively to avoid mismatch.

27. Bidders to quote the freight in terms of percentage of Total Ex-works price and mention the rate of freight (%) percentage in their unpriced bid.
28. Inspection shall be done by BHEL/ END CUSTOMER/Third party Agency (finalized by BHEL). Due to COVID-19 pandemic condition prevailing in the country, BHEL/PEM may go for Remote Inspection of Offered items, if required. Vendors are requested to be equipped with the facilities/gadgets as indicated in the guidelines available at <https://pem.bhel.com/Documents/VendorSection/Vendor/Guidelines.pdf> to take up the inspection REMOTELY.
29. The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines.
30. The offers of the bidders who are on the banned list and also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website <http://www.bhel.com>.
31. 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.
32. All correspondence thereof, shall be addressed to the undersigned by name & designation and sent at the following address:

<p><b>RAJEEV KUMAR/DY MGR, PG-III</b> <b>E-MAIL: rajeevsharma@bhel.in</b> <b>Ph. No. +91-120-4213582;</b> <b>Mob: +91-9654360233</b></p> <p><b>M/s Bharat Heavy Electricals Ltd.,</b> <b>Project Engineering Management,</b> PPEI Building, Plot No 25, Sector-16A, Noida-201301, U.P., INDIA</p>	<p><b>Rajeev Lalwani /Sr. Manager, PG-III</b> <b>E-MAIL: rlalwani@bhel.in</b> <b>Ph. No. +91-120-4368793;</b> <b>Mob: +91-9868875549</b></p> <p><b>M/s. Bharat Heavy Electricals Ltd.,</b> <b>Project Engineering Management,</b> PPEI Building, Plot No 25, Sector-16A, Noida-201301, U.P., INDIA</p>
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33. **Integrity Pact:** - Integrity pact is applicable for subject package. 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) have been appointed by BHEL with the approval of CVC. The names of the IEMs in panel are as follows:

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PS-Project Engineering Management,  
Power Project Engineering Institute,  
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**Ref. Enquiry No.: PE/PG/PA1/E-6962/2022**

- I. Shri Arun Chandra Verma, IPS (Retd.) - acverma1@gmail.com  
II. Shri Virendra Bahadur Singh, IPS (Retd.) - vbsinghips@gmail.com

The IP as enclosed is to be submitted (duly signed by authorized signatory) along with techno-commercial 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 any of the IEMs mentioned above. All correspondence with the IEMs shall be done through email only.

"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 officials." Integrity pact is not applicable for subject package.

34. Financial PQR not applicable.
35. The Evaluation Currency for this tender will be INR.
36. Bidders to note that GeM seller ID shall be mandatory before placement of order against this tender.
37. Terms of Delivery are: F.O.R Dispatch Station basis.
38. Additional overhead charges shall be 5% instead of 30% mentioned in clause no. 26.2 of GCC Rev. 06 of Risk and purchase clause.
39. Bidders participating through open tender will necessarily have to buy class III DSCs issued by the certifying authorities in India. Basic procedure/ checklist is uploaded on [www.bhel.com](http://www.bhel.com).
40. Submission of complete offer as per NIT terms is the responsibility of bidder. BHEL reserves the right to reject the incomplete offer.
41. HSE Guidelines as per is firm part of this NIT.
42. MSME bidders will have to furnish the Udyam Certificate details.
43. Please note that for technical bid, detailed offers are to be submitted including the following along with the Price schedule as per BHEL format enclosed with NIT: -
  - Acceptance of GCC Rev. 07 & its Corrigenda 01
  - Acceptance of Special Conditions of Contract (SCC) of project.
  - Acceptance of Technical Specification of project.
  - Technical PQR documents of project.
  - Technical & Commercial Deviations, if any along with Cost of withdrawal sheet.
  - Un-Priced price format of BOQ/BOM duly filled in 'Quoted' or 'Q' in each column/row.
  - Please furnish 'Gem' Seller ID with bid.
  - Instructions to Packing List.
  - Local Content Certification and Land Border Certificate format in the enclosed format
  - NTPC Sub-Supplier Questionnaire



**Ref. Enquiry No.: PE/PG/PA1/E-6962/2022**

- Credentials for end customer (NTPC) approval.: i.e. Reference list indicating P.O. details, customer name, P.O. date, execution date etc., Performance certificate issued by the clients., Filled NTPC's Main & Sub-supplier questionnaire (enclosed with enquiry) and submit all the supportive documents against details furnished therein (signed & stamped on each page).
  - Along with your offer, please submit a copy of this letter duly signed & stamped on each page as token of acceptance of all terms & instructions conveyed.
44. All the terms and conditions of NIT, GCC (Rev 07) & its Corrigenda 01 & SCC of project shall be applicable for the subject Package/tender. In the event of any contradiction in the terms and conditions mentioned, the order of preference shall be as mentioned in clause no 36 of GCTC of GCC (Rev.07).
45. Please contact to BHEL (via mail or phone) for any clarification (technical or commercial) at least one week before the due date (Techno-Commercial bid opening). Please note all correspondence from BHEL-PEM before Part-I opening, shall also be part of NIT.

Yours faithfully,  
For and on behalf of BHEL-PEM

**Rajeev Kumar**  
(DY. MANAGER/PG-III/BHEL-PEM)

**Enclosures:**

1. Enquiry Terms and Conditions. (NIT Letter no. PE/PG/PA1/E-6962/2022 dated 27/04/2022)
2. Technical Specification no. PE-TS-434-507-E021.
3. Technical PQR.
4. Price Schedule (to be filled in e-procurement portal only)
5. Cost of withdrawal sheet -Annexure-II to NIT (to be filled in e-procurement portal only)
6. Format of 'GeM' seller ID.
7. Format of self-Certification regarding Local content certification.
8. Performa for End customer approval-NTPC Sub-Vendor Questionnaire.
9. Land Border Certificate format
10. Unpriced schedule format and Annexure-II cost of withdrawal
11. Inspection Guidelines
12. Instructions to Packing List
13. HSE Guidelines
14. SCC of project.

**NTPC LTD.  
3 X 800MW PATRATU THERMAL POWER PROJECT.**

**VOLUME II**

**TECHNICAL SPECIFICATION FOR  
CABLE TRAYS & ACCESSORIES  
BHEL DOC. NO. PE-TS-434-507-E021**

**REVISION 00**



**BHARAT HEAVY ELECTRICALS LIMITED  
POWER SECTOR  
PROJECT ENGINEERING MANAGEMENT  
NOIDA (U.P), INDIA-201301**



**TECHNICAL SPECIFICATION FOR  
CABLE TRAYS & ACCESSORIES**

SPECIFICATION NO. PE-TS-434-507-E021

REVISION 00

DATE: 22.04.2022

SHEET 1 OF 1

**CONTENTS**

<b>Sl. No.</b>	<b>DESCRIPTION</b>	<b>NO. OF SHEETS</b>
1.0	TITLE SHEET	01
2.0	CONTENT	01
3.0	COMPLIANCE SHEET	01
4.0	SECTION – I	
4.1	SPECIFIC TECHNICAL REQUIREMENT	02
4.2	ANNEXURE-A (LIST OF DRAWINGS/DOCUMENTS TO BE SUBMITTED BY SUCCESSFUL BIDDER)	01
4.3	TECHNICAL DATA SHEET-A	03
5.0	SECTION- 'II'	
5.1	STANDARD TECHNICAL REQUIREMENTS	03
5.2	STANDADRD QUALITY PLAN	02
6.0	TYPICAL DETAILS OF CABLE TRAYS & ACCESSORIES (DRAWING NO. PE-DG-417-507-E050)	13

TOTAL SHEETS INCLUDING COVER SHEET, CONTENT/SEPARATOR SHEET = 27



**TECHNICAL SPECIFICATION FOR  
CABLE TRAYS & ACCESSORIES**

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME-II

COMPLIANCE CERTIFICATE

REVISION 00

DATE: 21.04.2022

**COMPLIANCE CERTIFICATE**

The bidder shall confirm compliance to the following by signing/ stamping this compliance certificate and furnishing same with the offer.

1. The scope of supply, technical details, construction features, design parameters etc. shall be as per technical specification & there are no exclusion/ deviation with regard to same.
2. There are no deviations with respect to specification other than those furnished in the 'schedule of deviations'.
3. Only those technical submittals which are specifically asked for in NIT to be submitted at tender stage shall be considered as part of offer. Any other submission, even if made, shall not be considered as part of offer.
4. Any comments/ clarifications on technical/ inspection requirements furnished as part of bidder's covering letter shall not be considered by BHEL, and bidder's offer shall be construed to be in conformance with the specification.
5. Any changes made by the bidder in the price schedule with respect to the description/ quantities from those given in 'BOQ-Cum-Price schedule' of the specification shall not be considered (i.e., technical description & quantities as per the specification shall prevail).

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BIDDER'S STAMP & SIGNATURE

800179/2022/PS-PEM-EL

**TECHNICAL SPECIFICATION FOR  
CABLE TRAYS & ACCESSORIES**

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME-II

SECTION I

REVISION 00

DATE: 21.04.2022

SHEET 1 of 3

**SECTION – I****SPECIFIC TECHNICAL REQUIREMENTS**



## TECHNICAL SPECIFICATION FOR CABLE TRAYS & ACCESSORIES

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME-II

SECTION I

REVISION 00

DATE: 21.04.2022

SHEET 2 of 3

### 1.0 SCOPE OF ENQUIRY

- 1.1 This enquiry covers Manufacture, Inspection and Testing at Manufacturer's works, proper packing and delivery to site of **Cable Trays & Accessories** conforming to this specification.
- 1.2 It is not the intent to specify herein all the details of design & manufacture of material. However, the material shall, conform in all respects to high standard of design, engineering and workmanship and shall be capable of performing in continuous commercial operation at site conditions.
- 1.3 General technical requirements of the Cable Trays & Accessories are indicated in Section-I. Project specific technical/ quality requirements / changes are listed in Data Sheet-A & Section-II.
- 1.4 The stipulations of Section-I, followed by those of Data Sheet-A shall prevail in case of any conflict between the stipulations of Section-I, Data Sheet - A & Section-II.

### 2.0 BILL OF QUANTITIES:

- 2.1 Quantity requirements shall be as per **Annexure-I (Bill of Quantities (BOQ))** of NIT.

### 3.0 SPECIFIC REQUIREMENTS:

#### 3.1 Technical:

Sr. No.	Reference Clause No. of Section II (if any)	Specific Requirement/ Change
1	NIL	NIL

#### 3.2 Quality/ Inspection:

Sr. No.	Reference Clause No. of Section II (if any)	Specific Requirement/ Change

#### 3.3 Bill of Material & Packing List

- 3.3.1 Supplier to submit detailed 'Bill of Material' (BoM) at the time of drawing/document submission after placement of PO. Each item of the BoM to be uniquely identified with item code no. or item serial no.
- 3.3.2 Supplier to ensure that all items which will find separate mention in the packing list are covered in this detailed BoM.
- 3.3.3 Supplier to also give the following undertaking in the BOM:

**"The BoM provided herewith completes the scope (in content and intent) of material supply under PO No. -----, dated -----.**

**Any additional material which may become necessary for the intended application of the supplied item(s)/package will be supplied free of cost in most reasonable time."**

800179/2022/PS-PEM-EL



**TECHNICAL SPECIFICATION FOR  
CABLE TRAYS & ACCESSORIES**

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME-II

SECTION I

REVISION 00

DATE: 21.04.2022

SHEET 3 of 3

**ANNEXURE – A**

**LIST OF DRAWINGS / DOCUMENTS**

**(REQUIRED TO BE FURNISHED BY SUCCESSFUL BIDDER AFTER AWARD OF CONTRACT)**

- 4.1 Drawings/ documents shall be submitted through Document Management System (DMS).
- 4.2 Drawing/Documents required to be submitted shall be as per NIT.
- 4.3 Bidder to submit drawing/document submission schedule at contract stage.



## TECHNICAL SPECIFICATION FOR CABLE TRAYS & ACCESSORIES

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME II

SECTION I

REVISION 00

DATE: 21.04.2022

SHEET 1 of 3

### DATASHEET-A

#### 1.0 APPLICABLE STANDARDS

- |    |          |  |
|----|----------|--|
| a) | IS: 1079 | For hot rolled carbon steel sheet and strip.                           |
| b) | IS: 1730 | For dimensions for steel sheet and strip.                              |
| c) | IS: 1363 | Hexagon head bolts, screws and nuts.                                   |
| d) | IS: 2629 | For hot dip galvanising of steel & surface pre treatment.              |
| e) | IS: 2633 | For testing of uniformity of zinc coating.                             |
| f) | IS: 6745 | For determination of mass of zinc coating.                             |
| g) | IS: 1367 | Galvanised Coating on threaded Fasteners.<br>(Part-XIII)               |
| h) | IS: 1852 | For Rolling and Cutting Tolerances of hot rolled steel products.       |
| i) | IS: 9595 | For Thickness of Welding.  |
| j) | IS: 4759 | For Hot Dip Zinc coating on structural steel and other allied products |

#### 2.0 CABLE TRAYS & ACCESSORIES

- |     |   |   |   |
|-----|---|---|---|
| 2.1 | Material  | : | Hot Rolled Mild Steel   |
| 2.2 | Type  | : | Ladder Type<br>Perforated Type  |
| 2.3 | Standard Length of<br>Straight Length of<br>Cable Trays | : | 2.5 meters  |
| 2.4 | Standard Width (mm)                                     | : | 600 300 150 (Ladder)<br>600 300 150 100 50 (Perforated)   |
| 2.5 | Construction  | : | Conforming to enclosed drawing  |
| 2.6 | Bending Radius<br>of Accessories (in mm)                | : | 600 mm  |
| 2.7 | Tolerance in length/<br>Width / Height                  | : | +/- 2 mm  |
| 2.8 | Marking   | : | Following shall be engraved/punched on each standard length<br>of cable tray at the centre of both side of runner: "PEM"<br>(length of letter shall be 90mm & height shall be 30mm) |

2.9 **Thickness of the finished product shall not be less than 2.0 mm.**

#### 3.0 FITTINGS

- |                 |   |   |
|-----------------|---|---|
| End connections | : | Through Coupler plates<br>(Side Coupler Plates shall be provided as part of cable tray &<br>accessories supply with bolts, nuts, washers etc) |
|-----------------|---|---|

#### 4.0 TRAY COVERS

- |             |   |                        |
|-------------|---|------------------------|
| a) Type     | : | Non-Perforated type.   |
| b) Material | : | Hot Rolled Mild Steel. |



## TECHNICAL SPECIFICATION FOR CABLE TRAYS & ACCESSORIES

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME II

SECTION I

REVISION 00

DATE: 21.04.2022

SHEET 2 of 3

- c) Width : Suitable for width of cable trays.
- d) Tolerance in length/  
Width / height : Same as cable trays.
- e) Thickness of the finished product shall not be less than 1.6mm.

### 5.0 SHEET THICKNESS before Hot Dip Galvanisation

- a) For cable trays &  
Accessories : 2.0 mm
- b) For cable tray cover : 1.7 mm
- c) For Coupler plate : 3.0 mm
- d) Tolerance in Thickness : As per IS: 1852
- e) Make : SAIL / TISCO / RINL / BHUSAN / JINDAL STEEL /  
JINDAL ISPAT / ESSAR / LLOYD / IISCO /  
Authorized re-rollers of SAIL

### 6.0 SURFACE TREATMENT

- a) Pre-treatment : IS 2629 before galvanisation
- b) Type : Hot dip galvanisation
- c) Applicable Standard : IS 2629
- d) Minimum thickness : 75 microns (minimum), 86 microns (average) for 2.0 mm  
thick product  
55 microns (minimum), 65 microns (average) for 1.7 mm  
thick product
- e) Min. weight of  
Zinc deposit : 610 grams per square meter for 2.0 mm thick product  
460 grams per square meter for 1.7 mm thick product
- f) Tests for galvanizing : (i) Weight of Zinc Coating as per IS 6745.  
(ii) Thickness of Zinc Coating as per IS 4759.  
(iii) Uniformity of Zinc Coating as per IS 2633.  
(iv) Adhesion Test as per IS 2629.



**TECHNICAL SPECIFICATION FOR  
CABLE TRAYS & ACCESSORIES**

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME II

SECTION I

REVISION 00

DATE: 21.04.2022

SHEET 3 of 3

**7.0 NUMBER OF COUPLER PLATES, BOLTS, WASHERS & NUTS REQUIRED FOR EACH CABLE TRAY SECTION (2.5 MTRS)**

Sl. No.	NAME OF ITEM	COUPLER PLATE (nos.)	NUTS (nos.)	WASHERS (nos.)	BOLTS (nos.)
1	Cable tray of standard length 2.5 meters	4	16	32	16

*NOTE: - Based on above table, no. of coupler plates, bolts, washers & nuts shall be calculated for the offered lot. Over & above the calculated quantity, additional 5% coupler plates & 10% bolts, washers & nuts shall be supplied by the bidder.*

800179/2022/PS-PEM-EL

**STANDARD TECHNICAL SPECIFICATION  
FOR CABLE TRAY & ACCESSORIES**

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME II

SECTION II

REVISION 00

DATE: 21.04.2022

**SECTION-II****STANDARD TECHNICAL REQUIREMENTS**



## TECHNICAL SPECIFICATION FOR CABLE TRAY & ACCESSORIES

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME II

SECTION II

REVISION 01

DATE: 21.04.2022

SHEET 1 of 2

### 1.0 SCOPE OF ENQUIRY

- 1.1 This specification covers the design, manufacture, assembly, testing and inspection at vendor's/sub vendor's works, packing and despatch to site of **CABLE TRAYS & ACCESSORIES** as described in various sections of this specification.

### 2.0 CODES & STANDARDS

- 2.1 The material, constructional features and various processes involved in manufacture shall comply with latest revision of relevant Indian Standards.
- 2.2 The design, material, construction, manufacture, inspection, testing and performance of Cable Trays & Accessories shall conform to the latest revision of relevant standards and codes of practices mentioned in Data Sheet - A.
- 2.3 In case of conflict between the applicable reference standard and this specification, this specification shall govern.

### 3.0 DESIGN REQUIREMENTS AND CONSTRUCTIONAL FEATURES

- 3.1 All items listed in the BOQ –Cum-Price Schedule for Cable Trays & Accessories (Annexure - I of NIT) shall be manufactured as per Datasheet-A and project drawings enclosed with this specification. Minor fabrication detail changes which do not affect the material / dimensional aspect of the equipment, shall be to BHEL / owner's approval without any commercial implications.

#### 3.2 **Cable Trays & Accessories, Tray Covers and Fittings:**

- 3.2.1 Cable trays & accessories shall be of two types, namely ladder type and perforated type as specified in Data Sheet-A and drawings enclosed with this specification.
- 3.2.2 Coupler plates shall be provided for connecting tray ends to other straight trays, horizontal elbows, vertical elbows, tees, cross, reducers etc. The number of coupler plates, washers, nuts & bolts to be supplied shall be as per Data Sheet-A.
- 3.2.3 Necessary fasteners shall be provided along with each length of cable tray as specified in drawings enclosed.
- 3.2.4 The width of the tray covers (where provided) shall be suitable for the width of trays. Suitable bolting arrangement shall be supplied for attaching the cover to the cable trays, elbows, reducers, tees etc. as per the drawing enclosed.
- 3.2.5 All welded joints shall be smooth enough to provide a good appearance and shall not cause any injury to working personnel or any damage to the cable laid directly on it. All welding work shall be done by skilled personnel.

### 4.0 QUALITY/INSPECTION

- 4.1 NTPC's Standard QP (QP NO. 0000-999-QOE-S-021, Rev-01) is enclosed for reference. However, at contract stage, the successful bidder shall submit the QP for BHEL/ ultimate customer's approval. In case bidder has reference QP agreed with ultimate customer, same can be submitted for specific project after award of contract for BHEL/ultimate customer's approval. There shall be no commercial implication to BHEL on account of QP approval.



## TECHNICAL SPECIFICATION FOR CABLE TRAY & ACCESSORIES

SPECIFICATION NO. PE-TS-434-507-E021

VOLUME II

SECTION II

REVISION 01

DATE: 21.04.2022

SHEET 2 of 2

4.2 All materials shall be procured, manufactured, inspected and tested by vendor/ sub-vendor as per approved quality plan.

4.3 The supplier shall perform all tests necessary to ensure that the material and workmanship conform to the relevant standards and comply with the requirements of the specification. Charges for all these tests for all the equipment & components shall be deemed to be included in the bid price.

4.4 Load Test: -

A 2.5-meter straight section of each type of cable tray of width 600mm, 450mm, 300mm & 150mm shall be simply supported at the two ends. A uniformly distributed load of 100 kg per meter shall be applied along the length of tray. The maximum deflection at mid span shall not exceed 7 mm.

### 5.0 PACKING

The material shall be packed to ensure protection against damage during transit, storage for prolonged periods and handling.

### 6.0 DELIVERY

The delivery shall be as per NIT (Notice Inviting Tender).

### 7.0 DOCUMENTATION

7.1 Documents to be submitted by the bidder along with the bid.

- a) A copy of sheet "Contents" with bidder's signature & company stamp
- b) A copy of sheet "Compliance Sheet" with bidder's signature & company stamp.
- c) Unpriced copy of "Annexure-I (BOQ – Cum- Price Schedule for Cable Trays & Accessories)" with bidder's signature & company stamp.
- d) A copy of sheet "No Deviation Sheet" with bidder's signature & company stamp.
- e) Supporting documents of PQR.

**No other documentation is required to be submitted as technical offer. Any information contained in other parts of the offer (e.g. covering letter, annexures, etc.) which is deviating from specification requirements in any way shall not be considered by BHEL as part of offer.**

SL. NO.	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	AGENCY			REMARKS
					M	C				N	M	C	
1	FINISHED CABLE TRAYS & ACCESSORIES	1 In Black Condition a) Weld Quality b) Burs 2 After Galvanising 2.1 General Physical inspection including Galvanising Quality/ Defects, Dieromating, White rusting etc. 2.2 Dimensional check & Sheet Thickness 2.3 Galvanising tests a) Coating thickness measurement survey by Elcometer b) Mass of zinc coating c) Uniformity of zinc coating/dip test d) Adhesion test 2.4 Deflection Test	4	5	6	7	8	9	D*	**	10	11	
			Major	Visual	100% Random	Manufacturer's Plant Std	Manufacturer's Plant Std No Burs	Inspection report		P	P		A) The cable trays shall be galvanised at NTPC approved sources only.
			Major	Visual	IS-4759 5 sample/lot -1996	IS-2629-1985 IS-4759-1996	IS-2629-1985 IS-4759-1996	-do-		P	P		B) The supplier to ensure procurement of steel from main producers like SAIL/TISCO, Rastrhya Japat/Aspat Ind. Jindal/Essex/Ljoyda/IS Co. and Zinc from Hindustan Zinc Ltd.
			Major	Measurement	-do-	NTPC/Main Supplier Approved Drawing	NTPC/Main Supplier Approved Drawing	-do-		P	P		C) Welding shall be done by qualified welders as per supplier system.
			Critical	Measurement	-do-	IS-4759-1996 IS-3203-1982	IS-4759-1996 Table-1	-do-		P	P		D) Pre-treatment of fabricated cable trays shall be carried out in seven tank process as per IS 2629. All the process parameters e.g. Concentration, temperature, density etc. to be maintained and recorded by the Galvaniser
			Critical	Measurement	1 coupon sample of each thickness	IS-6745-1972 IS-2633-1986	IS-4759-1996 Table-1	-do-		P	P		E) The process of pretreatment shall be verified by NTPC on surveillance basis during inspection of cable trays
			Critical	Measurement	-do-	IS-2629-1985 IS-2633-1986 IS-4759-1996	IS-4759-1996 cl. 9.3	-do-		P	P		*F* One piece each of 2.5 meter length size of cable tray of 300 mm & above shall be taken as sample from each offered lot for inspection. It shall be supported at both ends & loaded with uniformly distributed load of 76kg/meter along the length of cable tray. The maximum deflection at mid span of each sample shall not exceed 7mm.
			Critical	Visual	-do-	IS-2629-1985	IS-2629-1985	-do-		P	P		
			Critical	Measurement	1 sample from each size type/lot	*F*	*F*	-do-		P	P		

LEGEND: RECORDS IDENTIFIED WITH "TICK" SHALL BE ESSENTIALLY INCLUDED BY THE CONTRACTOR IN QA DOCUMENTATION  
 \*\* M: MANUFACTURER/SUB-SUPPLIER, C: CONTRACTOR/NOMINATED INSPECTION AGENCY, N: NTPC. INDICATE "P" PERFORM "W" WITNESS AND "V" VERIFICATION AS APPROPRIATE  
 "CHP" BY NTPC SHALL BE IDENTIFIED IN COLUMN "N" AS "W".

FORMAT NO.: QS-01-QAI-P-10/F3-R0

1/1

ENGG DIV./QAI

**ANNEXURE to Quality Plan****LIST OF NTPC APPROVED GALVANIZERS (FOR NTPC PROJECTS)**

<b>S. NO.</b>	<b>ITEM</b>	<b>VENDOR NAME</b>
1	Galvanising	MJ Engg., Delhi
2	Galvanising	Jamna Metal, Delhi
3	Galvanising	A.V. Engg., Kolkata
4	Galvanising	Inar Profiles, Vishakapatnam
5	Galvanising	Anand Udyog, Mumbai
6	Galvanising	Techno Engg., Chandigarh
7	Galvanising	Steelite Engg., Mumbai
8	Galvanising	National Galvanizer, Kolkata
9	Galvanising	Unistar Galvanizer, Kolkata
10	Galvanising	B.P. Projects, Kolkata
11	Galvanising	Bajaj, Pune
12	Galvanising	Electrocure Industries, Mumbai
13	Galvanising	B.G. Shirke, Pune
14	Galvanising	Gurpreet Galvanizer, Hyderabad
15	Galvanising	Sigma, Mumbai
16	Galvanising	Radhakrishnan Shetty, Chennai
17	Galvanising	Karamtara, Mumbai
18	Galvanising	Poona Galvanizers, Pune
19	Galvanising	Neha Galvanizer, Kolkata
20	Galvanising	Unitech Galvanizers, Hoogly
21	Galvanising	DMP projects, Kolkata
22	Galvanising	Patny Systems, Medhak

**NOTES:**

- 1 **ANY CHANGE IN THE ABOVE LIST SHALL BE INFORMED AT THE TIME OF SPECIFIC PROJECT REQUIREMENT AND NO COMMERCIAL IMPLICATION SHALL BE ALLOWED ON THIS ACCOUNT.**
- 2 **IT SHALL BE THE RESPONSIBILITY OF THE VENDOR TO GET THE MATERIAL GALVANIZED FROM THE ABOVE LIST WITHOUT ANY COMMERCIAL IMPLICATION TO BHEL.**

# TYPICAL DETAILS OF CABLE TRAYS AND ACCESSORIES

NTPC DOCUMENT NO: 9585-001-215-PVE-B-003

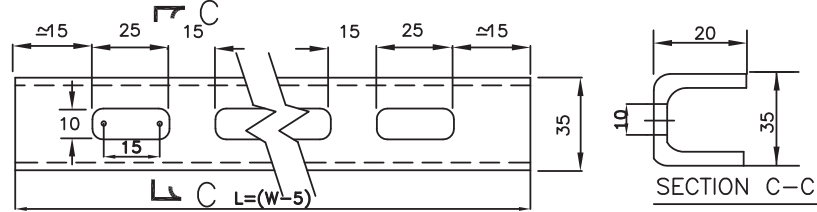
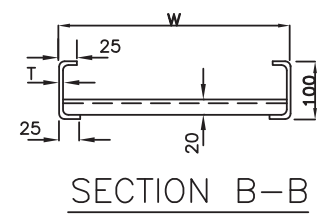
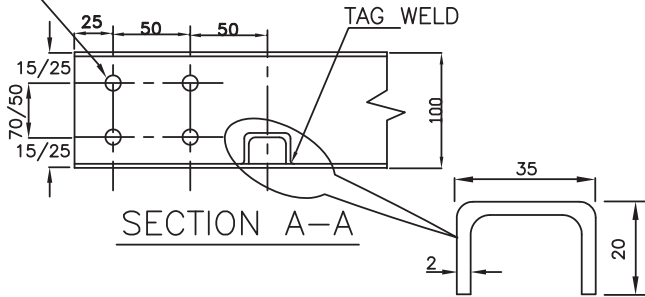
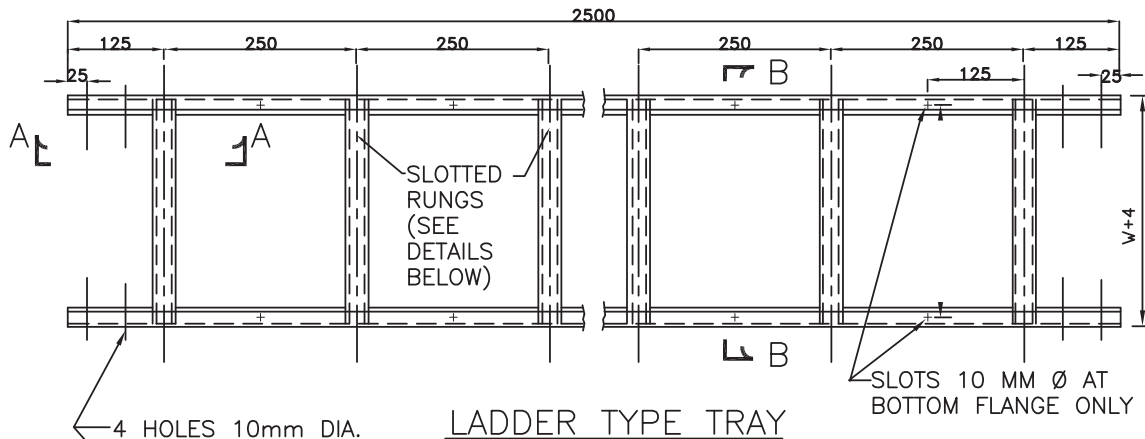


**NTPC Limited**  
(A GOVERNMENT OF INDIA ENTERPRISE)

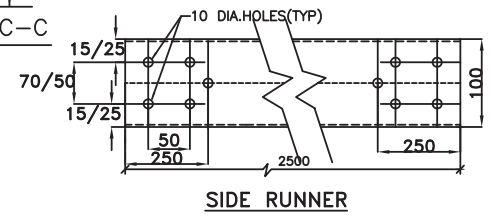
PROJECT

PATRATU SUPER THERMAL POWER STATION EXPANSION  
PHASE - I ( 3 X 800 MW)

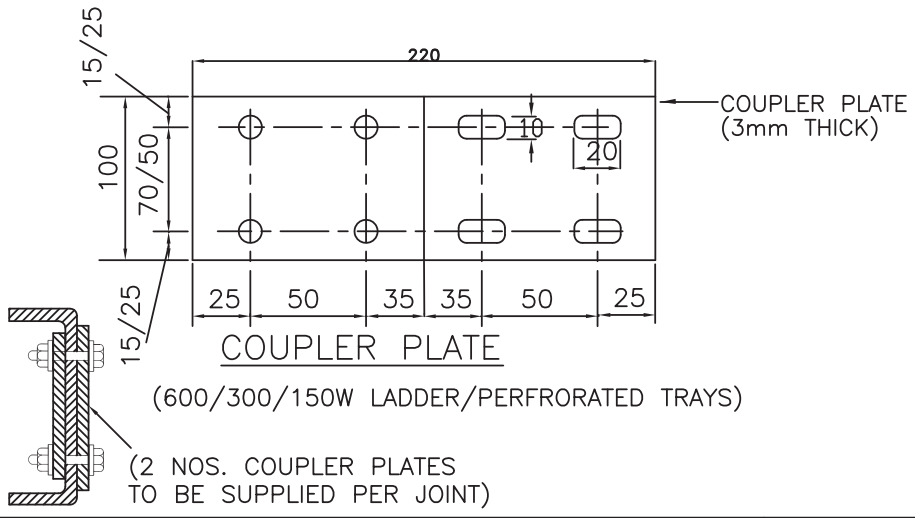
REV	DATE	ALTD	CHK	APD	JOB NO.	DPT CODE-E	DRN	NAME	SIGN	DATE
01	11.07.18	MMM	HK	PD			BHARAT HEAVY ELECTRICALS LIMITED POWER SECTOR PROJECT ENGINEERING MANAGEMENT NOIDA(U.P) INDIA	DSN	MMM	-sd-
THE DOCUMENT IS REVISED INLINE WITH THE NTPC COMMENTS RECEIVED VIDE TRANSMITTAL DTD. 08.05.18.							CHD	HK	-sd-	09.04.18
							APP	PD	-sd-	09.04.18
						DWG. NO. PE-DG-434-507-E005				
						SHT. 01 OF 13 REV. 01				



SLOTTED RUNGS  
(TO SUIT TRAY WIDTH)



LADDER TYPE TRAY



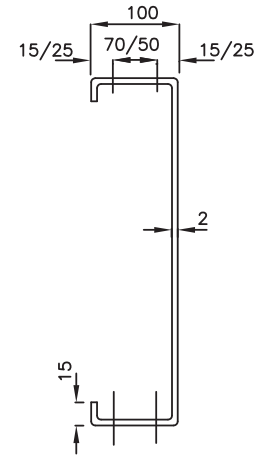
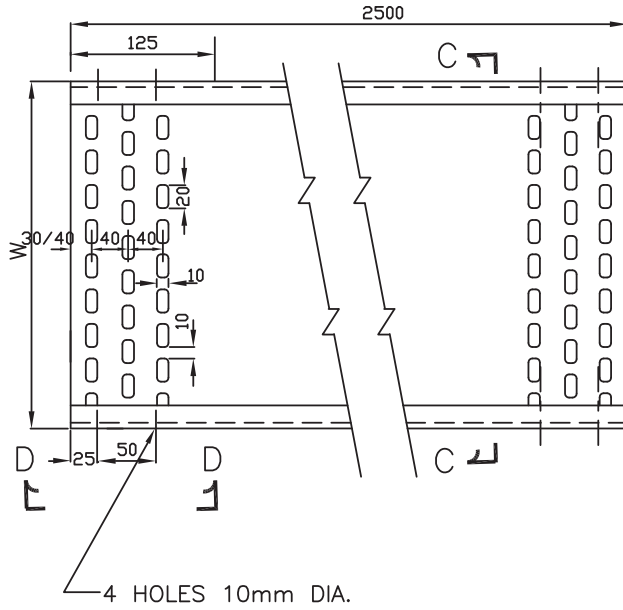
8 NUMBERS BOLTS  
8mm DIA 20mm LONG  
WITH NUTS AND  
WASHERS ARE TO BE  
SUPPLIED WITH EACH  
COUPLER PLATE



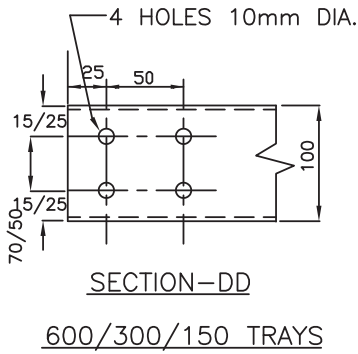
TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.  
PE-DG-434-507-E005

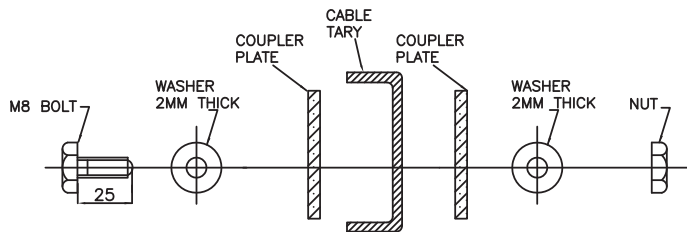
SH 2 OF 13      REV 01



SECTION-CC  
600/300/150 TRAYS



PERFORATED TYPE TRAY



SEQUENCE OF M8 BOLT, WASHER, NUT, COUPLER PLATE & CABLE TRAY  
FOR TYPICAL CABLE TRAY JOINT

SEE GENERAL NOTES IN SHEET 13.



TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

PE-DG-434-507-E005

SH 3 OF 13

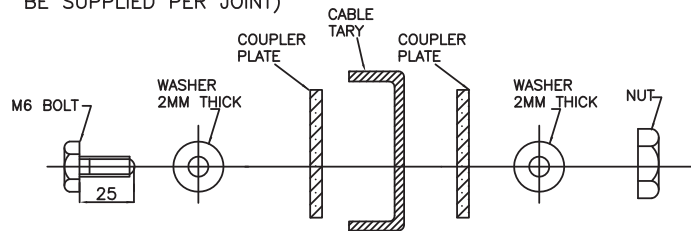
REV 01



QTY. REQD/TRAY SECTION

- A) 16 NOS. M6 BOLTS
- B) 16 NOS. NUTS
- C) 32 NOS. WASHERS

(2 NOS. COUPLER PLATES OF 3 MM THICKNESS TO BE SUPPLIED PER JOINT)



SEQUENCE OF M6 BOLT, WASHER, NUT, COUPLER PLATE & CABLE TRAY FOR TYPICAL CABLE TRAY JOINT

SEE GENERAL NOTES IN SHEET 13.



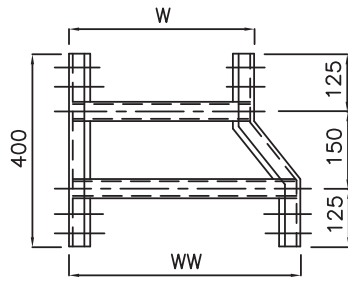
TYPICAL DETAILS OF CABLE TRAYS AND ACCESSORIES

DRAWING NO.

