



Ref. Enquiry No.: E-5689/2017 Dt: 05.09.2017

DUE DATE
19-September-2017
BY 10:00 PM

Dear Ma'am/Sir,

Subject: Tender Enquiry for "VIS FOR FAN FOUNDATION" as per Technical Specification No. PE-TS-412-618-C001 Rev 0 for 2X660 MW ENNORE SEZ.

BHEL invites your offers for Design, Manufacture, Inspection and testing at Manufacturer's works, proper packing and delivery to site for **2X660 MW ENNORE SEZ** as specified/ defined as per tender technical specification PE-TS-412-618-C001 Rev 0, amendment & agreements till placement of order for **VIS FOR FAN FOUNDATION for 2X660 MW ENNORE SEZ**.

Your offer shall be submitted in two parts strictly as per Clause-2.0 of the "Instructions to Bidders" of GCC Rev. 06, in sealed cover for the under mentioned equipment/system.

Item Description – VIS FOR FAN FOUNDATION		
Sl. No.	Project	TECHNICAL SPECIFICATION NO.
1	2X660 MW ENNORE SEZ	PE-TS-412-618-C001 Rev 0

Your best quotation/offer for the above requirement, in line with our terms and conditions, should be submitted **online via e-procurement system**. It shall be the responsibility of the bidder to ensure that the tender is submitted **on or before the due date by 02:00 PM**. Part-I bids shall be opened at **03:00 PM** on the due date.

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

- a. www.bhel.com
- b. www.bhelpem.com
- c. www.eprocure.gov.in
- d. <https://bheleps.buyjunction.in>

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

ENQUIRY TERMS AND CONDITIONS:

Please refer GCC Rev-06 which is available on www.bhelpem.com/Tenders.aspx. GST related corrigendum to GCC Rev06 is enclosed and same is to be considered along with GCC Rev06. Bidders are requested to go through the same while submitting the offer."Your best quotation/offer for the requirement, in line with our terms and conditions, should be uploaded on www.bheleps.buyjunction.in"

Kindly ensure timely submission of your offer on or before the due date.

1. Offers should be submitted separately in two parts **online through e-procurement system** as follows:

Akash Verma
Sr Engr/PG-IV, BHEL/PS-Project Engineering Management,
Power Project Engineering Institute,
Plot no. 25, Sector – 16A, Noida (UP) 201301, INDIA
(OFF) +91-120-4218960 (MOB.) +91 9718575780

Regd. Office
BHEL House Siri Fort
New Delhi-110049

[Signature]

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Part-I: TECHNO-COMMERCIAL BID

Part-II: PRICE BID

For detailed instructions, please see clause no. 1.0 & 2.0 of "Instructions to Bidders (Vol-I, GCC Rev. 06)".

2. Bidders shall submit their offers meeting the requirements of the following tender documents indicated in GCC, Rev. 06 and other Terms and Conditions included in this Enquiry Letter:
3. Bidders to note that following form the part of tender documents:
 - a. General Conditions of Contract (GCC) Rev 06 comprising of: Instructions to Bidders and General Commercial Terms & Conditions and GST related corrigendum to GCC Rev06
 - b. Technical Specifications.
 - c. Price format & Special Conditions of Contract (SCC Rev01).
 - d. Enquiry terms & conditions
 - e. Performance Bank Guarantee format.
 - f. PQR
4. Any hidden conditions/deviations mentioned elsewhere in offer and standard pre-printed terms & conditions of the tenderers shall not be considered valid.
5. Tenders shall be submitted strictly in accordance with the requirements of the above mentioned tender documents. Deviations (Technical as well as Commercial), if any, shall be listed out separately in Annexure-II of GCC Rev-06 (to be read in conjunction with GST related corrigendum to GCC Rev06) along with reasons for taking such deviations. 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 to GCC Rev.06 along with GST related corrigendum to GCC Rev06.
6. Bidder has to submit "NO DEVIATION CERTIFICATE FOR COMMERCIAL TERMS AND CONDITIONS as per General Conditions of Contracts (GCC, Rev.06), Special Conditions of Contract and Notice Inviting Tender (NIT)" **in case of no deviations.**
7. Unsolicited fresh/revised price bids shall not be entertained.
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. Late tenders shall be rejected.
11. Offers should be submitted separately in two parts **online through e-procurement system only**, however, all correspondence thereof, shall be addressed to the undersigned by name & designation and sent at the following address:

AKASH VERMA, Sr Eng, PG-IV
M/s. Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex,

SHREEDHAR SINGH, SR MANAGER, PG IV
M/s. Bharat Heavy Electricals Ltd.,
Project Engineering Management,
Power Project Engineering Institute,
HRD & ESI Complex,

Akash Verma
Sr Engr/PG-IV, BHEL/PS-Project Engineering Management,
Power Project Engineering Institute,
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Plot No 25, Sector-16 A, Noida-201301,U.P.,INDIA E-MAIL: akashverma@bhel.in Ph. No. +91-120-4218960; Mob: +919718575780	Plot No 25, Sector-16 A, Noida-201301,U.P.,INDIA E-MAIL: SHREEDHARSINGH@bhel.in Ph. No. +91-120-4368720
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12. Bidder to note that this is a conditional Global Open tender enquiry. Hence, price bid (Part-II) opening/RA shall be subject to following criterion:

- Techno-commercial qualification/recommendation of bidder by BHEL-PEM
- Approval of bidder by the customer. Same shall be taken up by BHEL with the customer based on the credentials/reference list being submitted by the bidder.

13. The bidders (who are not registered with BHEL-PEM) -Online Registration Portal is operational in BHEL. Non-registered Vendors, who wish to apply for registration with BHEL-PEM, have to apply through Online Registration Portal available at www.bhelpem.com → vendor section → Online Supplier Registration. All credentials and/or documents duly signed and stamped related to registration has to be uploaded on the website and submit the application for registration. One set of hard copy of the filled-up SRF downloaded from Online Registration Portal duly signed and stamped has to be submitted

14. **Delivery Schedule:-**

Delivery: Drawings/ Documents submission : Initial drawings/documents is to be submitted by vendor within Two (02) weeks from the date of PO and every re-submission within Ten (10) days of receipt of comments (incorporating all the BHEL/Customer comments).

In case there are delays of submission/re-submission of drawings/documents beyond above stated schedule, that much days of delay would be reduced from delivery period.

Equipment Supply: Within 06 Months from CAT-I approval (F.O.R. dispatch station basis for Indian vendor and C&F basis for Foreign Vendor).

Supervision of E&C: Supplier has to deploy its Service Engineer / Supervisor at project site within 15 days of BHEL intimation.

15. Pre-Qualifying Requirements: Bidders have to provide the required details as per PRE-QUALIFICATION REQUIREMENT CRITERIA (enclosed as NIT Tender Documents) in their Techno-Commercial offer. Bids of only those bidders shall be evaluated who meet the Pre-Qualifying requirements.
16. Bidders are requested to refer Performance Bank Guarantee (PBG) format & rules and adhere to it while furnishing PBG.
17. BHEL reserves the right to go for Reverse Auction (RA) (Guidelines as available on www.bhel.com) instead of opening the sealed envelope price bid, submitted by the bidder. This will be decided after techno-commercial evaluation. Bidders to give their acceptance with the offer for participation in RA. Non-acceptance to participate in RA may result in non-consideration of their bids, in case BHEL decides to go for RA.

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

The bidders have to necessarily submit online sealed bid less than or equal to their envelope sealed price bid already submitted to BHEL along with the offer. The envelope sealed price bid of successful L1 bidder in RA, if conducted, shall also be opened after RA and the order will be placed on lower of the two bids (RA closing price & envelope sealed price) thus obtained. The bidder having submitted this offer specifically agrees to this condition and undertakes to execute the contract on thus awarded rates.

If it is found that L1 bidder has quoted higher in online sealed bid in comparison to envelope sealed bid for any item(s), the bidder will be issued a warning letter to this effect. However, if the same bidder again defaults on this count in any subsequent tender in the unit, it will be considered as fraud and will invite action by BHEL as per extant guidelines for suspension of business dealings with suppliers/ contractors (as available on www.bhel.com)."

Link for RA guidelines to be followed as:

http://www.bhel.com/vender_registration/pdf/Guidelines%20for%20Reverse%20Auction-2016.pdf

IMPORTANT INSTRUCTION TO BIDDERS IN CASE OF REVERSE AUCTION

The Bidders has to quote the Single Price (i.e. Total Cost to BHEL availing input tax credit) in Reverse Auction. Price are to be inclusive of Packing & Forwarding charges, all the routine & type tests as per tender scope, Freight charges, Insurance charges (if applicable), Goods & Service Tax as applicable etc., including loading (if any) as applicable.

18. Prices are firm.
19. The variation on overall package value due to changes in the scope shall be limited to +/-25%. This will prevail over the quantity variation clause no.6.0 indicated in the GCC rev 06.
20. Payment term for design engineering charges is as follows:-
"100% on certification from engineering on completion of design & Engineering works" and along with first bill of supply Payment.
21. CIF allocation is not available for this package
22. If any bidder uploads price bid in the unpriced section (techno-commercial attachment page) of the tender in e-procurement, in that case bidder(s) shall only be responsible for such mistake and any 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
23. All the above Tender Documents shall automatically become a part of the Order/Contract after its finalisation.
24. Evaluation will be done on overall L1 (Total cost to BHEL i.e. FOR site) basis with necessary loading as applicable in line with clause no. 19 of GCC Rev06.