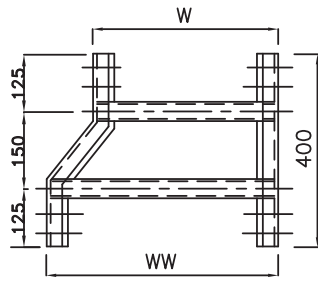
PE-DG-434-507-E005

SH 4 OF 13

REV 01



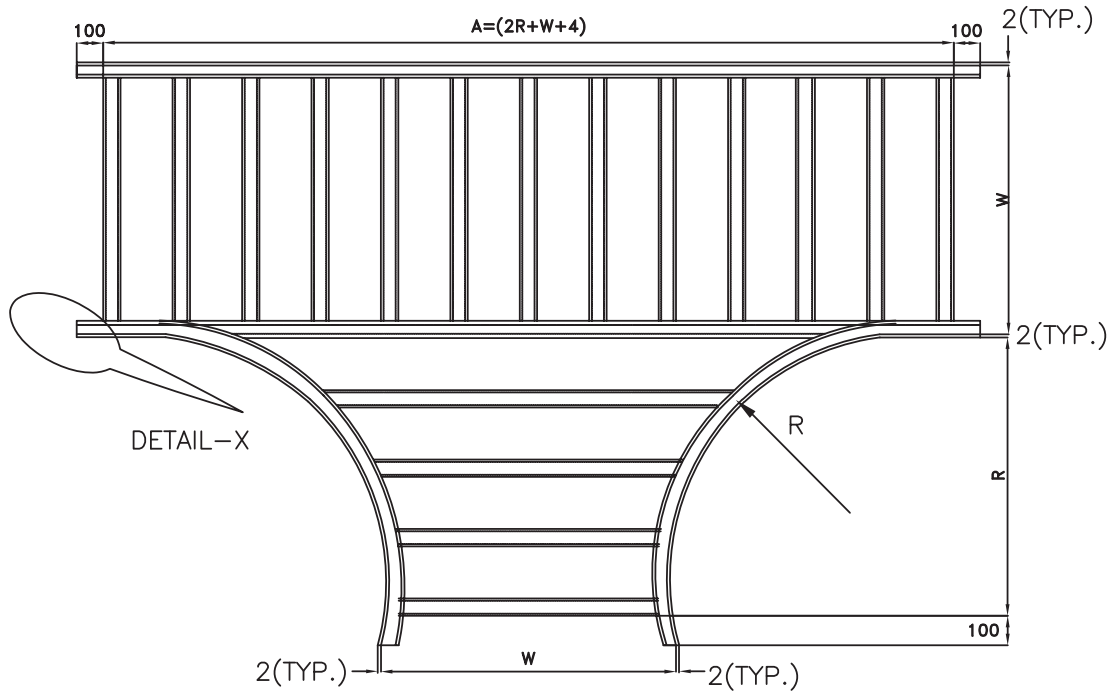
LEFT HAND REDUCER



RIGHT HAND REDUCER

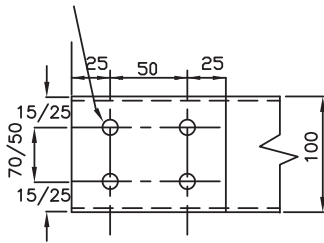
WW	W	DEPTH
600	300	100
600	150	100
300	150	100

LADDER TYPE



DETAIL-X

10mm DIA. HOLES



DETAIL-X

WIDTH W	BENDING RADIUS R	DEPTH	A		
			W		
			150	300	600
150, 300 & 600	600	100	1354	1504	1804

SEE GENERAL NOTES IN SHEET 13.

LADDER TYPE



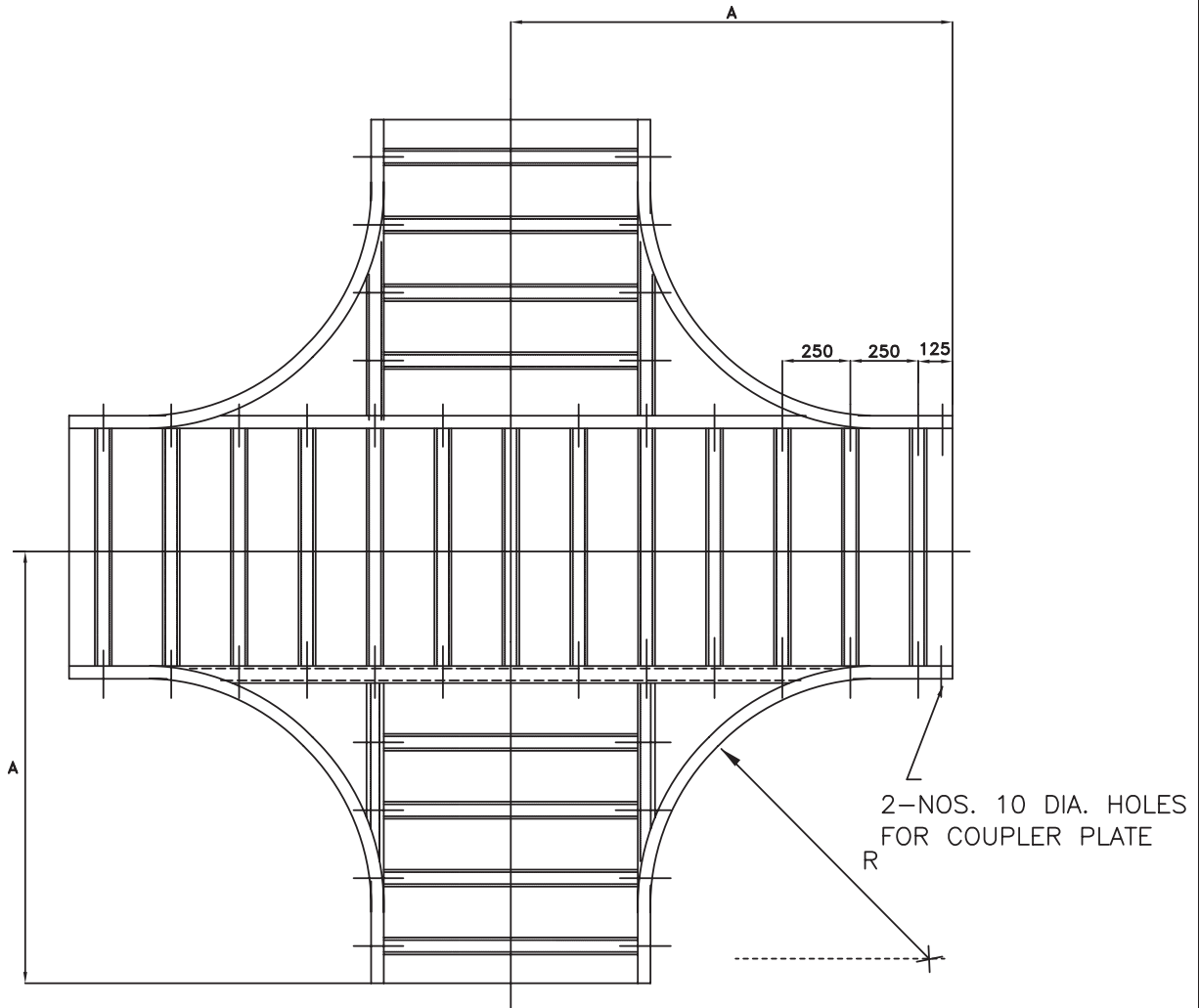
TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

PE-DG-434-507-E005

SH 5 OF 13

REV 01



HORIZONTAL CROSS-PLAN

WIDTH W	BENDING RADIUS R	$A=R+W/2+100$
600	600	1000
300	600	850

SEE GENERAL NOTES IN SHEET 13.



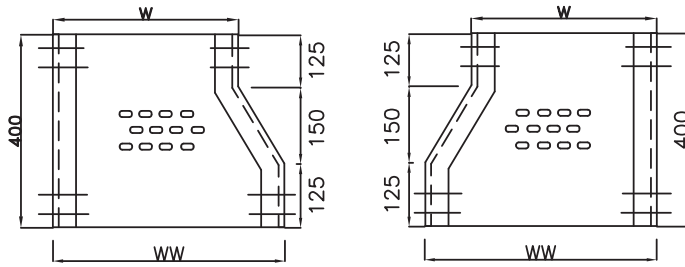
TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

PE-DG-434-507-E005

SH 6 OF 13

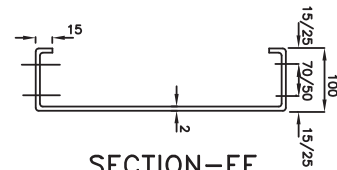
REV 01



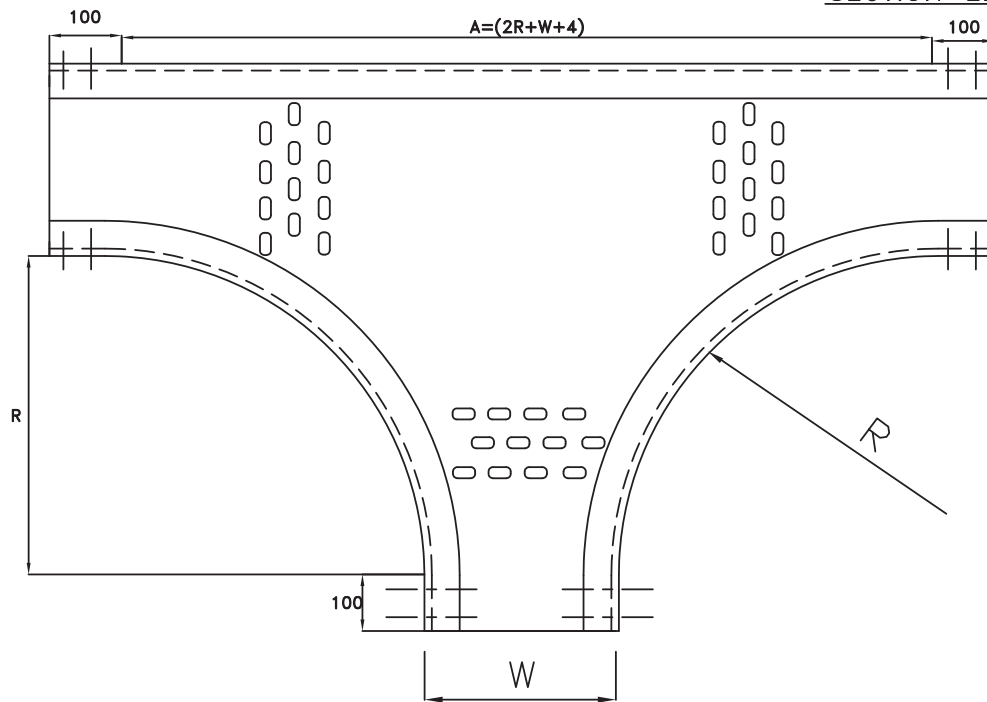
WW	W	DEPTH
600	300	100
600	150	100
300	150	100

LEFT HAND REDUCER      RIGHT HAND REDUCER

PERFORATED TYPE



SECTION-EE



TEE

WIDTH W	BENDING RADIUS R	DEPTH	A		
			W		
			150	300	600
150, 300 & 600	600	100	1354	1504	1804

SEE GENERAL NOTES IN SHEET 13.

PERFORATED TYPE



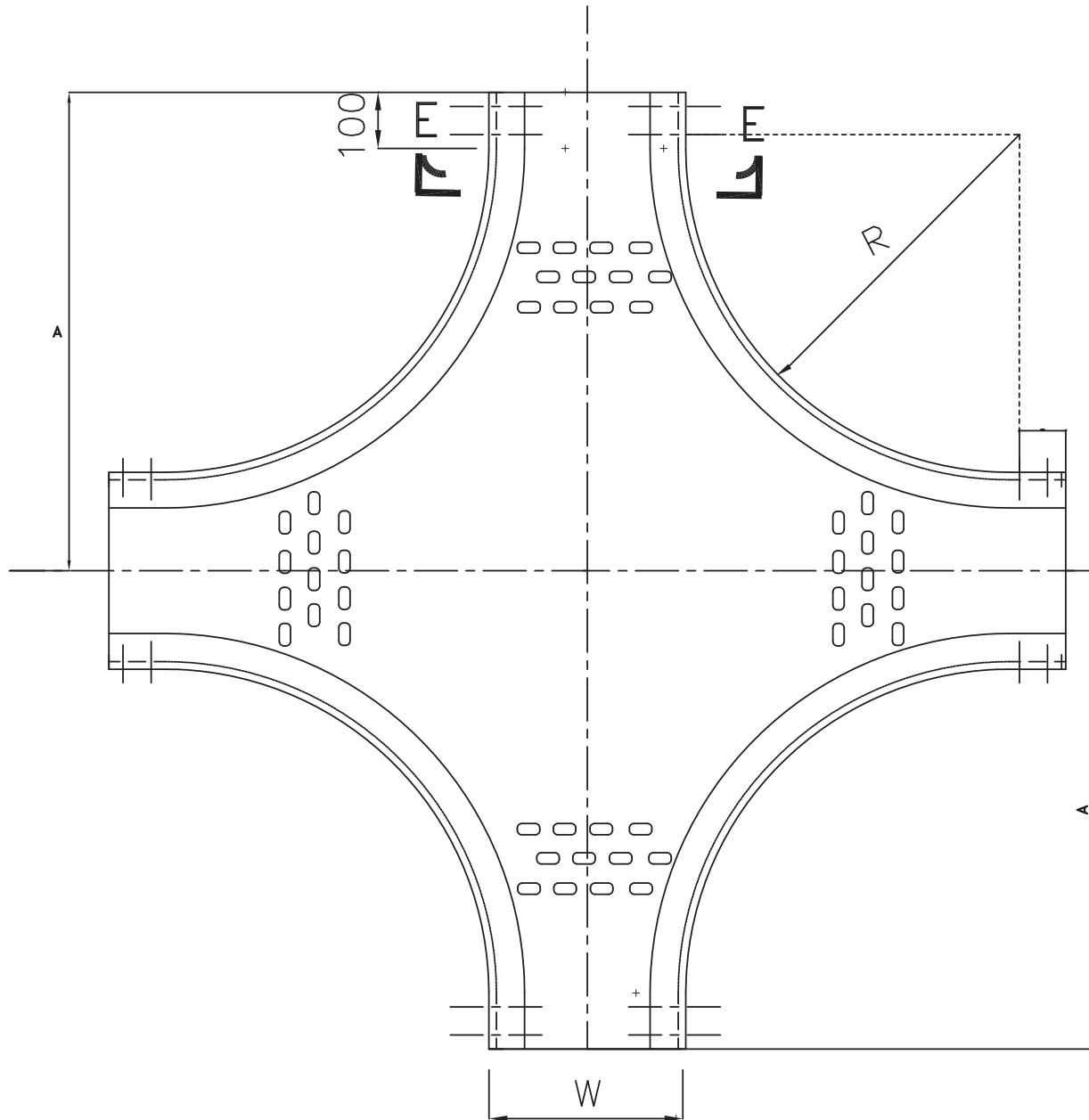
TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

PE-DG-434-507-E005

SH 7 OF 13

REV 01



CROSS

WIDTH W	BENDING RADIUS R	$A=R+W/2+100$
600	600	1000
300	600	850

SEE GENERAL NOTES IN SHEET 13.



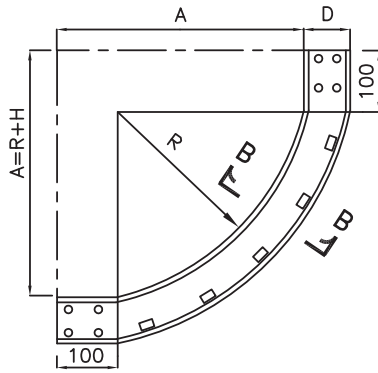
TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

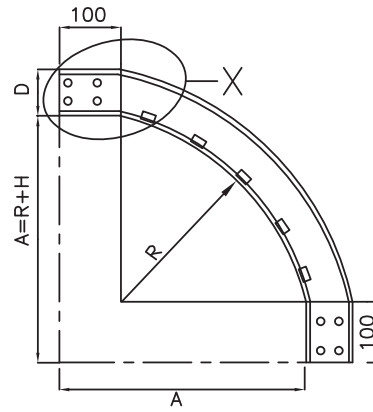
PE-DG-434-507-E005

SH 8 OF 13

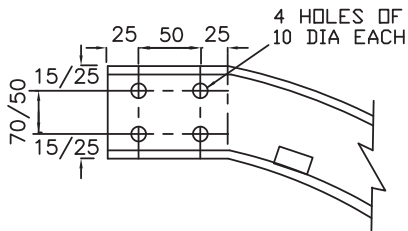
REV 01



INSIDE TYPE



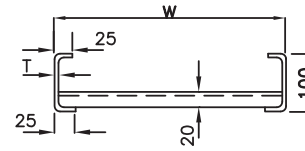
OUTSIDE TYPE



ENLARGED VIEW OF "X"

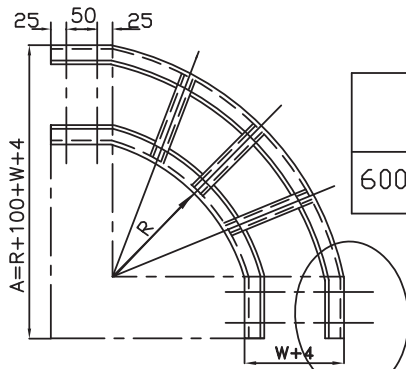
VERTICAL ELBOW 90 DEG UP/DOWN

INSIDE WIDTH W	BENDING RADIUS R	DEPTH	A
600, 300 & 150	600	100	700



SECTION B-B

90° VERTICAL BEND - LADDER TYPE



LADDER TYPE

X (AS ABOVE)

HORIZONTAL ELBOW 90 DEG

INSIDE WIDTH W	BENDING RADIUS R	DEPTH	A		
			150	300	600
600, 300 & 150	600	100	854	1004	1304

90° HORIZONTAL BEND - LADDER TYPE

SEE GENERAL NOTES IN SHEET 13.



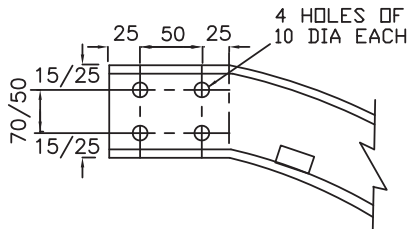
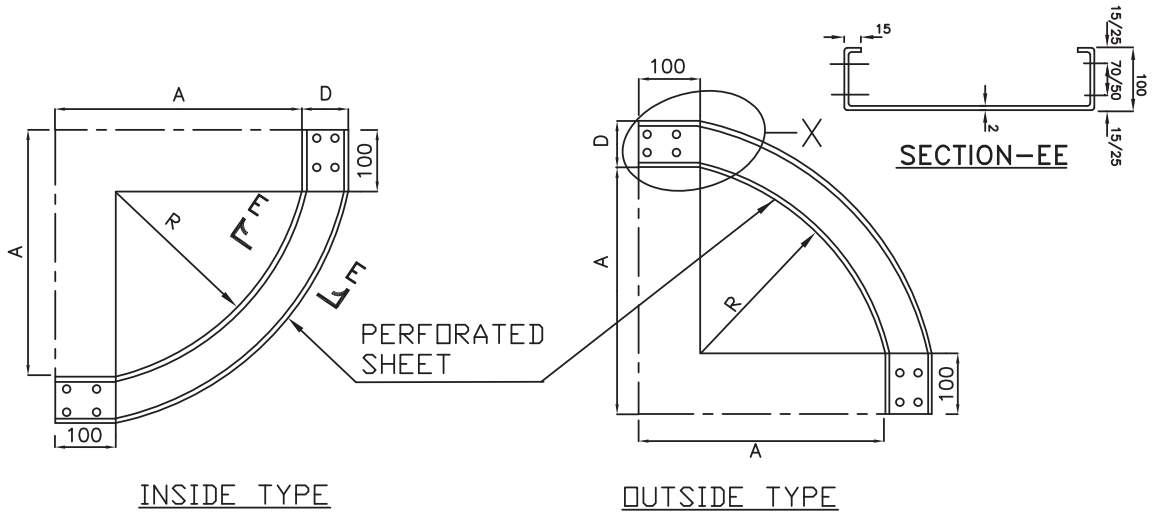
TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

PE-DG-434-507-E005

SH 9 OF 13

REV 01

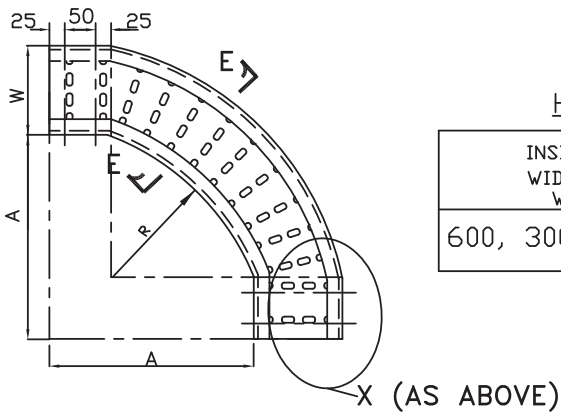


ENLARGED VIEW OF "X"

90° VERTICAL BEND - PERFORATED TYPE

VERTICAL ELBOW 90 DEG UP/DOWN

INSIDE WIDTH W	BENDING RADIUS R	DEPTH	A
600, 300 & 150	600	100	700



90° HORIZONTAL BEND - PERFORATED TYPE

SEE GENERAL NOTES IN SHEET 13.

HORIZONTAL ELBOW 90 DEG

INSIDE WIDTH W	BENDING RADIUS R	DEPTH	A		
			150	300	600
600, 300 & 150	600	100	854	1004	1304



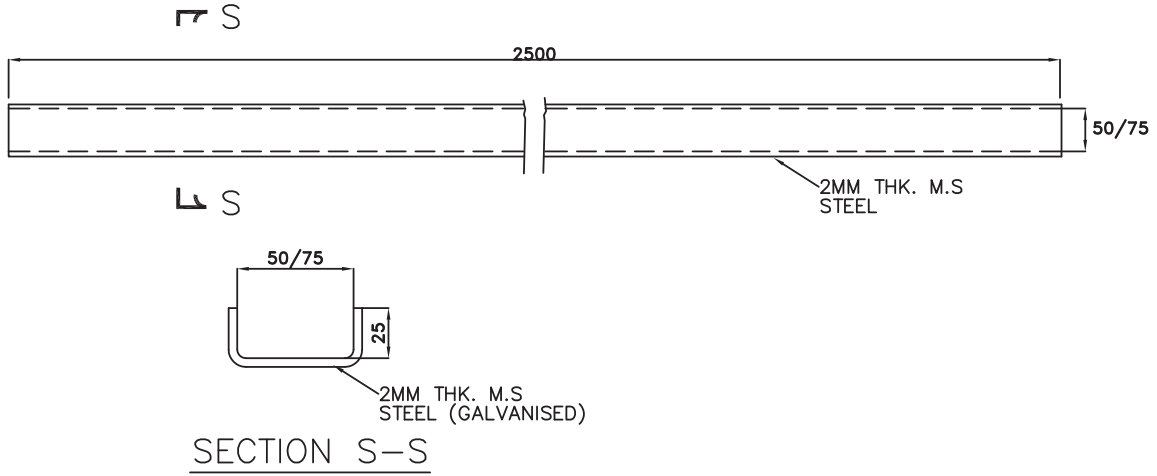
TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

PE-DG-434-507-E005

SH 10 OF 13

REV 01



CABLE TROUGHS

SEE GENERAL NOTES IN SHEET 13.

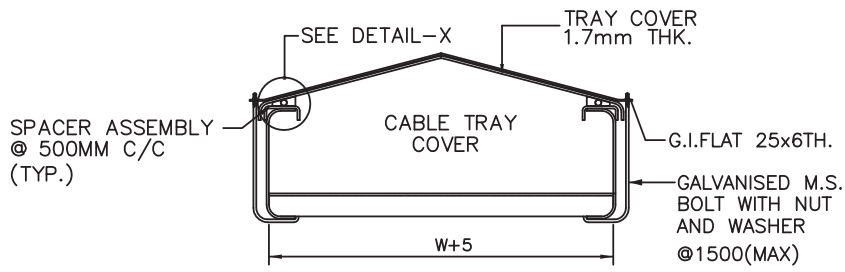


TYPICAL DETAILS OF  
CABLE TRAY AND ACCESSORIES

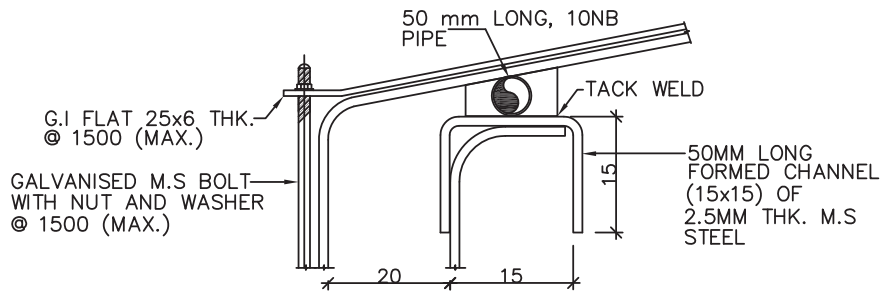
BHEL DRAWING NO.  
PE-DG-434-507-E005

SH 11 OF 13

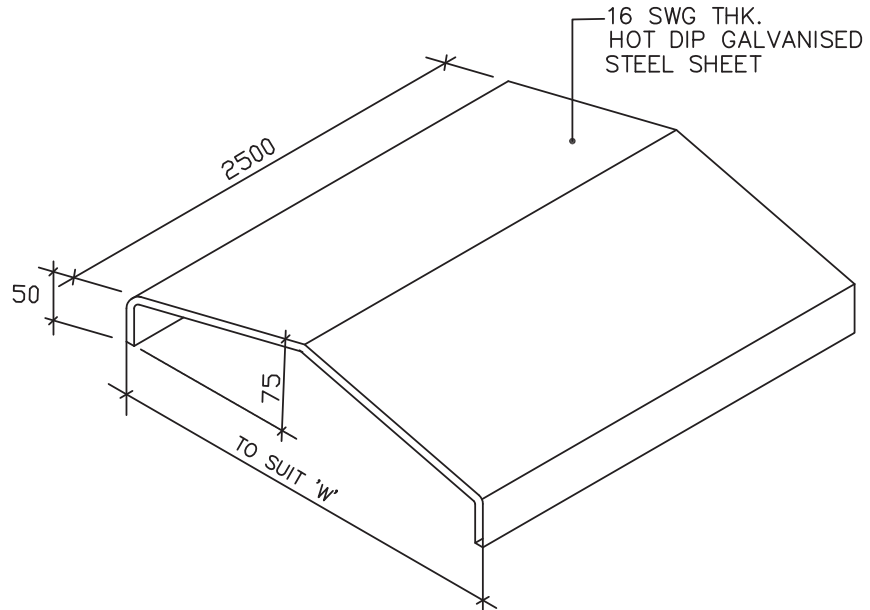
REV 01



COVER FIXING (TYP.)



DETAIL-X



CABLE TRAY COVER

SEE GENERAL NOTES IN SHEET 13.



TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

PE-DG-434-507-E005

SH 12 OF 13

REV 01

NOTES:—

1. THE CABLE TRAYS AND ACCESSORIES SHALL BE MADE OF 2mm HOT ROLLED M.S.SHEET CONFIRMING TO IS:1079. ALL THE COUPLER PLATE SHALL BE OF 3 MM THICK.
2. THE CABLE TRAYS AND ACCESSORIES SHALL BE HOT DIP GALVANISED AS PER IS 2629.
3. FOR LADDER TYPE CABLE TRAYS AND ACCESSORIES, ALL RUNGS SHALL BE SLOTTED.
4. PERFORATED TRAYS SHALL BE FABRICATED OUT OF A SINGLE M.S. SHEET.
5. THE DIMENSIONS OF ALL BENDS, TEES, CROSSES, ETC. FOR PERFORATED CABLE TRAYS SHALL BE THE SAME AS FOR LADDER TYPE TRAY FITTINGS.
6. SIDE CHANNELS OF PERFORATED TRAY ACCESSORIES SHALL BE WELDED WITH THE PERFORATED SHEET AT INTERVALS OF 100mm.
7. LENGTH OF WELDING SHALL NOT BE LESS THAN 25mm. WELDING SHALL BE AS PER IS 9595.
8. PREFERABLY SINGLE MS PERFORATED SHEET SHALL BE USED AS BASE OF ALL PERFORATED TYPE TRAY ACCESSORIES. HOWEVER, IF USE OF PIECES OF PERFORATED SHEET IS UNAVOIDABLE FOR BASE, PIECES SHALL BE WELDED WITH EACH OTHER IN LINE WITH THE ABOVE.
9. ALL TRAY CORNERS SHALL BE FREE OF SHARP EDGES & SMOOTH.
10. THE DEPTH, WIDTH AND LENGTH OF TRAYS AND ACCESSORIES SHALL BE WITHIN A TOLERANCE OF  $\pm 2$ MM.
11. TO FACILITATE ASSEMBLY, ALL ACCESSORIES AT ENDS SHALL HAVE 100mm STRAIGHT PORTION.
12. ALL NUTS, BOLTS, WASHERS ETC., SHALL BE HOT DIP GALVANISED AS PER IS 1367 FOR SIZES ABOVE 12MM AND ELECTROPLATED/ELECTROGALVANISED FOR SIZES UPTO 12MM.
13. ALL DIMENSIONS ARE IN mm UNLESS NOTED OTHERWISE.
14. TRAY ACCESSORIES SHOWN IN THIS DRAWING SHALL BE FACTORY FABRICATED FOR USE AT SITE AS PER APPROVED LAYOUT DRAWINGS. FOR SPECIFIC SITE REQUIREMENTS (E.G. IRREGULAR ANGLE BENDS SUCH AS 30°/60° BENDS, ETC) AS PER SITE LAYOUT CONDITIONS, TRAY ACCESSORIES SHALL BE FABRICATED AT SITE FROM THE STRAIGHT LENGTH OF RESPECTIVE SIZES AS REQUIRED. GALVANISATION DAMAGED DURING CUTTING/WELDING OPERATIONS SHALL BE BRUSHED AND RED LEAD PRIMER, OIL PRIMER AND ALUMINIUM PAINT SHALL BE APPLIED BEFORE INSTALLATION OF THE ACCESSORIES.
15. WIDTH OF CABLE TRAYS PROPOSED TO BE USED FOR PROJECT ARE AS UNDER :  
LADDER TYPE CABLE TRAY (MM) : 600,300 & 150.  
PERFORATED TYPE CABLE TRAY (MM) : 600,300,150.
16. 600MM WIDE CABLE TRAY SHALL BE SUITABLE FOR WEIGHT OF 100KG/M INCLUDING LIVE LOAD OF RUNNING LENGTH OF CABLE TRAY.
17. MAKE OF ALL ITEMS SHALL BE AS PER NTPC QA APPROVAL.
18. CABLE TROUGHS OR 50/75MM WIDE PERFORATED TYPE SHALL BE USED FOR LOCAL CABLING/BRANCHING OUT FEW CABLES FROM MAIN ROUTE.
19. AMOUNT OF ZN DEPOSIT OVER THREADED PORTION OF BOLTS, NUTS, SCREWS AND WASHERS SHALL BE AS PER IS 1367.
20. MASS OF ZN COATING SHALL BE 610gm PER SQ METER.



TYPICAL DETAILS OF  
CABLE TRAYS AND ACCESSORIES

DRAWING NO.

PE-DG-434-507-E005

SH 13 OF 13

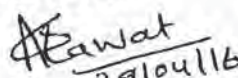
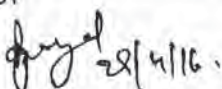
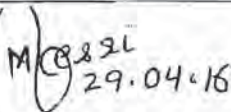
REV 01

	<b>PRE-QUALIFICATION REQUIREMENTS FOR CABLE TRAYS &amp; ACCESSORIES</b>	PE-PQ-999-507-E001
		REVISION NO. 02    DATE    29/04/2016
		SHEET NO. 1 OF 1

<b>SCOPE:</b> Supply : YES;    Erection & Commissioning : NO;	
1	Vendor should have in-house fabrication & manufacturing facility.
2	Capability of manufacturing cable trays & accessories for 40km per month.
3	Vendor has his own galvanization plant.  OR Vendor should get galvanization of cable trays & accessories to be done from any of the BHEL-PEM approved galvanizers.
4	Manufactured & supplied at least 100 km of cable trays & accessories in one or more orders and at least 30 km in a single order.
5	Minimum two (2) nos. purchase orders for cable trays & accessories shall be submitted which should not be more than five (5) years old from the date of application for registration or date of techno-commercial bid opening (as applicable) for establishing continuity in business.

**NOTE:**

Supplier to comply to "general points of PQR" available at <http://bhelpem.com/vensection/PMD/PMD.aspx>  
In case supplier is not OEM, the offer shall be evaluated as per point no 1 of "general points of PQR".

PREPARED BY  NAME: A.K. RAWAT DESIGNATION: SR. MGR	REVIEWED BY  NAME: RAJNISH GOYAL DESIGNATION: AGM	APPROVED BY  NAME: MEENA KESRI DESIGNATION: AGM L-DH(E)
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**Item Rate BoQ**

Tender Inviting Authority: Bharat heavy Electricals limited-Project Engineering Management, Noida

Name of Work: CABLE TRAYS AND ACCESSORIES for 3 x 800 MW PVUNL PATRATU TPP PHASE-I

Contract No: PE/PG/PA1/E-6962/2022 dated 27.04.2022

Name of the Bidder/ Bidding Firm / Company :

**PRICE SCHEDULE**

(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )

A. Notes :

- a) Total Quantity indicated above shall be known as Order Quantities. The total quantity variation shall be as per NIT.
- b)The unit prices shall apply for adjustment of variation in quantity
- c) Price of item at Sr. No. 11 to14 below shall be included in price of cable trays. No separate charges shall be applicable.

Bidder shall furnish this price Schedule indicating "Quoted" against each item along with his technical offer and actual prices in his price offer.

NUMBER #	TEXT #	NUMBER #	TEXT #	NUMBER	TEXT #	NUMBER #	NUMBER	NUMBER	NUMBER	NUMBER	NUMBER #	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	Order Quantity	Units	HSN/SAC CODE	Quoted Currency in INR / Other Currency	BASIC RATE In Figures To be entered by the Bidder in Rs. P	Total Ex-works Price Rs.	Freight rate in % of E-works Price	Freight Amount,as applicable in Rs	GST rate in %	GST amount in Rs.	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT With Taxes	TOTAL AMOUNT In Words
1	2	4	5	7	12	13	14	16	17	50	51	53	54	55
1.0	<b>HOT DIP GALVANISED LADDER TYPE CABLE TRAY COMPLETE WITH COUPLER PLATES, FASTENERS, CLAMPS AND FIXING HARDWARES ETC.</b>													
1.1	CABLE TRAY 2 MM THICK- LADDER TYPE 150W	8,000	MTR	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
1.2	CABLE TRAY 2 MM THICK- LADDER TYPE 300W	8,000	MTR	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
1.3	CABLE TRAY 2 MM THICK- LADDER TYPE 600W	28,000	MTR	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
2.0	<b>HOT DIP GALVANISED PERFORATED TYPE CABLE TRAY COMPLETE WITH COUPLER PLATES, FASTENERS, CLAMPS AND FIXING HARDWARES ETC.</b>													
2.1	CABLE TRAY 2 MM THICK- PERFORATED TYPE 150W	3,700	MTR	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
2.2	CABLE TRAY 2 MM THICK- PERFORATED TYPE 300W	3,800	MTR	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
2.3	CABLE TRAY 2 MM THICK- PERFORATED TYPE 600W	8,500	MTR	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
3.0	<b>LADDER TYPE HORIZONTAL 90 DEG. BEND-600mm RADIUS</b>													
3.1	LAD HOR 90DEG BEND 2 MM THICK 600 RAD 150W	20	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
3.2	LAD HOR 90DEG BEND 2 MM THICK 600 RAD 300W	45	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
3.3	LAD HOR 90DEG BEND 2 MM THICK 600 RAD 600W	320	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
4.0	<b>LADDER TYPE VERTICAL 90 DEG. BEND-600mm RADIUS (INSIDE)</b>													
4.1	LAD VER 90DEG BEND 2 MM THICK 600 RAD-INSIDE 300W	45	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
4.2	LAD VER 90DEG BEND 2 MM THICK 600 RAD-INSIDE 600W	100	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
5.0	<b>LADDER TYPE VERTICAL 90 DEG. BEND-600mm RADIUS (OUTSIDE)</b>													
5.1	LAD VER 90DEG BEND 2 MM THICK 600 RAD-OUTSIDE 300W	45	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
5.2	LAD VER 90DEG BEND 2 MM THICK 600 RAD-OUTSIDE 600W	140	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
6.0	<b>LADDER TYPE TEES-600mm RADIUS</b>													
6.1	LAD TEES 600R 2MM THICK 300W	12	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
6.2	LAD TEES 600R 2MM THICK 600W	50	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
7.0	<b>PERFORATED TYPE HORIZONTAL 90 DEG. BEND-600mm RADIUS</b>													
7.1	PER HOR 90DEG BEND 2 MM THICK 600 RAD 150W	7	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
7.2	PER HOR 90DEG BEND 2 MM THICK 600 RAD 300W	30	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
7.3	PER HOR 90DEG BEND 2 MM THICK 600 RAD 600W	105	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
8.0	<b>PERFORATED TYPE VERTICAL 90 DEG. BEND-600mm RADIUS (INSIDE)</b>													
8.1	PER VER 90DEG BEND 2 MM THICK 600 RAD-INSIDE 300W	20	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
8.2	PER VER 90DEG BEND 2 MM THICK 600 RAD-INSIDE 600W	30	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
9.0	<b>PERFORATED TYPE VERTICAL 90 DEG. BEND-600mm RADIUS (INSIDE)</b>													
9.1	PER VER 90DEG BEND 2 MM THICK 600 RAD-OUTSIDE 300W	20	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only
9.2	PER VER 90DEG BEND 2 MM THICK 600 RAD-OUTSIDE 600W	45	NOS	7308	INR		0.00		0.00		0.00	0.00	0.00	INR Zero Only

<b>10.0</b>	<b>PERFORATED TYPE TEES-600mm RADIUS</b>													
10.1	PER VER 90DEG BEND 2 MM THICK 600 RAD-OUTSIDE 300W	5	NOS	7308	INR		0.00		0.00		0.00		0.00	INR Zero Only
10.2	PER VER 90DEG BEND 2 MM THICK 600 RAD-OUTSIDE 300W	50	NOS	7308	INR		0.00		0.00		0.00		0.00	INR Zero Only
<b>11.0</b>	<b>COUPLER PLATE</b>	96,000	NOS	7308	INR		0.00		0.00		0.00		0.00	INR Zero Only
<b>12.0</b>	<b>NUT</b>	3,84,000	NOS	7308	INR		0.00		0.00		0.00		0.00	INR Zero Only
<b>13.0</b>	<b>BOLT</b>	3,84,000	NOS	7318	INR		0.00		0.00		0.00		0.00	INR Zero Only
<b>14.0</b>	<b>WASHER</b>	7,68,000	NOS	7308	INR		0.00		0.00		0.00		0.00	INR Zero Only
<b>Total in Figures</b>												<b>0.00</b>	<b>0.00</b>	INR Zero Only
<b>Quoted Rate in Words</b>		<b>INR Zero Only</b>												

Tender Inviting Authority: Bharat heavy Electricals limited-Project Engineering Management, Noida

Name of Work : CABLE TRAYS AND ACCESSORIES for 3 x 800 MW PVUNL PATRATU TPP PHASE-I

Contract No: PE/PG/PA1/E-6962/2022 dated 27.04.2022

Name of the Bidder/ Bidding Firm / Company :	
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**ANNEXURE-II (COST OF WITHDRAWAL)**

**(This BOQ template must not be modified/replaced by the bidder and the same should be uploaded after filling the relevent columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only )**

**NOTES:**

1. Cost of Withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.
2. All the bidders have to list out all their technical & commercial deviations (if any) in details in the above format.
3. Any deviation not mentioned below and shown separately or found hidden in offer, will not be taken cognizance of.
4. Bidder shall submit duly filled unpriced copy of below format indicating "quoted" in "cost of withdrawal of deviation" column of the schedule below along with their Techno-commercial offer, wherever applicable. In absence of same, such deviation(s) shall not be considered and offer shall be considered in total compliance to NIT.
5. Bidder shall furnish price copy of below format along with price bid.
6. The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
7. Bidders to note that any deviation (technical/commercial) not listed in below and asked after Part-I opening shall not be considered.
8. For deviations w.r.t. Credit Period, Liquidated damages, Firm prices if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VII of GCC, Rev-07 will apply. For any other deviation mentioned in un-priced copy of this format submitted with Part-I bid but not mentioned in priced copy of this format submitted with Priced bid, the cost of withdrawal of deviation shall be taken as NIL.
9. Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be accepted.
10. All techno-commercial terms and conditions of NIT shall be deemed to have been accepted by the bidder, other than those listed in unpriced copy of this format.
11. Cost of withdrawal is to be given separately for each deviation. In no event bidder should club cost of withdrawal of more than one deviation else cost of withdrawal of such deviations which have been clubbed together shall be considered as NIL.
12. In case nature of cost of withdrawal (positive/negative) is not specified it shall be assumed as positive.
13. In case of discrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.