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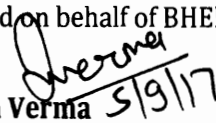
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25. The offers of the bidders who are on the banned list and also the offers of the bidders, who engage the services of the banned firms, shall be rejected. The list of banned firms is available on BHEL website <http://www.bhel.com>.
26. The Bidder 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.
27. Digital Signature: Foreign and indigenous bidders participating in subject tender will necessarily have to buy class III DSCs (Digital Signature Certificate) issued by the certifying authorities in India. Basic procedure /checklist is uploaded on www.bhel.com for participating in future tender enquires through e procurement.
28. 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.06.
 - Acceptance of Special Conditions of Contract (SCC Rev01).
 - 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.
 - Un-Priced price schedule (format) duly filled mentioning 'Quoted' or 'Q' in each column/row, wherein actual price has been quoted.

Note: Tenderer must submit UN-PRICED Price format duly filled mentioning the word "QUOTED" in place of actual price. The actual price is to be filled in separately and submitted in sealed price bid. Wherever GCC Rev06 is mentioned same is to be read in conjunction with GST related corrigendum to GCC Rev06

Thanking You.

Yours faithfully,
For and on behalf of BHEL


Akash Verma 5/9/17
(Sr. Engr/PG IV/BHEL-PEM)

Enclosures:

1. GST related corrigendum to GCC Rev06
2. Technical Specification No. PE-TS-412-618-C001 Rev 0
3. Project SCC Rev 01.
4. Priced & Un-Priced Price Schedule.
5. Deviation sheet Annexure-II of GCC Rev-06 (Priced & Un-Priced).
6. Performance Bank Guarantee format.
7. PQR
8. Guidelines regarding dealing with Indian agent of foreign supplier.

**TAMIL NADU GENERATION AND DISTRIBUTION
CORPORATION**
**2X660 MW ENNORE SEZ COAL BASED STPP AT ASH DYKE OF NCTPS,
CHENNAI**

**TECHNICAL SPECIFICATION
FOR
VIBRATION ISOLATION SYSTEM
FOR**

**ID FAN (4 NOS) FOUNDATION
PA FAN (4 NOS) FOUNDATION
FD FAN (4 NOS) FOUNDATION**

SPECIFICATION NO. : PE-TS-412-618-C001 (Rev 0)



**BHARAT HEAVY ELECTRICALS LIMITED
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
NOIDA-201301**

	TITLE : TECHNICAL SPECIFICATION FOR VIS FOR ID (4 NOS), PA(4 NOS.) & FD(4 NOS.) FAN FOUNDATION	SPECIFICATION NO. PE-TS-412-618-C001	
		SECTION	
		REV. NO. 0	DATE 19.08.2017

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This Technical Specification consists of two Sections:

SECTION I

- SPECIFIC TECHNICAL REQUIREMENTS.

SECTION II

- STANDARD TECHNICAL SPECIFICATION.
- REFERENCE QUALITY PLAN



TITLE :
TECHNICAL SPECIFICATION FOR
VIS FOR ID (4 NOS.) PA (4 NOS.) & FD (4 NOS.)
FAN FOUNDATION

SPECIFICATION NO. PE-TS-412-618-C001

SECTION I

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COMPLIANCE CERTIFICATE

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

01. 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.
02. There are no deviation with respect to specification other than those furnished in the 'schedule of deviations.'
03. 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.
04. 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.
05. 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).
06. QP will be subject to BHEL/Customer approval in the event of order & customer hold points for inspection/ testing shall be marked in the QP at the contract stage. Inspection/ testing shall be witnessed as per same apart from review of various test certificates/ Inspection records etc.

The charges for 3rd party inspection (Lloyds, or equivalent) for imported components shall be included in the base price of the equipment by the bidder.

07. All drawings/data – sheets etc. to be submitted during contract shall be subject to BHEL/Customer review/ approval.
08. GA drawings/ datasheet / QP as submitted with offer at tender stage are for reference purpose only and shall be subject to approval during contract stage.
09. All sub vendors shall be subject to BHEL/CUSTOMER approval.
10. Any special tools & tackles, if required, shall be in bidder's scope.



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SECTION-I

SPECIFIC TECHNICAL REQUIREMENTS



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TECHNICAL SPECIFICATION FOR
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1.0 SCOPE

1.01 SUPPLY OF VIBRATION ISOLATION SYSTEM (VIS):

- i) Vibration Isolation System (VIS)
- ii) Tools and facilities required for erection and commissioning including seaworthy packing & transportation etc. complete.

1.02 SUPERVISION OF ERECTION AND COMMISSIONING OF THE VIS.

Vendor shall deploy experienced manpower for setting the VIS in position and final adjustments after machine installation. Vendor shall also confirm the readiness at site before deploying the manpower for supervision of erection. Vendor shall furnish proposed erection strategy of the entire system and procedure for replacement of VIS and downtime involved.

1.03 DESIGN & ENGINEERING FOR THE VIBRATION ISOLATION SYSTEM AND TOP DECK (INCLUDED IN VENDOR'S SCOPE)

Design and engineering shall consist of the following:

- i) Selection of Vibration Isolation System (VIS).
- ii) Static and dynamic analysis and design of RCC deck slab (supporting arrangement for the equipment supported on VIS)
- iii) Calculation of loads on supporting structure along with their points of application and deflection limitations.
- iv) Calculation should establish that not more than 10 % of the dynamic loads are transmitted to the substructure supporting VIS and that the foundation system meets the amplitude/frequency requirements.
- v) Checking of stiffness for structure supported on VIS.

1.04 DOCUMENTATION

Vendor shall furnish following documents:

- i) Bill of materials of various elements included in the supply along with detailed specifications of system and various items included in supply and standards local or international standards to which they conform.
- ii) General Arrangement (GA) drawing showing location and supporting details of VIS. **(Included in vendor's scope).**
- iii) GA and reinforced concrete details drawings for deck slab including bar bending schedule. **(Included in vendor's scope).**
- iv) Embedment drawings showing location of all embedment and their details pertaining to RCC deck slab-**(Included in vendor's scope).**
- v) Design document. **(Included in vendor's scope).**
- vi) Methodology of providing the shuttering and its removal as well as concreting of deck slab, installation of VIS and sequence of above operation.
- vii) Installation and maintenance manual indicating equipment, procedures, etc. necessary for installation/maintenance of VIS.
- viii) List of power plants where such systems have been successfully installed for such applications.

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- ix) Performance certificate from the end user/customer for at least two successfully executed contracts for such system.

2.0 GENERAL:

- 2.1 In case of any conflict between section –I and section-II, section-I will prevail over section-II.
- 2.2 Vibration Isolation system (VIS) shall consist of steel helical springs and viscous damper.
- 2.3 The isolation efficiency of the foundation system comprising RCC deck and steel helical springs shall be at least 90%.
- 2.4 Bidder shall quote based on the input drawings as per Table-1 to satisfy the design requirement as per the relevant applicable codes in annexure- A and section - II.

Table-1

<u>Sl. No</u>	<u>TITLE</u>	<u>DRAWING NO.</u>
1	GENERAL ARRANGEMENT OF INDUCED DRAFT FAN SAF 38.5/25-1	1-00-099-28997(R0)
2	GENERAL ARRANGEMENT OF PRIMARY AIR FAN PAF 20/11.2-2	1-00-100-28998(R0))
3	GENERAL ARRANGEMENT OF FORCED DRAFT FAN FAF 26.6/12.5-1	1-00-098-28996(R0)

- 2.5 Bidder shall furnish the information about the entire range of spring units, damper units and spring cum damper units, manufactured by the vendor. The information to be furnished should include the load carrying capacity, stiffness (vertical & horizontal), damping resistance, dimension of spring and damper units as well as quality plan.

- 2.6 The steel helical springs and viscous damper supplied should be of proven make.

3.0 DOCUMENTS TO BE SUBMITTED BY VENDOR

- 3.1 Document submission schedule after the award of contract shall be as below:

PACKAGE	BHEL DRG NO	DRG TITLE	Drg Submission schedule
VIS FOR	Primary Documents - affecting Manufacturing/ Delivery Directly		



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ID/PA/FD FAN FOUNDATION	PE-V0-412-618-C201	Data sheet of VIS for ID/PA/FD Fan Foundation	R-0 within Two (02) weeks from LOI/PO & subsequent revisions within 10 days of comments received from BHEL/customer.
	PE-V0-412-618-C202	QAP of VIS for ID/PA/FD Fan Foundation	
	PE-V0-412-618-C203	Test certificate of VIS for Fan Foundation	
	PE-V0-412-618-C204	Static & dynamic Analysis of VIS for ID Fan Foundation	
	PE-V0-412-618-C205	Static & dynamic Analysis of VIS for PA Fan Foundation	
	PE-V0-412-618-C206	Static & dynamic Analysis of VIS for FD Fan Foundation	
	PE-DG-412-618-C001	Civil GA drwg of ID Fan Foundation	
	PE-DG-412-618-C002	Civil GA drwg of PA Fan Foundation	
	PE-DG-412-618-C003	Civil GA drwg of FD Fan Foundation	
	Secondary Documents - NOT affecting Manufacturing / Delivery Directly		R-0 within Two (02) weeks of Cat-I(or)II approval on GA drawing
	PE-DG-412-618-C004	RC details of Top Deck of ID Fan Foundation	
	PE-DG-412-618-C005	RC details of Top Deck of PA Fan Foundation	
	PE-DG-412-618-C006	RC details of Top Deck of FD Fan Foundation	

3.2 The documents shall be submitted as mentioned below:

- Soft copy of all documents/drawings shall be furnished in pdf and AutoCAD format as applicable.
- Hard copies shall also be submitted.
- Submission of civil drawings/documents shall be as mentioned in the table-2.