NUMBER #	TEXT #	NUMBER	TEXT	TEXT #	NUMBER #	TEXT	TEXT	TEXT	NUMBER #	NUMBER #	TEXT #
Sl. No.	Item Description	page No.	Technical Specification/ Tender Document clause no.	Quoted Currency in INR / Other Currency	Cost of Withdrawal of Deviation To be entered by the Bidder in Rs. P	Reference of Price Schedule on Which cost of Withdrawal of devotion is Applicable	Nature of Cost of Withdrawal of deviation (Positive/Negative)	Reason for Quoting Devetion	TOTAL AMOUNT Without Taxes in Rs. P	TOTAL AMOUNT With Taxes Rs. P	TOTAL AMOUNT In Words
1	2	7	8	12	13	18	19	24	53	54	55
1	<b>TECHNICAL DEVIATION</b>										
1.01	To be filled			INR					0.00	0.00	INR Zero Only
1.02	To be filled			INR					0.00	0.00	INR Zero Only
1.03	To be filled			INR					0.00	0.00	INR Zero Only
1.04	To be filled			INR					0.00	0.00	INR Zero Only
2	<b>COMMERCIAL DEVIATION</b>										
2.01	To be filled			INR					0.00	0.00	INR Zero Only
2.02	To be filled			INR					0.00	0.00	INR Zero Only
2.03	To be filled			INR					0.00	0.00	INR Zero Only
2.04	To be filled			INR					0.00	0.00	INR Zero Only
<b>Total in Figures</b>									<b>0.00</b>	<b>0.00</b>	INR Zero Only
<b>Quoted Rate in Words</b>											



PEM / PG-III, BHEL, Noida

**SPECIAL CONDITIONS OF CONTRACT (SCC) Rev-0**

**3 x 800 MW PVUNL PATRATU TPP PHASE-I (Job No. 434)**

These Conditions shall be read and construed along with General Conditions of Contract (GCC) rev.06 & GST related Corrigendum to GCC rev.06, to be enclosed along with the tender enquiry. In case of any conflict or inconsistency, the conditions given in SCC shall prevail over the GCC and its corrigendum.

Sl No.	Title	Description
1.	Project Name	3 x 800 MW PVUNL PATRATU TPP PHASE-I (EPC)
2.	Nature of project & Type of Bidding	Non-Mega & ICB (International Competitive Bidding )
3.	Customer Order Ref No	01/PVUNL-CS-9585-001-2/NOA-FC dated 08.03.2018 01/PVUNL-CS-9585-001-2/NOA-SC dated 08.03.2018 01/PVUNL-CS-9585-001-2/NOA-TC dated 08.03.2018
4.	BHEL's Customer	PATRATU VIDYUT UTPADAN NIGAM LIMITED (subsidiary of NTPC Limited in joint venture with JBVNL )
5.	PVUNL GST No.	20AAICP3718K1ZH
6.	Customer Consultants	No consultant
7.	Consignee Address (Bill To)	For supply package: BHEL, Power Sector-Project Engineering Management, Power Project Engineering Institute, Plot No. 25, Sector-16A, Noida, Uttar Pradesh-201301. <b>GSTIN: 09AAACB4146P2ZC</b>  <b>For turnkey packages (where BHEL-PEM will issue only the LOA and Purchase Order shall be issued by BHEL-PSWR):</b> Construction Manager, BHEL site office, Patratu Vidyut Utpadan Njigam Ltd , PO: PTPS , Patratu , Ramgarh , Jharkhand - 829119 <b>BHEL PSWR GSTIN No.- 27AAACB4146P1ZF</b>
8.	Delivery Address (Ship To)	Construction Manager, Bharat Heavy Electricals Limited, Patratu Vidyut Utpadan Njigam Ltd, PO: PTPS , Patratu , Ramgarh , Jharkhand - 829119
9.	BHEL Site Office Address	Construction Manager, Bharat Heavy Electricals Limited, Patratu Vidyut Utpadan Njigam Ltd , PO: PTPS , Patratu , Ramgarh , Jharkhand - 829119
10.	Location of Plant	Site is Located just outside the coal belt of South Karanpura in Ramgarh District of Jharkhand State. The nearest Railway Station is Patratu which is at a distance of about 4 km on Barkakhana-Barwadih Railway line.  <b>District: Ramgarh (state- Jharkhand)</b> <b>Next big cities to site: Ranchi</b> <b>Nearest Railway Station: - Patratu</b> <b>Nearest Airport: Ranchi (45 km by road from site)</b>
11.	Mode of Dispatch	Air, Road, Rail & Sea Transportation  For indigenous supplies: By Rail/Road on door delivery and freight pre-paid basis. For imported supplies: On C&F basis. Transit Insurance will be in BHEL scope
12.	Road Permit /E-waybill	Road Permit / E-way bill, to be arranged by Supplier/ transporter/ BHEL (as per GOI mandate).
13.	BHEL GSTIN Details	For supply packages: BHEL-PEM is registered in the State of Uttar Pradesh with GSTIN 09AAACB4146P2ZC

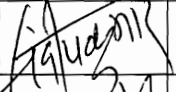
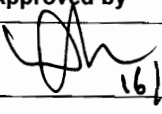
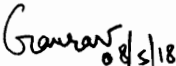
Gaurav 08/5/18

		<b>For Turnkey packages: BHEL PSWR GSTIN No.- 27AAACB4146P1ZF</b>
14.	Transit Insurance	<p>In BHEL Scope.</p> <p>For each dispatch, vendor shall inform the following to the Underwriter under intimation to BHEL-PEM and BHEL Site office:</p> <ul style="list-style-type: none"> <li>(i) Policy No.</li> <li>(ii) Consignee Name.</li> <li>(iii) Consignment Details (items with their weights and value (in INR).</li> <li>(iv) Project Name and P.O. No.</li> <li>(v) LR No. and date, Dispatch origin and destination details, Invoice No.</li> </ul> <p>Vendors to intimate the underwriters quoting the insurance Policy No. as mentioned in Purchase Order.</p>
15.	Dispatch intimation	<p>Yes in writing, Not less than 30 (Thirty) days prior to date of shipment and dispatch details to be sent to:</p> <p style="padding-left: 40px;">BHEL Site office (As mentioned in Sl. No. 9) BHEL PEM Noida (As mentioned in NIT)</p> <p>At the point of dispatch, vendor must furnish docs required as given below through Email / Fax</p> <ul style="list-style-type: none"> <li>i. Vendor's invoice</li> <li>ii. LR / RR / GR / Courier Receipt</li> <li>iii. Packing List/ Challan indicating the items dispatched (with their weights)</li> <li>iv. Insurance intimation letter informing the underwriters about the dispatches</li> <li>v. MDCC (of BHEL / NTPC) as applicable</li> <li>vi. Photograph of packing / boxes showing dispatch marking as per Sl. No. 26</li> </ul>
16.	Document required for Vendor's payment.	<p><b>For materials originating from Indian territory</b></p> <p>For claiming the payment against dispatch, MRC &amp; Freight, documents as mentioned in GCC rev 06 &amp; its corrigendum shall be submitted by vendor to BHEL. Original money receipt must be submitted for Freight payment.</p> <p><b>Packing List</b> must comply to Clause No. 19.3 of <del>General Commercial Terms &amp; Conditions of</del> GCC rev.06. Description of items in packing list shall be as per PO such that proper correlation between PO &amp; packing list must be furnished.</p> <p>Soft copy of documents for claiming payment shall be submitted by vendor as advance copy.</p> <p><b>For materials originating from non-Indian Territory</b></p> <p>Three (3) original and Three (3) copies of clean bill of lading or One (1) clean original Airway Bill &amp; Three (3) copies, in case of air freight.</p> <p>One (1) original and Three (3) copies of signed Invoices</p> <p>One (1) original and Three (3) copies of Packing List (clearly showing number of packages, gross weight and net weight).</p> <p>Three (3) copies of certificate of country of origin.</p> <p>Copy of MDCC from BHEL / NTPC (as applicable)</p> <p>Three (3) copies of inspection certificate, if any, issued by the customer/his authorized representative.</p> <p>Three (3) of certificate from the vendor to the effect that drawings and catalogues for customs clearance purpose have been kept with the packages for shipment.</p> <p>Three (3) copies of certificate from the vendor to the effect that the contents in each case are not less than that entered in the invoices and guaranteed as new and as per the relevant technical specifications.</p> <p>Shipping Specification – One (1) copy.</p> <p>Quality Certificate – One (1) copy.</p> <p>Approved Test Certificates, if any. - Three (3) copies.</p> <p>Guarantee Certificate – One (1) Original + One (1) copy.</p>

		Inspection Reports – One (1) Original + One (1) copy. PVC Calculation and copy of all applicable indices, if PVC applicable. – Two (2) copies.
17.	Material Receipt Certificate (MRC)	A) For supply packages- BHEL-PEM will arrange MRC from BHEL site B) For Turnkey (Supply + Erection & Commissioning) – Original MRC duly signed by customer (PVUNL) & BHEL site is to be arranged by Vendor.
18.	Buyer and Paying Authority	For packages where PEM will issue the Purchase Order: <b>BHEL PEM</b> will be the paying authority. For packages where BHEL-PEM will issue only the LOA and Purchase Order shall be issued by BHEL-PSWR: <b>BHEL Patratu Site will be the paying Authority.</b>
19.	Demurrage charges	Demurrage charges shall be paid by supplier/ vendor only to the transporter. No claim shall be acceptable to BHEL in this regard.
20.	Unloading, Storage & Movement of material at site	a) By BHEL site office for supply packages. b) By vendors for Turnkey i.e. Supply and E&C packages
21.	Concessional custom duty against Essentiality certificate (EC)	The project has been qualified through Project Import route. Accordingly, the benefits applicable to PI project would be granted for this project in this regard applicable documents such as Essentiality certificate will be issued by NTPC (ultimate customer). Under this, Concessional rate of Customs Duty shall be applicable on the Import Contents of the supplier respectively. Based on the above EC, Customs Duty Benefits will be passed on to the vendor. The Bidder to indicate the Import contents i.e. list of the item, Currency of Import and Country of Import including CIF value in their offers. BHEL shall inform, the availability of CIF value for a particular package, if any, at the time of NIT. The benefits availed in Concessional Customs Duty must be passed on to BHEL in their offer.  Vendor shall inform BHEL and provide the necessary documents to obtain required certificates from BHEL to avail exemption. Obtaining custom duty benefit in line with the Essentiality Certificate issued shall be in vendor's scope.
22.	Taxes & Duties (For Domestic Vendor)	As per General Conditions of Contract (GCC rev 06) & GST related Corrigendum to GCC rev.06
23. a	Taxes & Duties (For Order Directly to Foreign Bidders)- supply packages	In case of foreign vendors, quoted prices & Dispatches shall be on C & F (Port-Chennai) basis and the Taxes & duties in the country of dispatch shall be borne by Foreign vendor.
23. b	Taxes & Duties (For Order Directly to Foreign Bidders)- Turnkey packages	Complete responsibility of import including (but not limited to) import clearance, all taxes and duties in the country of export (origin), <b>all taxes and duties in India shall be to vendor's account.</b>
24.	Inspection Agency	BHEL/ BHEL approved 3rd party inspection agencies and/or NTPC/ Customer Agency as applicable.
25.	Inspection procedure for Domestic supplies	<u>For Domestic supplies</u> Vendor shall raise inspection call at least 15 business days in advance on BHEL CQS website to applicable inspection agency (as mentioned in PO/LOI or to be informed later) and submit copy of inspection call to BHEL-PEM for arranging NTPC inspection/Joint inspection on the proposed date, as applicable. MDCC shall be issued on the basis of clear inspection report (CQIR).  <u>For Foreign supplies</u> In case of Foreign supplies, if NTPC approved 3rd party inspection agency does not participate in the inspection, test certificates & inspection reports duly accepted by the agreed Inspection agency shall be submitted in soft copy to BHEL-PEM. The same shall be reviewed by PEM and then, sent to NTPC for clearance. The dispatch clearance (MDCC) by NTPC/ BHEL as applicable shall be given to the foreign supplier or representative in India after acceptance of above test certificates.

Grantur  
08/5/18

26.	Packing, Identification & marking [if not specified in NIT]	<p>Each box shall be marked with Capital Letters in "Red" indicating the <b>PEM SUPPLY (Main Supply/ Commissioning Spares/ Mandatory Spares) for 3 x 800 MW PVUNL PATRATU TPP.</b></p> <p><b>NOTE:</b> Main supply item and items for commissioning spares must be packed separately. Each package delivered under the Contract shall be marked by supplier and such marking must be distinct and in English language (all previous irrelevant markings being carefully obliterated). Such marking shall show the description and quantity of contents, the name and address of consignee, the Gross weight and Net weight of the package, the name of the Supplier, PEM P.O. reference number, with a distinctive number of mark sufficient for purposes of identification. Besides above necessary, packing shall bear a special marking 'TOP', 'BOTTOM', 'DO NOT TURN OVER', "KEEP DRY", "HANDLE WITH CARE", etc</p> <p><b>IMPORTANT: -</b></p> <ul style="list-style-type: none"> <li>• Two copies of respective standard manufacturer's erection instruction/operation instruction manual shall be kept in each package / container for immediate reference by BHEL site and same shall be reflected in packing slip also</li> <li>• The Packing list details for the consignment must be put inside the Box/Boxes.</li> </ul> <p>Items like pumps, Valves, Hoists, Cranes etc shall essentially have O&amp;M Manuals and E&amp;C guidelines duly enclosed in the packing box. Certificate to such effect shall also be reflected in packing slip.</p> <p>Mandatory spares shall be properly packed separately in separate box painted in Red, indicating <b>Mandatory Spares in bold letters</b> and each spare shall be properly tagged giving details i.e. item number of the equipment in line with the CUSTOMER approved BBU for Mandatory spares &amp; Number per item (to match the description given in the packing slip) to facilitate their proper identification by PVUNL/ NTPC. One Copy of Packing list must be put inside the Box along with Manufacturing drawing no. reference, Catalogue reference etc.</p>
27.	Submission of Final Drgs/Docs alongwith O&M Manual, Type Test Certificates (if any)	As per GCC rev.06/ Technical Specification/Kick-off meeting.

	Prepared by	Checked by	Reviewed by	Vetted by	Approved by
Name	Ganwan Garg	/		/	 16/05/18
Designation	Sr. Engr/ PG III	DGM/ PG III	DGM/ PG III	Finance	AGM & DH/ PG III
Signature	 08/5/18				DEEPAK GUPTA

An undertaking regarding 'GeM' Seller ID on company letter head only

(To be provided along with bid)

Reference: **PE/PG/PA1/E-6962/2022 dated 27.04.2022**

Item: **CABLE TRAYS & ACC.**

Project: **3x800 MW PVUNL PATRATU TPP PHASE-I**

TO WHOM SO IT MAY CONCERN

This is with reference to as per Department of Expenditure (DoE) OM No. 6/9/2020-PPD dt. 24/08/2020, it is mandatory for all the bidders to provide their 'GeM' (Government e-Market Place) Seller ID.

Bidder to Furnish:

- (a) Bidder Name:
- (b) Bidder 'GeM' Seller ID:

Above information is mandatory, failing which we are unable to place order. Please furnish the same.

Sign & Signature (Authorized Person)

Date:

Place:

An undertaking regarding Model Clauses on company letter head only  
(To be provided along with bid)

Reference: **PE/PG/PA1/E-6962/2022 dated 27.04.2022**

Item: **CABLE TRAYS & ACC.**

Project: **3x800 MW PVUNL PATRATU TPP PHASE-I**

TO WHOM SO IT MAY CONCERN

This is with reference to Ministry of Finance circular dated 23.07.20 reg. restriction under rule 144 (xi) of GFR.

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I hereby certify that M/s ..... is not from such a country and is eligible to be considered/participate in tender enquiry no.: **PE/PG/PA1/E-6962/2022 dated 27.04.2022.**

Sign & Signature (Not below Director/owner of the company)

Date:

Place:

# Letter head of Company

Ref: PE/PG/PA1/E-6962/2022 dated 27.04.2022

Date: .....

To,  
Bharat Heavy Electricals Limited  
PEM, PPEI Building, Plot No 25,  
Sector -16A, Noida (U.P)-201301

**Subject: - Certification regarding local content**

Reference: Tender Enquiry No: - **PE/PG/PA1/E-6962/2022 dated 27.04.2022**

Name of Package: **CABLE TRAYS & ACC.**

**Projects: 3x800 MW PVUNL PATRATU TPP PHASE-I**

Dear Sir,

We hereby certify that items offered by us of **CABLE TRAYS & ACC.** for above mentioned project meets the requirement of minimum local content in line with clause no. 19 of NIT and the Public Procurement (Preference to Make in India), Order 2017 dated-15.06.2017, 28.05.2018 & 29.05.2019, 04.06.20 & 16.09.20.

Bidder to furnish: Percentage of local content quoted in subject offer is: .....

We further confirm that details of location at which the local value addition is made will be our registered works at.....  
.....  
..... (address of the works)

Yours very truly

..... (authorized signatory of company)

..... (firm name)

authorized signatory  
of company

No.25-11/6/2018-PG  
Government of India  
Ministry of Power  
Shram Shakti Bhawan, Rafi Marg, New Delhi – 110001  
Tele Fax: 011-23730264  
\*\*\*\*\*

Dated 02/07/2020

**ORDER**

Power Supply System is a sensitive and critical infrastructure that supports not only our **national defence, vital emergency services** including health, disaster response, **critical national infrastructure** including classified data & communication services, defence installations and manufacturing establishments, logistics services but also the **entire economy** and the **day-to-day life** of the citizens of the country. Any danger or threat to Power Supply System can have catastrophic effects and has the potential to cripple the entire country. Therefore, the Power Sector is a **strategic and critical sector**.

The vulnerabilities in the Power Supply System & Network mainly arise out of the possibilities of cyber attacks through malware / Trojans etc. embedded in imported equipment. Hence, **to protect the security, integrity and reliability of the strategically important and critical Power Supply System & Network** in the country, the following directions are hereby issued :-

(1) All equipment, components, and parts imported for use in the Power Supply System and Network shall be tested in the country to check for any kind of embedded malware/trojans/cyber threat and for adherence to Indian Standards.

(2) All such testings shall be done in certified laboratories that will be designated by the Ministry of Power (MoP).

(3) Any import of equipment/components/parts from "prior reference" countries as specified or by persons owned by, controlled by, or subject to the jurisdiction or the directions of these "prior reference" countries will require prior permission of the Government of India

(4) Where the equipment/components/parts are imported from "prior reference" countries, with special permission, the protocol for testing in certified and designated laboratories shall be approved by the Ministry of Power (MoP).

This order shall apply to any item imported for end use or to be used as a component, or as a part in manufacturing, assembling of any equipment or to be used in power supply system or any activity directly or indirectly related to power supply system.

This issues with the approval of Hon'ble Minister of State for Power and New & Renewable Energy (Independent Charge).



**(Goutam Ghosh)**

Director

Tel: 011-23716674

To:

1. All Ministries/Departments of Government of India (As per list)
2. Secretary (Coordination), Cabinet Secretariat
3. Vice Chairman, NITI Aayog
4. Comptroller and Auditor General of India
5. Chairperson, CEA
6. CMDs of CPSEs/Chairman of DVC & BBMB/MD, EESL/DG, NPTI/DG, CPRI/DG, BEE/
7. All ASs/JSs/EA, MoP

Copy:

1. PS to Hon'ble PM, Prime Minister's Office
2. PS to Hon'ble MOS(IC) for Power and NRE
3. Sr. PPS to Secretary(Power)

No.25-11/6/2018-PG  
Government of India  
Ministry of Power  
Shram Shakti Bhawan, Rafi Marg, New Delhi – 110001  
Tele Fax: 011-23730264  
\*\*\*\*\*

Dated 02/07/2020

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This issues with the approval of Hon'ble Minister of State for Power and New & Renewable Energy (Independent Charge).



**(Goutam Ghosh)**

Director

Tel: 011-23716674

To:

1. All Ministries/Departments of Government of India (As per list)
2. Secretary (Coordination), Cabinet Secretariat
3. Vice Chairman, NITI Aayog
4. Comptroller and Auditor General of India
5. Chairperson, CEA
6. CMDs of CPSEs/Chairman of DVC & BBMB/MD, EESL/DG, NPTI/DG, CPRI/DG, BEE/
7. All ASs/JSs/EA, MoP

Copy:

1. PS to Hon'ble PM, Prime Minister's Office
2. PS to Hon'ble MOS(IC) for Power and NRE
3. Sr. PPS to Secretary(Power)

**No.11/05/2018-Coord.  
Government of India  
Ministry of Power**

**Shram Shakti Bhawan, New Delhi  
Dated the 23<sup>rd</sup> July, 2020.**

**ORDER**

**Sub: Measures for contributing towards 'Atmanirbhar Bharat' and 'Make in India' through phased indigenisation in Power Sector.**

**Whereas** Ministry of Power after analysis of data relating to import of the equipment in power sector and consultations with the stakeholders engaged in manufacturing of the equipment as well as developers of power projects in generation, transmission, and distribution, has taken note of the fact that despite Government of India policy of 'Make in India', many equipment in this sector are being imported even though sufficient domestic manufacturing capacity and competition exists.

**Whereas** DPIIT from time to time since 2017 has issued orders with the latest version issued vide No.P-45021/2/2017-PP (BE-II) on 04.06.2020 to promote Make in India and domestic manufacturing of goods and services in India with a view to enhancing income and employment and the said order needs to be fully implemented in power sector.

**Whereas**, for power sector to become an integral part of national campaign of 'Atmanirbhar Bharat' and to contribute to 'Make in India' policy of Government of India, it is essential that developers in the generation, transmission, and distribution of power, are also encouraged to effectively and wholeheartedly contribute in this endeavor.

**Whereas** Power is a sensitive and strategically important sector and is a critical infrastructure for development of our country, as our national defense, vital emergency services, critical national infrastructure, communication, data services, health services, logistics, manufacturing etc. all depends on reliable power supply and any possibility of malware/cyber threat in the power systems leads to vulnerability with the potential of bringing down the whole system with consequential impact on all other sectors of our country. Therefore, 'Atmanirbhar Bharat' has a much higher level of significance for this sector. Therefore, there is a need to encourage, adopt and use only 'Make in India' equipment/materials/parts/items in the power sector in order to protect the safety and security of our country.

**Now therefore the following order is issued:**

1. This order is issued in consonance with the order of the DPIIT referred above.
2. All equipment/materials/parts/items required in the power sector which are domestically manufactured with sufficient domestic capacity shall necessarily be used from the domestic manufacturers only as per the extant provisions of the Public Procurement (Preference to Make in India) Orders issued by DPIIT and MoP.

**Contd.....2/-**

3. In respect of equipment/materials/parts/items wherein domestic capacity is not available and imports are inevitable, the MoP shall list out all these equipment and prepare an Action Plan for their indigenisation over a specified time frame of 2-3 years. For this an enabling policy framework through support to Start-ups, phased manufacturing programme, vendor development, Research & Development, tax & other incentives needs to be developed.
4. Till such time indigenous manufacturing capacity for all equipment/materials/parts/items required in the power sector are developed, the goods so imported shall be tested in certified laboratories designated by MoP to check the presence of any embedded malware/trojans or other cyber threats and also to check adherence to Indian Standards. For testing of goods from prior reference countries, the testing protocol shall be approved by Ministry of Power (MoP).
5. Ministry of Power shall prepare an 'Approved list of Models and Manufacturers' (ALMM) in power sector. All Power Projects which are bid out as per the standard bidding guidelines will be required to procure equipment from manufacturers figuring in the approved list.
6. Financing from REC and PFC will be structured in such a manner that lower rates of interest will be charged on the developers who will use domestically manufactured equipment.

This issues with the approval of Hon'ble MoS (IC) for Power and NRE.



(R.K. Das)

Under Secretary to the Government of India  
Tel. No.011-23752495

To:

1. All Ministries/ Departments of Government of India (As per list)
2. Secretary (Coordination), Cabinet Secretariat
3. PS to Hon'ble PM, Prime Minister's Office
4. Vice Chairman, NITI Aayog
5. Director General, Comptroller and Auditor General of India
6. Secretary, DPIIT, Chairman of Standing Committee for implementation of Public Procurement Order, 2017
7. Joint Secretary, DPIIT, Member-Convener of Standing Committee for implementation of Public Procurement Order, 2017
8. Chairperson, CEA
9. CMDs of CPSEs/ Chairmen of DVC & BBMB/ MD of EESL/ DG(NPTI)/ DG(CPRI)/ DG(BEE)
10. All JSs/ EA, MoP

Copy to:

1. PS to MoS (IC) for Power and NRE
2. Sr. PPS to Secretary (Power)
3. Sr. PPS to Additional Secretaries in MoP

## Ashwani Sahu

---

**From:** Ashwani Sahu <ashwanisahu@bhel.in>  
**Sent:** 06 August 2020 10:52  
**To:** 'rakesh.singh@bhel.in'; 'rbajpai@bhel.in'; 'prawat@bhel.in'; 'apsamal@bhel.in'; 'skbaveja@bhel.in'; 'candy@bhel.in'; 'arn@bhel.in'; 'shyam.babu@bhel.in'; 'kumar.surendra@bhel.in'; 'vagrawal@bhel.in'; 'anilpatur@bhel.in'; 'padmaja@bhel.in'; 'avnaga@bhel.in'; 'radhikasista@bhel.in'; 'nalini@bhel.in'; 'mohan.k@bhel.in'; 'sanjeevi@bhel.in'; 'gans@bhel.in'; 'mnkumar@bhel.in'; 'pravi@bhel.in'; 'dina@bhel.in'; 'bhaskar.rao@bhel.in'; 'prasannagk@bhel.in'; 'jayakumarp@bhel.in'; 'ajaysharma@bhel.in'; 'aknived@bhel.in'; 'rbabu@bhel.in'; 'kms@bhel.in'; 'v.jain@bhel.in'; 'kumarrakesh@bhel.in'; 'atul.pandey@bhel.in'; 'sshekhar1@bhel.in'; 'ashuani@bhel.in'; 'shabbir@bhel.in'; 'rksaxena@bhel.in'; 'sbudiyal@bhel.in'; 'virender.gupta@bhel.in'; 'bsandipan@bhel.in'; 'gargi.ray@bhel.in'; 'prchiwarkar@bhel.in'; 'sk@bhel.in'; 'ev@bhel.in'; 'sprabhu@bhel.in'; 'indra.pal.singh@bhel.in'; 'mandvi@bhel.in'; 'minocha@bhel.in'; 'skmohite@bhel.in'; 'rprabha@bhel.in'; 'poongkodi@bhel.in'; 'dvkrsd@bhel.in'; 'aaditya@bhel.in'; 'sunilhaldia@bhel.in'; 'avisharma@bhel.in'; 'rlnagar@bhel.in'; 'anil.singh@bhel.in'; 'drgbhatla@bhel.in'; 'mgarg@bhel.in'; 'marora@bhel.in'; 'mmukundan@bhel.in'; 'neeraj@bhel.in'; 'krl@bhel.in'  
**Cc:** 'anandac@bhel.in'; 'tkbagchi@bhel.in'; 'sgulati@bhel.in'; 'jps@bhel.in'; 'amitkerketta@bhel.in'; 'pjreddy@bhel.in'; 'ratnav@bhel.in'; 'rpadmanabhan@bhel.in'; 'cmurthy@bhel.in'; 'akjain1@bhel.in'; 'brd@bhel.in'; 'gs@bhel.in'; 'gautam.chaklader@bhel.in'; 'tsmurali@bhel.in'; 'jai@bhel.in'; 'kaushika@bhel.in'; 'shakil@bhel.in'; 'subhas@bhel.in'; 'tlal@bhel.in'; 'aniljoshi@bhel.in'; 'csdeolika@bhel.in'; 'r\_singh@bhel.in'; 'pjreddy@bhel.in'; 'rsharma@bhel.in'; 'btalwar@bhel.in'; 'renuka@bhel.in'; 'pndmas@bhel.in'; 'snair@bhel.in'; 'gmurali@bhel.in'; 'pmgus@bhel.in'; 'pnm@bhel.in'; 'pulak@bhel.in'; 'aksarkar@bhel.in'; 'atuteja@bhel.in'; 'abgupta@bhel.in'; 'cvr@bhel.in'; 'amitpal@bhel.in'; 'sameer@bhel.in'; 'amalhotra@bhel.in'; 'ani@bhel.in'; 'sanju@bhel.in'; 'satyan@bhel.in'; 'bani@bhel.in'; 'saurabh@bhel.in'  
**Subject:** Restrictions under Rule 144 (xi) of GFR 2017 - DoE OM No.6/18/2019-PPD dated 23.07.2020 - Circular no. 09 of 2020-21  
**Attachments:** Restrictions under Rule 144 (xi) of GFR - Circular no. 09 of 2020-21.pdf

Dear Madam/ Sir,

Please find attached Circular No. 09 of 2020-21 on the above subject.

With kind regards,

Ashwani Sahu  
DGM/ COM-SS&P,  
Bharat Heavy Electricals Limited,  
Corporate Office, BHEL House,  
Siri Fort, New Delhi - 110049  
Ph: 011-66337203

**SOURCING STRATEGY & POLICY  
CORPORATE OPERATIONS MANAGEMENT  
BHEL – NEW DELHI**

AA:SSP:PPP-MII  
Dated: 06.08.2020

(Circular No. 09 of 2020-21)

**Sub: Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 - Dept. of Expenditure OM No.6/18/2019-PPD dated 23.07.2020**

**Ref: DPE OM No. DPE/7(4)/2017-Fin.(Part-I) dated 30.07.2020 (received vide DHI email dated 03.08.2020)**

1. DPE vide OM No. DPE/7(4)/2017-Fin.(Part-I) dated 30.07.2020 has enclosed Department of Expenditure's (DoE) OM and Order (Public Procurement No. 1 and No. 2) vide ref. F.No.6/18/2019-PPD dated 23.07.2020 on Restrictions under Rule 144 (xi) of the GFR and subsequent clarification Order (Public Procurement No. 3) dated 24.07.2020 for compliance by CPSEs.
2. As per para 1 of the DoE Order, any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) **only** if the bidder is registered with the Competent Authority (Registration Committee constituted by DPIIT as per annex I of the Order).
3. The DoE Order shall not apply to cases where orders have been placed or contract has been concluded or letter/ notice of award/ acceptance (LoA) has been issued on or before the date of the Order i.e. **23.07.2020** and cases falling under Annex II of the Order.
4. The DoE Order is not applicable to bidders from those countries (even if sharing a land border with India) to which the GoI has extended lines of credit or in which the GoI is engaged in development projects.
5. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are

  
06/08/2020

available on the Ministry of External affairs website (<https://www.mea.gov.in/>). The latest list is enclosed for ready reference. Units/ Regions are advised to regularly keep themselves updated in this regard.

6. Model clauses to be inserted in tenders and Model Certificates to be obtained from Bidders has been given in Annex III of the Order.

Accordingly, all Units/ Regions are to ensure compliance of DoE Orders dated 23.07.2020 and clarification dated 24.07.2020.

This issues with the approval of the Competent Authority.



(C. Venkat Rao)  
GM/ SS&P

Encls.: As above

**Distribution:**

- All Heads of MM of Units/ Regions

Copy to:

- All Heads of Units/ Regions
- SS&P page on Corporate Office intranet
- Director (HR)/(Fin)/(IS&P)/(Power)/(E, R&D)
- SA to CMD
- <http://intranet.bhel.in>
- for kind information
- for kind information of CMD

BHEL House, Siri Fort, New Delhi  
+91 - 11 - 2600 1001

---

**From:** "Dinesh Pal Singh" <[dineshp.singh@nic.in](mailto:dineshp.singh@nic.in)>  
**To:** "com sec" <[com.sec@andrewyule.com](mailto:com.sec@andrewyule.com)>, [yuledelhi@gmail.com](mailto:yuledelhi@gmail.com), [cmd@andrewyule.com](mailto:cmd@andrewyule.com), "nalinshinghal" <[nalinshinghal@bhel.in](mailto:nalinshinghal@bhel.in)>, "cmd" <[cmd@bhel.in](mailto:cmd@bhel.in)>, [cmd@bharatpumps.co.in](mailto:cmd@bharatpumps.co.in), [bpcdelhi@gmail.com](mailto:bpcdelhi@gmail.com), [bpclindia@sancharnet.in](mailto:bpclindia@sancharnet.in), [info@bheleml.com](mailto:info@bheleml.com), [md@bheleml.com](mailto:md@bheleml.com), [info@bbjconst.com](mailto:info@bbjconst.com), [sundarbanerjee@bbjconst.com](mailto:sundarbanerjee@bbjconst.com), "Bridge Roof" <[delhi@bridgeroof.co.in](mailto:delhi@bridgeroof.co.in)>, "CMD BRIDGEROOF" <[cmd@bridgeroof.co.in](mailto:cmd@bridgeroof.co.in)>, "Bridge Roof" <[bridge@bridgeroof.co.in](mailto:bridge@bridgeroof.co.in)>, [bandrdelhi@gmail.com](mailto:bandrdelhi@gmail.com), [cmd@ccilttd.in](mailto:cmd@ccilttd.in), [dirf@ccilttd.in](mailto:dirf@ccilttd.in), "co secy" <[co\\_secy@ccilttd.in](mailto:co_secy@ccilttd.in)>, "cci co" <[cci\\_co@ccilttd.in](mailto:cci_co@ccilttd.in)>, "CMD EPI" <[cmd@engineeringprojects.com](mailto:cmd@engineeringprojects.com)>, "pk sahu" <[pk.sahoo@engineeringprojects.com](mailto:pk.sahoo@engineeringprojects.com)>, "Deepika Mehta" <[deepika.mehta@engineeringprojects.com](mailto:deepika.mehta@engineeringprojects.com)>, "S Girish Kumar" <[cmd@hmtindia.com](mailto:cmd@hmtindia.com)>, [girishkumar@hmti.com](mailto:girishkumar@hmti.com), "cmd" <[cmd@hecltd.com](mailto:cmd@hecltd.com)>, "ABHAY KUMAR KANTH" <[sect@hecltd.com](mailto:sect@hecltd.com)>, [corpmktg@hecltd.com](mailto:corpmktg@hecltd.com), [hecdelhi@hecltd.com](mailto:hecdelhi@hecltd.com), [cmdhckol@gmail.com](mailto:cmdhckol@gmail.com), [hnl@hnlonline.com](mailto:hnl@hnlonline.com), [cmd@indiansalt.com](mailto:cmd@indiansalt.com), "sumona majumdar" <[sumona.majumdar@indiansalt.com](mailto:sumona.majumdar@indiansalt.com)>, [info@indiansalt.com](mailto:info@indiansalt.com), [cmd@ilkota.in](mailto:cmd@ilkota.in), [tsocmd@ilkota.in](mailto:tsocmd@ilkota.in), "ANANDA CHANNAKESHAVAIAH" <[cmd@nepamills.nic.in](mailto:cmd@nepamills.nic.in)>, "Secretary NEPAMILLS" <[secretary@nepamills.nic.in](mailto:secretary@nepamills.nic.in)>, "nepa ltd" <[nepa\\_ltd@yahoo.com](mailto:nepa_ltd@yahoo.com)>, "Shri AVHIJIT CHATTERJEE DELHI" <[nepadelhi@nepamills.nic.in](mailto:nepadelhi@nepamills.nic.in)>, [mdu@reil.co.in](mailto:mdu@reil.co.in), "Rakesh Chopra" <[rakesh.chopra@reiljp.com](mailto:rakesh.chopra@reiljp.com)>, "Subhash Agrawal, Addl. General Manager (F&A), REIL" <[fin\\_acct@reiljp.com](mailto:fin_acct@reiljp.com)>, [richardsoncruddas@yahoo.co.in](mailto:richardsoncruddas@yahoo.co.in), [cmd@scootersindia.com](mailto:cmd@scootersindia.com), [companysecretary@scootersindia.com](mailto:companysecretary@scootersindia.com), [info@tsl.in](mailto:info@tsl.in), [girishcmd@hpf-india.com](mailto:girishcmd@hpf-india.com), [indu@hpf-india.com](mailto:indu@hpf-india.com), [sunilkumar@fcriindia.com](mailto:sunilkumar@fcriindia.com), [director@fcriindia.com](mailto:director@fcriindia.com), [gsvfcri@gmail.com](mailto:gsvfcri@gmail.com), [director@araiindia.com](mailto:director@araiindia.com), [info@araiindia.com](mailto:info@araiindia.com), "PravinAggarwal Director" <[fame.india@gov.in](mailto:fame.india@gov.in)>, "sanjay bando" <[sanjay.bando@gmail.com](mailto:sanjay.bando@gmail.com)>, "Team Natrip" <[team@natrip.in](mailto:team@natrip.in)>, "Dinesh Vasishta" <[dinesh.vasishta@natrip.in](mailto:dinesh.vasishta@natrip.in)>, "Director, CMTI" <[director.cmti@nic.in](mailto:director.cmti@nic.in)>, "directorate cmti" <[directorate.cmti@nic.in](mailto:directorate.cmti@nic.in)>, "Krishna Rathod" <[cmti@nic.in](mailto:cmti@nic.in)>  
**Cc:** "Sukriti Likhi" <[sukriti.l@nic.in](mailto:sukriti.l@nic.in)>, "Office Of JS(SL)" <[jssl-dhi@gov.in](mailto:jssl-dhi@gov.in)>, "amit varadan" <[amit.varadan@gov.in](mailto:amit.varadan@gov.in)>, "Amit Mehta" <[amitmehta.ofb@nic.in](mailto:amitmehta.ofb@nic.in)>, "Sujata Sharma" <[sujatas@nic.in](mailto:sujatas@nic.in)>, "Sunil Kumar Singh" <[sunilsingh.irss@gov.in](mailto:sunilsingh.irss@gov.in)>, "Ritu Pande" <[ritu.pande@nic.in](mailto:ritu.pande@nic.in)>, "Mohmed Zakir Hussain" <[zakir.its@gov.in](mailto:zakir.its@gov.in)>, "Rama Kant Singh Director" <[singh.ramakant59@nic.in](mailto:singh.ramakant59@nic.in)>, "ANAND KUMAR SINGH" <[aksingh5.ofb@ofb.gov.in](mailto:aksingh5.ofb@ofb.gov.in)>, "Parveen Gupta (DS)" <[parveen.gupta9@nic.in](mailto:parveen.gupta9@nic.in)>, "am.manichan" <[am.manichan@nic.in](mailto:am.manichan@nic.in)>, "Alka Tewari" <[alka.tewari@gov.in](mailto:alka.tewari@gov.in)>, "Ghanshyam Thakur" <[ghanshyam.thakur@nic.in](mailto:ghanshyam.thakur@nic.in)>, "Kumar Diwakar Singh" <[kdiwakar.singh@nic.in](mailto:kdiwakar.singh@nic.in)>, "Vijay Kumar" <[ykumar.mv@nic.in](mailto:ykumar.mv@nic.in)>, "Madanpal Singh" <[madanpal.singh@nic.in](mailto:madanpal.singh@nic.in)>, "dhi\_coord" <[dhi\\_coord@nic.in](mailto:dhi_coord@nic.in)>  
**Sent:** Monday, August 3, 2020 1:26:15 PM  
**Subject:** Fwd: [Secy-admn-dpe] Restrictions under Rule 144(xi) of the General Financial Rules (GFRs), 2017- Dept. of Expenditure OM No.6/18/2019-PPD dated 23rd July, 2020 - regarding

Sir/Madam,

Reference to trailing mail dated 30th July, 2020 on the subject mentioned above.