Table-2

	Drawing	Document
For Approval	Soft copy + 4 nos. hard copies	Soft copy + 4 nos. hard copies
For RFC	Soft copy + 7 nos. hard copies	

4.0 SEISMIC LOADING:

The site is located in Zone III as per IS: 1893/Part I -2003 & IS: 1893- Part II- 2005.

Zone factor (Z) shall be 0.16

Importance factor shall be considered as 1.75.

5.0 WIND LOADING:

Basic wind speed at project site is 50 m/sec. as per IS: 875-1987 (Part 3).



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Probability factor, (k1 risk coefficient), terrain, height and structure size factor, k2 and topography factor, k3 shall be as per IS:875.

6.0 MATERIAL OF CONSTRUCTION

- i. Minimum grade of concrete: M35.
- ii. Reinforcing bars will be TMT bars of grade Fe500 conforming to IS-1786.

7.0 MATERIAL (DESIGN & SUPPLY)

7.1 Steel helical springs and viscous dampers shall consist of:

- i. Steel helical spring units and viscous dampers along with viscous liquid including associated auxiliaries for installation of the spring units and dampers like steel shims, adhesive pads, etc.
- ii. Frames for pre-stressing of spring elements.
- iii Suitable hydraulic jack system required for the erection, alignment etc. of the spring units
- iv. Any other items may be required for the pre-stressing, erection, release of pre-stress, alignment and commissioning of the steel helical springs and viscous dampers.

7.2 The sizes of the spring units, damper units, spring cum damper units should be such that groups of such units can be accommodated on column heads in case of elevated foundations and on Pedestals/walls in case of foundations at ground level.

7.3 The steel helical springs and viscous dampers shall be designed for ensuring "fit and forget" guarantee.

8.0 MANUFACTURING & TESTING

8.1 Complete manufacturing and testing of the steel helical springs and viscous dampers shall be done at the manufacturing shop of the vendor. For this purpose the vendor shall submit the detailed programme for approval of customer and take up the manufacturing / testing after approval of such programme. The programme (quality plan) shall include:

- i. Manufacturing schedule and quality check exercised during manufacturing.
- ii. Detail of test to be carried out at the manufacturing shop with its schedule.
- iii. Special requirements, if any, regarding concreting of top deck.
- iv. Complete step- by- step procedure covering the installation and commissioning of the spring system.
- v. Manuals for erection, commissioning, testing and maintenance of the steel helical springs and viscous dampers.
- vi. A checklist for confirming the readiness of the civil fronts for erection of steel helical springs and viscous dampers.
- vii. Checklist for equipment required at each stage of erection.
- viii. Bill of materials (data sheet) of various elements such as spring units, viscous dampers, with their rating, stiffness etc. included in the supply.
- ix. Bill of material (data sheet) for frames for pre stressing, hydraulic jack including electric pump, high pressure tubes, hand operated pump etc. with their rating and numbers.
- x. Any other details which may be necessary to facilitate design and construction of the foundations / structures.

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- 8.2 The springs shall conform to codes DIN 2089 and DIN 2096. The quality assurance and inspection procedure shall be finalised on the basis of the above codes and the quality plans be drawn accordingly.

9.0 ERECTION AND COMMISSIONING AND SUPERVISION

- 9.1 Complete erection and commissioning of the steel helical springs and viscous dampers including pre-stressing of elements, placing of elements in position, checking clearances on the shuttering of the RCC top deck, releasing of pre-stress in spring elements, making final adjustments and alignments etc. all shall be supervised by a specialist supervisor.
- 9.2 The scope of work shall be deemed to include all activities, which may not have been explicitly mentioned but are reasonably implied for the successful commissioning of steel helical springs and viscous dampers.

10.0 REALIGNMENT OF SPRING SYSTEM

If any realignment of the steel helical springs and viscous dampers is required to be done for aligning the shaft or for any other reasons during the first one year of operation from the date of commissioning of the machine, the same shall be done by the vendor.

11.0 TRANSPORTATION

- 11.1 Steel helical springs and viscous dampers shall be suitably protected, coated, covered, boxed and crated to prevent damage or deterioration during transit and handling.
- 11.2 The vendor shall be responsible for any loss or damage during transportation, handling.

12.0 INSPECTION REQUIREMENTS

- 12.1 Minimum requirement for quality plan shall be as per quality plan attached in section –II of the specification. Quality plan shall be subject to approval during detail engineering. No price implication shall be admissible to QP approval by BHEL/Customer.
- 12.2 Inspection for imported item shall be done from third party like Lloyd or equivalent and certificate shall be submitted for review of BHEL.
- 12.3 In case of new bidder, bidder may need to carry out damping test, stiffness test etc. during customer approval stage before price bid opening. No price implication shall be admissible for these tests.



TITLE :
TECHNICAL SPECIFICATION FOR
VIS FOR ID (4 NOS.) PA (4 NOS.) & FD (4 NOS.)
FAN FOUNDATION

SPECIFICATION NO. PE-TS-412-618-C001

SECTION I

REV. NO. 0

DATE 19.08.2017

SHEET 8 of 8

ANNEXURE-A

Codes and Standards

Latest revision of following codes shall be used for the design of the spring-supported foundations:

IS: 456	Codes practice for plain and reinforced concrete.
IS: 2974	Code of practice for design and construction of machine foundations.
IS: 1893	Criteria for earthquake resistant design of structures.
DIN: 4024	Machine foundations; Flexible supporting structures for machine with rotating masses
DIN: 2089	Helical compression springs out of round wire and rod: calculation & design.
DIN: 2096	Helical compression springs out of round wire and rod: quality requirements for hot formed compression springs.
VDI: 2056	Criteria for assessing mechanical vibrations of machine.
VDI: 2060	Criteria for assessing the state of balance of rotating rigid bodies.



TITLE :
TECHNICAL SPECIFICATION FOR
VIBRATION ISOLATION SYSTEM

SPECIFICATION NO. PE-TS-999-600-C026

SECTION II

REV. NO. 0

DATE 14.06.2016

SHEET 1 OF 3

SECTION-II

STANDARD TECHNICAL SPECIFICATION



TITLE :
TECHNICAL SPECIFICATION FOR
VIBRATION ISOLATION SYSTEM

SPECIFICATION NO. PE-TS-999-600-C026

SECTION II

REV. NO. 0

DATE 14.06.2016

SHEET 2 OF 3

1.0 SCOPE :

This section covers supply, supervision of erection commissioning & design engineering of the vibration isolation system (VIS) suitable for ID/PA/FD Fans/ TDBFP/MDBFP/ TURBOGENERATORS/ MILLS. The vibration isolation system shall be of proven make and should be in successful operation for similar machines.

2.0 SUPPLY OF VIBRATION ISOLATION SYSTEM (VIS)

VIS shall be supplied complete along with recommended spares if any. The selection of VIS shall be done by the vendor, in case not done by customer so that the amplitude at bearing locations are within permissible limits as per machine supplier recommendation or ISO 10816 whichever is governing and no dynamic loads are transferred to structure supporting VIS. Minimum 90% isolation shall be achieved and the system shall be capable of withstanding Seismic/Wind forces.

3.0 SUPERVISION OF ERECTION AND COMMISSIONING

3.01 Manual

Vendor shall supply installation and maintenance manual indicating equipment procedures etc. necessary for installation and replacement of VIS with downtime involved.

3.02 Tools and facilities

Vendor shall supply all tools and facilities as required for successful erection and commissioning of VIS. Vendor shall deploy experienced manpower to supervise successful installation of VIS.

4.0 DESIGN ENGINEERING OF VIBRATION ISOLATION SYSTEM

4.01 Dynamic Analysis

The dynamic analysis shall consist of free vibration analysis and forced vibration analysis. Isolation efficiency of at least 90% shall be obtained. The fundamental natural frequency shall be sufficiently above or below the frequency corresponding to operating speed. Vibration amplitude shall be calculated at all bearing locations and shall satisfy the permissible limits as per ISO 10816 or as specified by the machine supplier. Transient analysis shall be carried out for the short circuit / blade failure condition with an appropriate force function if required by the machine supplier. The forces for which substructure is to be designed shall be furnished.

4.02 Static Analysis

The static analysis shall include the

- a) Dead weights of machine stationary parts
- b) Dead weights of machine rotary parts
- c) Loads due to machine power torque
- d) Loads due to maximum allowable unbalance
- e) Temperature loads
- f) Loads due to blade unbalance/short circuit
- g) Erection loads
- h) Seismic loads
- i) Any other loads given by the supplier

Various loads combinations must be investigated to obtain the most severe loads for



TITLE :
**TECHNICAL SPECIFICATION FOR
VIBRATION ISOLATION SYSTEM**

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foundation design purpose as per relevant IS codes or as per machine supplier recommendation whichever is more critical.

4.03 CHECK FOR SHAFT MISALIGNMENT

Foundation deck must be adequately stiff to withstand all operating load combinations without excessively upsetting the rotor shaft alignment. The structural design must carefully be analysed for relative deflection for the members supporting machine shaft to satisfy the limits as given by machine supplier if any.

4.04 DESIGN OF RCC DECK SUPPORTED ON VIS

Vendor shall provide General arrangement drawing of deck showing location and supporting detail of VIS, all embedment and their details as per the machine supplier drawing.

RCC design shall be done by working stress method for all machine foundations. Minimum reinforcement shall be governed by IS: 2974 as well IS:456.

All documents/drawings shall be supplied in 25 (twenty five) prints. All calculations shall be supplied in 6 (six) sets. Soft copy of the drawings in Auto Cad shall be supplied along with the soft copy of the documents supplied. All documentation shall be in English language and all RCC/structural design shall be conforming to the relevant Indian Standard Code of practice.

5.0 QUALITY PLAN AND TEST CERTIFICATE

Vendor shall furnish the quality plan and Test certificate for the hardware in their scope of supply. The quality plan shall be reviewed by BHEL/Consultant wherein the inspection and hold points shall be indicated. Vendor shall submit test certificate based on approved quality plan. Despatch of material by the vendor shall only take place after the receipt of Material Dispatch Clearance Certificate (MDCC) issued by BHEL/Consultant on the basis of test reports/test certificates submitted by the Vendor after manufacture.

6.0 ENVIRONMENTAL PROTECTION

VIS shall be suitably protected against environmental damages e.g. abrasion, discolouration, corrosion, oily water etc. to give a prolonged service matching the plant life.



TITLE :
TECHNICAL SPECIFICATION FOR
VIS FOR ID (4 NOS) PA (4 NOS.) & FD (4
NOS.) FAN FOUNDATION

SPECIFICATION NO. PE-TS-412-618-C001

SECTION II

REV. NO. 0

DATE 19.08.2017

SECTION-II

REFERENCE QUALITY PLAN

Manufacturer's logo		Manufacturer's name and Address			MANUFACTURING QUALITY PLAN (I-QAP)				Project: Main supplier: BHEL BHEL P.O NO:				
ITEM : Vibration Isolation system Equipment: Spring Unit Module name as per Vendor		QP No: Rev : Date : Page :		REFERENCE DOCUMENT		ACCEPTANCE NORMS		FORMAT OF RECORD		AGENCY		REMARKS	
Sl. No.	COMPONENT AND OPERATION	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	7	8	9	10		11		
1	2	3	4	5	6	7	8	9	D	M	C	B	
Materials													
1.1	For boxes	Chemical/Mechanical	Minor	Verify	One / Heat	IS 2042/DIN EN 10025 / JHYT 63/JHYHT 01800/SAILMA 350 HIRSA/LMA 350 or equivalent	Same as column 7"	Certificate	✓	P	V	V	
1.2	For Springs	a) Chemical	Major	Verify	One / Lot	60 C: V 4 As per DIN 17221 or 61 Cr V 4 As per EN10089 or Equivalent	Same as column 7"	Certificate	✓	P	V	V	
		b) Grain Size	Major	Verify	One / Lot	ASTM E 112	ASTM A 5 or finer	Certificate	✓	P	V	V	
		c) Hard	Major	Verify	One / Lot	IS 4183	ABCD series 7H-2.0/1.5	Certificate	✓	P	V	V	
		d) Micro structure	Major	Verify	One / Lot	-	DIN 17221 or equivalent	Certificate	✓	P	V	V	
1.3	Spring at Manufacturer's end	Hardness	Major	Test	One/Lot	IS 1600	418-450 BHN	Certificate	✓	P	V	V	
1.4	Spring at Manufacturer's end	Decarburization	Major	Test	One / Lot	IS 6396	Max. depth 0.5% of bar dia - partial	Certificate	✓	P	V	V	
1.5	Spring at Manufacturer's end	NDE after compression	Major	Test	100%	IS 3703	No cracks	Certificate	✓	P	V	V	
1.6	Spring (at vendor end)	Spring Rate	Major	Test	AQL 4.0	DIN 2098	Same as column 7"	Lab Report	✓	P	V	V	
1.7	Adhesive pads (Gus), 4mm Thick, Steel shims	Dimensions (mm)	Minor	Measure / Visual	6 %	Drawing	DIN 7188 8g	Internal Record	✓	P	V	V	
1.8	Viscous liquid	Viscosity/ Penetration speed (mm/sec)	Major	Test	Sample	DIN 53019 or equivalent	Same as column 7"	Certificate	✓	P	V	V	
1.9	Studs & Nuts	Chemical Dimensions (mm)	Minor Minor	Verify Measure	One / Lot 8%	IS 1367 (Grade 8.8 & Class 8) IS 4216 (Tolerance Class 8g & 6H)	Same as column 7"	Lab Test Report	✓	P	V	V	
In Process Inspection													
2													
2.1	Welding	Visual / Surface exam (mm)	Major	Visual / Measure	10% on welds	Annexure-1 (attached)	Same as column 7"	Certificate	✓	P	V	V	
2.2	Boxes	NDE	Major	DPT	10% Random	ASTM / E 165	Same as column 7"	Certificate	✓	P	V	V	
		Dimensions (mm)	Major	Measure	10%	Drawing & data sheet	EN ISO 13920 C	Internal record	✓	P	V	V	
Final Inspection													
3													
3.1	Shot Blasting	Picture	Major	Compare	10%	EN ISO12944-4	SA - 2 %	Certificate	✓	P	V	V	
3.2	Painting	Thickness (180 microns)	Major	Measure / Visual	10%	Annexure-2 (attached)	Same as column 7"	Certificate	✓	P	V	V	
3.3	Spring Unit	Dimensions (Except HC & HV)	Minor	Measure	10%	Drawing / Data sheet	EN ISO 13920 C	Internal Record	✓	P	V	V	
3.4	Constant of Spring Units (Vertical, KV)	Load Vs Displacement (N/mm)	Critical	Test	10%	DIN 2098 & DIN 2088	Date Sheet	Certificate	✓	P	V	V	
3.5	Document Control	Verification of above documents (TC/RS)	Major	Compare	All	MOQ	Same as column 7"	Certificate	✓	P	V	V	
3.6	Packing / Marking	Visual	Major	Compare	100%	As per vendor's standard	Same as column 7"	Certificate	✓	P			
MANUFACTURER/ SUB-CONTRACTOR		CONTRACTOR		LEGEND: S RECORDS, IDENTIFIED WITH 'ICK' SHALL BE ESSENTIALLY INCLUDED BY MANUFACTURER IN QA DOCUMENTATION M: MANUFACTURER/ SUB-CONTRACTOR C: MAIN SUPPLIER, B: CUSTOMER INDICATE 'P' PERFORM 'W' WITNESS AND 'V' VERIFICATION		NAME & SIGNATURE OF APPROVING AUTHORITY WITH SEAL		REVIEWED BY					
SIGNATURE													

ANNEXURE - 1
WELDING

WELDING DETAILS

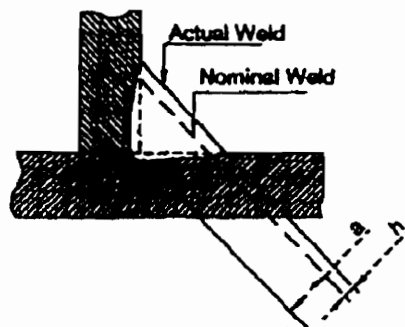
SI
No

Imperfection
Designation

Outside status

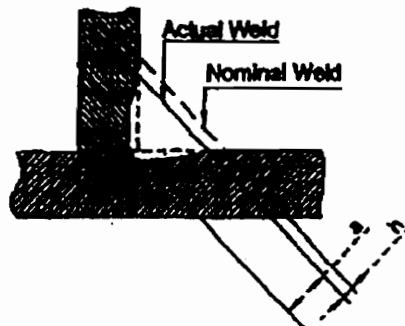
Limits for Imperfection with
reference to quality level:
DIN EN 25817 / D

1. Excessive convexity



$$h \leq 1\text{mm} + 0.25 b ; \text{max. } 5\text{mm}$$

2. Fillet weld having a throat
thickness smaller than the
nominal value

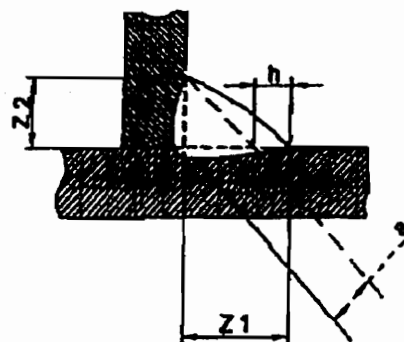


A fillet weld with an apparent throat thickness smaller than that prescribed should not be regarded as being imperfect if the actual throat thickness with a compensating greater depth of penetration complies with the nominal value.