DPE O.M. No.DPE/7(4)/2017-Fin.(Part-I) dated 30th July, 2020 alongwith its enclosures is sent herewith for necessary action.

Regards,

Dinesh Pal Singh,  
Under Secretary(Coord.), DHI

**From:** "Samba Siva Rao" <[ps.sivarao@nic.in](mailto:ps.sivarao@nic.in)>

**To:** [secy-admn-dpe@lsmgr.nic.in](mailto:secy-admn-dpe@lsmgr.nic.in)

**Sent:** Thursday, July 30, 2020 2:57:09 PM

**Subject:** [Secy-admn-dpe] Restrictions under Rule 144(xi) of the General Financial Rules (GFRs), 2017- Dept. of Expenditure OM No.6/18/2019-PPD dated 23rd July, 2020 - regarding

Sir/Madam

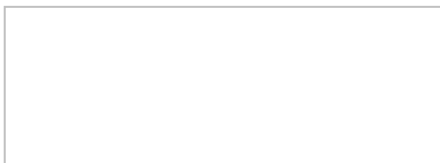
Please find enclosed DPE OM dated 30.7.2020 on the above subject for necessary action.

P S S RAO  
DD/DPE



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Secy-admn-dpe mailing list  
[Secy-admn-dpe@lsmgr.nic.in](mailto:Secy-admn-dpe@lsmgr.nic.in)



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13 MB

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**No. DPE/7(4)/2017-Fin.(Part-I)**  
**Government of India**  
**Ministry of Heavy Industries & Public Enterprises**  
**Department of Public Enterprises**  
\*\*\*\*\*

**Public Enterprises Bhawan**  
**Block No.14, CGO Complex**  
**New Delhi – 110003**

**Date: 30<sup>th</sup> July, 2020**

**OFFICE MEMORANDUM**

**Subject: Restrictions under Rule 144(xi) of the General Financial Rules (GFRs), 2017-  
Dept. of Expenditure OM No.6/18/2019-PPD dated 23<sup>rd</sup> July, 2020 -  
regarding**

The undersigned is directed to enclose Department of Expenditure's (DoE) OMs No. 6/18/2019-PPD dated 23<sup>rd</sup> July, 2020 & 24<sup>th</sup> July, 2020 imposing restrictions under Rule 144(xi) of the General Financial Rules (GFRs), 2017 on the grounds of Defence of India and National Security for information and compliance.

2. All the administrative Ministries/ Departments of CPSEs are requested to ensure compliance of the directions issued by DoE by CPSEs under their administrative control.
3. This issues with the approval of competent authority.



(Kalyani Mishra)  
Director  
Tel.24362061

Encl.: (DoE's OMs No. 6/18/2019-PPD dated 23<sup>rd</sup> July, 2020  
6/18/2019-PPD dated 23<sup>rd</sup> July, 2020 &  
6/18/2019-PPD dated 24<sup>th</sup> July, 2020)

To

- i) All the Secretaries to the Administrative Ministries/Departments of CPSEs
- ii) Chief Executives of CPSEs

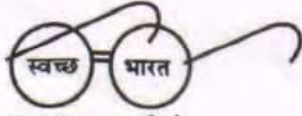
Copy for information to:  
Secretary, D/o Expenditure, North Block, New Delhi

डा. टी. वी. सोमनाथन, आई.ए.एस.  
सचिव (व्यय)

Dr. T. V. Somanathan, I.A.S.  
Secretary (Expenditure)



सत्यमेव जयते



एक करण स्वच्छता की ओर

भारत सरकार  
वित्त मंत्रालय  
व्यय विभाग

Government of India  
Ministry of Finance  
Department of Expenditure  
नार्थ ब्लॉक, नई दिल्ली-110001  
North Block, New Delhi-110001  
Tel. : 23092929, 23092663  
Fax : 23092546  
E-mail : secyexp@nic.in  
Website : www.finmin.nic.in

D.O.F.No.6/18/2019- PPD

28<sup>th</sup> July, 2020

Dear Shri Sailesh,

As you are aware the General Financial Rules (GFRs), 2017 have been amended inserting Rule 144 (xi) which empowers Department of Expenditure to impose restrictions, including prior registration or screening on procurement from bidders from a country or countries on grounds of Defence of India and National Security. The amended Rule provides that no public procurement shall be made in violation of such restrictions. Pursuant to the above, Order (Public Procurement No. 1) and Order (Public Procurement No. 2) were issued vide F.No.6/18/2019-PPD dated 23.7.2020. A clarification was issued in Order (Public Procurement No. 3).

2. Though the GFRs ordinarily do not apply to public sector enterprises, in this instance, as they relate to national security, the orders have consciously been made applicable to all Central Public Sector Enterprises as well. It is, therefore, requested that necessary instructions may be issued by your Department reiterating the applicability of orders stated in Paragraph 1 of this letter to all Central Public Sector Enterprises.

3. Copies of the Orders are attached for ease of reference.

With regards,

Encl: **As above**

**Shri Sailesh, IAS**  
Secretary,  
Department of Public Enterprises,  
160, Udyog Bhawan,  
New Delhi: 110011

Copy to: Cabinet Secretary – for information

Yours sincerely,

(T.V. Somanathan)

we may issue  
instructions today

29/7

ASCRKC

47545  
29/7/20

F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

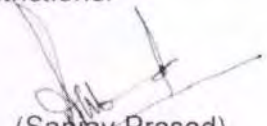
161, North Block,  
New Delhi  
23rd July, 2020

**Office Memorandum**

**Subject: Insertion of Rule 144 (xi) in the General Financial Rules (GFRs), 2017**

Rule 144 of the General Financial Rules 2017 entitled 'Fundamental principles of public buying', has been amended by inserting sub-rule (xi) as under:

*Notwithstanding anything contained in these Rules, Department of Expenditure may, by order in writing, impose restrictions, including prior registration and/or screening, on procurement from bidders from a country or countries, or a class of countries, on grounds of defence of India, or matters directly or indirectly related thereto including national security; no procurement shall be made in violation of such restrictions.*



(Sanjay Prasad)  
Joint Secretary (PPD)  
Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)  
Telephone: 011-23093882

To,  
(1) Secretaries of All Ministries/ Departments of Government of India  
(2) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

1/12

F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

161, North Block,  
New Delhi  
23rd July, 2020

**Order (Public Procurement No. 1)**

**Subject: Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017**

Attention is invited to this office OM no. 6/18/2019-PPD dated 23<sup>rd</sup> July 2020 inserting Rule 144 (xi) in GFRs 2017. In this regard, the following is hereby ordered under Rule 144 (xi) on the grounds stated therein:

**Requirement of registration**

1. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority, specified in **Annex I**.
2. This Order shall not apply to (i) cases where orders have been placed or contract has been concluded or letter/notice of award/ acceptance (LoA) has been issued on or before the date of this order; and (ii) cases falling under **Annex II**.

**Transitional cases**

3. Tenders where no contract has been concluded or no LoA has been issued so far shall be handled in the following manner: -
  - a) *In tenders which are yet to be opened, or where evaluation of technical bid or the first exclusionary qualificatory stage (i.e. the first stage at which the qualifications of tenderers are evaluated and unqualified bidders are excluded) has not been completed: No contracts shall be placed on bidders from such countries. Tenders received from bidders from such countries shall be dealt with as if they are non-compliant with the tender conditions and the tender shall be processed accordingly.*
  - b) *If the tendering process has crossed the first exclusionary qualificatory stage: If the qualified bidders include bidders from such countries, the*

2/12  
-

entire process shall be scrapped and initiated *de novo*. The *de novo* process shall adhere to the conditions prescribed in this Order.

- c) As far as practicable, and in cases of doubt about whether a bidder falls under paragraph 1, a certificate shall be obtained from the bidder whose bid is proposed to be considered or accepted, in terms of paras 8, 9 and 10 read with para 1 of this Order.

#### Incorporation in tender conditions

4. In tenders to be issued after the date of this order, the provisions of paragraph 1 and of other relevant provisions of this Order shall be incorporated in the tender conditions.

#### Applicability

5. Apart from Ministries / Departments, attached and subordinate bodies, notwithstanding anything contained in Rule 1 of the GFRs 2017, this Order shall also be applicable
  - a. to all Autonomous Bodies;
  - b. to public sector banks and public sector financial institutions; and
  - c. subject to any orders of the Department of Public Enterprises, to all Central Public Sector Enterprises; and
  - d. to procurement in Public Private Partnership projects receiving financial support from the Government or public sector enterprises/ undertakings.
  - e. Union Territories, National Capital Territory of Delhi and all agencies/ undertakings thereof

#### Definitions

6. "Bidder" for the purpose of this Order (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies). every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency, branch or office controlled by such person, participating in a procurement process.
7. "Tender" for the purpose of this Order will include other forms of procurement, except where the context requires otherwise.
8. "Bidder from a country which shares a land border with India" for the purpose of this Order means

- a) An entity incorporated, established or registered in such a country; or
- b) A subsidiary of an entity incorporated, established or registered in such a country; or
- c) An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d) An entity whose *beneficial owner* is situated in such a country; or
- e) An Indian (or other) agent of such an entity; or
- f) A natural person who is a citizen of such a country; or
- g) A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

9. "Beneficial owner" for the purpose of paragraph 8 above will be as under:

- (i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person(s), has a controlling ownership interest or who exercises control through other means.

Explanation—

- a. "Controlling ownership interest" means ownership of, or entitlement to, more than twenty-five per cent of shares or capital or profits of the company;
- b. "Control" shall include the right to appoint the majority of the directors or to control the management or policy decisions, including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

- (ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

- (iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

- (iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

4/12

(v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

10. "Agent" for the purpose of this Order is a person employed to do any act for another, or to represent another in dealings with third persons.

#### Sub-contracting in works contracts

11. In works contracts, including turnkey contracts, contractors shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority. The definition of "contractor from a country which shares a land border with India" shall be as in paragraph 8 above. This shall not apply to sub-contracts already awarded on or before the date of this Order.

#### Certificate regarding compliance

12. A certificate shall be taken from bidders in the tender documents regarding their compliance with this Order. If such certificate given by a bidder whose bid is accepted is found to be false, this would be a ground for immediate termination and further legal action in accordance with law.

#### Validity of registration

13. In respect of tenders, registration should be valid at the time of submission of bids and at the time of acceptance of bids. In respect of supply otherwise than by tender, registration should be valid at the time of placement of order. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

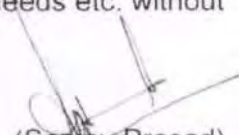
#### Government E-Marketplace

14. The Government E-Marketplace shall, as soon as possible, require all vendors/ bidders registered with GeM to give a certificate regarding compliance with this Order, and after the date fixed by it, shall remove non-compliant entities from GeM unless/ until they are registered in accordance with this Order.

5/12

Model Clauses/ Certificates

15. Model Clauses and Model Certificates which may be inserted in tenders / obtained from Bidders are enclosed as **Annex III**. While adhering to the substance of the Order, procuring entities are free to appropriately modify the wording of these clauses based on their past experience, local needs etc. without making any reference to this Department.

  
(Sanjay Prasad)  
Joint Secretary (PPD)  
Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)  
Telephone: 011-23093882

To

- (1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.
- (2) Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect of Public Enterprises.
- (3) Secretary DPIIT with a request to initiate action as provided under Annex I
- (4) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

6/12

## Annex I: Competent Authority and Procedure for Registration

- A. The Competent Authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)\*.
- B. The Registration Committee shall have the following members\*:
- i. An officer, not below the rank of Joint Secretary, designated for this purpose by DPIIT, who shall be the Chairman;
  - ii. Officers (ordinarily not below the rank of Joint Secretary) representing the Ministry of Home Affairs, Ministry of External Affairs, and of those Departments whose sectors are covered by applications under consideration;
  - iii. Any other officer whose presence is deemed necessary by the Chairman of the Committee.
- C. DPIIT shall lay down the method of application, format etc. for such bidders as stated in para 1 of this Order.
- D. On receipt of an application seeking registration from a bidder from a country covered by para 1 of this Order, the Competent Authority shall first seek political and security clearances from the Ministry of External Affairs and Ministry of Home Affairs, as per guidelines issued from time to time. Registration shall not be given unless political and security clearance have both been received.
- E. The Ministry of External Affairs and Ministry of Home Affairs may issue guidelines for internal use regarding the procedure for scrutiny of such applications by them.
- F. The decision of the Competent Authority, to register such bidder may be for all kinds of tenders or for a specified type(s) of goods or services, and may be for a specified or unspecified duration of time, as deemed fit. The decision of the Competent Authority shall be final.
- G. Registration shall not be granted unless the representatives of the Ministries of Home Affairs and External Affairs on the Committee concur\*.
- H. Registration granted by the Competent Authority of the Government of India shall be valid not only for procurement by Central Government and its agencies/ public enterprises etc. but also for procurement by State Governments and their agencies/ public enterprises etc. No fresh registration at the State level shall be required.

7/12

- I. The Competent Authority is empowered to cancel the registration already granted if it determines that there is sufficient cause. Such cancellation by itself, however, will not affect the execution of contracts already awarded. Pending cancellation, it may also suspend the registration of a bidder, and the bidder shall not be eligible to bid in any further tenders during the period of suspension.
- J. For national security reasons, the Competent Authority shall not be required to give reasons for rejection / cancellation of registration of a bidder.
- K. In transitional cases falling under para 3 of this Order, where it is felt that it will not be practicable to exclude bidders from a country which shares a land border with India, a reference seeking permission to consider such bidders shall be made by the procuring entity to the Competent Authority, giving full information and detailed reasons. The Competent Authority shall decide whether such bidders may be considered, and if so shall follow the procedure laid down in the above paras.
- L. Periodic reports on the acceptance/ refusal of registration during the preceding period may be required to be sent to the Cabinet Secretariat. Details will be issued separately in due course by DPIIT.

[\*Note:

- i. In respect of application of this Order to procurement by/ under State Governments, all functions assigned to DPIIT shall be carried out by the State Government concerned through a specific department or authority designated by it. The composition of the Registration Committee shall be as decided by the State Government and paragraph G above shall not apply. However, the requirement of **political and security clearance as per para D shall remain and no registration shall be granted without such clearance.**
- ii. Registration granted by State Governments shall be valid only for procurement by the State Government and its agencies/ public enterprises etc. and shall not be valid for procurement in other states or by the Government of India and their agencies/ public enterprises etc.]

8/12

## Annex II: Special Cases

- A. Till 31<sup>st</sup> December 2020, procurement of medical supplies directly related to containment of the Covid-19 pandemic shall be exempt from the provisions of this Order.
- B. *Bona fide* procurements made through GeM without knowing the country of the bidder till the date fixed by GeM for this purpose, shall not be invalidated by this Order.
- C. *Bona fide* small procurements, made without knowing the country of the bidder, shall not be invalidated by this Order.
- D. In projects which receive international funding with the approval of the Department of Economic Affairs (DEA), Ministry of Finance, the procurement guidelines applicable to the project shall normally be followed, notwithstanding anything contained in this Order and without reference to the Competent Authority. Exceptions to this shall be decided in consultation with DEA.
- E. This Order shall not apply to procurement by Indian missions and by offices of government agencies/ undertakings located outside India.

9/12

### Annex III

#### Model Clause /Certificate to be inserted in tenders etc.

(While adhering to the substance of the Order, procuring entities and GeM are free to appropriately modify the wording of the clause/ certificate based on their past experience, local needs etc.)

#### Model Clauses for Tenders

- I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.
- II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Order means: -
  - a. An entity incorporated, established or registered in such a country; or
  - b. A subsidiary of an entity incorporated, established or registered in such a country; or
  - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
  - d. An entity whose *beneficial owner* is situated in such a country; or
  - e. An Indian (or other) agent of such an entity; or
  - f. A natural person who is a citizen of such a country; or
  - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The *beneficial owner* for the purpose of (iii) above will be as under:
  1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation—

    - a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;

10/12

- b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;
2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
  3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
  4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
  5. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- VI. *[To be inserted in tenders for Works contracts, including Turnkey contracts]* The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

Model Certificate for Tenders (for transitional cases as stated in para 3 of this Order)

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I hereby certify that this bidder is not from such a country and is eligible to be considered."*

Model Certificate for Tenders

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the*

11/12

*Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"*

Model Certificate for Tenders for Works involving possibility of sub-contracting

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such countries; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"*

Model Certificate for GeM:

*"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this vendor/ bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this vendor/ bidder fulfills all requirements in this regard and is eligible to be considered for procurement on GeM. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"*

12/12

\*\*\*\*\*

F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

161, North Block  
New Delhi  
23rd July, 2020

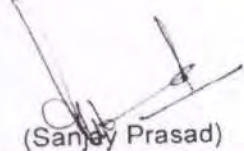
**Order ( Public Procurement No. 2)**

**Subject: Exclusion from restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017 –regarding.**

In Order (Public Procurement No. 1) dated 23rd July 2020, orders have been issued requiring registration of bidders from a country sharing a land border with India in order to be eligible to bid in public procurement.

2. Notwithstanding anything contained therein, it is hereby clarified that the said Order will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects.

3. Updated lists of countries to which lines of credit have been extended or in which development projects are undertaken are given in the website of the Ministry of External Affairs.

  
(Sanjay Prasad)  
Joint Secretary (PPD)  
Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)  
Telephone: 011-23093882

To,

- (1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform these provisions to all procuring entities.
- (2) Secretary, Department of Public Enterprises with a request to immediately reiterate these orders in respect of Public Enterprises.
- (3) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi

F.No.6/18/2019-PPD  
Ministry of Finance  
Department of Expenditure  
Public Procurement Division

161, North Block,  
New Delhi  
24<sup>th</sup> July, 2020

**Order (Public Procurement No. 3)**

**Subject: Clarification to Order (Public Procurement No.1) dated 23<sup>rd</sup> July 2020**

Attention is invited to paragraph 3(b) of the Order (Public Procurement No.1), under the heading "Transitional provisions" which reads as follows:

- b) *If the tendering process has crossed the first exclusionary qualificatory stage: If the qualified bidders include bidders from such countries, the entire process shall be scrapped and initiated *de novo*. The *de novo* process shall adhere to the conditions prescribed in this Order.*

It is hereby clarified that for the purpose of paragraph 3 (b), "qualified bidders" means only those bidders who would otherwise have been qualified for award of the tender after considering all factors including price, if Order (Public Procurement No. 1) dated 23<sup>rd</sup> July 2020 had not been issued.

2. If bidders from such countries would not have qualified for award for reasons unconnected with the said Order (for example, because they do not meet tender criteria or their price bid is higher or because of the provisions of purchase preference under any other order or rule or any other reason) then there is no need to scrap the tender / start the process de novo.

3. The following examples are given to assist in implementation of the Order.

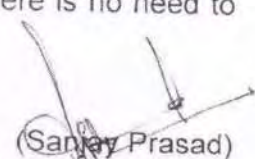
Example 1: Four bids are received in a tender. One of them is from a country which shares a land border with India. The bidder from such country is found to be qualified technically by meeting all prescribed criteria and is also the lowest bidder. In this case, the bidder is qualified for award of the tender, except for the provisions of the Order (Public Procurement No. 1) dated 23<sup>rd</sup> July. In this case, the tender should be scrapped and fresh tender initiated.

Example 2: The facts are as in Example 1, but the bidder from such country, though technically qualified is not the lowest because there are other technically qualified bidders whose price is lower. Hence the bidder from such country would not be

qualified for award of the tender irrespective of the Order (Public Procurement No. 1) dated 23<sup>rd</sup> July 2020. In such a case, there is no need to scrap the tender.

Example 3: The facts are as in Example 1, but the bidder from a country which shares a land border with India, though technically qualified, is not eligible for award due to the application of price preference as per other orders/ rules. In such a case, there is no need to scrap the tender.

Example 4: Three bids are received in a tender. One of them is a bidder from a country sharing a land border with India. The bidder from such a country does not meet the technical requirements and hence is not qualified. There is no need to scrap the tender.

  
(Sanjay Prasad)  
Joint Secretary (PPD)  
Email ID: [js.pfc2.doe@gov.in](mailto:js.pfc2.doe@gov.in)  
Telephone: 011-23093882

To,

- (1) Secretaries of All Ministries/ Departments of Government of India for information and necessary action. They are also requested to inform the clarification to all procuring entities.
- (2) Secretary, Department of Public Enterprises with a request to immediately circulate this clarification among Public Enterprises.
- (3) Chief Secretaries/ Administrators of Union Territories/ National Capital Territory of Delhi




English 

Home > [List of Countries to which LoC has been extended w.r.t. Order \(Public Procurement no.2\) 23 July 2020](#)

## List of Countries to which LoC has been extended w.r.t. Order (Public Procurement no. 2) dated 23 July 2020

Sr. No.	Country
<b>South Asia (4 countries)</b>	
1	Bangladesh
2	Maldives
3	Nepal
4	Sri Lanka
<b>South East Asia (4 countries)</b>	
5	Cambodia
6	Lao PDR
7	Myanmar
8	Vietnam
<b>Asia (3 countries)</b>	
9	Mongolia

10	Iran
11	Syria
<b>Russia and CIS (3 countries)</b>	
12	Belarus
13	Russia
14	Uzbekistan
<b>Africa (41 countries)</b>	
15	Angola
16	Benin
17	Burkina Faso
18	Burundi
19	Cameroon
20	Central African Republic
21	Chad
22	Comoros
23	Cote d'Ivoire
24	D.R.Congo
25	Djibouti
26	Eritrea
27	Eswatini (Swaziland)
28	Ethiopia
29	Gabon
30	Gambia
31	Ghana

32	Guinea
33	Guinea Bissau
34	Kenya
35	Lesotho
36	Liberia
37	Madagascar
38	Malawi
39	Mali
	Mali & Senegal (combined LOC)
40	Mauritania
41	Mauritius
42	Mozambique
43	Niger
44	Nigeria
45	R. Congo
46	Rwanda
47	Senegal
48	Seychelles
49	Sierra Leone
50	Sudan
51	Tanzania
52	Togo
53	Uganda

54	Zambia
55	Zimbabwe
	Ecogas Bank of Investment and Development (EBID)
56	Bolivia
57	Cuba
58	Guyana
59	Honduras
60	Jamaica
61	Nicaragua
62	Suriname
<b>Pacific Island countries (2 countries)</b>	
63	Fiji Islands
64	Papua New Guinea
<b>Total (64 countries) US \$ 30.595 billion</b>	



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English 

Home > [List of Countries in Which Development Grant Projects](#)

## List of countries in which development grant projects are undertaken w.r.t. Order (Public Procurement No. 2) dated 23 July 2020

Sr. No.	Country
1	Afghanistan
2	Antigua & Barbuda
3	Argentina
4	Armenia
5	Azerbaijan
6	Bangladesh
7	Barbados
8	Belize
9	Benin
10	Bhutan
11	Bolivia
12	Botswana

13	Burkina Faso
14	Burundi
15	Cambodia
16	Cameroon
17	Cape Verde
18	Central African Republic
19	Chad
20	Commonwealth of Dominica
21	Comoros
22	Cook Islands
23	Costa Rica
24	Cote d'Ivoire
25	Democratic Republic of the Congo
26	Djibouti
27	Ecuador
28	Egypt
29	Equatorial Guinea
30	Eritrea
31	Ethiopia
32	Federated States of Micronesia
33	Fiji Islands
34	Gabon
35	Gambia
36	Ghana

37	Grenada
38	Guinea
39	Guinea-Bissau
40	Guyana
41	Haiti
42	Jamaica
43	Jordan
44	Kazakhstan
45	Kenya
46	Kingdom of Lesotho
47	Kiribati
48	Kyrgyzstan
49	Lao PDR
50	Lebanon
51	Liberia
52	Libya
53	Madagascar
54	Malawi
55	Maldives
56	Mali
57	Marshall Islands
58	Mauritania
59	Mauritius
60	Mongolia

61	Morocco
62	Mozambique
63	Myanmar
64	Namibia
65	Nauru
66	Nepal
67	Niger
68	Nigeria
69	Niue
70	Palau
71	Palestine
72	Panama
73	Papua New Guinea
74	Peru
75	Republic of Congo
76	Rwanda
77	Saint Kitts & Nevis
78	Saint Lucia
79	Saint Vincent & the Grenadines
80	Samoa
81	Sao Tome and Principe
82	Senegal
83	Seychelles
84	Sierra Leone

85	Solomon Islands
86	Somalia
87	South Africa
88	South Sudan
89	Sri Lanka
90	Sudan
91	Suriname
92	Swaziland
93	Syria
94	Tajikistan
95	Tanzania
96	The Bahamas
97	The Commonwealth of Dominica
98	Timor Leste
99	Togo
100	Tonga
101	Trinidad & Tobago
102	Turkmenistan
103	Tuvalu
104	Uganda
105	Ukraine
106	Uzbekistan
107	Vanuatu
108	Vietnam

109	Zambia
110	Zimbabwe



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## वासव महाजन / Vasav Mahajan

---

**From:** Ashwani Sahu <ashwanisahu@bhel.in>  
**Sent:** 24 July 2020 14:07  
**To:** rakesh.singh@bhel.in; rbajpai@bhel.in; prawat@bhel.in; apsamal@bhel.in; skbaveja@bhel.in; candy@bhel.in; arn@bhel.in; adarsh@bhel.in; kumar.surendra@bhel.in; vagrawal@bhel.in; anilpatur@bhel.in; padmaja@bhel.in; avnaga@bhel.in; radhikasista@bhel.in; nalini@bhel.in; mohank@bhel.in; sanjeevi@bhel.in; gans@bhel.in; mnkumar@bhel.in; pravi@bhel.in; dina@bhel.in; bhaskar.rao@bhel.in; prasannagk@bhel.in; ajaysharma@bhel.in; aknived@bhel.in; rbabu@bhel.in; kms@bhel.in; v.jain@bhel.in; kumarrakesh@bhel.in; atul.pandey@bhel.in; sshekhar1@bhel.in; ashvani@bhel.in; shabbir@bhel.in; rksaxena@bhel.in; sbudiyal@bhel.in; virender.gupta@bhel.in; subrata.sen@bhel.in; gargi.ray@bhel.in; prchiwarkar@bhel.in; sk@bhel.in; bsandipan@bhel.in; ev@bhel.in; sprabhu@bhel.in; indrapal.singh@bhel.in; mandvi@bhel.in; minocha@bhel.in; skmohite@bhel.in; rprabha@bhel.in; poongkodi@bhel.in; dvkrds@bhel.in; aaditya@bhel.in; sunilhaldia@bhel.in; avisharma@bhel.in; rlnagar@bhel.in; anil.singh@bhel.in; drgbhatla@bhel.in; mgarg@bhel.in; marora@bhel.in; mmukundan@bhel.in; neeraj@bhel.in; krl@bhel.in  
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**Subject:** Public Procurement (Preference to Make in India), Order 2017 - Revision; - Circular no. 08 of 2020-21  
**Attachments:** PPP-MII, Order 2017 - Global tender enquiry - Circular no. 08 of 2020-21.PDF; PPP-MII compliance format\_rev.doc; FORMAT FOR ITEMS WHICH NECESSITATE GLOBAL TENDER.xlsx

Dear Madam/ Sr,

Please find attached Circular No. 08 of 2020-21 on the above subject.

With kind regards,

Ashwani Sahu  
DGM/ COM-SS&P,  
Bharat Heavy Electricals Limited,  
Corporate Office, BHEL House,  
Siri Fort, New Delhi - 110049  
Ph: 011-66337203

**SOURCING STRATEGY & POLICY  
CORPORATE OPERATIONS MANAGEMENT  
BHEL – NEW DELHI**

AA:SSP:PPP-MII  
Dated: 24.07.2020

**(Circular No. 08 of 2020-21)**

**Sub: Public Procurement (Preference to Make in India), Order 2017 – Revision; reg.**

**Ref: DPIIT Order No. P-45021/2/2017-PP (BE-II) dated 04.06.2020**

Department for Promotion of Industry and Internal Trade (DPIIT) in its partial modification of the PPP-MII Order on 04.06.2020 has modified the paras 2, 3, 5, 9(a), 9(b) & 10(b) and para 3A has been added.

Accordingly, in addition to Circular no. 42 of 2018-19 dated 30.11.2018, Circular no. 25 of 2019-20 dated 02.08.2019, Circular no. 06 of 2020-21 dated 02.07.2020 and modified provisions contained in the revised PPP-MII Order, 2017 dated 04.06.2020, following is to be noted for necessary action and compliance:

1. All cases where bids are solicited from foreign bidders are treated as Global Tenders.
2. In line with DPIIT letter dated 09.07.2020 clarifying the competent authority (in case of CPSEs) for seeking prior approval, any exception for floating Global Tender as per clause 3 (b) of PPP-MII, Order 2017 dated 04.06.2020, will require well-reasoned proposal with detailed justification to be routed through COM to DHI and further to Secretary (Coordination), Cabinet Secretariat, for approval.

The proposal shall be duly recommended by the Unit Level Overseeing Committee, as per Format No. AA:SSP:PPP-MII:F02 (enclosed), and approved by Head of Unit/ Region, before it is forwarded to COM.

3. Global tenders (with estimated value less than Rs. 200 Cr.) shall not be issued after **16.06.2020** i.e. receipt of communication from administrative ministry Department of Heavy Industries (DHI) vide email dated 16.06.2020.

  
24/07/2020

In case bids have been sought from foreign bidders after 16.06.2020, the same shall either be retendered by seeking bids only from local suppliers **or** if there is a necessity to seek bids from foreign bidders, necessary approvals have to be taken before processing further.

4. NIT clause to be revised as below:

“For this procurement, the local content to categorize a supplier as a Class I local supplier/ Class II local Supplier/ Non-Local supplier and purchase preference to Class I local supplier, is as defined in Public Procurement (Preference to Make in India), Order 2017 dated 04.06.2020 issued by DPIIT. In case of subsequent orders issued by the nodal ministry, changing the definition of local content for the items of the NIT, the same shall be applicable even if issued after issue of this NIT, but before opening of Part-II bids against this NIT”.

This issues with the approval of the Competent Authority.



(C. Venkat Rao)  
GM/ SS&P

Encls.: As above

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- for kind information of CMD



## Compliance Certificate

### Public Procurement (Preference to Make in India), Order 2017

No. AA:SSP:PPP-MII:F01

\_\_\_\_\_ (Unit / Region)

Dated: \_\_\_ / \_\_\_ / \_\_\_

Quarter ending: \_\_\_\_\_

With reference to Corporate SS&P Circular No. 42 of 2018-19 dated 30.11.2018, No. 25 of 2019-20 dated 02.08.2019, No. 06 of 2020-21 dated 02.07.2020 and No. 08 of 2020-21 dated 24.07.2020, following is certified:

- i. Overseeing committee is in place.
- ii. All NITs floated on or after the issue of the circular are having PPP-MII clause as per the above circular.
- iii. Certified that no restrictive or discriminatory conditions against local suppliers are included in NITs.
- iv. All ongoing tenders are compliant with Public Procurement (Preference to Make in India) Order (PPP-MII Order), 2017 vide No. P-45021/2/2017-PP (BE-II) dated 04.06.2020, issued by DPIIT, Ministry of Commerce and Industry.

( \_\_\_\_\_ )  
Head/ Engineering

( \_\_\_\_\_ )  
Head/ Finance

( \_\_\_\_\_ )  
Head/ MM

( \_\_\_\_\_ )  
Head of Unit/ Region

Head/ COM

  
24/07/2020

No.P-45021/102/2019-PP(BE-II)(E-29930)  
Government of India  
Ministry of Commerce and Industry  
Department for Promotion of Industry and Internal Trade  
(Public Procurement Section)

Udyog Bhawan, New Delhi  
Dated July 09, 2020

To

Shri Arun B. Gupta  
General Manager & Head  
Corporate Operations Management  
Bharat Heavy Electricals Limited  
Email: abgupta@bhel.in

Subject: Clause 3 b) of Public Procurement (Preference to Make in India) Order, 2017 - Department of Expenditure instructions No.F.12/17/19-PPD dated 28.05.2020 - regarding.

Sir,

With reference to your letter No. AA:SSP:PPP-MII dated 01.07.2020 (copy attached), it is informed that the definition of 'procuring entity' under PPP MII Order, 2017 dated 04.06.2020 (available at <https://dipp.gov.in/public-procurements>) 'includes Government companies as defined in the Companies Act'.

2. As per DoE's extant instructions dated 28.05.2020, no Global Tender Enquiry (GTE) shall be invited for tenders up to Rs. 200 Crore except in exceptional cases, wherein competent authority for relaxation in Rule 161(iv)(b) of GFR shall be Secretary (Coordination), Cabinet Secretariat. DoE advised Ministries / Departments to send only well-reasoned proposals to Secretary (Coordination) with detailed justification and seek prior approval for relaxation. Accordingly, all CPSUs/ CPSEs may approach respective administrative Ministries / Departments for seeking requisite approval from competent authority.

3. This issues with the approval of Joint Secretary (MKN).

Encl: As above

Yours faithfully



(D.V.S.P. Varma)

Under Secretary to Govt. of India  
E-mail: dvsp.varma@nic.in

Copy to:

1. Secretary, Department of Public Enterprises, New Delhi (email: secy-dpe@nic.in]
2. Sh. Sanjay Aggarwal, Director (PPD) Department of Expenditure, North Block New Delhi. [email:sanjay.aggarwal68@nic.in]
3. Shri Sanjiv Kumar Gupta and Shri Dinesh Pal Singh, Under Secretary, Department of Heavy Industry, Udyog Bhawan New Delhi. [email:sanjiv.gupta75@nic.in, dineshp.singh@nic.in]

**From:** "Dinesh Pal Singh" <dineshp.singh@nic.in>  
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bjconst.com, "ps cmd" <ps\_cmd@bbjconst.com>, "CMD BRIDGEROOF"  
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**Cc:** "Rama Kant Singh Director" <singh.ramakant59@nic.in>, "dhi\_coord"  
<dhi\_coord@nic.in>  
**Sent:** Tuesday, June 16, 2020 12:19:56 PM  
**Subject:** Recent changes in Public Procurement (Preference to Make in India)  
Order, 2017 (PPP-MII Order, 2017) of DPIIT - reg.

Sir/Madam,

Please find attached a copy of D.O. letter No.P-45021/2/2017-PP(BE-II)(E-1588) dated 8th June, 2020 received from Secretary, Department for Promotion of Industry and Intrnal Trade, Ministry of Commerce & Industry for compliance and report.

It is requested to interact with industry associations regarding the proposed changes, share their procurement projection with industry and advise industry to gear up their capacities/capabilities to meet projected public procurement demand in accordance with Hon'ble Prime Minister's vision of "Atmanirbhar Bharat".

With Regards,

Dinesh Pal Singh,  
Under Secretary(Coord.), DHI

डॉ. गुरुप्रसाद महापात्र  
DR. GURUPRASAD MOHAPATRA  
सचिव  
Secretary



भारत सरकार  
उद्योग संवर्धन और आंतरिक व्यापार विभाग  
वाणिज्य एवं उद्योग मंत्रालय  
उद्योग भवन, नई दिल्ली-110 011

Government of India

Deptt. for Promotion of Industry and Internal Trade

Ministry of Commerce & Industry

Udyog Bhawan, New Delhi-110 011

Tel. : 23061815, 23061667 Fax : 23061598

E-mail : secy-ipp@nic.in

08<sup>th</sup> June, 2020



Dear Secretary,

I am writing this regarding recent changes in Public Procurement (Preference to Make in India) Order, 2017 (PPP-MII Order, 2017) of DPIIT.

2. As you are aware, DPIIT issued PPP-MII Order, 2017 to promote procurement of made in India goods/works/services by central government procuring entities by providing purchase preference to local manufactured items in public procurement and other related measures.

3. Recently, Government of India has taken fresh initiative for "Atmanirbhar Bharat" and as a part of it Hon'ble Finance Minister announced on 12.05.2020 that no global tender shall be issued for procurement for less than Rs. 200 crore. Accordingly, as a major policy initiative, PPP-MII Order, 2017 has been amended to provide that only items with minimum 20% domestic value addition/local content can participate in public procurement unless global bid are invited. Also, items with more than 50% local content will get purchase preference over other items. A copy of the Order as amended on 04.06.2020 is enclosed for your ready reference.

4. I request you to kindly advise all procuring entities, including CPSUs/CPSEs/Autonomous Bodies, under administrative control of your Ministry/Department to comply with the revised Order. It is also requested to direct all procuring entities to interact with industry associations regarding the proposed changes, share their procurement projection with industry, and advise industry to gear up their capacities/ capabilities to meet projected public procurement demand in accordance with Hon'ble Prime Minister vision of "Atmanirbhar Bharat".

With regards,

Adv. Secy

Yours sincerely,

(Guruprasad Mohapatra)

Encl: as above.

Cap 10.6.2020

All Secretaries to the Govt. of India  
As per list attached.

K. Mishra  
11.6.20

AD(AS)

S  
ASCRAT

No. P-45021/2/2017-PP (BE-II)  
Government of India  
Ministry of Commerce and Industry  
Department for Promotion of Industry and Internal Trade  
(Public Procurement Section)

Udyog Bhawan, New Delhi  
Dated: 04<sup>th</sup> June, 2020

To

All Central Ministries/Departments/CPSUs/All concerned

**ORDER**

**Subject: Public Procurement (Preference to Make in India), Order 2017– Revision; regarding.**

Department for Promotion of Industry and Internal Trade, in partial modification [Paras 2, 3, 5, 9(a), 9(b) and 10(b) modified and Para 3A added] of Order No.P-45021/2/2017-B.E.-II dated 15.6.2017 as amended by Order No.P-45021/2/2017-B.E.-II dated 28.05.2018 and Order No.P-45021/2/2017-B.E.-II dated 29.05.2019, hereby issues the revised 'Public Procurement (Preference to Make in India), Order 2017' dated 04.06.2020 effective with immediate effect.

**Whereas** it is the policy of the Government of India to encourage 'Make in India' and promote manufacturing and production of goods and services in India with a view to enhancing income and employment, and

**Whereas** procurement by the Government is substantial in amount and can contribute towards this policy objective, and

**Whereas** local content can be increased through partnerships, cooperation with local companies, establishing production units in India or Joint Ventures (JV) with Indian suppliers, increasing the participation of local employees in services and training them,

**Now therefore the following Order is issued:**

1. This Order is issued pursuant to Rule 153 (iii) of the General Financial Rules 2017.
2. **Definitions:** For the purposes of this Order:

*'Local content'* means the amount of value added in India which shall, unless otherwise prescribed by the Nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.

*'Class-I local supplier'* means a supplier or service provider, whose goods, services or works offered for procurement, has local content equal to or more than 50%, as defined under this Order.

*'Class-II local supplier'* means a supplier or service provider, whose goods, services or works offered for procurement, has local content more than 20% but less than 50%, as defined under this Order.

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'Non - Local supplier' means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than or equal to 20%, as defined under this Order.

'L1' means the lowest tender or lowest bid or the lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.

'Margin of purchase preference' means the maximum extent to which the price quoted by a "Class-I local supplier" may be above the L1 for the purpose of purchase preference.

'Nodal Ministry' means the Ministry or Department identified pursuant to this order in respect of a particular item of goods or services or works.

'Procuring entity' means a Ministry or department or attached or subordinate office of, or autonomous body controlled by, the Government of India and includes Government companies as defined in the Companies Act.

'Works' means all works as per Rule 130 of GFR- 2017, and will also include 'turnkey works'.

### 3. Eligibility of 'Class-I local supplier'/ 'Class-II local supplier'/ 'Non-local suppliers' for different types of procurement

(a) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', as defined under the Order, shall be eligible to bid irrespective of purchase value.

(b) In procurement of all goods, services or works, not covered by sub-para 3(a) above, and with estimated value of purchases less than Rs. 200 Crore, in accordance with Rule 161(iv) of GFR, 2017, Global tender enquiry shall not be issued except with the approval of competent authority as designated by Department of Expenditure. Only 'Class-I local supplier' and 'Class-II local supplier', as defined under the Order, shall be eligible to bid in procurements undertaken by procuring entities, except when Global tender enquiry has been issued. In global tender enquiries, 'Non-local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'.

(c) For the purpose of this Order, works includes Engineering, Procurement and Construction (EPC) contracts and services include System Integrator (SI) contracts.

### 3A. Purchase Preference

(a) Subject to the provisions of this Order and to any specific instructions issued by the Nodal Ministry or in pursuance of this Order, purchase preference shall be given to 'Class-I local supplier' in procurements undertaken by procuring entities in the manner specified here under.

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(b) In the procurements of goods or works, which are covered by para 3(b) above and which are divisible in nature, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract for full quantity will be awarded to L1.
- ii. If L1 bid is not a 'Class-I local supplier', 50% of the order quantity shall be awarded to L1. Thereafter, the lowest bidder among the 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I local supplier' subject to matching the L1 price. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I local supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on the L1 bidder.

(c) In the procurements of goods or works, which are covered by para 3(b) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone, the 'Class-I local supplier' shall get purchase preference over 'Class-II local supplier' as well as 'Non-local supplier', as per following procedure:

- i. Among all qualified bids, the lowest bid will be termed as L1. If L1 is 'Class-I local supplier', the contract will be awarded to L1.
- ii. If L1 is not 'Class-I local supplier', the lowest bidder among the 'Class-I local supplier', will be invited to match the L1 price subject to Class-I local supplier's quoted price falling within the margin of purchase preference, and the contract shall be awarded to such 'Class-I local supplier' subject to matching the L1 price.
- iii. In case such lowest eligible 'Class-I local supplier' fails to match the L1 price, the 'Class-I local supplier' with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and contract shall be awarded accordingly. In case none of the 'Class-I local supplier' within the margin of purchase preference matches the L1 price, the contract may be awarded to the L1 bidder.

(d) "Class-II local supplier" will not get purchase preference in any procurement, undertaken by procuring entities.

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4. **Exemption of small purchases:** Notwithstanding anything contained in paragraph 3, procurements where the estimated value to be procured is less than Rs. 5 lakhs shall be exempt from this Order. However, it shall be ensured by procuring entities that procurement is not split for the purpose of avoiding the provisions of this Order.
5. **Minimum local content:** The local content requirement to categorize a supplier as 'Class-I local supplier'/ 'Class-II local supplier'/ 'Non-local supplier' shall be as defined in the Para "2" of the Order. No change is permissible on this account. However, if any nodal Ministry/ Department finds that for any particular item, pertaining to their nodal ministry/department, the definition of Local Content, as defined in the Order, is not workable/ has limitations, it may notify alternate suitable mechanism for calculation of local content for that particular item.
6. **Margin of Purchase Preference:** The margin of purchase preference shall be 20%.
7. **Requirement for specification in advance:** The minimum local content, the margin of purchase preference and the procedure for preference to Make in India shall be specified in the notice inviting tenders or other form of procurement solicitation and shall not be varied during a particular procurement transaction.
8. **Government E-marketplace:** In respect of procurement through the Government E-marketplace (GeM) shall, as far as possible, specifically mark the items which meet the minimum local content while registering the item for display, and shall, wherever feasible, make provision for automated comparison with purchase preference and without purchase preference and for obtaining consent of the local supplier in those cases where purchase preference is to be exercised.
9. **Verification of local content:**
  - a. The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the local content requirement for 'Class-I local supplier'/ 'Class-II local supplier', as the case may be. They shall also give details of the location(s) at which the local value addition is made.
  - b. In cases of procurement for a value in excess of Rs. 10 crores, the 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.
  - c. Decisions on complaints relating to implementation of this Order shall be taken by the competent authority which is empowered to look into procurement-related complaints relating to the procuring entity.

- d. Nodal Ministries may constitute committees with internal and external experts for independent verification of self-declarations and auditor's/ accountant's certificates on random basis and in the case of complaints.
- e. Nodal Ministries and procuring entities may prescribe fees for such complaints.
- f. False declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.
- g. A supplier who has been debarred by any procuring entity for violation of this Order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of the debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in the manner prescribed under paragraph 9h below.
- h. The Department of Expenditure shall issue suitable instructions for the effective and smooth operation of this process, so that:
  - i. The fact and duration of debarment for violation of this Order by any procuring entity are promptly brought to the notice of the Member-Convenor of the Standing Committee and the Department of Expenditure through the concerned Ministry /Department or in some other manner;
  - ii. on a periodical basis such cases are consolidated and a centralized list or decentralized lists of such suppliers with the period of debarment is maintained and displayed on website(s);
  - iii. in respect of procuring entities other than the one which has carried out the debarment, the debarment takes effect prospectively from the date of uploading on the website(s) in the such a manner that ongoing procurements are not disrupted.

**10. Specifications in Tenders and other procurement solicitations:**

- a. Every procuring entity shall ensure that the eligibility conditions in respect of previous experience fixed in any tender or solicitation do not require proof of supply in other countries or proof of exports.
- b. Procuring entities shall endeavour to see that eligibility conditions, including on matters like turnover, production capability and financial strength do not result in unreasonable exclusion of 'Class-I local supplier'/ 'Class-II local supplier' who would otherwise be eligible, beyond what is essential for ensuring quality or creditworthiness of the supplier.
- c. Procuring entities shall, within 2 months of the issue of this Order review all existing eligibility norms and conditions with reference to sub-paragraphs 'a' and 'b' above.

- d. If a Nodal Ministry is satisfied that Indian suppliers of an item are not allowed to participate and/ or compete in procurement by any foreign government, it may, if it deems appropriate, restrict or exclude bidders from that country from eligibility for procurement of that item and/ or other items relating to that Nodal Ministry. A copy of every instruction or decision taken in this regard shall be sent to the Chairman of the Standing Committee.
- e. For the purpose of sub-paragraph 10 d above, a supplier or bidder shall be considered to be from a country if (i) the entity is incorporated in that country, or ii) a majority of its shareholding or effective control of the entity is exercised from that country; or (iii) more than 50% of the value of the item being supplied has been added in that country. Indian suppliers shall mean those entities which meet any of these tests with respect to India."

✓ **10A. Action for non-compliance of the Provisions of the Order:** In case restrictive or discriminatory conditions against domestic suppliers are included in bid documents, an inquiry shall be conducted by the Administrative Department undertaking the procurement (including procurement by any entity under its administrative control) to fix responsibility for the same. Thereafter, appropriate action, administrative or otherwise, shall be taken against erring officials of procurement entities under relevant provisions. Intimation on all such actions shall be sent to the Standing Committee.

**11. Assessment of supply base by Nodal Ministries:** The Nodal Ministry shall keep in view the domestic manufacturing / supply base and assess the available capacity and the extent of local competition while identifying items and prescribing minimum local content or the manner of its calculation, with a view to avoiding cost increase from the operation of this Order.

**12. Increase in minimum local content:** The Nodal Ministry may annually review the local content requirements with a view to increasing them, subject to availability of sufficient local competition with adequate quality.

**13. Manufacture under license/ technology collaboration agreements with phased indigenization:** While notifying the minimum local content, Nodal Ministries may make special provisions for exempting suppliers from meeting the stipulated local content if the product is being manufactured in India under a license from a foreign manufacturer who holds intellectual property rights and where there is a technology collaboration agreement / transfer of technology agreement for indigenous manufacture of a product developed abroad with clear phasing of increase in local content.

**14. Powers to grant exemption and to reduce minimum local content:** The administrative Department undertaking the procurement (including procurement by any entity under its administrative control), with the approval of their Minister-in-charge, may by written order, for reasons to be recorded in writing,

- a. reduce the minimum local content below the prescribed level; or
- b. reduce the margin of purchase preference below 20%; or

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- c. exempt any particular item or supplying entities from the operation of this Order or any part of the Order.

A copy of every such order shall be provided to the Standing Committee and concerned Nodal Ministry / Department. The Nodal Ministry / Department concerned will continue to have the power to vary its notification on Minimum Local Content.


15. **Directions to Government companies:** In respect of Government companies and other procuring entities not governed by the General Financial Rules, the administrative Ministry or Department shall issue policy directions requiring compliance with this Order.
16. **Standing Committee:** A standing committee is hereby constituted with the following membership:
  - Secretary, Department for Promotion of Industry and Internal Trade—Chairman
  - Secretary, Commerce—Member
  - Secretary, Ministry of Electronics and Information Technology—Member
  - Joint Secretary (Public Procurement), Department of Expenditure—Member
  - Joint Secretary (DPIIT)—Member-Convenor

The Secretary of the Department concerned with a particular item shall be a member in respect of issues relating to such item. The Chairman of the Committee may co-opt technical experts as relevant to any issue or class of issues under its consideration.

17. **Functions of the Standing Committee:** The Standing Committee shall meet as often as necessary, but not less than once in six months. The Committee
  - a. shall oversee the implementation of this order and issues arising therefrom, and make recommendations to Nodal Ministries and procuring entities.
  - b. shall annually assess and periodically monitor compliance with this Order
  - c. shall identify Nodal Ministries and the allocation of items among them for issue of notifications on minimum local content
  - d. may require furnishing of details or returns regarding compliance with this Order and related matters
  - e. may, during the annual review or otherwise, assess issues, if any, where it is felt that the manner of implementation of the order results in any restrictive practices, cartelization or increase in public expenditure and suggest remedial measures
  - f. may examine cases covered by paragraph 13 above relating to manufacture under license/ technology transfer agreements with a view to satisfying itself that adequate mechanisms exist for enforcement of such agreements and for attaining the underlying objective of progressive indigenization
  - g. may consider any other issue relating to this Order which may arise.
18. **Removal of difficulties:** Ministries /Departments and the Boards of Directors of Government companies may issue such clarifications and instructions as may be necessary for the removal of any difficulties arising in the implementation of this Order.

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19. **Ministries having existing policies:** Where any Ministry or Department has its own policy for preference to local content approved by the Cabinet after 1<sup>st</sup> January 2015, such policies will prevail over the provisions of this Order. All other existing orders on preference to local content shall be reviewed by the Nodal Ministries and revised as needed to conform to this Order, within two months of the issue of this Order.
20. **Transitional provision:** This Order shall not apply to any tender or procurement for which notice inviting tender or other form of procurement solicitation has been issued before the issue of this Order.



(Rajesh Gupta)  
Director

Tel: 23063211

[rajesh.gupta66@gov.in](mailto:rajesh.gupta66@gov.in)

<b>i.</b>	<b>Item/Scope of Sub-contracting</b> उप-संविदा(अनुबंध) का मद/ दायरा	
<b>ii.</b>	<b>Address of the registered office</b> पंजीकृत कार्यालय का पता	<b>Details of Contact Person</b> संपर्क व्यक्ति का विवरण  (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)
<b>iii.</b>	<b>Name and Address of the proposed Sub-vendor's works where item is being manufactured</b> प्रस्तावित उप-विक्रेता के कार्यों का नाम और पता, जहां मद का निर्माण किया जा रहा है	<b>Details of Contact Person:</b> संपर्क व्यक्ति का विवरण  (Name, Designation, Mobile, Email) (नाम, पदनाम, मोबाइल, ईमेल)
<b>iv.</b>	<b>Annual Production Capacity for proposed item/scope of sub-contracting</b> उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए वार्षिक उत्पादन क्षमता	
<b>v.</b>	<b>Annual production for last 3 years for proposed item/scope of sub-contracting</b> उप-संविदा(अनुबंध) के प्रस्तावित मद / दायरे के लिए पिछले 3 वर्षों का वार्षिक उत्पादन	
<b>vi.</b>	<b>Details of proposed works</b> प्रस्तावित कार्यों का विवरण	
<b>1.</b>	<b>Year of establishment of present works</b> वर्तमान फैक्टरी की स्थापना का वर्ष	
<b>2.</b>	<b>Year of commencement of manufacturing at above works</b> उपरोक्त फैक्टरी में निर्माण कार्य शुरू होने का वर्ष	
<b>3.</b>	<b>Details of change in Works address in past (if any)</b> पूर्व में फैक्टरी स्थल में परिवर्तन का विवरण (यदि कोई हो)	
<b>4.</b>	<b>Total Area</b> कुल क्षेत्र	
	<b>Covered Area</b> शामिल क्षेत्र	
<b>5.</b>	<b>Factory Registration Certificate</b> फैक्टरी पंजीकरण प्रमाण पत्र	<b>Details attached at Annexure – F2.1</b> विवरण अनुलग्नक- एफ 2.1 पर संलग्न है
<b>6.</b>	<b>Design/ Research &amp; development set-up</b> डिजाइन / अनुसंधान और विकास सेटअप (No. of manpower, their qualification, machines & tools employed etc.) (श्रमिकों की संख्या, उनकी योग्यता, मशीन और उपलब्ध उपकरण आदि)	<b>Applicable / Not applicable if manufacturing is as per Main Contractor/purchaser design</b> <b>Details attached at Annexure – F2.2</b> (if applicable) लागू / लागू नहीं, अगर विनिर्माण मुख्य संविदाकार / खरीददार के डिजाइन के अनुसार है) विवरण अनुलग्नक –एफ 2.2 पर संलग्न है । (यदि लागू हो)
<b>7.</b>	<b>Overall organization Chart with Manpower Details</b> (Design/Manufacturing/Quality etc) मैनपावर विवरण के साथ समग्र संगठन का चार्ट( डिजाइन / विनिर्माण / गुणवत्ता आदि )	<b>Details attached at Annexure – F2.3</b> विवरण अनुलग्नक – F2.3 में संलग्न है ।
<b>8.</b>	<b>After sales service set up in India, in case of foreign sub-vendor(Location, Contact Person, Contact details etc.)</b> भारत	<b>Applicable / Not applicable</b> लागू / लागू नहीं

	में बिक्री सेवा की स्थापना के बाद, विदेशी उप-विक्रेता के मामले में( स्थल , संपर्क व्यक्ति, संपर्क विवरण आदि)	<i>Details attached at Annexure – F2.4</i> विवरण अनुलग्नक -2.4 पर संलग्न है ।			
9.	<i>Manufacturing process execution plan with flow chart indicating various stages of manufacturing from raw material to finished product including outsourced process, if any</i> फ्लोचार्ट सहित विनिर्माण प्रक्रिया निष्पादन योजना , जिसमें आउटसोर्स प्रक्रिया, यदि कोई हो, सहित कच्चे माल से तैयार उत्पाद तक विनिर्माण के विभिन्न चरणों को दर्शाया गया हो,	<i>Details attached at Annexure – F2.5</i> विवरण अनुलग्नक - F2.5में संलग्न है ।			
10.	<i>Sources of Raw Material/Major Bought Out Item</i> कच्चे माल के स्रोत / खरीदे हुए मुख्य मद	<i>Details attached at Annexure – F2.6</i> विवरण अनुलग्नक - F2.6में संलग्न है ।			
11.	<i>Quality Control exercised during receipt of raw material/BOI, in-process , Final Testing, packing</i> कच्चे माल / खरीदे हुए मद, प्रक्रियाबद्ध, अंतिम परीक्षण, पैकिंग करते समय गुणवत्ता नियंत्रण	<i>Details attached at Annexure – F2.7</i> विवरण अनुलग्नक - F2.7 पर संलग्न है			
12.	<i>Manufacturing facilities (List of machines, special process facilities, material handling etc.)</i> विनिर्माण सुविधा( मशीनों की सूची , विशेष प्रक्रिया सुविधाएं, सामग्री रख-रखाव आदि)	<i>Details attached at Annexure – F2.8</i> विवरण अनुलग्नक - F2.8में संलग्न है ।			
13.	<i>Testing facilities (List of testing equipment)</i> परीक्षण सुविधाएं( परीक्षण उपकरण की सूची )	<i>Details attached at Annexure – F2.9</i> विवरण अनुलग्नक – F2. 9 में संलग्न है ।			
14.	<i>If manufacturing process involves fabrication then-</i> यदि निर्माण प्रक्रिया में फेब्रिकेशन की गई है तो- <i>List of qualified Welders</i> पात्र वेल्डर की सूची <i>List of qualified NDT personnel with area of specialization</i> विशेषज्ञता के क्षेत्र सहित पात्र एनडीटी कार्मिकों की सूची	<i>Applicable / Not applicable</i> लागू / लागू नहीं <i>Details attached at Annexure – F2.10</i> विवरण अनुलग्नक - F2.10में संलग्न है। <i>(if applicable)</i> लागू / लागू नहीं			
15.	<i>List of out-sourced manufacturing processes with Sub-Vendors’ names &amp; addresses</i> सब-वेंडर द्वारा बाह्य स्रोतों (उनके नाम और पते सहित)से करवाएं गए निर्माण प्रक्रियाओं की सूची	<i>Applicable / Not applicable</i> लागू / लागू नहीं <i>Details attached at Annexure. –F2.11</i> विवरण अनुलग्नक - F2.10में संलग्न है। <i>(if applicable)</i> (यदि लागू हो)			
16.	<i>Supply reference list including recent supplies</i> नवीनतम आपूर्ति सहित आपूर्ति संदर्भ सूची	<i>Details attached at Annexure – F2.12</i> विवरण अनुलग्नक - F2.12 में संलग्न है । <i>(as per format given below)</i> ( नीचे दिए गए प्रारूप के अनुसार )			
<i>Project/ package</i> परियोजना /पैकेज	<i>Customer Name</i> ग्राहक का नाम	<i>Supplied Item (Type/Rating/Model /Capacity/Size etc)</i> आपूर्ति की गई वस्तु (प्रकार / रेटिंग / मॉडल / क्षमता / आकार आदि)	<i>PO ref no/date</i> पीओ संदर्भ सं. / तिथि	<i>Supplied Quantity</i> आपूर्ति की मात्रा	<i>Date of Supply</i> आपूर्ति की तारीख
17.	<i>Product satisfactory performance feedback letter/certificates/End User Feedback</i> उत्पाद के संतोषजनक प्रदर्शन संबंधी फीडबैक पत्र / प्रमाण पत्र / अंतिम उपयोगकर्ता फीडबैक		<i>Attached at annexure - F2.13</i> अनुलग्नक F2. 3पर संलग्न है		
18.	<i>Summary of Type Test Report (Type Test Details, Report No, Agency, Date of testing) for the proposed product</i>		<i>Applicable / Not applicable</i> लागू / लागू नहीं		

	(similar or higher rating) प्रस्तावित उत्पाद (एक समान या उच्च रेटिंग वाले) के लिए टाइप टेस्ट रिपोर्ट (टाइप टेस्ट विवरण, रिपोर्ट संख्या, एजेंसी, जांच की तारीख) का सारांश नोट: - रिपोर्ट प्रस्तुत करने की आवश्यकता नहीं है <i>Note:- Reports need not to be submitted</i>	<i>Details attached at Annexure – F2.14</i> विवरण अनुलग्नक - F2.1 4में संलग्न है (if applicable) (यदि लागू हो)
19.	<b>Statutory / mandatory certification for the proposed product</b> प्रस्तावित उत्पाद के लिए वैधानिक / अनिवार्य प्रमाणीकरण	<i>Applicable / Not applicable</i> लागू / लागू नहीं  <i>Details attached at Annexure – F2.15</i> (if applicable) (यदि लागू हो)
20.	<b>Copy of ISO 9001 certificate</b> आईएसओ 9001 प्रमाण पत्र की प्रति (if available(यदि उपलब्ध हो))	<i>Attached at Annexure – F2.16</i> अनुलग्नक में संलग्न - F2.1 6 है
21.	<b>Product technical catalogues for proposed item (if available)</b> प्रस्तावित मद के लिए उत्पाद तकनीकी कैटलॉग (यदि उपलब्ध हो)	<i>Details attached at Annexure – F2.17</i> विवरण अनुलग्नक - F2.1 7 में संलग्न है

<b>Name:</b>		<b>Desig:</b>		<b>Sign:</b>		<b>Date:</b>	
<b>नाम:</b>		<b>पद:</b>		<b>हस्ता</b>		<b>तिथि:</b>	
				<b>क्षर:</b>			

**Company's Seal/Stamp:- कंपनी की मुहर/ मोहर:-**

**1. 3x660 MW NPGCPL NABINAGAR STPP (FGD PKG)**  
**2. 4X250 MW BRBCL NABINAGAR FGD**  
**Item: MISC. PUMPS-HORIZONTAL**

**Enquiry letter: PE/PG/NB2/E-6855/2021 dated 07/01/2022**

**(INSTRUCTIONS TO PACKING LIST)**

For faster verification of bills, successful bidder to submit detailed Bill of Material (BOM) at the time of drawings/ documents submission after placement of PO. Each item of the BOM to be uniquely identified with item code no. or item Sl. No. Supplier to ensure that all items which will find separate mention in the packing list are covered in this detailed BOM.

Supplier to also give the following undertaking in the BOM:

“The BOM provided herewith completes the scope (in content and intent) of material supply under PO No. .... Dated ..... Any additional material which may become necessary for the intended application of the supplied items/package will be supplied free of cost in most reasonable time.

Packing List must indicate:

- a) Packing size
- b) Gross weight and net weight of each package
- c) Contents of the package with cross reference to BOM item code no. / Sl. No.
- d) Quantity of each items separately.

The packing list must cover all the BOM items.

Supplier to give following undertaking in the packing list:

The Packing list provided herewith is as per BOM approved under PO No. -----

**CORRIGENDA 01  
TO  
GENERAL CONDITIONS OF CONTRACTS (GCC)  
Rev No. 07 wef 05.03.2022**

CORRIGENDA 01 TO GCC REV 07  
ANNEXURE VIII REV 01

PAGE 1 - 4  
PAGE 1 – 4



**BHARAT HEAVY ELECTRICALS LIMITED**

**PROJECT ENGINEERING MANAGEMENT**

PPEI BUILDING, HRDI & ESI COMPLEX  
PLOT NO. 25, SECTOR – 16A  
NOIDA – 201301 (U.P.), INDIA

Not for Publication

For Official Use



**PROJECT ENGINEERING  
MANAGEMENT**

**CORRIGENDA 01  
TO  
GENERAL CONDITIONS OF  
CONTRACT (GCC) Revision no. 07**

SI No.	Clause Ref	Existing Clause as:	Replaced/ New Clause as:
1	19.3 of Instructions to Bidders (ITB)	New Clause	"In the course of evaluation, if more than one bidder happens to occupy L-1 status, effective L-1 will be decided by soliciting discounts from the respective L-1 bidders. In case more than one bidder happens to occupy the L-1 status even after soliciting discounts, the L-1 bidder shall be decided by a toss / draw of lots, in the presence of the respective L-1 bidder(s) or their representative(s). Ranking will be done accordingly. BHEL's decision in such situations shall be final and binding."
2	26.1 of Instructions to Bidders (ITB)	New Clause	"Self-declarations/ auditor's/ accountant's certificates submitted by the manufacturer/ supplier may be verified randomly by the committee constituted as per MoP Order 28-07- 2020. In case of false documents/misrepresentation of the facts requisite action against such manufacturer/ supplier will be taken based on the recommendation of the Committee."
3	31 of Instructions to Bidders (ITB)	New Clause	Restrictions under Rule 144(xi) of the General Financial Rules (GFRs), 2017.  I. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority.  II. "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.  III. "Bidder from a country which shares a land border with India" for the purpose of this Order means  a. An entity incorporated, established or registered in such a country; or  b. A subsidiary of an entity Incorporated. established or registered in such a country; or  c. An entity substantially controlled through entities incorporated, established or registered in such a country; or  d. An entity whose beneficial owner is situated in such a country; or



**PROJECT ENGINEERING  
MANAGEMENT**

**CORRIGENDA 01  
TO  
GENERAL CONDITIONS OF  
CONTRACT (GCC) Revision no. 07**

				<p>e. An Indian (or other) agent of such an entity; or</p> <p>f. A natural person who is a Citizen of such a country; or</p> <p>g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above.</p> <p>IV. The beneficial owner for the purpose of (iii) above will be as under:</p> <p>1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership Interest or who exercises control through other means, Explanation-</p> <p>2 a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;</p> <p>b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions Including by virtue of their shareholding or management rights or shareholder's agreements or voting agreements;</p> <p>2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together. or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;</p> <p>3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of Individuals;</p> <p>4. Where no natural person is Identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;</p> <p>5. In case of a trust, the identification of beneficial owner(s) shall Include identification of the author of the trust. the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.</p> <p>V. An Agent is a person employed to do any act for another, or to represent another in                      dealings with third person</p>
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**PROJECT ENGINEERING  
MANAGEMENT**

**CORRIGENDA 01  
TO  
GENERAL CONDITIONS OF  
CONTRACT (GCC) Revision no. 07**


			Note- The above clause shall not be applicable for the bidders from those countries (even if sharing a land order with India) to which the Government of India (GoI) has extended lines of credit or in which the GoI is engaged in development work.
4	19.4 of Instructions to Bidder (ITB)	New Clause	The evaluation currency for this tender shall be INR.
5	19.5 of Instructions to Bidder (ITB)	New Clause	Bidders to ensure that Third party/customer issued certificates being submitted as proof of PQR qualification should have verifiable details of document/certificate issuing authority such as name & designation of Issuing Authority and its organization contact number and e-mail Id etc. In case the same found not available, Purchaser has right to reject such document from evaluation
6	32 of Instructions to Bidder (ITB)	New Clause	The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case, the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies/ guidelines
7	14 A of General Commercial Terms and Conditions (GCTC)	New Clause	All Bidders to comply Govt. of India, Ministry of Power, Order No-25/11/2018-PG dtd 02/07/2020 regarding mandatory testing of all the imported items/equipment's/components.
8	33 of Instructions to Bidder (ITB)	New Clause	For order exceeding Rs 25 lakhs, Successful L1 bidder to submit mandatorily the GeM Seller ID before placement of Order/Award of contract
9	34 of Instructions to Bidder (ITB)	New Clause	Wherever Service charges like Supervision, Inspection, etc. consequent or incidental to supply are envisaged in tender, such charges should not exceed 2% of the total contract value. It is recommended that such charges be sought on per visit / per day basis, and the evaluation of the tender is to be done including the cost of the service charges



**PROJECT ENGINEERING  
MANAGEMENT**

**CORRIGENDA 01  
TO  
GENERAL CONDITIONS OF  
CONTRACT (GCC) Revision no. 07**

10	11.10 of General Commercial Terms and Conditions (GCTC)	New Clause	Bidder to submit performance security required for execution of the contract within the time period mentioned. In case of delay in submission of performance security, enhanced performance security which would include interest (SBI rate + 6%) for the delayed period, shall be submitted by the bidder. Further, if performance security is not submitted till such time the first bill becomes due, the amount of performance security due shall be recovered as per terms defined in NIT I contract, from the bills along with due interest
11	Annexure VIII Rev 01	Annexure VIII (Page 14 of 31 to 17 of 31)	<p>Annexure VIII of Annexures to GCC Rev 07 for Integrity Pact has been revised and replaced with Annexure VIII Rev 01 annexed with Corrigenda 01 to GCC Rev 07</p> <p>Annexure VIII mentioned at clause number 12.0 of "Instruction to Bidders" of GCC Rev 07 shall be read as Annexure VIII Rev 01 which is annexed with Corrigenda 01 to GCC Rev 07.</p>

	<b>PROJECT ENGINEERING MANAGEMENT</b>	<b>GENERAL CONDITIONS OF CONTRACT (GCC)</b>  <b>Revision no. 07</b>	<b>ANNEXURES</b>
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**ANNEXURE– VIII (Rev 01)**

**INTEGRITY PACT**

**Between**

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

**And**

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

**Preamble**

The Principal intends to award, under laid-down organizational procedures, contract/s for \_\_\_\_\_ (hereinafter referred to as "Contract"). The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

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


**Section 1- Commitments of the Principal**

- 1.1 The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
  - 1.1.1 No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
  - 1.1.2 The Principal will, during the tender process treat all Bidder(s) with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential/ additional information through which the Bidder(s) could obtain an advantage in relation to the tender process or the contract execution.
  - 1.1.3 The Principal will exclude from the process all known prejudiced persons.
- 1.2 If the Principal obtains information on the conduct of any of its employees which is a penal offence under the Indian Penal Code 1860 and Prevention of Corruption Act 1988 or any other statutory penal enactment, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

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

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. The Bidder(s)/ Contractor(s) commits himself to observe the following principles during participation in the tender process and during the contract execution.
  - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he/ she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.



	<b>PROJECT ENGINEERING MANAGEMENT</b>	<b>GENERAL CONDITIONS OF CONTRACT (GCC)</b>  <b>Revision no. 07</b>	<b>ANNEXURES</b>
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6.3 The Principal will disqualify from the tender process all Bidders who do not sign this Integrity Pact or violate its provisions

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

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

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

8.1 The Principal appoints competent and credible panel of Independent External Monitor (s) (IEMs) for this Integrity Pact. The task of the IEMs is to review independently and objectively, whether and to what extent the parties comply with the obligations under this Integrity Pact.

8.2 The IEMs are not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.

8.3 The IEMs shall be provided access to all documents/ records pertaining to the Contract, for which a complaint or issue is raised before them as and when warranted. However, the documents/records/information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed.

8.4 The Principal will provide to the IEMs sufficient information about all meetings among the parties related to the Contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the IEMs the option to participate in such meetings.

8.5 The advisory role of IEMs is envisaged as that of a friend, philosopher and guide. The advice of IEMs would not be legally binding and it is restricted to resolving issues raised by a Bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some Bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.

8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process or during execution of Contract, the matter should be examined by the full panel of IEMs jointly, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.


8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to the CMD, BHEL at the earliest. They may also send their report directly to the CVO, in case of suspicion of serious irregularities requiring legal/ administrative action. Only in case of very serious issue having a specific, verifiable Vigilance angle, the matter should be reported directly to the Commission. IEMs will tender their advice on the complaints within 30 days.

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

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

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

8.11 After award of work, the IEMs shall look into any issue relating to execution of Contract, if specifically raised before them. As an illustrative example, if a Contractor who has been awarded the Contract, during the execution of Contract, raises issue of delayed payment etc. before the IEMs, the same shall be examined by the panel of IEMs. Issues like warranty/ guarantee etc. shall be outside the purview of IEMs.

	<b>PROJECT ENGINEERING MANAGEMENT</b>	<b>GENERAL CONDITIONS OF CONTRACT (GCC)</b>  <b>Revision no. 07</b>	<b>ANNEXURES</b>
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8.12 However, the IEMs may suggest systemic improvements to the management of the Principal, if considered necessary, to bring about transparency, equity and fairness in the system of procurement.

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

**Section 9 - Pact Duration**

9.1 This Integrity Pact shall be operative from the date this Integrity Pact is signed by both the parties till the final completion of contract for successful Bidder, and for all other Bidders 6 months after the Contract has been awarded. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings.

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

**Section 10 - Other Provisions**

10.1 This Integrity Pact is subject to Indian Laws and exclusive jurisdiction shall be of the competent Courts as indicated in the Tender or Contract, as the case may be.

10.2 Changes and supplements as well as termination notices need to be made in writing.

10.3 If the Bidder(s)/ Contractor (s) is a partnership or a consortium or a joint venture, this Integrity Pact shall be signed by all partners of the partnership or joint venture or all consortium members.

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

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

10.6 In the event of any dispute between the Principal and Bidder(s)/ Contractor(s) relating to the Contract, in case, both the parties are agreeable, they may try to settle dispute through Mediation before the panel of IEMs in a time bound manner. In case, the dispute remains unresolved even after mediation by the panel of IEMs, either party may take further action as the terms & conditions of the Contract. The fees/expenses on dispute resolution through mediation shall be shared by both the parties. Further, the mediation proceedings shall be confidential in nature and the parties shall keep confidential all matters relating to the mediation proceedings including any settlement agreement arrived at between the parties as outcome of mediation. Any views expressed, suggestions, admissions or proposals etc. made by either party in the course of mediation shall not be relied upon or introduced as evidence in any further arbitral or judicial proceedings, whether or not such proceedings relate to the dispute that is the subject of mediation proceedings. Neither of the parties shall present IEMs as witness in any Alternative Dispute Resolution or judicial proceedings in respect of the dispute that was subject of mediation.