Short imperfections: $h \leq 0.3$
 $\text{mm} + 0.1 a ; \text{max. } 2\text{mm}$

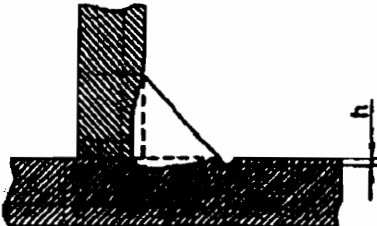
Long imperfections:
Not Permitted

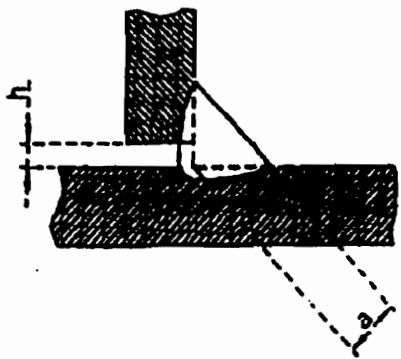
3. Excessive asymmetry
of fillet weld

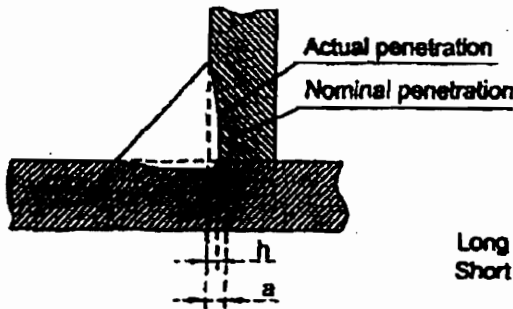


It is assumed that the asymmetric fillet weld has not been expressly prescribed.

$$h \leq 2\text{mm} + 0.2 a$$

WELDING DETAILS			
SI No	Imperfection Designation	Outside status	Limits for Imperfection with reference to quality level: DIN EN 25817 / D
4.	Undercut		Smooth transition is required $h \leq 1.5\text{mm}$
5.	Gas pores and porosity	The following conditions and limits for imperfections shall be fulfilled a) Maximum dimension of the summation of the projected or surface crack area of the imperfection. b) Maximum dimension of a single pore for -butt welds -fillet welds c) Maximum dimension for a single pore	4% $d \leq 0.5 s$ $d \leq 0.5 a$ 5 mm
6.	Localised (clustered) porosity	The total pore area within the cluster should be summed and calculated as a percentage of the greater of the two areas; an envelop surrounding all the pores or a circle with a diameter corresponding to the weld width. The permitted porous area should be local. The possibility of masking other imperfections should be taken into consideration. The following conditions and limits for imperfections shall be fulfilled: a) Maximum dimension of the summation of the projected or surface crack area of the imperfection b) Maximum dimension of a single pore for -butt weld -fillet weld c) Maximum dimension for localised clustered porosity.	16% $d \leq 0.5 s$ $d \leq 0.5 a$ 4mm

WELDING DETAILS			
Sl No	Imperfection Designation	Outside status	Limits for Imperfection with reference to quality level: DIN EN 25817 / D
7.	Elongated cavities, worm holes	Long imperfections for -butt welds -fillet welds In any case, maximum dimension for elongated cavities, worm holes	$h \leq 0.5 s$ $h \leq 0.5 a$ 2mm
		Short imperfections for -butt welds -fillet welds In any case, maximum dimension for elongated cavities, worm holes	$h \leq 0.5 s$ $h \leq 0.5 a$ 4mm or Not Larger Than Thickness (NLTT)
8.	Solid inclusions (other than copper)	Long imperfections for -butt welds -fillet welds In any case, maximum dimension for elongated cavities, worm holes	$h \leq 0.5 s$ $h \leq 0.5 a$ 2mm
		Short imperfections for -butt welds -fillet welds In any case, maximum dimension for elongated cavities, worm holes	$h \leq 0.5 s$ $h \leq 0.5 a$ 4mm or Not Larger Than Thickness (NLTT)
9.	Lack of fusion (Incomplete fusion)		Permitted, but only intermittently and not breaking the surfaces
10.	Bad fit-up, fillet weld	 An excessive or insufficient gap between the parts to be joined. Gaps exceeding the appropriate limit may in cases be compensated for by a corresponding increase in the throat.	
			$h \leq 1\text{mm} + 0.3 s$ max. 4mm

WELDING DETAILS			Limits for Imperfection with reference to quality level: DIN EN 25817 / O
Sl No	Imperfection Designation	Outside status	
11.	Incomplete penetration		Long imperfections: Not permitted Short imperfections: $h \leq 0.2 s$, max. 2mm
12.	Cracks	All types of cracks	Not Permitted
13.	Crater cracks		Permitted
14.	Spalters	Fused welding splashes are material trickless (drops) fused to the basic material or welding seam.	Permissible
15.	Stray flash or arc strike	Ignition points are local fuses caused by the electric arc on the surface of the basic material or welding seam.	Permissible

Abbreviations

- a nominal fillet weld throat thickness (fillet thickness), in mm
- b width of weld reinforcement, in mm
- d pore diameter in mm
- h size (height or width) of imperfection, in mm
- l length of imperfection, in mm
- s nominal butt weld thickness or, in the case of partial penetration, the prescribed depth of penetration, in mm
- t tube-wall- or plate thickness, in mm
- z leg length of fillet welds (in case of isoscele-right angle triangular section $z = a \cdot \sqrt{2}$) in mm

ANNEXURE-2

CORROSION PROTECTION PAINTING

REQUIREMENTS

1. Painting of steel parts

All steel parts must be coated immediately after short blasting according to EN-ISO 12944-4. Surface must be free of fat.

- a. Material:
 - M/s Southfield paints –RAL 6011 Green or equivalent
 - M/s Toyo paints – RAL 1000 Black or equivalent
 - M/s Akzo Nobel Coatings India Pvt. Ltd. – RAL 1004 Yellow colour or equivalent
- b. Execution:
 - Painting is performed as given below:
 - Layer thickness:
 - Standard:
 - One layer coating thickness of minimum 100 microns.
 - Long term protection:
 - Two layers coating to total thickness of minimum 180 microns.
- c. Mixing of paint compounds:
 - The compounds (mother paint, accelerator, thinner) must be mixed according to instructions of the paint manufacture. The mixing procedure has to be adjusted to the ambient climatic situation.
- d. Coating:
 - Coating is performed with spray gun. Baking temperature 80 °C. furnace exposing time 45 minutes.
- e. Coating thickness control:
 - Measurements to be taken at 5 random points. Acceptable thickness is 10% below specified thickness.

2. Springs

All the springs must be powder coated by "Electrostatic powder coating spray process" (EPS).

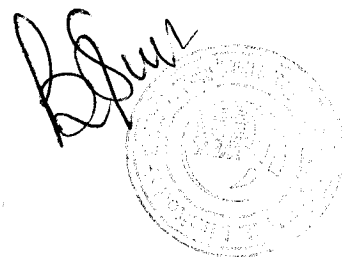
- a. Preparation:
 - Springs must be oil free
- b. Execution:
 - Electrostatic spray coating with an epoxy polyester powder. Baking temperature 190 °C +10 °C. furnace exposing time of 40 minutes.
 - Colour: Black.
- c. Coating thickness:
 - Coating thickness must be minimum of 70 microns.

Note.

1. The colour of paint is subjected to as per customer requirement.

GST related Corrigendum to GCC Rev 06

Clause Ref:	Existing Clause as:	Replaced/ New Clause as:
Clause No.4 of GCTC (General commercial terms and conditions)	TAXES AND DUTIES 4.1 EXCISE DUTY	TAXES AND DUTIES 4.1 CGST/SGST/UTGST/IGST
	4.1.1 Seller/ Contractor is required to ensure that excise duty including cess, if any, is quoted as per the existing tariff on the date of the offer and all benefits as per existing rules have been considered. 4.1.2 Excise duty actually incurred by Seller/ Contractor on self-manufactured items alone shall be reimbursed against documentary evidence. Excise duty paid by Purchaser on inputs, bought out items, raw materials and components consigned directly to site from sources other than Seller/ Contractor's factory/ works shall be included by the bidder in the quoted basic price. 4.1.3 If excise duty is paid under protest or dispute, it shall not be reimbursed till the dispute is settled. If the Seller/ Contractor claims/ obtains any refund of the excise duty paid, the same shall be refunded to the Purchaser immediately 4.1.4 Invoice cum Excise duty gate pass (Excise Invoice) should contain the name of the ultimate consignee as per Order/ Contract/ Special Conditions of Contract. 4.1.5 If required by Purchaser, the Seller / Contractor will provide a certificate stating that CENVAT benefit has been availed of on the inputs and the same has been passed on to the Purchaser. 4.1.6 Excise duty shall be paid at actuals against documentary evidence but restricted to the amount and percentage indicated in the Order/ Contract. 4.2 SALES TAX / VALUE ADDED TAX (VAT) 4.2.1 Central Sales Tax / Value Added Tax shall be reimbursed only if the same is paid by the Seller / Contractor to the respective Govt. authorities on direct sales by the Seller/ Contractor to the Purchaser, meeting all statutory requirements and availing all exemptions/ concessions under the respective Central Sales Tax / Value Added Tax Acts. The offer should clearly indicate CST/ VAT percentage and the total	4.1.1 Seller/ Contractor is required to ensure that CGST/SGST/UTGST/IGST (whichever is applicable) is quoted as per the existing tariff on the date of the offer and all benefits as per existing laws have been considered. 4.1.2 It is the responsibility of the seller/contractor to issue the Tax Invoice strictly as per the format prescribed under the relevant applicable GST law (CGST Act/SGST Act/UTGST Act/IGST Act). Vendor to indicate the proper GSTN Registration/ HSN code in their tax invoice. 4.1.3 The purchaser is registered in the State of Uttar Pradesh vide following GST registration number: 09AAACB4146P2ZC 4.1.4 Seller/contractor is required to mention the above registration number in their tax invoice unless stated otherwise in NIT/SCC. 4.1.5 CGST/SGST/UTGST/IGST shall be paid at actuals against Tax Invoice but restricted to the amount and percentage in the order/contract