-----  
 For & On behalf of the Principal  
 (Office Seal)

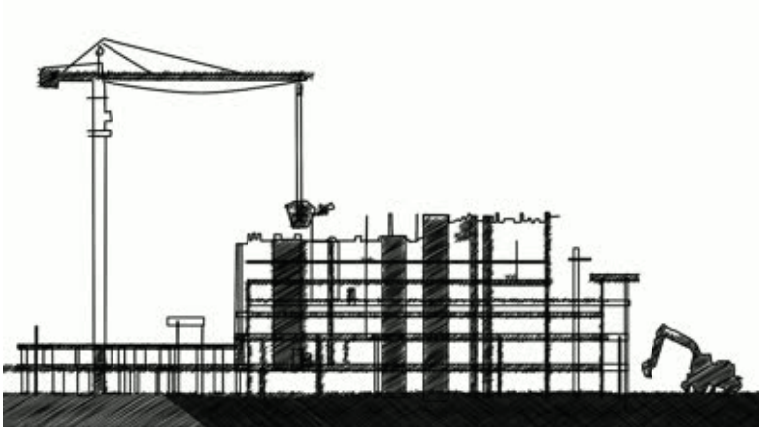
-----  
 For & On behalf of the Bidder/ Contractor  
 (Office Seal)

Place-----

Date-----

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_

Witness: \_\_\_\_\_  
 (Name & Address) \_\_\_\_\_



**HEALTH,  
SAFETY and  
ENVIRONMENT  
PLAN**

for

**SITE  
OPERATIONS**

by

**SUB-  
CONTRACTORS**

**POWER SECTOR**



HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

POWER SECTOR

DOCUMENT ISSUE SHEET

	Prepared	Reviewed	Approved
Name	Sanghamitra B. Jayant	A.K. Sinha	Anuj Bhatnagar
Designation	Dy. Manager PSHQ(FQA & Safety)	GM PSHQ(FQA & Safety)	ED PSHQ(FQA & Safety)
Signature			
Date	12/8/14	12/8/14	12/8/14

# HSE PLAN FOR SITE OPERATIONS BY BHEL'S SUBCONTRACTORS

## AT A GLANCE

BEFORE START	<b>SIGNING OF MOU</b> Agree to comply to HSE requirement- Statutory and BHEL's	
PLAN	<b>HSE ORGANISATION</b>	
	<b>Manpower</b> <ul style="list-style-type: none"> <li>1 (one) safety officer for every 500 workers or part thereof</li> <li>1(one) safety-steward/ supervisor for every 100 workers</li> </ul> <b>Qualification</b> As per Cl. 7.1	<b>HSE Roles and responsibilities</b> <ul style="list-style-type: none"> <li>Site In-charge- As per clause 7.2.1</li> <li>Safety officer- As per clause 7.2.2</li> </ul>
	<b>HSE Planning</b> for Man , Machinery/Equipment/Tools & Tackles	
PROVIDE	<b>HSE INFRASTRUCTURE</b>	
	<ul style="list-style-type: none"> <li>PPEs</li> <li>Drinking Water</li> <li>Washing Facilities</li> <li>Latrines and Urinals</li> <li>Provision of shelter for rest</li> <li>Medical facilities</li> </ul>	<ul style="list-style-type: none"> <li>Canteen facilities</li> <li>Labour Colony</li> <li>Emergency Vehicle</li> <li>Pest Control</li> <li>Scrapyard</li> <li>Illumination</li> </ul>
TRAIN	<b>HSE TRAINING , AWARENESS &amp; PROMOTION</b>	
	<b>Training</b> <ul style="list-style-type: none"> <li>Induction training</li> <li>Height work and other critical areas</li> <li>Tool Box talk &amp; Pep Talk</li> </ul>	<b>Awareness &amp; Promotion</b> <ul style="list-style-type: none"> <li>Signage</li> <li>Poster</li> <li>Banner</li> <li>Competition</li> <li>Awards</li> </ul>
COMMUNICATE	<b>HSE COMMUNICATION</b>	
	<b>Incident Reporting</b> <ul style="list-style-type: none"> <li>Accident- Fatal &amp; Major</li> <li>Property damage</li> <li>Near Miss</li> </ul>	<b>Event Reporting</b> <ul style="list-style-type: none"> <li>Celebrations</li> <li>Training</li> <li>Medical camp</li> </ul>

**EXECUTE SAFELY**

**OPERATIONAL CONTROL PROCEDURES**

**PERMIT TO WORK**

Height work ( above 2 metres), Hot Work, Heavy Lifting, Confined Space, Radiography, excavation( More than 4 metres)

**SAFETY DURING WORK EXECUTION**

- |  |  |
|--|--|
| <ul style="list-style-type: none"><li>• Welding</li><li>• Rigging</li><li>• Cylinder- storage &amp; Movement</li><li>• Demolition work</li><li>• T&amp;Ps</li><li>• Chemical Handling</li><li>• Electrical works</li></ul> | <ul style="list-style-type: none"><li>• Fire</li><li>• Scaffolding</li><li>• Height work</li><li>• Working Platform</li><li>• Excavation</li><li>• Ladder</li><li>• Lifting</li><li>• Hoisting appliance</li></ul> |
|--|--|

**HOUSE KEEPING**

**WASTE MANGEMENT**

**TRAFFIC MANAGEMENT**

**ENVIRONMENTAL CONTROL**

**EMERGENCY PREPAREDNESS AND RESPONSE PLAN**

**CHECKS**

**HSE AUDITS & INSPECTION**

- |  |   |
|--|---|
| <ul style="list-style-type: none"><li>• Daily Checks</li><li>• Inspection of PPEs</li><li>• Inspection of T&amp; Ps</li><li>• Inspection of Cranes &amp; Winches</li></ul> | <ul style="list-style-type: none"><li>• Inspection of Height work</li><li>• Inspection of Welding and Gas cutting</li><li>• Inspection of elevators etc</li></ul> |
|--|---|

**HSE PERFORMANCE EVALUATION PARAMETERS**

**NON CONFORMANCE**

**PENALTY for NON CONFORMANCE**

**Refer Clause 16**

**Incremental penalty**

For repeated violation by the same person, the penalty would be double of the previous penalty

For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 1 of 43

POWER SECTOR

Sr. No.	Description	Page No.
1.0	PURPOSE	4
2.0	SCOPE	4
3.0	OBJECTIVES AND TARGETS	4
4.0	HEALTH, SAFETY & ENVIRONMENT POLICY	5
5.0	MEMORANDUM OF UNDERSTANDING	6
6.0	TERMS & DEFINITIONS	7
7.0	HSE ORGANIZATION	8
7.1	QUALIFICATION FOR HSE PERSONNEL	8
7.2	RESPONSIBILITIES	9
8.0	PLANNING BY SUBCONTRACTOR	11
8.1	MOBILISATION OF MACHINERY/EQUIPMENT/TOOLS	11
8.2	MOBILISATION OF MANPOWER BY SUBCONTRACTOR	11
8.3	PROVISION OF PPEs	12
8.4	ARRANGEMENT OF INFRASTRUCTURE	13
9.0	HSE TRAINING & AWARENESS	16
9.1	HSE INDUCTION TRAINING	16
9.2	HSE TOOLBOX TALK	17
9.3	TRAINING ON HEIGHT WORK	17
9.4	HSE TRAINING DURING PROJECT EXECUTION	17



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 2 of 43

POWER SECTOR

9.5	HSE PROMOTION-SIGNAGE, POSTERS, COMPETITION, AWARDS ETC	18
10.0	HSE COMMUNICATION	18
10.1	INCIDENT REPORTING	18
10.2	HSE EVENT REPORTING	18
11.0	OPERATIONAL CONTROL	19
11.1	HSE ACTIVITIES	19
11.2	WORK PERMIT SYSTEM	20
11.3	SAFETY DURING WORK EXECUTION	20
11.4	ENVIRONMENTAL CONTROL	24
11.5	HOUSEKEEPING	24
11.6	WASTE MANAGEMENT	25
11.7	TRAFFIC MANAGEMENT SYSTEM	26
11.8	EMERGENCY PREPAREDNESS AND RESPONSE	28
12.0	HSE INSPECTION	29
12.1	DAILY HSE CHECKS	29
12.2	INSPECTION OF PPE	29
12.3	INSPECTION OF T&Ps	30
12.4	INSPECTION OF CRANES AND WINCHES	30
12.5	INSPECTION ON HEIGHT WORKING	30
12.6	INSPECTION ON WELDING AND GAS CUTTING OPERATION	30



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 3 of 43

POWER SECTOR

12.7	INSPECTION ON ELECTRICAL INSTALLATION / APPLIANCES	31
12.8	INSPECTION OF ELEVATOR	31
13.0	HSE PERFORMANCE	31
14.0	HSE PENALTIES	32
15.0	OTHER REQUIREMENTS	32
16.0	NON COMPLIANCE	33
17.0	HSE AUDIT/INSPECTION	34
18.0	MONTHLY HSE REVIEW MEETING	34
19.0	FORMATS USED	34
20.0	Annexures	36



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 4 of 43

POWER SECTOR

## 1.0 PURPOSE

- 1.1 The purpose of this HSE Plan is to provide for the systematic identification, evaluation, prevention and control of general workplace hazards, specific job hazards, potential hazards and environmental impacts that may arise from foreseeable conditions during installation and servicing of industrial projects and power plants.
- 1.2 This document shall be followed by BHEL's subcontractors at all installation and servicing sites. In case customer specific documents are to be implemented, this document will be followed in conjunction with customer specific documents.
- 1.3 Although every effort has been made to make the procedures and guidelines in line with statutory requirements, in case of any discrepancy relevant statutory guidelines must be followed.
- 1.4 In case the customer has any specific requirement, the same is to be fulfilled.

## 2.0 SCOPE

The document is applicable for BHEL's Subcontractors at all installation / servicing activities of BHEL Power Sector as per the relevant contractual obligations.

## 3.0 OBJECTIVES AND TARGETS

The HSE Plan reflects that BHEL places high priority upon the Occupational Health, Safety and Environment at workplaces.

- Ensure the Health and Safety of all persons at work site is not adversely affected by the work.
- Ensure protection of environment of the work site.
- Comply at all times with the relevant statutory and contractual HSE requirements.
- Provide trained, experienced and competent personnel. Ensure medically fit personnel only are engaged at work.
- Provide and maintain plant, places and systems of work that are safe and without risk to health and the environment.
- Provide all personnel with adequate information, instruction, training and supervision on the safety aspect of their work.
- Effectively control, co-ordinate and monitor the activities of all personnel on the Project sites including subcontractors in respects of HSE.
- Establish effective communication on HSE matters with all relevant parties involved in the Project works.
- Ensure that all work planning takes into account all persons that may be affected by the work.
- Ensure fitness testing of all T&Ps/Lifting appliances like cranes, chain pulley blocks etc. are to be certified by competent person.
- Ensure timely provision of resources to facilitate effective implementation of HSE requirements.
- Ensure continual improvements in HSE performance
- Ensure conservation of resources and reduction of wastage.
- Capture the data of all incidents including near misses, process deviation etc. Investigate and analyze the same to find out the root cause.
- Ensure timely implementation of correction, corrective action and preventive action.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 5 of 43

POWER SECTOR

**HSE TARGETS**

EXPLOSION	ZERO
FATALITY	ZERO
LOST TIME INJURY	ZERO
FIRE	ZERO
VEHICLE INCIDENTS	ZERO
ENVIRONMENTAL INCIDENTS	ZERO

**4.0 BHEL POWER SECTOR HEALTH, SAFETY & ENVIRONMENT POLICY**

**Power Sector HSE Policy**

We, at BHEL Power Sector, reaffirm our belief that the Health and Safety of our stakeholders and conservation of Environment is of utmost importance and takes precedence in all our business decisions. In pursuit of this belief and commitment, we strive to:

- ✓ Ensure total compliance with applicable legislation, regulations and other requirements concerning Occupational Health, Safety and Environment.
- ✓ Ensure continual improvement in the Occupational Health, Safety and Environment Management System performance.
- ✓ Enhance Occupational Health, Safety and Environment awareness amongst employees, customers and suppliers by proactive communication and training.
- ✓ Review periodically and improve Occupational Health, Safety and Environment Management System to ensure its continuing suitability, adequacy and effectiveness in a continuously changing business environment.
- ✓ Develop a culture of safety through active leadership and provide appropriate training at all levels to enable employees to fulfill their Health, Safety and Environmental obligations.
- ✓ Incorporate appropriate Occupational Health, Safety and Environmental criteria into business decisions for selection of plant, technology and services as well as appointment of key personnel.
- ✓ Ensure availability at all times of appropriate resources to fully implement the Occupational Health, Safety and Environmental policy of the company.

This policy will be communicated to all employees and made available to interested parties.

Sd/-

Date: 01.05.2013

Director (Power)



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 6 of 43

POWER SECTOR

**5.0 MEMORANDUM OF UNDERSTANDING:**

After award of work, subcontractors are required to enter into a memorandum of understanding as given below:

**Memorandum of Understanding**

BHEL, Power Sector \_\_\_\_\_ Region is committed to Health, Safety and Environment Policy (HSE Policy).

M/s \_\_\_\_\_ do hereby also commit to comply with the same HSE Policy while executing the Contract Number \_\_\_\_\_

M/s \_\_\_\_\_ shall ensure that safe work practices as per the HSE plan. Spirit and content therein shall be reached to all workers and supervisors for compliance.

In addition to this, M/S \_\_\_\_\_ shall comply to all applicable statutory and regulatory requirements which are in force in the place of project and any special requirement specified in the contract document of the principal customer.

M/s \_\_\_\_\_ shall co-operate in HSE audits/inspections conducted by BHEL /customer/ third party and ensure to close any non-conformity observed/reported within prescribed time limit.

Signed by authorized representative of M/s \_\_\_\_\_

Name :

Place & Date:



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 7 of 43

POWER SECTOR

## 6.0 TERMS AND DEFINITIONS

### 6.1 DEFINITIONS

#### 6.1.1 INCIDENT

Work-related or natural event(s) in which an injury, or ill health (regardless of severity), damage to property or fatality occurred, or could have occurred.

#### 6.1.2 NEAR MISS

An incident where no ill health, injury, damage or other loss occurs, but it had a potential to cause, is referred to as "Near-Miss".

#### 6.1.3 MAN-HOUR WORKED

The total number of man hours worked by all employees including subcontractors working in the premises. It includes managerial, supervisory, professional, technical, clerical and other workers including contract labours. Man-hours worked shall be calculated from the payroll or time clock recorded including overtime. When this is not feasible, the same shall be estimated by multiplying the total man-days worked for the period covered by the number of hours worked per day. The total number of workdays for a period is the sum of the number of men at work on each day of period. If the daily hours vary from department to department separate estimate shall be made for each department and the result added together.

#### 6.1.4 FIRST AID CASES

First aids are not essentially all reportable cases, where the injured person is given medical treatment and discharged immediately for reporting on duty, without counting any lost time.

#### 6.1.5 LOST TIME INJURY

Any work injury which renders the injured person unable to perform his regular job or an alternative restricted work assignment on the next scheduled work day after the day on which the injury occurred.

#### 6.1.6 MEDICAL CASES

Medical cases come under non-reportable cases, where owing to illness or other reason the employee was absent from work and seeks Medical treatment.

#### 6.1.7 TYPE OF INCIDENTS & THEIR REPORTING:

The three categories of Incident are as follows:

##### **Non-Reportable Cases:**

An incident, where the injured person is given medical help and discharged for work without counting any lost time.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 8 of 43

POWER SECTOR

**Reportable Cases:**

In this case the injured person is disable for 48 hours or more and is not able to perform his duty.

**Injury Cases:**

These are covered under the heading of non-reportable cases. In these cases the incident caused injury to the person, but he still continues his duty.

**6.1.8 TOTAL REPORTABLE FREQUENCY RATE**

Frequency rate is the number of Reportable Lost Time Injury (LTI) per one Million Man hours worked. Mathematically, the formula read as:

$$\frac{\text{Number of Reportable LTI} \times 1,000,000}{\text{Total Man Hours Worked}}$$

**6.1.9 SEVERITY RATE**

Severity rate is the Number of days lost due to Lost Time Injury (LTI) per one Million Man hours worked. Mathematically, the formula reads as:

$$\frac{\text{Days lost due to LTI} \times 1,000,000}{\text{Total Man Hours Worked}}$$

**6.1.10 INCIDENCE RATE**

Incidence Rate is the Number of LTI per one thousand manpower deployed. Mathematically, the formula reads as:

$$\frac{\text{Number of LTI} \times 1000}{\text{Average number of manpower deployed}}$$

**7.0 HSE ORGANISATION**

**Number of safety officers:**

The subcontractor must deploy one safety officer for every 500 workers or part thereof in each package. In addition, there must be one safety-steward/safety-supervisor for every 100 workers.

**Deployment:** The subcontractor should deploy sufficient safety officers and safety-steward/Safety-supervisor, as per requirement given above, since initial stage and add more in proportion to the added strength in work force. Any delay in deployment will attract a penalty of Rs.30,000/- per man month for the delayed period.

**7.1 QUALIFICATION FOR HSE PERSONNEL**

Sl.no	Designation	Qualification	Experience
1	Safety officer (Construction Agency)	Degree or Diploma in Engineering with full time diploma in Industrial Safety with construction safety as one of the subjects	Minimum two years for degree holder and five years for diploma holder in the field of Construction of power plant/ major industries



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 9 of 43

POWER SECTOR

2	Safety-Steward/ Supervisor	Safety- Supervisor	Degree or diploma in any discipline with full time diploma in Industrial Safety with construction safety as one of the subjects	Minimum two years
---	-------------------------------	-----------------------	---	-------------------

## 7.2 RESPONSIBILITIES

### 7.2.1 SITE IN -CHARGE OF SUBCONTRACTOR

- Shall sign Memorandum of Understanding (MoU) for compliance to BHEL's HSE Plan for Site Operations as per clause 5.0
- Shall engage qualified safety officer(s) and steward (s) as per clause 7.0
- Shall adhere to the rules and regulations mentioned in this code, practice very strictly in his area of work in consultation with his concerned engineer and the safety coordinator.
- Shall screen all workmen for health and competence requirement before engaging for the job and periodically thereafter as required.
- Shall not engage any employee below 18 years.
- Shall arrange for all necessary PPEs like safety helmets, belts, full body harness, shoes, face shield, hand gloves etc. before starting the job. Shall ensure that no working men/women carry excessive weight more than stipulated in Factory Rule Regulation R57.
- Shall ensure that all T&Ps engaged are tested for fitness and have valid certificates from competent person.
- Shall ensure that provisions stipulated in contract Labour Regulation Act 1970, Chapter V C.9, canteen, rest rooms/washing facilities to contracted employees at site.
- Shall adhere to the instructions laid down in Operation Control Procedures (OCPs) available with the site management.
- Shall ensure that person working above 2.0 meter should use Safety Harness tied to a life line/stable structure.
- Shall ensure that materials are not thrown from height. Cautions to be exercised to prevent fall of material from height.
- Shall report all incidents(Fatal/Major/Minor/Near Miss)to the Site engineer /HSE officer of BHEL.
- Shall ensure that Horseplay is strictly forbidden.
- Shall ensure that adequate illumination is arranged during night work.
- Shall ensure that all personnel working under subcontractor are working safely and do not create any Hazard to self and to others.
- Shall ensure display of adequate signage/posters on HSE.
- Shall ensure that mobile phone is not used by workers while working.
- Shall ensure conductance of HSE audit, mockdrill, medical camps, induction training and training on HSE at site.
- Shall ensure full co-operation during HQ/External /Customer HSE audits.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 10 of 43

**POWER SECTOR**

- Shall ensure submission of look-ahead plan for procurement of HSE equipment's and PPEs as per work schedule.
- Shall ensure good housekeeping.
- Shall ensure adequate valid fire extinguishers are provided at the work site.
- Shall ensure availability of sufficient number of toilets /restrooms and adequate drinking water at work site and labour colony.
- Shall ensure adequate emergency preparedness.
- Shall be member of site HSE committee and attend all meetings of the committee
- Power source for hand lamps shall be maximum of 24 v.
- Temporary fencing should be done for open edges if Hand – railings and Toe-guards are not available.

**7.2.2 HEALTH, SAFETY AND ENVIRONMENT OFFICER OF SUBCONTRACTOR**

- Carry out safety inspection of Work Area, Work Method, Men, Machine & Material, P&M and other tools and tackles.
- Facilitate inclusion of safety elements into Work Method Statement.
- Highlight the requirements of safety through Tool-box / other meetings.
- Help concerned HOS to prepare Job Specific instructions for critical jobs.
- Conduct investigation of all incident/dangerous occurrences & recommend appropriate safety measures.
- Advice & co-ordinate for implementation of HSE permit systems, OCPs & MPs.
- Convene HSE meeting & minute the proceeding for circulation & follow-up action.
- Plan procurement of PPE & Safety devices and inspect their healthiness.
- Report to PS Region/HQ on all matters pertaining to status of safety and promotional program at site level.
- Facilitate administration of First Aid
- Facilitate screening of workmen and safety induction.
- Conduct fire Drill and facilitate emergency preparedness
- Design campaigns, competitions & other special emphasis programs to promote safety in the workplace.
- Apprise PS– Region on safety related problems.
- Notify site personnel non-conformance to safety norms observed during site visits / site inspections.
- Recommend to Site In charge, immediate discontinuance of work until rectification, of such situations warranting immediate action in view of imminent danger to life or property or environment.
- To decline acceptance of such PPE / safety equipment that do not conform to specified requirements.
- Encourage raising Near Miss Report on safety along with, improvement initiatives on safety.
- Shall work as interface between various agencies such customer, package-in-charges, subcontractors on HSE matters



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 11 of 43

POWER SECTOR

## **8.0 PLANNING BY SUBCONTRACTOR**

### **8.1 MOBILISATION OF MACHINERY/EQUIPMENT/TOOLS BY SUBCONTRACTOR**

- As a measure to ensure that machinery, equipment and tools being mobilized to the construction site are fit for purpose and are maintained in safe operating condition and complies with legislative and owner requirement, inspection shall be arranged by in-house competent authority for acceptance as applicable.
- The machinery and equipment to be embraced for this purpose shall include but not limited to the following:
  - Mobile cranes.
  - Side Booms.
  - Forklifts.
  - Grinding machine.
  - Drilling machine.
  - Air compressors.
  - Welding machine.
  - Generator sets.
  - Dump Trucks.
  - Excavators.
  - Dozers
  - Grit Blasting Equipment.
  - Hand tools.
- Subcontractor shall notify the engineer, of his intention to bring on to site any equipment or any container, with liquid or gaseous fuel or other substance which may create a hazard. The Engineer shall have the right to prescribe the condition under which such equipment or container may be handled and used during the performance of the works and the subcontractor shall strictly adhere to such instructions. The Engineer shall have the right to inspect any construction tool and to forbid its use, if in his opinion it is unsafe. No claim due to such prohibition will be entertained.

### **8.2 MOBILISATION OF MANPOWER BY SUBCONTRACTOR**

- The subcontractor shall arrange induction and regular health check of their employees as per schedule VII of BOCW rules by a registered medical practitioner.
- The subcontractor shall take special care of the employees affected with occupational diseases under rule 230 and schedule II of BOCW Rules. The employees not meeting the fitness requirement should not be engaged for such job.
- Ensure that the regulatory requirements of excessive weight limit (to carry/lift/ move weights beyond prescribed limits) for male and female workers are complied with.
- Appropriate accommodation to be arranged for all workmen in hygienic condition.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 12 of 43

POWER SECTOR

**8.3 PROVISION OF PPEs**

- Personnel Protective Equipment (PPEs), in adequate numbers, will be made available at site & their regular use by all concerned will be ensured
- The following matrix recommends usage of minimum PPEs against the respective job.

Sl. No	Type of work	PPEs
1	Concrete and asphalt mixing	Nose mask, hand glove, apron and gum boot
2	Welders/Grinders/ Gas cutters	Welding/face screen, apron, hand gloves, nose mask and ear muffs if noise level exceeds 90dB. Helmet fitted with welding shield is preferred for welders
3	Stone/ concrete breakers	Ear muffs, safety goggles, hand gloves
4	Electrical Work	Rubber hand glove, Electrical Resistance shoes
5	Insulation Work	Respiratory mask, Hand gloves, safety goggles
6	Work at height	Double lanyard full body harness, Fall arrestor (specific cases)
7	Grit/Sand blasting	Blast suit, blast helmet, respirator, leather gloves
8	Painting	Plastic gloves, Respirators (particularly for spray painting)
9	Radiography	As per BARC guidelines

- The PPEs shall conform to the relevant standards as below and bear ISI mark.

**Relevant is-codes for personal protection**

IS: 2925 – 1984	Industrial Safety Helmets.
IS: 4770 – 1968	Rubber gloves for electrical purposes.
IS: 6994 – 1973 (Part-I)	Industrial Safety Gloves (Leather & Cotton Gloves).
IS: 1989 – 1986 (Part-I-II)	Leather safety boots and shoes.
IS: 5557 – 1969	Industrial and Safety rubber knee boots.
IS: 6519 – 1971	Code of practice for selections care and repair of Safety footwear.
IS: 11226 – 1985	Leather Safety footwear having direct molding sole.
IS: 5983 – 1978	Eye protectors.
IS: 9167 – 1979	Ear protectors.
IS: 1179-1967	Eye & Face protection during welding
IS: 3521 – 1983	Industrial Safety Belts and Harness
IS:8519 -1977	Guide for selection of industrial Safety equipment for body protection
IS:9473-2002,14166-1994,14746-1999	Respiratory Protective Devices

The list is not exhaustive. The safety officer may demand additional PPEs based on specific requirement.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 13 of 43

**POWER SECTOR**

- Where workers are employed in sewers and manholes, which are in use, the subcontractor shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into manhole, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent incident to the public
- Besides the PPEs mentioned above, the persons shall use helmet and safety shoe. The visitors shall use Helmet and any other PPEs as deemed appropriate for the area of work.

Colour scheme for Helmets:

1. Workmen: Yellow
  2. Safety staff: Green or white with green band
  3. Electrician: Red
  4. Others including visitors: White
- All the PPEs shall be checked for its quality before issue and the same shall be periodically checked. The users shall be advised to check the PPEs themselves for any defect before putting on. The defective ones shall be repaired/ replaced.
  - The issuing agency shall maintain register for issue and receipt of PPEs.
  - The Helmets shall have logo or name (abbreviation of agency name permitted) affixed or printed on the front.
  - The body harnesses shall be serial numbered.

#### **8.4 ARRANGEMENT OF INFRASTRUCTURE**

##### **8.4.1 DRINKING WATER**

- Drinking water shall be provided and maintained at suitable places at different elevations.
- Container should be labeled as " Drinking Water"
- Cleaning of the storage tank shall be ensured atleast once in 3 months indicating date of cleaning and next due date.
- Potability of water should be tested as per IS10500 at least once in a year.

##### **8.4.2 WASHING FACILITIES**

- In every workplace, adequate and suitable facilities for washing shall be provided and maintained.
- Separate and adequate cleaning facilities shall be provided for the use of male and female workers. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition and dully illuminated for night use.
- Overalls shall be supplied by the subcontractor to the workmen and adequate facilities shall be provided to enable the painters and other workers to wash during the cessation of work.

##### **8.4.3 LATRINES AND URINALS**

- Latrines and urinals shall be provided in every work place.
- Urinals shall also be provided at different elevations.
- They shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times, by appointing designated person.
- Separate facilities shall be provided for the use of male and female worker if any.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 14 of 43

POWER SECTOR

**8.4.4 PROVISION OF SHELTER DURING REST**

Proper Shed & Shelter shall be provided for rest during break

**8.4.5 MEDICAL FACILITIES**

**8.4.5.1 MEDICAL CENTRE (As per Schedule V, X and XI of BOCW central Rules, 1998)**

- A medical centre shall be ensured/identified at site with basic facilities for handling medical emergencies. The medical center can be jointly developed on proportionate sharing basis with permission from BHEL
- A qualified medical professional, not less than MBBS, shall be deployed at the medical centre
- The medical centre shall be equipped with one ambulance, with trained driver and oxygen cylinder.
- Medical waste shall be disposed as per prevailing legislation (Bio-Medical Waste –Management and Handling Rules, 1998)

**8.4.5.2 FIRST AIDER**

- Ensure availability of Qualified First-aider throughout the working hours.
- Every injury shall be treated, recorded and reported.
- Refresher course on first aid shall be conducted as necessary.
- List of Qualified first aiders and their contact numbers should be displayed at conspicuous places.

**8.4.5.3 FIRST AID BOX (as per schedule III of BOCW)**

- The subcontractor shall provide necessary first aid facilities as per schedule III of BOCW. At every work place first aid facilities shall be provided and maintained.
- The first aid box shall be kept by first aider who shall always be readily available during the working hours of the work place. His name and contact no to be displayed on the box.
- The first aid boxes should be placed at various elevations so as to make them available within the reach and at the quickest possible time.
- The first aid box shall be distinctly marked with a Green Cross on white background.
- Details of contents of first aid box is given in Annexure No. 01
- Monthly inspection of First Aid Box shall be carried out by the owner as per format no. HSEP:13-F01
- The subcontractor should conduct periodical first –aid classes to keep his supervisor and Engineers properly trained for attending to any emergency.

**8.4.5.4 HEALTH CHECK UP (As per schedule VII and Form XI)**

The persons engaged at the site shall undergo health checkup as per the format no. HSEP:13-F02 before induction. The persons engaged in the following works shall undergo health checkup at least once in a year:

- a. Height workers
- b. Drivers/crane operators/riggers



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 15 of 43

**POWER SECTOR**

- c. Confined space workers
- d. Shot/sand blaster
- e. Welding and NDE personnel

**8.4.6 PROVISION OF CANTEEN FACILITY**

- Canteen facilities shall be provided for the workmen of the project inside the project site.
- Proper cleaning and hygienic condition shall be maintained.
- Proper care should be taken to prevent biological contamination.
- Adequate drinking water should be available at canteen.
- Fire extinguisher shall be provided inside canteen.
- Regular health check-up and medication to the canteen workers shall be ensured.

**8.4.7 PROVISION OF ACCOMODATION/LABOUR COLONY**

- The subcontractor shall arrange for the accommodation of workmen at nearby localities or by making a labour colony.
- Regular housekeeping of the labour colony shall be ensured.
- Proper sanitation and hygienic conditions to be maintained.
- Drinking water and electricity to be provided at the labour colony.
- Bathing/ washing bay
- Room ventilation and electrification.

**8.4.8 PROVISION OF EMERGENCY VEHICLE**

- Dedicated emergency vehicle shall be made available at workplace by each subcontractor to handle any emergency

**8.4.9 PEST CONTROL**

Regular pest control should be carried out at all offices, mainly laboratories, canteen, labour colony and stores.

**8.4.10 SCRAPYARD**

- In consultation with customer, scrapyard shall be developed to store metal scrap, wooden scrap, waste, hazardous waste.
- Scrap/Waste shall be segregated as Bio-degradable and non-bio-degradable and stored separately.

**8.4.11 ILLUMINATION**

- The subcontractor shall arrange at his cost adequate lighting facilities e.g. flood lighting, hand lamps, area lighting etc. at various levels for safe and proper working operations at dark places and during night hours at the work spot as well as at the pre-assembly area.
- Adequate and suitable light shall be provided at all work places & their approaches including passage ways as per IS: 3646 (Part-II). Some recommended values are given below:



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 16 of 43

**POWER SECTOR**

S. No.	Location	Illumination (Lux)
<b>A. Construction Area</b>		
1.	Outdoor areas like store yards, entrance and exit roads	20
2.	Platforms	50
3.	Entrances, corridors and stairs	100
4.	General illumination of work area	150
5.	Rough work like fabrication, assembly of major items	150
6.	Medium work like assembly of small machined parts	300
	rough measurements etc.	
7.	Fine work like precision assembly, precision measurements etc.	700
8.	Sheet metal works	200
9.	Electrical and instrument labs	450
<b>B. Office</b>		
1.	Outdoor area like entrance and exit roads	20
2.	Entrance halls	150
3.	Corridors and lift cars	70
4.	Lift landing	150
5.	Stairs	100
6.	Office rooms, conference rooms, library reading tables	300
7.	Drawing table	450
8.	Manual telephone exchange	200

- Lamp (hand held) shall not be powered by mains supply but either by 24V or dry cells.
- Lamps shall be protected by suitable guards where necessary to prevent danger, in case of breakage of lamp.
- Emergency lighting provision for night work shall be made to minimise danger in case of main supply failure.

If the subcontractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instructions issued by the authorized BHEL official, BHEL shall have the right to take corrective steps at the risk and cost of the subcontractor

## 9.0 HSE TRAINING & AWARENESS

### 9.1 HSE INDUCTION TRAINING

All persons entering into project site shall be given HSE induction training by the HSE officer of BHEL /subcontractor before being assigned to work.

In-house induction training subjects shall include but not limited to:

- Briefing of the Project details.
- Safety objectives and targets.
- Site HSE rules.
- Site HSE hazards and aspects.
- First aid facility.
- Emergency Contact No.
- Incident reporting.
- Fire prevention and emergency response.
- Rules to be followed in the labour colony (if applicable)



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 17 of 43

**POWER SECTOR**

- Proper safety wear & gear must be issued to all the workers being registered for the induction (i.e., Shoes/Helmets/Goggles/Leg guard/Apron etc.)
- They must arrive fully dressed in safety wear & gear to attend the induction.
- Any one failing to conform to this safety wear& gear requirement shall not qualify to attend.
- On completing attending subcontractor's in-house HSE induction, each employee shall sign an induction training form (format no. HSEP:13-F03) to declare that he had understood the content and shall abide to follow and comply with safe work practices. They may only then be qualified to be issued with a personal I.D. card, for access to the work site.

**9.2 HSE TOOLBOX TALK**

- HSE tool Box talk shall be conducted by frontline foreman/supervisor of subcontractor to specific work groups prior to the start of work. The agenda shall consist of the followings:
  - Details of the job being intended for immediate execution.
  - The relevant hazards and risks involved in executing the job and their control and mitigating measures.
  - Specific site condition to be considered while executing the job like high temperature, humidity, unfavorable weather etc.
  - Recent non-compliances observed.
  - Appreciation of good work done by any person.
  - Any doubt clearing session at the end.
- Record of Tool box talk shall be maintained as per format no. HSEP:13-F04
- Tool box talk to be conducted at least once a week for the specific work.

**9.3 TRAINING ON HEIGHT WORK**

Training on height work shall be imparted to all workers working at height by in-house/external faculty at least twice in a year. The training shall include following topics:

- Use of PPEs
- Use of fall arrester, retractable fall arrester, life line, safety nets etc.
- Safe climbing through monkey ladders.
- Inspection of PPEs.
- Medical fitness requirements.
- Mock drill on rescue at height.
- Dos & Don'ts during height work.

**9.4 HSE TRAINING DURING PROJECT EXECUTION**

- Other HSE training shall be arranged by BHEL/ subcontractor as per the need of the project execution and recommendation of HSE committee of site.
- The topics of the HSE training shall be as follows but not limited to:
  - Hazards identification and risk analysis (HIRA)
  - Work Permit System
  - Incident investigation and reporting
  - Fire fighting
  - First aid
  - Fire-warden training
  - EMS and OHSMS
  - T & Ps fitness and operation



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 18 of 43

**POWER SECTOR**

- Electrical safety
- Welding, NDE & Radiological safety
- Storage, preservation & material handling.
- A matrix shall be maintained to keep an up-to-date record of attendance of training sessions carried out.

**9.5 HSE PROMOTION-SIGNAGE, POSTERS, COMPETITION, AWARDS ETC**

**9.5.1 Display of HSE posters and banners**

- Site shall arrange appropriate posters, banners, slogans in local/Hindi/English languages at work place

**9.5.2 Display of HSE signage**

- Appropriate HSE signage shall be displayed at the work area to aware workmen and passersby about the work going on and do's and don'ts to be followed

**9.5.3 Competition on HSE and award**

- Site will arrange different competition (slogan, poster, essay etc.) on HSE time to time (Safety day, BHEL day, World Environment Day etc.) and winners will be suitably awarded.

**9.5.4 HSE awareness programme**

- Subcontractor shall arrange HSE awareness programme periodically on different topics including medical awareness for all personnel working at site

**10.0 HSE COMMUNICATION**

**10.1 INCIDENT REPORTING**

- The subcontractor shall submit report of all incidents, fires and property damage etc to the Engineer immediately after such occurrence, but in any case not later than 24 hours of the occurrence. Such reports shall be furnished in the manner prescribed by BHEL. ( Refer HSE procedure for incident investigation, analysis and reporting for details)
- In addition, periodic reports on safety shall also be submitted by the subcontractor to BHEL from time to time as prescribed by the Engineer. Compiled monthly reports of all kinds of incidents, fire and property damage to be submitted to BHEL safety officer as per prescribed formats.
- HSE incidents of site shall be reported to BHEL site Management as per Procedure for Incident Investigation and Reporting in format no. HSEP:14-F15. Corrective action shall be immediately implemented at the work place and compliance shall be verified by BHEL HSE officer and until then, work shall be put on hold by Construction Manager.

**10.2 HSE EVENT REPORTING**

- Important HSE events like HSE training, Medical camp etc. organized at site shall be reported to BHEL site management in detail with photographs for publication in different in-house magazines
- Celebration of important days like National Safety Day, World Environment Day etc. shall also be reported as mentioned above.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 19 of 43

POWER SECTOR

**11.0 OPERATIONAL CONTROL**

All applicable OCPs (Operational control procedures) will be followed by subcontractor as per BHEL instructions. This will be done as part of normal scope of work. List of such OCPs is given below. In case any other OCP is found to be applicable during the execution of work at site, then subcontractor will follow this as well, within quoted rate. These OCPs (applicable ones) will be made available to subcontractor during work execution at site. However for reference purpose, these are kept with Safety Officer of BHEL at the Power Sector Regional HQ, or available in downloadable format in the website, which may be referred by subcontractor, if they so desire.

**LIST OF OCPs**

Safe handling of chemicals	Safety in use of cranes	Hydraulic test
Electrical safety	Storage and handing of gas cylinders	Spray insulation
Energy conservation	Manual arc welding	Trial run of rotary equipment
Safe welding and gas cutting operation	Safe use of helmets	Stress relieving
Fire safety	Good house keeping	Material preservation
Safety in use of hand tools	Working at height	Cable laying/tray work
First aid	Safe excavation	Transformer charging
Food safety at canteen	Safe filling of hydrogen in cylinder	Electrical maintenance
Illumination	Vehicle maintenance	Safe handling of battery system
Handling and erection of heavy metals	Safe radiography	Computer operation
Safe acid cleaning	Waste disposal	Storage in open yard
Safe alkali boil out	Working at night	For sanitary maintenance
Safe oil flushing	Blasting	Batching
Steam blowing	DG set	Piling rig operation
Safe working in confined area	Handling & storage of mineral wool	Gas distribution test
Safe operation of passenger lift, material hoists & cages	Drilling, reaming and grinding(machining)	Cleaning of hotwell / deaerator
Electro-resistance heating	Compressor operation	O&M of control of AC plant & system
Air compressor	Passivation	Safe Loading of Unit
Safe EDTA Cleaning	Safe Chemical cleaning of Pre boiler system	Safe Boiler Light up
Safe Rolling and Synchronisation		

**11.1 HSE ACTIVITIES**

HSE activities shall be conducted at site based on the HSEMSM developed by Power Sector and issued to site by Regions.

While planning for any activity the following documents shall be referred for infrastructural requirements to establish control measures:

- 1) HSE Procedure for Register of OHS Hazards and Risks
- 2) HSE Procedure for Register of Environmental Aspects and Impacts
- 3) HSE Procedure for Register of Regulations



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 20 of 43

POWER SECTOR

- 4) Operational Control Procedures
- 5) HSE Procedure for Emergency Preparedness and Response Plan
- 6) Contract documents

### 11.2 WORK PERMIT SYSTEM

- The following activities shall come under Work Permit System
  - a. Height working above 2 metres
  - b. Hot working at height
  - c. Confined space
  - d. Radiography
  - e. Excavation more than 4 meter depth
  - f. Heavy lifting above 50 tonRefer Annexure 05 for Work permit formats.
- "HSE Procedure for Work Permit System" shall be followed while implementing permit system. Where customer is having separate Work Permit System the same shall be followed.
- Permit applicant shall apply for work permit of particular work activity at particular location before starting of the work with Job Hazard Analysis.
- Permit signatory shall check that all the control measures necessary for the activity are in place and issue the permit to the permit holder.
- Permit holder shall implement and maintain all control measures during the period of permit .He will close the permit after completion of the work. The closed permit shall be archived in HSE Department of site.

### 11.3 SAFETY DURING WORK EXECUTION

Respective OCPS are to be followed and adherence to the same would be contractually binding

#### 11.3.1 WELDING SAFETY

All safety precautions shall be taken for welding and cutting operations as per IS-818. All safety precautions shall be taken for foundation and other excavation marks as per IS-3764.

#### 11.3.2 RIGGING

Rigging equipment shall not be loaded in excess of its recommended safe working load. Rigging equipment, when not in use, shall be removed from the original work area so as not to present a hazard to employees.

#### 11.3.3 CYLINDERS STORAGE AND MOVEMENT

All gas cylinders shall be stored in upright position. Suitable trolley shall be used. There shall be flash-back arrestors conforming to IS-11006 at both cylinder and burner ends. Damaged tube and regulators must be immediately replaced. No of cylinders shall not exceed the specified quantity as per OCP

Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dragged, struck or permitted to strike each other violently.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 21 of 43

POWER SECTOR

When cylinders are transported by powered vehicle they shall be secured in a vertical position.

#### 11.3.4 DEMOLITION WORK

Before any demolition work is commenced and also during the process of the work the following shall be ensured:

- All roads and open areas adjacent to the work site shall either be closed or suitably protected.
- No electric cable or apparatus which is liable to be a source of danger nor a cable or an apparatus used by the operator shall remain electrically charged.
- All practical steps shall be taken to prevent danger to persons employed from the risks of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render them unsafe.

#### 11.3.5 T&Ps

All T&Ps/ MMEs should be of reputed brand/appropriate quality & must have valid test/calibration certificates bearing endorsement from competent authority of BHEL..Subcontractor to also submit monthly reports of T&Ps deployed and validity test certificates to BHEL safety Officer as per the format/procedure of BHEL.

#### 11.3.6 CHEMICAL HANDLING

Displaying safe handling procedures for all chemicals such as lube oil, acid, alkali, sealing compounds etc , at work place. Where it is necessary to provide and/or store petroleum products or petroleum mixture & explosives, the subcontractor shall be responsible for carrying out such provision / storage in accordance with the rules & regulations laid down in the relevant petroleum act, explosive act and petroleum and carbide of calcium manual, published by the chief inspector of explosives of India. All such storage shall have prior approval if necessary from the chief inspector of explosives or any other statutory authority. The subcontractor shall be responsible for obtaining the same.

#### 11.3.7 ELECTRICAL SAFETY

- Providing adequate no. of 24 V sources and ensure that no hand lamps are operating at voltage level above 24 Volts.
- Fulfilling safety requirements at all power tapping points.
- High/ Low pressure welders to be identified with separate colour clothings. No welders will be deployed without passing appropriate tests and holding valid welding certificates. Approved welding procedure should be displayed at work place.
- The subcontractor shall not use any hand lamp energized by Electric power with supply voltage of more than 24 volts in confined spaces like inside water boxes, turbine casings, condensers etc.
- All portable electric tools used by the subcontractor shall have safe plugging system to source of power and be appropriately earthed. Only electricians licensed by appropriate statutory authority shall be employed by the subcontractor to carry out all types of electrical works. Details of earth resource and their test date to be given to BHEL safety officer as per the prescribed formats of BHEL
- The subcontractor shall use only properly insulated and armored cables which conform to the requirement of Indian Electricity Act and Rules for all wiring, electrical applications at site.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 22 of 43

**POWER SECTOR**

- BHEL reserves the right to replace any unsafe electrical installations, wiring, cabling etc. at the cost of the subcontractor.
- All electrical appliances used in the work shall be in good working condition and shall be properly earthed.
- No maintenance work shall be carried out on live equipment.
- The subcontractor shall maintain adequate number of qualified electricians to maintain his temporary electrical installations.
- Area wise Electrical safety inspection is to be carried out on monthly basis as per "Electrical Safety Inspection checklist" and the report is to be submitted to BHEL safety officer
- Adequate precautions shall be taken to prevent danger for electrical equipment. No materials on any of the sites of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public
- The subcontractor shall carefully follow the safety requirement of BHEL/ the purchaser with the regard to voltages used in critical areas.

**11.3.8 FIRE SAFETY**

- Providing appropriate fire fighting equipment at designated work place and nominate a fire officer/warden adequately trained for his job.
- Subcontractor shall provide enough fire protecting equipment of the types and numbers at his office, stores, temporary structure in labor colony etc. Such fire protection equipment shall be easy and kept open at all times.
- The fire extinguishers shall be properly refilled and kept ready which should be certified at periodic intervals. The date of changing should be marked on the Cylinders.
- All other fire safety measures as laid down in the "codes for fire safety at construction site" issued by safety coordinator of BHEL shall be followed.
- Non-compliance of the above requirement under fire protection shall in no way relieve the subcontractor of any of his responsibility and liabilities to fire incident occurring either to his materials or equipment or those of others.
- Emergency contacts nos must be displayed at prominent locations
- Tarpaulin being inflammable should not be used (instead, only non infusible covering materials shall be used) as protective cover while preheating, welding, stress relieving etc. at site.

**11.3.9 SCAFFOLDING**

- Suitable scaffolds shall be provided for workman for all works that cannot safely be done from the ground, or from solid construction except in the case of short duration of work which can be done safely from ladders.
- When a ladder is used, it shall be of rigid construction made of steel. The steps shall have a minimum width of 45 cm and a maximum rise of 30 cm. Suitable handholds of good quality wood or steel shall be provided and the ladder shall be given an inclination not steeper than ¼ horizontal and 1 vertical.
- Scaffolding or staging more than 3.6 m above the ground floor, swung or suspended from an overhead support or erected with stationery support shall have a guard rail properly bolted, braced or otherwise secured, at least 90 cm above the floor or platform of such scaffolding or staging and extending along the entire length of the out side and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from savor, from swaying, from the building or structure.

**11.3.10 WORK AT HEIGHT:**

- Guardrails and toe-board/barricades and sound platform conforming to IS:4912-1978 should be provided.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 23 of 43

**POWER SECTOR**

- Wherever necessary, life-line(pp or metallic) and fall arrestor along with Polyamide rope or Retractable lifeline should be provided.
- Safety Net as per IS:11057:1984 should be used extensively for prevention/ arrest of men and materials falling from height. The safety nets shall be fire resistant, duly tested and shall be of ISI marked and the nets shall be located as per site requirements to arrest or to reduce the consequences of a possible fall of persons working at different heights.
- Reaching beyond barricaded area without lifeline support, moving with support of bracings, walking on beams without support, jumping from one level to another, throwing objects and taking shortcut must be discouraged.
- Use of Rebar steel for making Jhoola and monkey-ladder (Rods welded to vertical or inclined structural members), temporary platform etc. must be avoided.
- Monkey Ladder should be properly made and fitted with cages.
- Jhoola should be made with angles and flats and tested like any lifting tools before use.
- Lanyard must be anchored always and in case of double lanyard, each should be anchored separately.
- In case of pipe-rack, persons should not walk on pipes and walk on platforms only.
- In case of roof work, walking ladder/ platform should be provided along with lifeline and/ or fall arrestor.
- Empty drums must not be used.
- For chimney or structure painting, both hanging platform and men should be anchored separately to a firm structure alongwith separate fall arrestor. Rope ladder should be discouraged.

**11.3.11 WORKING PLATFORM**

Working platforms, gangways and stairways shall be so constructed that they do not sag unduly or unequally and if the height of the platform gangways provided is more than 3.6 m above ground level or floor level, they shall be closely boarded and shall have adequate width which shall not be less than 750 mm and be suitably fenced as described above. Every opening in the floor or a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing whose minimum height shall be 90 cm.

**11.3.12 EXCAVATION**

Wherever there are open excavation in ground, they shall be fenced off by suitable railing and danger signals installed at night so as to prevent persons slipping into the excavations.

**11.3.13 LADDER SAFETY**

Safe means of access shall be provided to all working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 m in the length while the width between side rails in rung ladder shall in no case be less than app. 29.2 cm for ladder upto and including 3 m in length. For longer ladders this width shall be increased at least ¼" for each additional foot of length.

A sketch of the ladders and scaffolds proposed to be used shall be prepared and approval of the Engineer obtained prior to Construction.

**11.3.14 LIFTING SAFETY**

- It will be the responsibility of the subcontractor to ensure safe lifting of the equipment, taking due precaution to avoid any incident and damage to other equipment and personnel.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 24 of 43

POWER SECTOR

- All requisite tests and inspection of handling equipment, tools & tackle shall be periodically done by the subcontractor by engaging only the Competent Persons as per law.
- Defective equipment or uncertified shall be removed from service.
- Any equipment shall not be loaded in excess of its recommended safe working load.

#### 11.3.15 HOISTING APPLIANCE

- Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safe guards.
- Hoisting appliance should be provided with such means as will reduce to the minimum the risk of any part of a suspended load becoming incidentally displaced.
- When workers employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided.
- The worker should not wear any rings, watches and carry keys or other materials which are good conductor of electricity.

#### 11.4 ENVIRONMENTAL CONTROL

Environment protection has always been given prime importance by BHEL. Environmental damage is a major concern of the principal subcontractor and every effort shall be made, to have effective control measures in place to avoid pollution of Air, Water and Land and associated life. Chlorofluorocarbons such as carbon tetrachloride and trichloroethylene shall not be used. Waste disposal shall be done in accordance with the guidelines laid down in the project specification.

Any chemical including solvents and paints, required for construction shall be stored in designated bonded areas around the site as per Material Safety Data Sheet (MSDS).

In the event of any spillage, the principle is to recover as much material as possible before it enters drainage system and to take all possible action to prevent spilled materials from running off the site. The subcontractor shall use appropriate MSDS for clean-up technique

All subcontractors shall be responsible for the cleanliness of their own areas.

The subcontractors shall ensure that noise levels generated by plant or machinery are as low as reasonably practicable. Where the subcontractor anticipates the generation of excessive noise levels from his operations the subcontractor shall inform to Construction Manager of BHEL accordingly so that reasonable & practicable precautions can be taken to protect other persons who may be affected.

It is imperative on the part of the subcontractor to join and effectively contribute in joint measures such as tree plantation, environment protection, contributing towards social upliftment, conversion of packing woods to school furniture, keeping good relation with local populace etc.

The subcontractor shall carry out periodic air and water quality check and illumination level checking in his area of work place and take suitable control measure.

#### 11.5 HOUSEKEEPING

- Keeping the work area clean/ free from debris, removed scaffoldings, scraps, insulation/sheeting wastage /cut pieces, temporary structures, packing woods etc. will be in the scope of the subcontractor. Such cleanings has to be done by



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 25 of 43

**POWER SECTOR**

subcontractor within quoted rate, on daily basis by an identified group. If such activity is not carried out by subcontractor / BHEL is not satisfied, then BHEL may get it done by other agency and actual cost along with BHEL overheads will be deducted from contractor's bill. Such decisions of BHEL shall be binding on the subcontractor

- Proper housekeeping to be maintained at work place and the following are to be taken care of on daily basis.
- All surplus earth and debris are removed/disposed off from the working areas to identified locations.
- Unused/Surplus cables, steel items and steel scrap lying scattered at different places/elevation within the working areas are removed to identified locations.
- All wooden scrap, empty wooden cable drums and other combustible packing materials, shall be removed from workplace to identified locations. Sufficient waste bins shall be provided at
- Different work places for easy collection of scrap/waste. Scrap chute shall be installed to remove scrap from high location.
- Access and egress (stair case, gangways, ladders etc.) path should be free from all scrap and other hindrances.
- Workmen shall be educated through tool box talk about the importance of housekeeping and encourage not to litter.
- Labour camp area shall be kept clear and materials like pipes, steel, sand, concrete, chips and bricks, etc. shall not be allowed in the camp to obstruct free movement of men and machineries.
- Fabricated steel structures, pipes & piping materials shall be stacked properly.
- No parking of trucks/trolleys, cranes and trailers etc. shall be allowed in the camp, which may obstruct the traffic movement as well as below LT/HT power line.
- Utmost care shall be taken to ensure over all cleanliness and proper upkeep of the working areas

#### **11.6 WASTE MANAGEMENT**

Take suitable measures for waste management and environment related laws/legislation as a part of normal construction activities. Compliance with the legal requirements on storage/ disposal of paint drums (including the empty ones), Lubricant containers, Chemical Containers, and transportation and storage of hazardous chemicals will be strictly maintained.

##### **11.6.1 BINS AT WORK PLACE**

- Sufficient rubbish bins shall be provided close to workplaces.
- Bins should be painted yellow and numbered.
- Sufficient nos. of drip trays shall be provided to collect oil and grease.
- Sufficient qty. of broomsticks with handle shall be provided.
- Adequate strength of employees should be deployed to ensure daily monitoring and service for waste management.

##### **11.6.2 STORAGE AND COLLECTION**

- Different types of rubbish/waste should be collected and stored separately.
- Paper, oily rags, smoking material, flammable, metal pieces should be collected in separate bins with close fitting lids.
- Rubbish should not be left or allowed to accumulate on construction and other work places.
- Do not burn construction rubbish near working site.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 26 of 43

**POWER SECTOR**

**11.6.3 SEGREGATION**

- Earmark the scrap area for different types of waste.
- Store wastes away from building.
- Oil spill absorbed by non-combustible absorbent should be kept in separate bin.
- Clinical and first aid waste stored and incinerated separately.

**11.6.4 DISPOSAL**

- Sufficient containers and scrap disposal area should be allocated.
- All scrap bin and containers should be conveniently located.
- Provide self-closing containers for flammable/spontaneously combustible material.
- Keep drainage channels free from choking.
- Make schedule for collection and disposal of waste.

**11.6.5 WARNING AND SIGNS**

- Appropriate sign to be displayed at scrap storage area
- No toxic, corrosive or flammable substance to be discarded into public sewage system.
- Waste disposal shall be in accordance with best practice.
- Comply with all the requirements of Pollution Control Board (PCB) for storage and disposal of hazardous waste.

**11.7 TRAFFIC MANAGEMENT SYSTEM**

**11.7.1 SAFE WORKPLACE TRANSPORT SYSTEM**

- Traffic routes in a work place shall be suitable for the persons or vehicles using them. This shall be sufficient in number and of sufficient size. This shall reflect the suitability of traffic routes for vehicles and pedestrians.
- Where vehicles and pedestrians use the same traffic routes there shall be sufficient space between them. Where necessary all traffic routes must be suitably indicated. Pedestrians or vehicles must be able to use traffic routes without endangering those at work. There must be sufficient separation of traffic routes from doors, gates and pedestrian traffic routes.
- For internal traffic, lines marked on roads / access routes and between buildings shall clearly indicate where vehicles are to pass.
- Temporary obstacles shall be brought to the attention of drivers by warning signs or hazard cones.
- Speed limits shall be clearly displayed. Speed ramps preceded by a warning signs or marker are necessary.
- The traffic route should be wide enough to allow vehicles to pass and re-pass oncoming or parked traffic and it may be advisable to introduce on-way system or parking restrictions.
- Safest route shall be provided between places where vehicles have to call or deliver.
- Avoid vulnerable areas/items such as fuel or chemicals tanks or pipes, open or unprotected edges and structures likely to collapse



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 27 of 43

**POWER SECTOR**

- Safe areas shall be provided for loading and unloading.
- Avoid sharp or blind bends. If this is not possible hazards should be indicated e.g. blind corner.
- Ensure road crossings are minimum and clearly signed.
- Entrance and gateways shall be wide enough to accommodate a second vehicle without causing obstruction.
- Set sensible speed limits which are clearly sign posted.
- Where necessary ramps should be used to retard speed. This shall be preceded by a warning sign or mark on the road.
- Forklift trucks shall not pass over road hump unless of a type capable of doing so.
- Overhead electric cable, pipes containing flammable hazardous chemical shall be shielded by using goal posts height gauge posts or barriers.
- Road traffic signs shall be provided on prominent locations for prevention of incidents and hazards and for quick guidance and warning to employees and public. Safety signs shall be displayed as per the project working requirement and guideline of the state in which project is done. Vehicles hired or used shall not be parked within the 15m radius of any working area. Any vehicle, that is required to be at the immediate/near the vicinity, shall be approved by the person in-charge of the site.

**11.7.2 TRAFFIC ROUTE FOR PEDESTRIANS**

- Where traffic routes are used by both pedestrians and vehicles road shall be wide enough to allow vehicles and pedestrians safely.
- Separate routes shall be provided for pedestrians to keep them away from vehicles. Provide suitable barriers/guard at entrances/exit and the corners or buildings.
- Where pedestrian and vehicle routes cross, appropriate crossing shall be provided.
- Where crowd is likely to use roadway e.g. at the end of shift, stop vehicles from using them at such times.
- Provide high visibility clothing for people permitted in delivery area.

**11.7.3 WORK VEHICLE**

Work vehicle shall be as safe stable efficient and roadworthy as private vehicles on public roads. Site management shall ensure that drivers are suitably trained. All vehicle e.g. heavy motor vehicle forklift trucks dump trucks mobile cranes shall ensure that the work equipment conforms to the following:

- A high level of stability.
- A safe means of access/egress.
- Suitable and effective service and parking brakes.
- Windscreens with wipers and external mirrors giving optimum all round visibility.
- Provision of horn, vehicle lights, reflectors, reversing lights, reversing alarms.
- Provision of seat belts.
- Guards on dangerous parts.
- Driver protection - to prevent injury from overturning and from falling objects/materials.
- Driver protection from adverse weather.
- No vehicle shall be parked below HT/LT power lines.
- Valid Pollution Under Control certification for all vehicles



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 28 of 43

POWER SECTOR

#### 11.7.4 DAILY CHECK BY DRIVER

- There should also be daily safety checks containing below mentioned points by the driver before the vehicle is used.
  - Brakes.
  - Tires.
  - Steering.
  - Mirrors.
  - Windscreen waters.
  - Wipers.
  - Warning signals.
  - Specific safety system i.e. control interlocks
- Management should ensure that drivers carry out these checks.

#### 11.7.5 TRANSPORTATION OF PERSONNEL AND MATERIALS BY VEHICLES

- All drivers shall hold a valid driving License for the class of vehicle to be driven and be registered as an authorized BHEL driver with the Administration Department.
  - Securing of the load shall be by established and approved methods, i.e. chains with patented tightening equipment for steel/heavy loads. Sharp corners on loads shall be avoided when employing ropes for securing.
  - All overhangs shall be made clearly visible and restricted to acceptable limits
  - Load shall be checked before moving off and after traveling a suitable distance.
  - On no account is construction site to be blocked by parked vehicles Drivers of vehicles shall only stop or park in the areas designate by the stringing foreman.
  - Warning signs shall be displayed during transportation of material.
- All vehicles used by BHEL shall be in worthy condition and in conformance to the Land Transport requirement.

#### 11.7.6 MAINTENANCE

All Vehicles used for transportation of man and material shall undergo scheduled inspections on frequent intervals to secure safe operation. Such inspections shall be conducted in particular for steering, brakes, lights, horn, doors etc. Site management shall ensure that work equipment is maintained in an efficient, working order and in good repair. Inspections and services carried out at regular intervals of time and or mileage. No maintenance shall be carried below HT/LT power lines.

#### 11.8 EMERGENCY PREPAREDNESS AND RESPONSE

- Emergency preparedness and response capability of site shall be developed as per Emergency Preparedness and Response plan issued by Regional HQ
- Availability of adequate number of first aiders and fire warden shall be ensured with BHEL and its subcontractors
- All the subcontractor's supervisory personnel and sufficient number of workers shall be trained for fire protection systems. Enough number of such trained personnel must be available during the tenure of contract. Subcontractor should nominate his supervisor to coordinate and implement the safety measures.
- Assembly point shall be earmarked and access to the same from different location shall be shown
- Fire exit shall be identified and pathway shall be clear for emergency escape.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 29 of 43

**POWER SECTOR**

- Appropriate type and number of fire extinguisher shall be deployed as per Fire extinguisher deployment plan and validity shall be ensured periodically through inspection
- Adequate number of first aid boxes shall be strategically placed at different work places to cater emergency need. Holder of the first aid box shall be identified on the box itself who will have the responsibility to maintain the same.
- First aid center shall be developed at site with trained medical personnel and ambulance
- Emergency contact numbers (format given in EPRP) of the site shall be displayed at prominent locations.
- Tie up with fire brigade shall be done in case customer is not having fire station.
- Tie up with hospital shall be done in case customer is not having hospital.
- Disaster Management group shall be formed at site
- Mock drill shall be arranged at regular intervals. Monthly report of the above to be given to BHEL safety Officer as per prescribed BHEL formats
- Mock drill shall be conducted on different emergencies periodically to find out gaps in emergency preparedness and taking necessary corrective action

## **12.0 HSE INSPECTION**

Inspection on HSE for different activities being carried out at site shall be done to ensure compliance to HSEMS requirements. The subcontractor shall maintain and ensure necessary safety measures as required for inspection and tests HV test, Pneumatic test, Hydraulic test, Spring test, Bend test etc as applicable, to enable inspection agency for performing Inspection. If any test equipment is found not complying with proper safety requirements then the Inspection Agency may withhold inspection, till such time the desired safety requirements are met.

### **12.1 DAILY HSE CHECKS**

Both the Site Supervisors and safety officer of Subcontractor are to conduct daily site Safety inspection around work activities and premises to ensure that work methods and the sites are maintained to an acceptable standard. The following are to form the common subjects of a daily safety inspection:

- Personal Safety wears & gear compliance.
- Complying with site safety rules and permit-to-work (PTW).
- Positions and postures of workers.
- Use of tools and equipment etc. by the workers.

The inspection should be carried out just when work starts in beginning of the day, during peak activities period of the day and just before the day's work ends.

### **12.2 INSPECTION OF PPE**

- PPEs shall be inspected by HSE officer at random once in a week as per format no. HSEP:13-F06 for its compliance to standard and compliance to use and any adverse observation shall be recorded in the PPE register.
- The applicable PPEs for carrying out particular activities are listed below.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 30 of 43

POWER SECTOR

### 12.3 INSPECTION OF T&Ps

- A master list of T&Ps shall be maintained by each subcontractor.
- All T&Ps being used at site shall be inspected by HSE officer once in a month as per format no. HSEP:13-F07 for its healthiness and maintenance.
- The T&Ps which require third party inspection shall be checked for its validity during inspection. The third party test certificate should be accompanied with a copy of the concerned competent person's valid qualification record.
- The validity of T&P shall be monitored as per "Status of T&Ps" format no. HSEP:13-F08

### 12.4 INSPECTION OF CRANES AND WINCHES

- Cranes and winches shall be inspected by the operator through a daily checklist for its safe condition (as provided by the equipment manufacturer) before first use of the day.
- Cranes and Winches shall be inspected by HSE officer once in a month as per format no. HSEP:13-F09 for healthiness, maintenance and validity of third party inspection.
- The date of third party inspection and next due date shall be painted on cranes and winches.
- The operators/drivers shall be authorized by sub-contractor based on their competency and experience and shall carry the I-card.
- The operator should be above 18 years of age and should be in possession of driving license of HMV man & goods), vision test certificate and should have minimum qualification so that he can read the instructions and check list.

### 12.5 INSPECTION ON HEIGHT WORKING

- Inspection on height working shall be conducted daily by supervisors before start of work to ensure safe working condition including provision of
  - Fall arrestor
  - Lifelines
  - Safety nets
  - Fencing and barricading
  - Warning signage
  - Covering of opening
  - Proper scaffolding with access and egress.
  - Illumination
- Inspection on height working shall be conducted once in a week by HSE officer as per format no. HSEP:14-F10.
- Medical fitness of height worker shall be ensured.
- Height working shall not be allowed during adverse weather.

### 12.6 INSPECTION ON WELDING AND GAS CUTTING OPERATION

- Supervisor shall ensure that no flammable items are available in near vicinity during welding and gas cutting activity.
- Gas cylinders shall be kept upright.
- Use of Flash back arrestor shall be ensured at both ends.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 31 of 43

**POWER SECTOR**

- Inspection during welding and gas cutting operations shall be carried out by HSE officer once a month as per format no. HSEP:14-F11.
- Use of fire blanket to be ensured to avoid falling of splatters during welding or gas cutting operation at height.
- Availability of fire extinguisher at vicinity shall be ensured.

**12.7 INSPECTION ON ELECTRICAL INSTALLATION / APPLIANCES**

- Ensure proper earthing in electrical installation
- Use ELCB at electrical booth
- Electrical installation shall be properly covered at top where required
- Use appropriate PPEs while working
- Use portable electrical light < 24 V in confined space and potentially wet area.
- Monthly inspection shall be carried out as per format no. HSEP:14-F12.

**12.8 INSPECTION OF ELEVATOR**

- Elevators shall be inspected by concerned supervisors once in a week as per format no. HSEP:14-F13.
- All elevators shall be inspected by competent person and validity shall be ensured.
- The date of third party inspection and next due date shall be painted on elevator.

**13.0 HSE PERFORMANCE**

HSE performance of the subcontractor shall be monitored as per the following parameters:

Sl. No.	Parameters of measurement
1	Timely deployment of qualified safety officer and cumulative number of days in a month the required no. of qualified safety officer is available
2	Shortfall in number of meetings in the month conducted or attended by the safety officer
3	Level of compliance wrt decisions taken in previous meetings/audit/inspection/as reported.
4	Delay in submission of monthly report on safety in the prescribed format
5	Delay in reporting any incident including near-miss to BHEL /Customer/statutory authority( if required)
6	Degree of PPE non-compliance
7	Non- conducting of health check-up as per BOCW equirements
8	Non availability of proper first-aid facility , ambulance, adequate labour welfare initiatives
9	Non conductance of induction training and tool box meeting
10	Total number of instances in the month, House keeping NOT attended inspite of instructions by BHEL i.e. removal/disposal of surplus earth/ debris/scraps/unused/surplus cable drums/other electrical items/surplus steel items/packing material

- Suitable HSE reward system shall be developed at site level to promote HSE compliance amongst workmen.
- To decide HSE reward performance towards HSE shall be evaluated for workmen and it shall be awarded regularly in public gathering.
- If safety record of the subcontractor in execution of the awarded job is to the satisfaction of safety department of BHEL, issue of an appropriate certificate to recognize the safety performance of the subcontractor may be considered by BHEL after completion of the job.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 32 of 43

POWER SECTOR

#### 14.0 HSE PENALTIES

- As per contractual provision HSE penalties shall be imposed on subcontractors for non-compliance on HSE requirement as per format no. HSEP:14-F14. The list in the format is only indicative. For any other violation, not listed in the format, the minimum penalty amount is to be decided as per BOCW act.
- If principal customer/statutory and regulatory bodies impose some penalty on HSE due to the non-compliance of the subcontractor the same shall be passed on to them.
- The penalty amount shall be recovered by Site Finance department from subcontractors from the RA/Final bill.

#### 15.0 OTHER REQUIREMENTS

- In case of any delay in completion of a job due to mishaps attributable to lapses by the subcontractor, BHEL shall have the right to recover cost of such delay from the payments due to the subcontractor, after notifying the subcontractor suitably.
- If the subcontractor fails to improve the standards of safety in its operation to the satisfaction of BHEL after being given reasonable opportunity to do so and/or if the subcontractor fails to take appropriate safety precautions or to provide necessary safety devices and equipment or to carry out instruction regarding safety issued by BHEL, BHEL shall have the right to take corrective steps at the risk and cost of the subcontractor after giving a notice of not less than 7 days indicating the steps that would be taken by BHEL.
- If the subcontractor succeeds in carrying out its job in time without any fatal or disabling injury incident and without any damage to property BHEL may, at its sole discretion, favorably consider to reward the subcontractor suitably for the performance.
- In case of any damage to property due to lapses by the subcontractor, BHEL shall have the right to recover the cost of such damages from the subcontractor after holding an appropriate enquiry.
- The subcontractor shall take all measures at the sites of the work to protect all persons from incidents and shall be bound to bear the expenses of defense of every suit, action or other proceeding of law that may be brought by any persons for injury sustained or death owing to neglect of the above precautions and to pay any such persons such compensation or which may with the consent of the subcontractor be paid to compromise any claim by any such person, should such claim proceeding be filed against BHEL, the subcontractor hereby agrees to indemnify BHEL against the same.
- The subcontractor shall not employ men below the age of 18 years and women on the work of painting with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, overalls shall be supplied by the subcontractor to the workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.
- The subcontractor shall notify BHEL of his intention to bring to site any equipment or material which may create hazard.
- BHEL shall have the right to prescribe the conditions under which such equipment or materials may be handled and the subcontractor shall adhere to such instructions.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 33 of 43

POWER SECTOR

- BHEL may prohibit the use of any construction machinery, which according to the organization is unsafe. No claim for compensation due to such prohibition will be entertained by BHEL.

**16. NON COMPLIANCE**

NONCONFORMITY OF SAFETY RULES AND SAFETY APPLIANCES WILL BE VIEWED SERIOUSLY AND BHEL HAS RIGHT TO IMPOSE FINES ON THE SUBCONTRACTOR AS UNDER FOR EVERY INSTANCE OF VIOLATION NOTICED:

SN	Violation of Safety Norms	Fine (in Rs)
01	Not Wearing Safety Helmet	200/- *
02.	Not wearing Safety Belt or not anchoring life line	500/-*
03	Not wearing safety shoe	200/-*
04	Not keeping gas cylinders vertically	200/-
05	Not using flash back arrestors	100/-
06	Not wearing gloves	50/- *
07.	Grinding Without Goggles	50/- *
08.	Not using 24 V Supply For Internal Work	500/-
09.	Electrical Plugs Not used for hand Machine	100/-
10.	Not Slings properly	200/-
11.	Using Damaged Sling	200/-
12.	Lifting Cylinders Without Cage	500/-
13.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
14.	Not Removing Small Scrap From Platforms	500/-
15.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	500/-
16.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
17.	Improper Earthing Of Electrical T&P	500/-
18	No or improper barricading	500/-
19.	Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)	1000/-
20.	Incident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
21.	Fatal Incident Resulting in total loss in Earning Capacity	1,00,000/- per victim for first instance #

- Legend:-

\*: per head. For repeated violation by the same person, the penalty would be double of the previous penalty. Date of "Repeated violation" will be counted from subsequent days.

#: or as deducted by customer, whichever is higher. For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.

Any other non-conformity noticed not listed above will also be fined as deemed fit by BHEL. The decision of BHEL engineer is final on the above. The amount will be deducted from running bills of the subcontractor. The amount collected above will be utilized for giving award to the employees who could avoid incident by following safety rules. Also the amount will be spent for purchasing the safety appliances and supporting the safety activity at site.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 34 of 43

POWER SECTOR

**17.0 HSE AUDIT/INSPECTION**

- Regular HSE Audit/inspection shall be carried out by Subcontractor as per Site HSE audit calendar.
- HSE checklist(**Annexure 02**) shall be used for carrying out audit/inspection and report shall be submitted to BHEL sitemangement
- All non-conformities and observations on HSE identified during internal or external HSE audit shall be disposed off by site in a time bound manner and reported back the implementation status
- Corrective action and Preventive action on HSE issues raised by certification body issued by Regional HQs shall be implemented by site and reported to Site management.

**18.0 MONTHLY HSE REVIEW MEETING**

- Site shall hold HSE review meeting every month to discuss and resolve HSE issues of site and improve HSE performance. It will also discuss the incidents occurred since previous meeting, its root cause and Corrective action and Preventive action. The agenda is given below:
  - Implementation of earlier MOM
  - HSE performance
  - HSE inspection
  - HSE audit and CAPA
  - HSE training
  - Health check-up camp
  - HSE planning for the erection and commissioning and installation activities in the coming month
  - HSE reward and promotional activities
- The meeting shall be chaired by Construction Manager, convened by HSE coordinator and attended by all HOS, Site Incharge of Subcontractors and HSE officer of Subcontractors.
- MOM on the discussion will be circulated to the concerned for implementation.

**19.0 FORMATS USED(Details available in Annexure-04)**

SL. No.	Format Name	Format No.	Rev No.
01	Inspection of First Aid Box	HSEP:13-F01	00
02	Health Check Up	HSEP:13-F02	00
03	HSE Induction Training	HSEP:13-F03	00
04	Tool Box Talk	HSEP:13-F04	00
05	Monthly Site HSE Report	HSEP:13-F05	00
06	Inspection of PPE	HSEP:13-F06	00



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 35 of 43

POWER SECTOR

07	Inspection of T&Ps	HSEP:13-F07	00
08	Status of T&Ps	HSEP:13-F08	00
09	Inspection of Cranes and Winches	HSEP:13-F09	00
10	Inspection on Height Working	HSEP:13-F10	00
11	Inspection on Welding & Gas Cutting	HSEP:13-F11	00
12	Inspection on Electrical Installation	HSEP:13-F12	00
13	Inspection on Elevator	HSEP:13-F13	00
14	HSE Penalty	HSEP:13-F14	00
15	Accident /incident / property damage /fire incident report	HSEP:13-F15	00



HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 36 of 43

POWER SECTOR

20.0 ANNEXURES

ANNEXURE 01

As per Contract Labour (Regulation & Abolition Act), Central Rules, 1971,

- (1) The first-aid box shall be distinctively marked with a Red Cross on a white background and shall contain the following items, namely:

(a) For establishments in which the number of contract labour employed does not exceed fifty, each first aid box shall contain the following equipment:

(i)	6 small sterilized dressings
(ii)	3 medium size sterilized dressings
(iii)	3 large size sterilized dressings
(iv)	6 pieces of sterilized eye pads in separate sealed packets.
(v)	6 roller bandages 10 cm wide.
(vi)	6 roller bandages 5 cm wide.
(vii)	One tourniquet
(viii)	A supply of suitable splints
(ix)	Three packets of safety pins.
(x)	Kidney tray.
(xi)	3 large sterilized burn dressings.
(xii)	1 (30ml) bottle containing a two percent alcoholic solution of iodine
(xiii)	1 (30 ml) bottle containing Sal volatile having the dose and mode of administration indicated on the label
(xiv)	1 snake bite lancet
(xv)	1 (30gms) bottle of potassium permanganate crystals.
(xvi)	1 pair scissors
(xvii)	1 copy of the First-Aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
(xviii)	A bottle containing 100 tablets (each of 5 grains) of aspirin
(xix)	Ointment for burns
(xx)	A bottle of suitable surgical anti-septic solution

(b) For establishment in which the number of contract labour exceeds fifty each first-aid box shall contain the following equipment:

(i)	12 small sterilized dressings
(ii)	6 medium size sterilized dressings
(iii)	6 large size sterilized dressings.
(iv)	6 large size sterilized burn dressings
(v)	6 (15 grams) packets sterilized cotton wool
(vi)	12 pieces of sterilized eye pads in separate sealed packets.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 37 of 43

POWER SECTOR

(vii)	12 roller bandages 10 cm wide.
(viii)	12 roller bandages 5 cm wide.
(ix)	One tourniquet.
(x)	A supply of suitable splints.
(xi)	Three packets of safety pins.
(xii)	Kidney tray.
(xiii)	Sufficient number of eye washes bottles filled with distilled water or suitable liquid clearly indicated by a distinctive sign which shall be visible at all times.
(xiv)	4 per cent Xylocaine eye drops, and boric acid eye drops and soda by carbonate eye drops.
(xv)	1 (60ml) bottle containing a two percent alcoholic solution of iodine
(xvi)	One (two hundred ml) bottle of mercurochrome (2 per cent) solution in water.
(xvii)	1 (120ml) bottle containing Sal volatile having the dose and mode of administration indicated on the label.
(xviii)	1 roll of adhesive plaster (6 cmX1 meter)
(xix)	2 rolls of adhesive plaster (2 cmX1 meter)
(xx)	A snake bite lancet.
(xxi)	1 (30 grams) bottle of potassium permanganate crystals.
(xxii)	1 pair scissors
(xxiii)	1 copy of the First-Aid leaflet issued by the Director-General, Factory Advice service and labour Institutes, Government of India.
(xxiv)	a bottle containing 100 tablets (each of 5 grains) of aspirin
(xxv)	Ointment for burns
(xxvi)	A bottle of a suitable surgical anti septic solution.

(2) Adequate arrangement shall be made for immediate recoupment of the equipment when necessary.



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 38 of 43

POWER SECTOR

**ANNEXURE 02**

**HSE AUDIT/INSPECTION CHECKLIST CUM COMPLIANCE REPORT**

PROJECT: \_\_\_\_\_

SUBCONTRACTOR: \_\_\_\_\_

DATE : \_\_\_\_\_

OWNER : \_\_\_\_\_

INSPECTION BY: \_\_\_\_\_

Note : write 'NA' wherever the items is not applicable

Item	Y e s	N o	Remarks	Action
<b>HOUSEKEEPING</b>				
Waste containers provided and used				
Passageways and walkways clear				
General neatness of working area				
Other				
<b>PERSONNEL PROTECTIVE EQUIPMENTS</b>				
Goggles; shields				
Face protection				
Hearing protection				
Respiratory masks etc.				
Safety belts				
Other				
<b>EXCAVATIONS / OPENINGS</b>				
Openings properly covered or barricaded				
Excavations shored				
Excavations barricaded				
Overnight lighting provided				
Other				
<b>WELDING, CUTTING</b>				
Gas cylinders chained upright				
Cable and hoses not obstructing				
Fire extinguisher (s) accessible				
Others				
<b>SCAFFOLDING</b>				
Fully decked platforms				
Guard and intermediate rails in place				
Toe boards in place				
Adequate shoring				
Adequate access				
Others				
<b>LADDER</b>				
Extension side rails 1 m above				
Top of landing				
Properly secured				



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 39 of 43

POWER SECTOR

Angle $\pm 70^\circ$ from horizontal				
Other				
<b>HOISTS, CRANES AND DERRICKS</b>				
Condition of cables and sheaf OK				
Condition of slings, chains, hooks OK				
Inspection & maintenance log maintained				
Outriggers used				
Signals observed and understood				
Qualified operators				
Others				
<b>MACHINERY, TOOLS &amp; EQUIPMENT</b>				
Proper instruction				
Safety devices				
Proper cords				
Inspection and maintenance				
Other				
<b>VEHICLE AND TRAFFIC</b>				
Rules and regulations observed				
Inspection and maintenance				
Licensed drivers				
Other				
<b>TEMPORARY FACILITIES</b>				
Emergency instructions posted				
Fire extinguishers provided				
Fire-aid equipment available				
General neatness				
Others				
<b>FIRE PREVENTION</b>				
Personnel instructed				
Fire extinguishers checked				
No smoking in prohibited areas.				
Hydrants				
Clearance				
Others				
<b>ELECTRICAL</b>				
Proper wiring				
ELCB's provided				
Ground fault circuit interrupters				
Protection against damage				
Prevention of tripping hazards				
Other				
<b>HANDLING &amp; STORAGE OF MATERIALS</b>				
Properly stored or stacked				
Passageways clear				
Other				
<b>FLAMMABLE GASES AND LIQUIDS</b>				
Containers clearly identified				
Proper storage				
Fire extinguisher nearby				



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 40 of 43

POWER SECTOR

Other				
<b>WORKING AT HEIGHT</b>				
Safety nets				
Safety belts				
Safety helmets				
Anchoring of safety belt to the life line rope				
<b>ENVIRONMENT</b>				
Lubricant waste/engine oils properly dispose.				
Waste from Canteen, offices, sanitation etc. disposed properly.				
Disposal of surplus earth, stripping materials, expired batteries, oily rags and combustible materials done properly.				
<b>HEALTH CHECKS</b>				
Hygienic conditions at labor camps O.K.				
Availability of first-aid facilities				
Proper sanitation at site, office & labor camps.				
Arrangement of medical facilities.				
Measures for dealing with illness.				
Availability of potable drinking water for workmen & staff.				
Provision of crèches for children.				