GST related Corrigendum to GCC Rev 06

amount along with concessional form(s), if any.
4.2.2 Purchaser is registered in NOIDA, U.P. vide following Registration Numbers:
Central Sales Tax Registration No. : ND – 5341151 w.e.f. 01-07-2006
UP Trade Tax Registration No. : ND – 0345307 w.e.f. 01-07-2006
UP TIN No. : 09765702874
4.2.3 Central Sales Tax/ Value Added Tax shall be reimbursed, as per tariff applicable, but restricted to the percentage and amount shown in the Order/ Contract. If it is shown as included in the quoted price/ not applicable, it will not be reimbursed by the Purchaser.
4.2.4 Purchaser proposes to make sale-in-transit under section 6 (2) (b) of Central Sales Tax Act where goods movement is inter-state. Form-C shall be issued and exchanged against Form-E1/E2 based on quarterly transactions. Seller/Contractor is required to submit his request in the format enclosed at Annexure-VI within 30 days from end of the Quarter, giving State-wise invoice details.
4.2.5 VAT invoices, in format prescribed by the respective State Sales Tax Act, have to be submitted in the name of Nodal Agency specified in Special Conditions of Contract.

4.3 SERVICE TAX

4.3.1 Service Tax paid by the Service Provider /contractor to the Government authorities directly shall only be reimbursed at actuals against documentary evidence, but restricted to the rate and amount mentioned in the order/contract. The offer should clearly indicate the percentage and the total amount of service tax.
4.3.2 Service provider/Contractor to ensure their registration for "Intended Service" to be provided, before claiming Service tax under the "intended category". Decision of BHEL shall be final w.r.t. the "Intended category" in which the service will be falling.
4.3.3 If required by the Purchaser, the Service Provider/Contractor will provide a certificate stating that "CENVAT Benefit has been availed of on the input and the

4.2 OTHER TAXES & LEVIES

4.2.1 All taxes/duties/Cess other than CGST/SGST/UTGST/IGST shall be deemed to be included in the Ex-Works prices unless specified otherwise by the bidder in the price bid. No variation in other taxes and duties shall be payable by Purchaser.

4.3 CUSTOMS DUTY



GST related Corrigendum to GCC Rev 06

same has been passed on to the purchaser" or "CENVAT Benefit has not been availed of on the inputs".

4.4 OTHER TAXES & LEVIES

All taxes and duties other than Excise Duty, Sales Tax/ VAT, Service Tax shall be deemed to be included in the Ex-Works prices unless specified otherwise by the bidder in the price bid. No variation in other taxes and duties shall be payable by Purchaser. However, statutory variation in Octroi will be payable extra against documentary evidence.

4.5 CUSTOMS DUTY

4.5.1 Customs Duty element for imported items as per Special Conditions of Contract shall be included in the Ex-Works prices. No variation in customs duty and exchange rate for imported items shall be payable by Purchaser.

4.5.2 Seller/ Contractor shall arrange for his own import license, if required, since Purchaser will not provide any import license. Therefore, Seller/ Contractor alone shall be responsible for any delay in getting import license or non-availability of the same or completion of other related formalities. Purchaser shall not be responsible for any financial liability, whatsoever, on this account.

4.5.3 Essentiality Certificate or Project Authority Certificate (PAC) as per Import Policy, if required to avail concessional customs duty, shall be clearly specified in the offer. Import content (CIF value in rupees) with list of items, quantity, foreign currency, country of origin etc., shall be submitted by the bidder as part of Price bid.

4.6 DIRECT TAX

4.6.1 Purchaser shall not be liable towards income tax of whatever nature including variations thereof, arising out of this Order/ Contract, as well as tax liability of the Seller/ Contractor and his personnel.

4.3.1 Customs Duty/IGST/Goods and Services compensation cess under Goods and Services Tax (Compensation to States) Act, 2017 element for imported items as per Special Conditions of Contract shall be included in the Ex-Works prices.

4.3.2 Seller/ Contractor shall arrange for his own import license, if required, since Purchaser will not provide any import license. Therefore, Seller/ Contractor alone shall be responsible for any delay in getting import license or non-availability of the same or completion of other related formalities. Purchaser shall not be responsible for any financial liability, whatsoever, on this account.

4.3.3 Essentiality Certificate or Project Authority Certificate (PAC) as per Import Policy, if required to avail concessional customs duty, shall be clearly specified in the offer. Import content (CIF value in rupees) with list of items, quantity, foreign currency, Country of origin etc., shall be submitted by the bidder as part of Price bid.

4.4 DIRECT TAXES

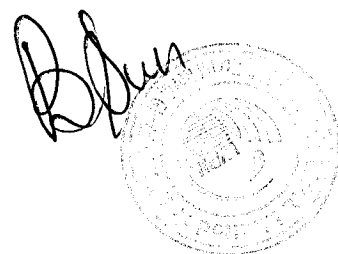
4.4.1 Purchaser shall not be liable towards income tax of whatever nature including variations thereof, arising out of this Order/ Contract, as well as tax liability of the Seller/ Contractor and his personnel.

4.4.2 Deductions of Tax at source at the prevailing rates shall be effected by the Purchaser before release of payment, as a statutory obligation, if applicable. TDS certificate will be issued by the Purchaser as per statutory provisions



GST related Corrigendum to GCC Rev 06

4.6.2 Deductions of Tax at source at the prevailing rates shall be effected by the Purchaser before release of payment, as a statutory obligation, if applicable. TDS certificate will be issued by the Purchaser as per statutory provisions.	
5.0 STATUTORY VARIATION 5.1 If the rates for taxes and duties in respect of the quoted materials and/ or services assumed by the Seller/ Contractor are less than the tariff prevailing at the time of tendering, Seller/ Contractor will be responsible for such under quotations. However, if the rates assumed are higher than the correct rates prevailing at the time of tendering, the difference will be to the credit of the Purchaser. 5.2 Statutory Variations in Excise Duty, Service Tax and Central Sales Tax/ Value Added Tax only on self-manufactured items/ services rendered by vendor himself on the rates prevailing at the time of delivery/ completion in comparison to the date of offer, will be to the account of the Purchaser. No other variations such as on customs duty, exchange rate, minimum wages, prices of controlled commodities, any other input etc. shall be payable by the Purchaser. 5.3 Notwithstanding the above, where the actual completion of the supply occurs beyond the period stipulated in the Order/ Contract or any extension thereof, variations referred to above, will be limited to the rates prevailing on the dates of such agreed completion periods only. For variations after the agreed completion periods, the Seller/ Contractor alone shall bear the impact for the upward revisions and for downward revisions; purchaser shall be given the benefit of reduction in taxes/ duties. This will be without prejudice to the levy of penalty for delay in delivery/ completion schedule. 5.4 Any new tax structure (like Goods & Services Tax) as and when implemented by the Government shall become applicable in addition to or in lieu of existing tax structure.	5.0 STATUTORY VARIATION 5.1 Statutory variation for CGST/SGST/UGST/IGST is available provided the actual completion of supply does not occur beyond the period stipulated in the order/contract or any extension (without levy of penalty). 5.2 For variation after the agreed completion periods, the seller/contractor alone shall bear the impact for the upwards revisions and adjust the price in their basic price in such a manner that total price with tax matches with the ex-works with taxes of Purchase Order/Contract. For downward revisions, purchaser shall be given the benefit of reduction in CGST/SGST/UGST/IGST. This will be without prejudice to the levy of penalty for delay in delivery/completion schedule. 5.4 No other variations such as on Custom Duty, exchange rate, minimum wages, prices of controlled commodities, any other input etc. shall be payable by the purchaser.