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 41 of 43

POWER SECTOR

**ANNEXURE 03**

**REFERENCES**

- Contract documents
- Relevant legislations
- HSEMMS
- Relevant Indian standards as listed below (illustrative only):

SL NO	CODE NAME	TITLE
(1)	IS : 818-1888 (Reaffirmed 2003)	Code of Practice for safety and health requirements in Electric and Gas Welding and Cutting operations.
(2)	IS: 1179-1967 (Reaffirmed 2003)	Specification for Equipment for Eye & Face protection during welding.
(3)	IS : 1989 (Part 2):1986 (Reaffirmed 1997)	Specification for Leather Safety Boots & Shoes
(4)	IS:2925 – 1984 (Reaffirmed 2010)	Specification for Industrial Safety Helmets
(5)	IS:3521 : 1999 (Reaffirmed 2002)	Industrial Safety Belts & Harnesses-Specification
(6)	IS:3646(Part II) – 1966 (Reaffirmed 2003)	Code of Practice for Interior Illumination
(7)	IS:3696 (Part I) – 1987 (Reaffirmed 2002)	Safety Code for Scaffolds and Ladders
(8)	IS: 3696(Part 2) : 1991 (Reaffirmed 2002 )	Scaffolds and Ladders-Code of Safety
(9)	IS:3786 – 1983 (Reaffirmed 2002)	Method for Computation of Frequency and Severity Rates for Industrial Injuries and Classification of Industrial Incidents
(10)	IS:4770 : 1991 (Reaffirmed 2006)	Rubber Gloves – Electricals purposes-Specification
(11)	IS:4912 : 1978 (Reaffirmed 2002)	Safety Requirements for Floor and Wall Openings, Railings and Toe Boards
(12)	IS: 5983 – 1980 (Reaffirmed 2002)	Specification for Eye-Protectors
(13)	IS:6519 – 1971 (Reaffirmed 1997)	Code of Practice for Selection, Care and Repair of Safety Footwear
(14)	IS:9167:1979	Specification for Ear-Protectors
(15)	IS:6994(Part I)-1973 (Re affirmed 1996)	Specification for Industrial Safety Gloves Leather and Cotton Gloves
(16)	IS:8519 – 1977 (Reaffirmed 1983)	Guide for Selection of Industrial Safety Equipment for Body Protection.
(17)	IS 11006 : 2011	Flash Back(Flame Arrestor) Specification



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 42 of 43

POWER SECTOR

(18)	IS:8520 – 1977 (Reaffirmed 2002)	Guide for Selection of Industrial Safety Equipment for Eye, Face and Ear Protection.
(19)	IS:9473:2002	Respiratory Protective Devices-Filtering Half Masks to protect against Particles-Specification.
(20)	IS:9944:1992 (Reaffirmed 2003)	Natural and Man-made Fiber Rope Slings-Recommendations on Safe working loads.
(21)	IS:11057 – 1884 (Reaffirmed 2001)	Specification for Industrial Safety Nets
(22)	IS:12254:1993 (Reaffirmed 2002)	Polyvinyl Chloride (PVC) Industrial Boots-Specification
(23)	IS:13367(Part 1):1992 (Reaffirmed 2003)	Safe Use of Cranes-Code of Practice
(24)	IS:14166:1994 (Reaffirmed 2002)	Respiratory Protective Devices-Full Face Masks Specification
(25)	IS:14746 : 1999 (Reaffirmed 2003)	Respiratory Protective Devices-Half Masks and Quarter Masks - Specification
(26)	IS : 15397 :2003 (Reaffirmed 2008)	Portable Extinguisher Mechanical Foam Type(Stored Pressure)-Specification
(27)	IS: 19011:2002	Guidelines for Quality and/or Environmental Management Systems Auditing



**HEALTH, SAFETY AND ENVIRONMENT  
PLAN FOR  
SITE OPERATION by SUBCONTRACTORS**

Doc no.: HSEP: 14

REV: 00

Date: 12.08.2014

Page: 43 of 43

POWER SECTOR

**ANNEXURE 04 : SAFETY FORMATS  
&  
ANNEXURE 05 : WORK PERMIT FORMATS**

**POWER SECTOR****INSPECTION OF FIRST AID BOX**

FORMAT NO: HSEP:13-F01

REV NO.: 00

PAGE NO. 01 OF 02

<b>Name of Site :</b>	
<b>Name of Sub-Contractor :</b>	
<b>Inspected by :</b>	
<b>Date of Inspection :</b>	

**Number of employees on the site:- \_\_\_\_\_**

Sl.No.	Item	No. Available	Remarks
1	No. of small sterilized dressings		
2	No of medium sized sterilized dressings		
3	No of large sized sterilized dressings.		
4	No of large sized sterilized burn dressings		
5	No of (15 grams) packets sterilized cotton wool		
6	No of pieces of sterilized eye pads in separate sealed packets.		
7	No of roller bandages 10 cm wide.		
8	No of roller bandages 5 cm wide.		
9	Whether tourniquet available		
10	Whether supply of suitable splints available.		
11	No of packets of safety pins.		
12	Whether kidney tray available		
13	Whether sufficient number of eye wash bottles, filled with distilled water or suitable liquid, clearly indicated by a distinctive sign which shall be visible at all times, available.		
14	Whether 4%-xylocaine eye drops, and boric acid eye drops and soda by carbonate eye drops available.		
15	Whether (60ml) bottle containing a two percent alcoholic solution of iodine available		
16	Whether (two hundred ml) bottle of mercurochrome (2 per cent) solution in water available.		

**POWER SECTOR****INSPECTION OF FIRST AID BOX**

FORMAT NO: HSEP:13-F01

REV NO.: 00

PAGE NO. 02 OF 02

Sl.No.	Item	No. Available	Remarks
17	Whether 120ml bottle containing Sal volatile having the dose and mode of administration indicated on the label, available.		
18	Whether roll of adhesive plaster (6 cmX1 meter) available		
19	No of rolls of adhesive plaster (2 cmX1 meter)		
20	Whether snake bite lancet available.		
21	Whether (30 grams) bottle of potassium permanganate crystals available.		
22	Whether a pair scissors available		
23	Whether copy of the First-Aid leaflet issued by the Director-General, Factory Advice service and labour Institutes, Government of India available.		
24	Whether bottle containing 100 tablets (each of 5 grains) of aspirin available		
25	Whether Ointment for burns available		
26	Whether bottle of a suitable surgical anti septic solution available		

Signature of Subcontractor's Site I/C::



**POWER SECTOR**

**HEALTH CHECK UP**

FORMAT NO: HSEP:13-F02

REV NO.: 00

PAGE NO. 01 OF 02

<b>Name of Site :</b>	
<b>Name of Sub-Contractor :</b>	
<b>Name of Employee :</b>	

**NAME:**

History Of Past Illness	H/O Epilepsy
	H/O Drug Allergy
	H/O Diabetics/ Hypertension
	H/O Unconsciousness

Personal History

<b>EXAMINATION</b>	<b>OBSERVATION</b>
<b>General Physical Examination</b>	
Height	:
Weight	:
BMI	:
Built And nourishment	:
Pallor	:
Temperature	:
Chest Expansion	: Inspiration Expansion
Lymph Node Enlargement	:
<b>Ear, Nose, Throat</b>	:
Ear	:
Nose	:
Throat	:



**POWER SECTOR**

**HEALTH CHECK UP**

FORMAT NO: HSEP:13-F02

REV NO.: 00

PAGE NO. 02 OF 02

EXAMINATION	OBSERVATION
<b>Cardiovascular System Examination :</b>	
Inspection :	
Palpation :	Pulse BP
Auscultation (Heart Sounds) :	
<b>Respiratory System :</b>	
Inspection :	Respiratory Rate
Palpation:	
Percussion :	
Auscultation (Breath Sounds) :	
<b>Examination of Abdomen :</b>	
Inspection :	
Palpation :	
Auscultation (Bowel Sounds) :	
<b>Any Other :</b>	
<b>Clinical Impression</b>	

Signature of the examining doctor







**POWER SECTOR**

**PERSONAL PROTECTIVE EQUIPMENTS**

FORMAT NO: HSEP:13-F06

REV NO.: 00

PAGE NO. 01 OF 01

<b>Name of Site :</b>	
<b>Name of Sub-Contractor :</b>	
<b>Inspected by :</b>	
<b>Date of Inspection :</b>	

<b>Item</b>	<b>Issued this Month</b>	<b>Nos. Issued up to the Month</b>	<b>Percentage of usage at site</b>
Safety Helmet			
Safety Shoes			
Full Body Harness			
Fall Arrestor			
Safety Nets			
Other PPEs.			

**Signature of Site I/C of Subcontractor :**

**POWER SECTOR****INSPECTION OF T&Ps**

FORMAT NO: HSEP:13-F07

REV NO.: 00

PAGE NO. 01 OF 01

<b>Name of Site :</b>	
<b>Name of Sub-Contractor :</b>	
<b>Date of Inspection :</b>	

Sl.No.	Description	Remarks
1.0	Name of equipment	
2.0	Basic Information of equipment	
2.1	Specification	
2.2	Sr. No. of equipment	
2.3	Make	
2.4	Year of manufacture	
3.0	Major repairs / overhauls(Furnish details of work carried out)	Date(s) of major repair/overhaul
3.1		
3.2		
3.3	Repairs carried out at site	
4.0	Any performance test conducted	Yes/No
5.0	Document Submitted	Yes/No
6.0	Manufacturer's test / guarantee certificate	Available/ Not available
7.0	Performance test	Done/ Not Done
8.0	Acceptance Norms	
9.0	Committee Observations	
10.0	Date of next review (if accepted)	

Signature-Site Safety Officer ( BHEL)

Signature-Subcontractor/ Subcontractor's  
Safety Officer

**POWER SECTOR****STATUS OF T&Ps**

FORMAT NO: HSEP:13-F08

REV NO.: 00

PAGE NO. 01 OF 01

Name of Site	
Name of Sub-Contractor	
Date of Inspection	

Item	Nos. Deployed	Identification No.	Nos. Tested by competent person	Validity of Test Certificate
Winches				
Chain Blocks				
Wire Rope Slings				
Man Cages				
D-Shackles				
Air Compressors				
Crawler Cranes				
Mobile Cranes				
Hydra Cranes				
Others				

Signature of Site I/C of subcontractor :

**POWER SECTOR****INSPECTION OF CRANES AND WINCHES**

FORMAT NO: HSEP:13-F09

REV NO.: 00

PAGE NO. 01 OF 03

<b>Name of Site :</b>	
<b>Name of Sub-Contractor :</b>	
<b>Inspected by :</b>	
<b>Date of Inspection:</b>	

Crane Reg. No (Make/Model) \_\_\_\_\_

Name of Driver/Operator \_\_\_\_\_

Sl.no.	Description	Observation	Measures
1	Valid Driving license		
2	Hook & Hook Latch		
3	Over Hoist limit switch		
4	Boom limit switch		
5	Boom Angle Indicator		
6	Boom limit cutoff switch		
7	Condition of Boom		
8	Condition of ropes		
9	Number of load lines		
10	Size and condition of the slings		
11	Stability of the cranes		
12	Soil Condition		
13	Swing Break And Lock		
14	Proper Break And Lock		
15	Hoist Break And Lock		
16	Boom Break And Lock		
17	Main Clutch		
18	Leakage in Hydraulic Cylinders		
19	Out riggers fully extendable		
20	Tyre pressure		
21	Condition of Battery And Lamps		

**POWER SECTOR****INSPECTION OF CRANES AND WINCHES**

FORMAT NO: HSEP:13-F09

REV NO.: 00

PAGE NO. 02 OF 03

Sl.no.	Description	Observation	Measures
22	Guards of moving and rotating parts		
23	Load chart provided		
24	Number and position of pedant ropes		
25	Reverse Horn		
26	Load Test Details		
27	Operator's fitness		
28	Pollution under control certificate		
29	Fire extinguisher of appropriate type.		
30	Training of the operator		

**WINCH**

Sl. No.	Description	YES	NO	NA	Remarks
1	Has the copy of Third Party Inspection certificate been provided in winch machine shed?				
2	Is winch machine operator experienced enough to operate the winch machine?				
3	Is the winch machine operated by someone other than the winch machine operator?				
4	Is there guard provided in all moving parts like wheel and motor's shaft?				
5	Will it protect against unforeseen operational contingencies?				
6	Are brakes, clutch and locking arrangement working properly?				
7	Has it been ensured that the guard does not constitute a hazard by itself?				
8	Are the cranks and the connecting rods protected by guardrails?				
9	Is there provision for fully covered shed with wooden plank roof?				



**POWER SECTOR**

**INSPECTION OF CRANES AND WINCHES**

FORMAT NO: HSEP:13-F09

REV NO.: 00

PAGE NO. 03 OF 03

Sl. No.	Description	YES	NO	NA	Remarks
10	Is wire rope free from any kind of damage or wear and tear?				
11	Is split pin provided for the protection of clutch and brake locking arrangement?				
12	Is pulley inspected by competent person and certified before use?				
13	Is pulley free from any wear and tear visually?				
14	Is winch rope barricaded with clipsheet for the protection of rope and person?				
15	Is the wire rope lubricated by cardium oil?				
16	Is there any friction in wire rope which may damage the wire rope rather than the rolling parts?				
17	Is there any oil leakage in the hydraulic system of the winch machine?				
18	Has it been ensured that the guard will not cause discomfort or inconvenience to operator?				
	<b>Total Number of NO:</b>				
	<b>Total Number of NA:</b>				
	<b>% Compliance :</b>				

Signature of Site I/C of subcontractor :

**POWER SECTOR****INSPECTION OF HEIGHT WORKING**

FORMAT NO: HSEP:13-F10

REV NO.: 00

PAGE NO. 01 OF 02

<b>Name of Site :</b>	
<b>Name of Sub-Contractor :</b>	
<b>Inspected by :</b>	
<b>Date of Inspection:</b>	

Sl. No.	Descriptions	Observation (Yes/No)	Remarks
1	All the workers have been explained safe work method?		
2	An established communication system has been established and explained to the workers.		
3	Adequate illumination has been ensured.		
4	Work area inspected prior to the start of the work.		
5	Area below the work place barricaded, particularly below hot work.		
6	Workers provided with bags /box to carry bolts, nuts and hand tools		
7	Arrangement for fastening hand tools made.		
8	All work platforms ensured to be of adequate strength and ergonomically suitable.		
9	Fabricated makeshift arrangements are checked for quality and type of material welding, anchoring etc.		
10.	Work at more than one elevation at the same segment is restricted.		
	<b>ACCESS/EGRESS</b>		
1	Walkways provided with handrail, mid-rail and toe guard?		
2	All checkered plates, gratings properly welded/ bolted?		
3	Are ladders inspected and they are in good condition?		
4	Are ladders spliced?		
5	Are ladders properly secured to prevent slipping, sliding or falling?		
6	Do side rails extend 36" above top landing?		
7	Are built up ladders constructed of sound materials?		

**POWER SECTOR****INSPECTION OF HEIGHT WORKING**

FORMAT NO: HSEP:13-F10

REV NO.: 00

PAGE NO. 02 OF 02

Sl. No.	Descriptions	Observation (Yes/No)	Remarks
8	Are rugs and cleats not over 12" on center?		
9	Metal ladders not used around electrical hazards.		
10	Proper maintenance and storage.		
11	Ladders placed at right slope.		
12	Ladders / staircases welded/ bolted properly.		
13	Any obstruction in the stairs.		
14	Are landing provided with handrails, knee rails, toe boards etc.?		
15	Whether ramp is provided with proper slope.		
16	Proper hand rails / guards provided in ramps.		
	<b>Housekeeping</b>		
1	Walkways, aisles & all overhead workplaces cleared of loose material.		
2	Flammable materials, if any, are cleared.		
3	All the de shuttering materials are removed after de shuttering is done.		
4	Platforms and walkways free from oil/grease or other slippery material.		
5	Collected scrap are brought down or lowered down and not dropped from height.		
	<b>PPE And Safety Devices</b>		
1	Use of safety helmet, safety belts ensured for all workers		
2	Anchoring points provided at all places of work.		
3	Common lifeline provided wherever linear movement at height is required.		
4	Safety nets are use wherever required.		
5	Proper fall arrest system is deployed at critical workplaces.		
6	Crawler boards/Safety system or works on fragile roof are used.		

Signature of Site I/C of subcontractor :

**POWER SECTOR****INSPECTION OF WELDING AND GAS  
CUTTING**FORMAT NO: HSEP:13-F11  
REV NO.: 00  
PAGE NO. 01 OF 02

<b>Name of Site</b>	
<b>Name of Sub-Contractor</b>	
<b>Inspected by</b>	
<b>Date of Inspection</b>	

<b>Welding</b>				
Sl.no.	Description	Y e s	N o	Remarks
1	Is electric connection given through 30 mA ELCB/RCCB to welding m/c?			
2	Is electric cable fitted properly in junction box on m/c?			
3	Is electrical cable free from joints?			
4	Are the joints attached firmly & insulated with tape?			
5	Is double earthing given to body of m/c?			
6	Is the physical condition of the m/c good?			
7	Is ON/OFF switch connected to the m/c is working and in good condition?			
8	Are indication lamps on m/c working?			
9	Is the electrode holder in good condition?			
10	Are the cables of the welding m/c lugged & tight properly?			
11	Are return lead connected properly (Rod, Angle, Channels shall not be used)			
	Total No of NO			
	Total No of YES			



**POWER SECTOR**

**INSPECTION OF WELDING AND GAS  
CUTTING**

FORMAT NO: HSEP:13-F11  
REV NO.: 00  
PAGE NO. 02 OF 02

Gas Cutting				
Sl. no	Description	Yes	No	Remarks
1	Are Cylinders kept on trolleys?			
2	Physical condition of Gas cylinders Good?			
3	Is there Oil/Grease on valve of the cylinder?			
4	Are pressure regulators in good condition?			
5	Condition of hose pipe OK?			
6	Are hose pipe clamped with hose clip?			
7	Is flash back arrestor & NRV fitted on torch both for O2 and LPG cylinder?			
8	Is nozzle of the torch cleaned?			
	Total Number of NO			
	Total No of YES			
	<b>% Compliance</b>			

**Signature of Site I/C of subcontractor :**

**POWER SECTOR****INSPECTION OF ELECTRICAL INSTALLATION**

FORMAT NO: HSEP:13-F12

REV NO.: 00

PAGE NO. 01 OF 02

<b>Name of Site</b>	
<b>Name of Sub-Contractor</b>	
<b>Inspected by</b>	
<b>Date of Inspection:</b>	

Sr. No.	Contents	Yes/No	Remarks
<b>A</b>	<b>Cable</b>		
1.	Whether the condition of cable is checked?		
2.	Are cables received from other sites checked for insulation resistance before putting them into use?		
3.	Are all main cables taken either underground / overhead?		
4.	Are welding cables routed properly above the ground?		
5.	Are welding and electrical cables overlapping?		
6.	Is any improper joining of cables/wires prevailing at site?		
<b>B</b>	<b>DBs/SDBs</b>		
1.	Is earth conductor continued upto DB / SDB?		
2.	Whether DBs and extension boards are protected from rain / water?		
3.	Is there any overloading of DBs / SDBs?		
4.	Are correct / proper fuses & CBs provided at main boards and sub-boards?		
5.	Is energized wiring in junction boxes, CB panels & similar places covered all times?		
<b>C</b>	<b>ELCB</b>		
1.	Whether the connections are routed through ELCB?		
2.	Is ELCB sensitivity maintained at 30 mA?		

**POWER SECTOR****INSPECTION OF ELECTRICAL INSTALLATION**

FORMAT NO: HSEP:13-F12

REV NO.: 00

PAGE NO. 02 OF 02

Sr. No.	Contents	Yes/No	Remarks
3.	Are the ELCB numbered and tested periodically & test results recorded in a logbook countersigned by a competent person?		
<b>D</b>	<b>Grounding</b>		
1.	Is natural earthing ensured at the source of power (main DB at Generator or Transformer)?		
2.	Whether the continuity and tightness of the earth conductor are checked?		
3.	Mention the gauge of the earth conductor used at the site.		
4.	Mention the value of Earth Resistance.		
<b>E</b>	<b>Electrically operated Machines or Accessories.</b>		
1.	Whether the plug top is provided everywhere.		
2.	Are all metal parts of electrical equipment and light fittings / accessories grounded?		
3.	Is there any shed or cover for welding machines?		
4.	Are halogen lamps fixed at proper places?		
5.	Are portable power tools maintained as per norms?		
6.	Any other information:		

Signature of Site I/C of subcontractor :



**POWER SECTOR**  
**INSPECTION OF ELEVATOR**

FORMAT NO: HSEP:13-F13  
REV NO.: 00  
PAGE NO. 01 OF 01

<b>Name of Site</b>	
<b>Name of Sub-Contractor</b>	
<b>Inspected by</b>	
<b>Date of Inspection</b>	

Sr. No.	Description	Remarks
1.0	Name of equipment	
2.0	Basic Information of equipment	
2.1	Specification	
2.2	Sr. No. of equipment	
2.3	Make	
2.4	Year of manufacture	
3.0	Major repairs/overhauls(Furnish details of work carried out)	Date(s) of major repair/overhaul
3.1		
3.2		
3.3	Repairs carried out at site	
4.0	Any performance test conducted	Yes/No
5.0	Document Submitted	Yes/No
6.0	Manufacturer's test / guarantee certificate	Available/ Not available
7.0	Performance test	Done/ Not Done
8.0	Acceptance Norms	
9.0	Committee Observations	
10.0	Date of next review (if accepted)	

**Signature-Subcontractor/ Subcontractor's  
Safety Officer**

**Signature-Site Safety Officer ( BHEL)**

**POWER SECTOR****HSE PENALTY**

FORMAT NO: HSEP:13-F14

REV NO.: 00

PAGE NO. 01 OF 02

**Sub: MEMO for Penalty for non compliances in Safety**

Following lapse (tick marked) was observed and penalty is imposed as stated at the bottom of this memo. It is requested that such occurrences be please avoided in future.

**Safety Area**

SN	Violation of Safety Norms	Fine (in Rs)
01.	Not Wearing Safety Helmet	200/- *
02.	Not wearing Safety Belt or not anchoring life line	500/-*
03.	Not wearing safety shoe	200/-*
04.	Not keeping gas cylinders vertically	200/-
05.	Not using flash back arrestors	100/-
06.	Not wearing gloves	50/- *
07.	Grinding Without Goggles	50/- *
08.	Not using 24 V Supply For Internal Work	500/-
09.	Electrical Plugs Not used for hand Machine	100/-
10.	Not Slinging properly	200/-
11.	Using Damaged Sling	200/-
12.	Lifting Cylinders Without Cage	500/-
13.	Not Using Proper Welding Cable With Lot of Joints And Not Insulated Property.	200/-
14.	Not Removing Small Scrap From Platforms	500/-
15.	Gas Cutting Without Taking Proper Precaution or Not Using Sheet Below Gas Cutting	500/-
16.	Not Maintaining Electric Winches Which are Operated Dangerously	500/-
17.	Improper Earthing Of Electrical T&P	500/-
18.	No or improper barricading	500/-
19.	Activity carried out without Safety work permit (Height work, Lifting activity, Hot work-each person/case)	1000/-
20.	Incident Resulting in Partial Loss in Earning Capacity	25,000/- per victim
21.	Fatal Incident Resulting in total loss in Earning Capacity	1,00,000/- per victim for first instance #

**Legend:-**

\*: per head. For repeated violation by the same person, the penalty would be double of the previous penalty. Date of "Repeated violation" will be counted from subsequent days.

#: or as deducted by customer, whichever is higher. For repeated fatal incident in the same Unit incremental penalty to be imposed. The subcontractor will pay 2 times the penalty compared to previously paid in case there are repeated cases of fatal incidents under the same subcontractor for the same package in the same unit.



**POWER SECTOR**

**HSE PENALTY**

FORMAT NO: HSEP:13-F14

REV NO.: 00

PAGE NO. 02 OF 02

Details (if any) related to non- compliance (Name of persons, Nature of deficiency, etc.)

\_\_\_\_\_

Penalty imposed:

1, Rate as per above chart \_\_\_\_\_

2. No. of Persons/ machine/ event/ labour \_\_\_\_\_

3. Total Penalty= 1. X 2. = \_\_\_\_\_


Signature :

Witnessed by: (Sub- Contractor representative) (BHEL Personnel)

Name \_\_\_\_\_

Name \_\_\_\_\_

Distribution: 1 Copy: to Sub- contractor,  
1 Copy to Site Construction Manager(BHEL)

	<b>POWER SECTOR- HQ</b>	FORMAT NO: HSEP:13-F15
	<b>Incident Report</b>	REV NO.: 00
(To be submitted within 24 hours of time of incident)		PAGE NO. 01 OF 01

**Type of incident: Fatal/Major/ Minor/Fire/Property Damage/Near-miss**

1	NAME OF SITE		3	ACTIVITY AREA	
2	SCOPE OF WORK		4	NAME OF CONTRACTOR	
			5	NAME & DESIGNATION OF BHEL ACTIVITY I/C	
6	DATE & TIME OF ACCIDENT		7	DATE RESUMED	
8	NO. OF WORK-DAYS LOST BY VICTIM (If duty not resumed, give estimated figure)				
9	NO. OF MANHOURS LOST BY OTHERS				
10	PERSONAL DETAILS OF INJURED AND / OR DETAILS OF MATERIALS / EQUIPMENT / PROPERTY DAMAGED				
	NAME		NAME OF MATERIAL / EQUIPMENT / PROPERTY		
	PERIOD OF EMPLOYMENT				
	AGE	YRS	SEX	MALE/ FEMALE	ESTIMATED COST
	MARITAL STATUS		SINGLE / MARRIED		ACTUAL COST
	OCCUPATION		NATURE OF DAMAGE		
	PART OF BODY INJURED				
	NATURE OF INJURY				
	AGENCY ( OBJECT / EQUIPMENT / SUBSTANCE ) MOST RESPONSIBLE FOR CAUSING ACCIDENT / INJURY / DAMAGE				
12	PERSON (NAME & DESIGNATION) WITH MOST CONTROL OVER AGENCY (OBJECT / EQUIPMENT / SUBSTANCE ) CAUSING ACCIDENT INJURY / DAMAGE				
13	DESCRIBE CLEARLY HOW THE ACCIDENT OCCURRED (USE ADDITIONAL SHEET, IF REQUIRED)				
<b>ANALYSIS</b>					
14	WHAT ACTS AND / OR CONDITIONS CONTRIBUTED MOST DIRECTLY TO THIS ACCIDENT				
15	WHAT ARE THE BASIC REASON FOR THE EXISTENCE OF THESE ACTS AND / OR CONDITION ?				
16	WHAT CORRECTIVE ACTIONS HAVE BEEN TAKEN TO PREVENT ACCIDENT RECURRENCE ?				
	DATE :		SIGNATURE OF SITE HSE COORDINATOR		
17	COMMENTS OF HEAD / SOX				
	DATE:		SIGNATURE OF HEAD/SOX		



<b>SAFETY WORK CLEARANCE</b>	Permit no. _____
<b>Project:</b> _____	<b>Emergency Contact Nos:</b> _____
<b>Subcontractor:</b> _____	

### BURNING/WELDING /HOT WORK PERMIT

Area : \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Name of Site Engineer (Permit Requesting Authority): \_\_\_\_\_ Sign: \_\_\_\_\_  
 Name of Work Performing Contractor: \_\_\_\_\_  
 Name of Package In charge: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_  
 Description of Work: \_\_\_\_\_

Work Execution Date: \_\_\_\_\_ Time Valid from: \_\_\_\_\_ to \_\_\_\_\_

*The above signing person(s) will be responsible to ensure that the above described work will be done under all the safety precautions mentioned on the permit to work.*

The following precautions are to be taken:

No.	Item	Yes	Not required
1.	Proper Access/Exit available		
2.	Proper ventilation and /or lighting provided.		
3.	Proper and safe scaffolding, platform, ladder provided.		
4.	Welding machine located in a clean and dry area.		
5.	Welding machine grounded at the equipment and proper leakage current protection device (ELCB) provided for welding machine.		
6.	Emergency STOP buttons are in working condition. Welder /Helper knows how to operate it.		
7.	Welding machine input/output cables, welding holder and weld return clamp (Holder) are insulated and in good condition.		
8.	Welder & Fitter trained to connect ground/work return clamps (Holder) to work place prior to energization of welding machine.		
9.	Gas cylinders are stacked vertically and not below the welding / cutting area. Regulator key is available with cylinder.		
10.	Pressure gauges/Flash back arrestor provided and in working condition.		
11.	Personal Protective equipment Minimum applicable: safety helmet, safety goggles, welding helmet, safety shoes, leather gloves, long sleeve and nose mask -provided		
12.	In case of pits, water removed from the pit and wood/rubber insulation provided.		
13.	Safety signboards are in place.		
14.	Adequate and Suitable nos. of fire fighting extinguisher provided.		
15.	Nearby combustible material removed. Housekeeping done.		
16.	Other		

Name of Contractor Safety Officer: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Reviewed and approved by BHEL Site Engineer (Permit Issuing Authority):**

Name: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of BHEL Safety Representative: \_\_\_\_\_ Sign: \_\_\_\_\_

*I understand the precaution to be taken as described above and as per project requirement and hereby confirm that work will be executed under my supervision by following all precaution and Safety Rules.*

**Name of Work Performing Authority:** \_\_\_\_\_ **Sign:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Permit Cancellation:**

*I hereby declare that the work is complete, all workers under my control have been withdrawn and the site restored to safe tidy condition.*

Name of Work performing Authority: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of Site Engr. (Permit Requesting Authority): \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of BHEL Site Engr. (Permit Issuing Authority): \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

(This permit is valid only for the date it is issued)

<b>Original at BHEL site</b>	<b>Second Copy – BHEL SAFETY</b>	<b>Third Copy : Contractor</b>
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<b>SAFETY WORK CLEARANCE</b>	Permit no. _____
<b>Project:</b> _____	<b>Emergency Contact Nos:</b> _____
<b>Subcontractor:</b> _____	

### LIFTING ACTIVITY PERMIT

Area : \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of Site Engineer (Permit Requesting Authority): \_\_\_\_\_ Sign: \_\_\_\_\_

Name of Work Performing Contractor: \_\_\_\_\_

Name of Package In charge: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_

Description of Work: \_\_\_\_\_

Work Execution Date: \_\_\_\_\_ Time Valid from: \_\_\_\_\_ to \_\_\_\_\_

*The above signing person(s) will be responsible to ensure that the above described work will be done under all the safety precautions mentioned on the permit to work.*

The following precautions are to be taken:

No.	Item	Yes	Not required
1.	Crane used for lifting activity tested, certified and approved for rated lifting		
2.	All lifting tackles, gears/appliances are tested and certified for lifting works.		
3.	Crane operator is trained and competent for lifting operation.		
4.	Lifting sling/ belt is protected against sharp edge of the jobs to be lifted.		
5.	Access and exit marked and without obstruction.		
6.	Lifting arrangement adequate.		
7.	Unwanted rubbish material removed from work platform.		
8.	Minimum 2 guidelines have been provided for balancing and guiding jobs to be lifted.		
9.	Periphery area of crane booms as well as lifting job is barricaded and unauthorised/no-entry sign board posted.		
10.	Rigger and signal man is trained and competent for lifting work.		
11.	No lifting activity to be carried out during lightening, heavy wind/rain.		
12.	If scaffolding to be used during lift, scaffolding with valid tag available for use.		
13.	Double lanyards safety harness/belt checked and in working condition.		
14.	Safety shoes (non-slip), helmet with chin strap available with employees.		
15.	Others.		

Name of Contractor Safety Officer: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Reviewed and approved by BHEL Site Engineer (Permit Issuing Authority):**

Name: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of BHEL Safety Representative: \_\_\_\_\_ Sign: \_\_\_\_\_

*I understand the precaution to be taken as described above and as per project requirement and hereby confirm that work will be executed under my supervision by following all precaution and Safety Rules.*

**Name of Work Performing Authority:** \_\_\_\_\_ **Sign:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Permit Cancellation:**

*I hereby declare that the work is complete, all workers under my control have been withdrawn and the site restored to safe tidy condition.*

Name of Work performing Authority: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of Site Engr. (Permit Requesting Authority): \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of BHEL Site Engr. (Permit Issuing Authority): \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

(This permit is valid only for the date it is issued)

<b>Original at BHEL site</b>	<b>Second Copy – BHEL SAFETY</b>	<b>Third Copy : Contractor</b>
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<b>SAFETY WORK CLEARANCE</b>	Permit no. _____
<b>Project:</b> _____	<b>Emergency Contact Nos:</b> _____
<b>Subcontractor:</b> _____	

### WORKING AT HEIGHT PERMIT

Area : \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of Site Engineer (Permit Requesting Authority): \_\_\_\_\_ Sign: \_\_\_\_\_

Name of Work Performing Contractor: \_\_\_\_\_

Name of Package In charge: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_

Description of Work: \_\_\_\_\_

Work Execution Date: \_\_\_\_\_ Time Valid from: \_\_\_\_\_ to \_\_\_\_\_

*The above signing person(s) will be responsible to ensure that the above described work will be done under all the safety precautions mentioned on the permit to work.*

The following precautions are to be taken:

No.	Item	Yes	Not required
1.	All workers on job are medically fit for working at height (Person should not have vertigo)		
2.	Scaffolding with valid tag available for use		
3.	Safety harness with life line support/ fall arrester are checked and in working condition		
4.	Safety shoes ( non-slip), Helmet with chin strip available with employees		
5.	Safety nets are provided as per design and provided 25 ft. below working area & extending 8 ft beyond.		
6.	Horizontal life lines are provided to cater to design specification of 2300kg per person.		
7.	Ladders have been inspected and provided as per BHEL standard/contract.		
8.	All lifting / tightening tools, hand tools/equipment checked and in good condition		
9.	Access and exit marked and without obstruction.		
10.	Lighting arrangement adequate.		
11.	Unwanted and rubbish material removed from working platform.		
12.	Electrical cable, welding Hose/Compressed air hose properly secured and lay down without obstruction.		
13.	Signboards provided on working platforms		
14.	Hazards in the vicinity are identified and communicated to the worker.		
15.	Other		

Name of Contractor Safety Officer: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

**Reviewed and approved by BHEL Site Engineer (Permit Issuing Authority):**

Name: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of BHEL Safety Representative: \_\_\_\_\_ Sign: \_\_\_\_\_

*I understand the precaution to be taken as described above and as per project requirement and hereby confirm that work will be executed under my supervision by following all precaution and Safety Rules.*

**Name of Work Performing Authority:** \_\_\_\_\_ **Sign:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_

**Permit Cancellation:**

*I hereby declare that the work is complete, all workers under my control have been withdrawn and the site restored to safe tidy condition.*

Name of Work performing Authority: \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of Site Engr. (Permit Requesting Authority): \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Name of BHEL Site Engr. (Permit Issuing Authority): \_\_\_\_\_ Sign: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

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## Guidelines for Remote Inspection of PEM BOIs

### 1) OBJECTIVE:

To lay down the procedure for carrying out Remote Inspection of Bought-out Items (BOIs) for PEM suppliers wherever applicable.

### 2) SCOPE:

It will cover suppliers for packages of PEM BOIs for various project requirements.

Invitation is sent to the suppliers for remote inspection on applications like MS Teams, Webex, etc. by BHEL.

### 3) MINIMUM REQUIREMENTS AT SUPPLIER'S WORKS:

- i. Uninterrupted internet services
- ii. Good internet bandwidth (Min 100 Mbps)
- iii. Good resolution camera (2 nos) – one preferably CCTV (static at one place) and one hand hold (moving)
- iv. Smart phone with minimum 8MPi camera front and back both with optical zoom facility suitable for using web applications like Webex, MicroSoft (MS) Teams, etc.
- v. Computer and Scanner with good resolution
- vi. Digital signatures of supplier's Quality Engineer
- vii. Availability of web applications like Webex, MicroSoft (MS) Teams, as required.
- viii. All Test certificates, internal test reports, calibration reports, etc. for the items offered for inspection.
- ix. Availability of the above to be submitted to BHEL two days in advance before inspection.
- x. Dedicated team from supplier side for facilitating inspection requirements.
- xi. For ensuring proper visibility, the suggested Portable lighting sources (torch/ electric LED bulb of minimum 15 W) with no glare is to be ensured at offered job, location for remote inspection/testing. This is to be verified before start of the inspection.
- xii. The GPS location co-ordinates or any method to locate inspection location shall be captured indicating the location of the Vendor-Premises of remote inspection/testing.

### 4) MINIMUM REQUIREMENTS AT BHEL and CUSTOMER LOCATION :

- i. Uninterrupted internet services
- ii. Suitable internet bandwidth
- iii. Digital signatures wherever required.
- iv. Availability of web applications like Webex, MS Teams, etc. as required.
- v. Clearance from customer for conducting remote inspection

### 5) PROCEDURE:

- i. Supplier will raise the inspection call in BHEL - CQIR portal.
- ii. Supplier shall ensure availability of minimum requirements at supplier's works as mentioned above at point 3.

- iii. Before starting the inspection, the supplier shall submit the documents (TCs, internal test reports and calibration certificates as per approved QAP) two days before the date of inspection for review by BHEL and supplier shall coordinate with BHEL and if found satisfactory, inspection shall be considered for remote.
  - iv. Prior to commencement of remote inspection a pre inspection meeting shall be organised by BHEL inspector with supplier to ascertain the readiness for remote inspection.
- 6) During inspection, supplier shall share the location on Google maps for verifying the address of the manufacturer. Location may be captured by BHEL as screenshot.
- i. Inspection shall be on the basis of approved Quality Plans and associated reference documents mentioned.
  - ii. For witnessing inspection, supplier shall bring the mobile video camera near to the surface of the equipment or as per requirement of the inspector for clarity in viewing the test/ equipment which shall be the responsibility of supplier. Supplier shall ensure that proper lighting is available during live video streaming.
  - iii. Before start of the inspection, inspector shall ensure that all instruments shall have valid calibration report. Supplier shall ensure use of digital instruments preferably for inspection to the extent possible.
  - iv. Details of suppliers's dedicated team handling the remote inspection shall also be incorporated in the CQIR.
  - v. All details of inspection/ testing referred documents shall be mentioned in the CQIR. Recording of remote inspection shall be maintained by the BHEL inspector and this recording (unedited) shall be maintained at BHEL system for a minimum period of 3 years or till the warranty period whichever is later.
  - vi. PEM (Engineering) shall accord final technical clearance, in case of any deviation in inspected item noticed during inspection.
  - vii. Inspection shall be conducted by PEM-Q&BE assigned inspector along with PEM-Engg (if required). CQIR shall be prepared and maintained by PEM-Q&BE.
  - viii. PG will issue MDCC on the basis of acceptance of inspected items along with accepted packing photographs as per contract provisions.
- 7) **UNDERTAKING BY VENDOR:** Material inspected through remote inspections is meeting all technical requirements of BHEL. In case of any discrepancy from the above procedure/ material inspected, if found later, vendor will replace the materials without any cost implication to BHEL.
- 8) Vendor shall provide the signed and stamped of the above guidelines to BHEL as a token of acceptance.