GST related Corrigendum to GCC Rev 06

Clause 8	8.0 TRANSPORTATION & FREIGHT CHARGES 8.1 All dispatches shall be through road carriers approved by Purchaser/ Bank, on freight pre-paid basis. 8.2 Road permit/ entry permit, if required as per law of the State, shall be arranged by Purchaser. 8.3 Freight charges (including Service Tax) shall be payable after delivery of the goods at the project site, on receipt of MRC or receipted LR on pro-rata basis.	8.0 TRANSPORTATION & FREIGHT CHARGES 8.1 All dispatches shall be through road carriers approved by Purchaser/ Bank, on freight pre-paid basis. 8.2 Road Permit/E-way bill, if required, will be arranged by Supplier.
	9.0 TERMS OF PAYMENT 9.1 SUPPLY PACKAGES 9.1.1 Ninety percent (90%) of basic price of materials supplied, as per PO, along with 100% taxes and duties (as applicable), shall be paid against receipt of material at site on pro-rata basis. 9.1.2 Ten percent (10%) of basic price of materials supplied will be released on pro-rata basis after receipt of Material Receipt Certificate (MRC) from project site engineer of Owner/ Purchaser, on submission of all final documents for the packages as detailed below, duly certified by Engg. Deptt. of purchaser, and submission of Form E1/ E2 against Form-C, if applicable. List of packages with required final documents is as per Annexure-X. 9.2 SUPPLY PACKAGES WITH PERFORMANCE GUARANTEE / DEMONSTRATION TEST AT SITE IN VENDOR'S SCOPE 9.2.1 Eighty Five percent (85%) of basic price of materials supplied, as per PO / approved billing schedule, along with 100% taxes and duties (as applicable), shall be paid against receipt of material at site on pro-rata basis. 9.2.2 Ten percent (10%) of basic price of materials supplied will be released on pro-rata basis after receipt of Material Receipt Certificate (MRC) from project site engineer of Owner/ Purchaser and submission of Form E1/ E2 against Form-C, if applicable. 9.2.3 Five percent (5%) of the total basic price of materials and PG/ Demonstration test charges shall be released after submission of all final documents as per Technical	9.0 TERMS OF PAYMENT 9.1 SUPPLY PACKAGES Payment of basic price of materials supplied alongwith freight and taxes and duties (as applicable), shall be paid against receipt of material at site on pro-rata basis. 10% of basic price of materials supplied will be retained as security deposit which will be released on pro – rata basis after receipt of Material Receipt Certificate (MRC) from project site engineer of owner/purchaser on submission of all the final documents for the packages as detailed below, duly certified by engineering department of purchaser. List of packages with required final documents is as per Annexure-X. 9.2 Supply packages with performance guarantee/demonstration test at site in vendor's scope Payment of basic price of materials supplied, as per PO/ as per approved billing schedule, along with freight and taxes and duties (as applicable), shall be paid against receipt of material at site on pro-rate basis. 15% of basic price of materials supplied will be retained as security deposit which will be released on pro – rata basis as details below: a) 10% will be released after receipt of Material Receipt Certificate (MRC) from project site engineer of owner/purchaser.



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Specifications and successful completion of the Performance Guarantee (PG)/ Demonstration Test at site.

Note: If the Performance Guarantee/ Demonstration Test is not conducted up to 24

months from supply completion for reasons not attributable to the vendor, then last

5% payment will be released against Bank Guarantee of an equivalent amount, valid

for 12 months. This bank guarantee will be in addition to Contract Performance Bank

Guarantee for 10% of the contract value (excluding taxes, duties and freight).

9.3 SUPPLY PAYMENT FOR TURNKEY PACKAGES (E&C IN VENDOR'S SCOPE)

9.3.1 Eighty Five percent (85%) of basic price of materials supplied, as per approved

billing schedule, along with 100% taxes and duties (as applicable), shall be paid

against receipt of material at site on pro-rata basis.

OR

i) Five percent (5%) lump sum payment of total basic price (excluding taxes,

duties & freight) against approval of design documents and quality plan as

certified by Engineering. Design documents and quality plan shall be as defined

in the Technical Specifications.

ii) Eighty percent (80%) of basic price of materials supplied, as per approved

billing schedule, along with 100% taxes and duties (as applicable), shall be paid

against receipt of material at site on pro-rata basis.

9.3.2 Five percent (5%) of basic price of materials supplied along with freight, if

applicable, will be released on pro-rata basis after submission of Material Receipt

Certificate (MRC) from project site engineer of Owner/ Purchaser and submission of

Form E1/ E2 against Form-C, if applicable.

Collection of Material Receipt Certificate from Site/ Owner and its submission for

claiming the payment shall be the responsibility of the Seller/ Contractor.

9.3.3 Ten percent (10%) of the total basic price shall be released after i) submission of all

final documents as per Technical Specifications and ii) successful completion of

b) 5% will be released after submission of final documents as per technical specification and successful completion of the performance guarantee (PG)/ Demonstration test at site.

Note: If the Performance Guarantee/ Demonstration Test is not conducted up to 24

months from supply completion for reasons not attributable to the vendor, then 5%

security deposit will be released against Bank Guarantee of an equivalent amount, valid

for 12 months. This bank guarantee will be in addition to Contract Performance Bank

Guarantee for 10% of the contract value (excluding taxes, duties and freight).

9.3 SUPPLY PAYMENT FOR TURNKEY PACKAGES (E&C IN VENDOR'S SCOPE)

9.3.1 Payment of basic price of materials supplied, as per approved billing schedule,

along with freight, taxes and duties (as applicable), shall be paid against receipt of

material at site on pro-rata basis. 15% of basic price of materials supplied will be retained as

security deposit which will be released on pro – rata basis as details below:

a) 5% will be released on pro-rata basis after submission of Material Receipt

Certificate (MRC) from project site engineer of owner/purchaser.

Collection of Material Receipt Certificate from site/owner and its

submission for claiming the payment shall be the responsibility of the

Seller/Contractor.

b) 10% will be released after i) submission of all final documents as per Technical

Specifications and ii) successful completion of Performance Guarantee

(PG)/ Demonstration Test and handing over of the system/ package, if

applicable, as per Order/ Contract



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Performance Guarantee (PG)/ Demonstration Test and handing over of the system/ package, if applicable, as per Order/ Contract.

9.4 ERECTION & COMMISSIONING PAYMENT FOR TURNKEY PACKAGES

9.4.1 Eighty percent (80%) payment on pro-rata basis for the work completed, as per approved billing schedule, shall be released by Site authorities/ Region on submission of protocols, duly signed by BHEL Site/ Owner.

9.4.2 Ten percent (10%) of the total value shall be released by Site authorities/ Region on successful commissioning of the complete system/ package.

9.4.3 Ten percent (10%) of the total value shall be released by Site authorities/ Region on successful completion of PG/ Demonstration test(s) and handing over system/ package to the Owner, as applicable.

9.5 PG TEST, INSTALLATION CHECK, SUPERVISION OF ERECTION / COMMISSIONING CHARGES

100% payment shall be released after successful completion of the activity, on Site certification.

9.6 Vendors shall submit documents for payment directly to BHEL. Payment will be released within 60 days after receipt of complete documents as per order/ contract (45 days for vendors qualified and registered as Micro or Small as per MSMED Act).

To be eligible for payment as Micro and Small category, vendors shall submit annual certification for validation from designated authority under MSMED Act or Chartered Accountant within first quarter of every financial year. .

Note:

- 1) For indigenous suppliers, if the documents are routed through Bank, then all bank charges will be to vendor's account.
- 2) Foreign bidders can opt for payment (less agency commission, if applicable) through irrevocable and unconfirmed letter of credit. In that case for

9.4 ERECTION & COMMISSIONING PAYMENT FOR TURNKEY PACKAGES

9.4.1 Eighty percent (80%) payment on pro-rata basis for the work completed, as per approved billing schedule, shall be released by Site authorities/ Region on submission of protocols, duly signed by BHEL Site/ Owner.

9.4.2 Ten percent (10%) of the total value shall be released by Site authorities/ Region on successful commissioning of the complete system/ package.

9.4.3 Ten percent (10%) of the total value shall be released by Site authorities/ Region on successful completion of PG/ Demonstration test(s) and handing over system/ package to the Owner, as applicable.

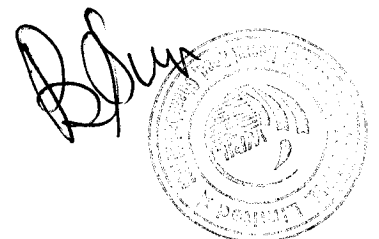
9.5 PG TEST, INSTALLATION CHECK, SUPERVISION OF ERECTION / COMMISSIONING CHARGES

100% payment shall be released after successful completion of the activity, on Site certification.

9.6 Vendors shall submit documents for payment directly to BHEL. Payment will be released within 60 days after receipt of complete documents as per order/ contract (45 days for vendors qualified and registered as Micro or Small as per MSMED Act).

Note:

- 1) Vendors are required to issue Tax Invoice inclusive of PVC value (if applicable) wherever indices are available.
- 2) For indigenous suppliers, if the documents are routed through Bank,



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evaluation purpose, prices of foreign bidders will be loaded on account of payment through LC, equal to loading specified against 'Payment through Bank' in Annexure-VIII. No loading will be done if foreign vendors agree for 90 days usance LC or submit the documents on collection basis for payment within 90 days of submission of complete documents.

- 3) LC opening/ negotiation/ confirmation charges will be to vendor's account.
- 4) Form C/ E1/E2 are not applicable for foreign bidders.
- 5) In extreme case of vendors not agreeing to link 10% payment with submission of Form E1/ E2 against Form-C as above, their prices will be loaded as per Annexure-VIII.
- 6) Any negative PVC, if not adjusted in earlier payments, will be adjusted at the time of MRC payment.
- 7) Payment terms for mandatory spares shall be as per clause 9.1.

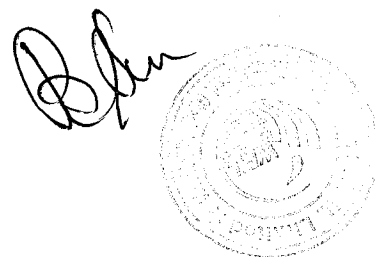
then all bank charges will be to vendor's account.

- 3) Foreign bidders can opt for payment (less agency commission, if applicable) through irrevocable and unconfirmed letter of credit. In that case for evaluation purpose, prices of foreign bidders will be loaded on account of payment through LC, equal to loading specified against 'Payment through Bank' in Annexure-VIII. No loading will be done if foreign vendors agree for 90 days usance LC or submit the documents on collection basis for payment within 90 days of submission of complete documents.
- 4) LC opening/ negotiation/ confirmation charges will be to vendor's account.
- 5) Payment terms for mandatory spares shall be as per clause 9.1.

9.7 The applicable TDS under CGST/SGST/UGST/IGST/ Goods and Services (Compensation to States) Act will be deducted from the payments.

9.8 Other clauses

1. Vendor/Supplier will intimate & upload the Tax invoice along with LR/RR(as applicable) on web portal & intimate BHEL immediately on removal of goods from vendor/supplier works. In case of Services, Vendor is required to upload the Tax invoice on Web Portal immediately after raising the invoice. BHEL will issue the delivery order/instruction to dispatch the material to the customer as indicated in SCC.
2. All payments against Tax Invoice to vendors/contractors shall be released only after:



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		a) Vendor/contractor declaring such invoice in GSTR-1 within the prescribed timeline as per the relevant Act. b) The tax component charged by the vendor in the invoice should be matched with the details uploaded by vendor in GSTR-1. c) Confirmation of payment of GST thereon by vendor on GSTN portal 3. In case, any GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry to timeline prescribed in the relevant Act for availing such ITC, or any other reasons not attributable to BHEL, tax amount shall be recoverable from the vendor/contractor along with interest levied/leviable on BHEL. 4. Wherein GST liability arises on BHEL under reverse charge, any interest levied/leviable due to any reasons not attributable to BHEL shall be recovered from the vendor/contractor.
Clause 9	9.7 DOCUMENTS TO BE SUBMITTED BY VENDOR 9.7.1 For Recognition of Dispatch Copy of the following documents by e-mail/ fax immediately on despatch: a. Invoice b. LR along with Delivery Order c. Packing List d. Insurance Intimation e. Dispatch Clearance 9.7.2 For Claiming Payments (under clause 9.1.1, 9.2.1, 9.3.1): a. Invoice – original+1 copy b. Receipted LR (signed & stamped)/ confirmation from site regarding receipt of packages/ Boxes original/ copy	9.7 All same a. to be replaced with "GST compliant invoice" in 9.7.1, 9.7.2, 9.7.3 Modification in the clause Duty drawback documents "As per applicable law" (original+1 copy.)



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	c. Delivery order- 2 copies d. Packing List - clearly showing number of packages, gross weight and net weight. - original+1 copy e. MDCC from BHEL/ Customer – as per SCC – 2 copies f. Guarantee Certificate – Original + 1 copy g. Insurance Intimation - 2 copies CQIR / Inspection Reports – Original+1 copy i. PVC Calculation and copy of all applicable indices, if PVC applicable. – 2 copies j. Duty drawback documents (original excise invoice, original disclaimer certificate, original certificate from excise authority for payment of excise duty), if applicable. – original + 1 copy 9.7.3 For Claiming Freight Payment a. Invoice – Original + 1 copy b. Receipted LR (signed & stamped)/ confirmation from site regarding receipt of packages/ Boxes original/ copy c. Transporter's document indicating the freight amount. Original money receipt to be submitted if required as per SCC. 9.7.4 For Claiming MRC Payment a. Invoice – Original + 1 copy b. Copy of MRC 9.7.5 For Claiming Payment for Services involving Service Tax a. Invoice as per rule 4A of Service Tax Act – Original + 1 copy b. Copy of Service Tax registration certificate c. Copy of challan for Service Tax payment	
Clause 3.0 Instruction to bidders	Total erection & commissioning charges including service tax should be minimum 20% (or as specified in NIT) of the total quoted package price (excluding mandatory spares but including all taxes and freight), failing which the break-up of prices shall be adjusted accordingly for ordering.	Total erection & commissioning charges including applicable tax but excluding freight along with GST should be minimum 20% (or as specified in NIT) of the total quoted package price (excluding mandatory spares but including all taxes and freight), failing which the break-up of prices shall be adjusted accordingly for ordering.



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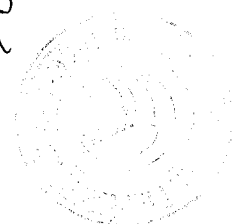
Clause 16.0 Instruction to bidder	For deviations w.r.t. Payment terms, Liquidated damages, Firm prices and submission of E1/ E2 forms before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII will apply.	For deviations w.r.t. Payment terms, Liquidated damages, Firm prices before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII will apply.
Clause 16.0 of GCTC	Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages and not by way of penalty, a sum equivalent to half (½) percent of the total contract price per week or part thereof, subject to a maximum of ten (10) percent of the total contract price excluding elements of taxes, duties and freight, if the Seller/ Contractor fails to deliver any part of the ordered stores within the period stipulated in the Order/ Contract. For Turnkey packages (Supply and E&C in vendor's scope), Liquidated Damages shall be levied on the total contract value of both Supply and E&C orders (excluding taxes, duties and freight) if E&C completion of the package is delayed beyond the contractual completion date or extension thereof. Liquidated Damages will not be withheld from supply payment. LR/ GR/ RR date for indigenous supplies and AWB/ BL date for FOB contracts shall be treated as the date of dispatch for levying LD as per Clause 16. However, for indigenous supply if receipted LR date is beyond three months from the date of LR, such excess period shall also be considered for LD purpose. 2. In case of any amendment/ revision, LD shall be linked to the amended/ revised contract value and delivery date(s)	Purchaser reserves the right to recover from the Seller/ Contractor, as agreed liquidated damages and not by way of penalty, a sum equivalent to half (½) percent plus applicable GST of the total contract price per week or part thereof, subject to a maximum of ten (10) percent of the total contract price excluding elements of taxes, duties and freight, if the Seller/ Contractor fails to deliver any part of the ordered stores within the period stipulated in the Order/ Contract. For Turnkey packages (Supply and E&C in vendor's scope), Liquidated Damages shall be levied on the total contract value of both Supply and E&C orders (excluding taxes, duties and freight) if E&C completion of the package is delayed beyond the contractual completion date or extension thereof. Liquidated Damages will not be withheld from supply payment. LR/ GR/ RR/ eway bill date for indigenous supplies and AWB/ BL date for C&F contracts shall be treated as the date of dispatch for levying LD as per Clause 16. However, for indigenous supply if receipted LR/eway bill date is beyond three months from the date of LR/e-way bill, such excess period shall also be considered for LD purpose. 2. In case of any amendment/ revision, LD shall be linked to the amended/ revised contract value and delivery date(s)



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Deviation sheet- Cost of Withdrawal	Point no-9 For deviations w.r.t. Payment terms, Liquidated damages, Firm prices and submission of E1/ E2 forms before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII of GCC, Rev-06 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.	For deviations w.r.t. Payment terms, Liquidated damages, Firm prices before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII of GCC, Rev-06 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.
Annexure-VI		Deleted
Annexure-VIII		Following changes in annexure-8, (remaining portion of annex-8 is same): C) LIQUIDATED DAMAGES If maximum limit asked for is 10% or 5% of Undelivered Portion – 10% value of the total quoted price including GST & freight. If maximum limit asked is less than 10 % of contract value loading shall be to the extent to which not agreed by bidder (at offered value) . E) DEVIATION TO SUBMISSION OF FORM E1/ E2 BEFORE CLAIMING 10% PAYMENT 10% of Ex-Works supply value.
New clauses: - In case of discrepancy in CGST/SGST/UTGST/IGST rate corresponding to HSN ;code and quotes rates, the evaluation shall be done on quoted price and correct CGST/SGST/UTGST/IGST rate shall be considered for ordering (limited to quoted FOR Site Price) - The bidder should have been registered with the appropriate authority under relevant GST laws. - The bidder to specify in their offer (part 1 bid) the category of registration under GST i.e. registered dealer and composite dealer - No CGST/SGST/UTGST/IGST will be reimbursed to composite dealer. In the event of any GST quoted by composite dealer, the same shall be considered for evaluation purpose. However, the ordering will be done without considering the tax. - In the event of any change in the status of vendor from composite to regular dealer after the submission of the bid but before the supply, no reimbursement of CGST/SGST/UTGST/IGST will be made. However, the vendor has to raise the invoice strictly, as per the law, by adjusting their ex-works price.		

[Signature]



ANNEXURE-II: DEVIATION SHEET (COST OF WITHDRAWAL)**PROJECT:-****PACKAGE:-****TENDER ENQUIRY REFERENCE:-****NAME OF VENDOR:-**

SL NO	VOULME/ SECTION	PAGE NO.	CLAUSE NO.	TECHNICAL SPECIFICATION/ TENDER DOCUMENT	COMPLETE DESCRIPTION OF DEVIATION	COST OF WITHDRAWAL OF DEVIATION	REFERENCE OF PRICE SCHEDULE ON WHICH COST OF WITHDRAWAL OF DEVIATION IS APPLICABLE	NATURE OF COST OF WITHDRAWAL OF DEVIATION (POSITIVE/ NEGATIVE)	REASON FOR QUOTING DEVIATION
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TECHNICAL DEVIATIONS

COMMERCIAL DEVIATIONS

PARTICULARS OF BIDDERS/ AUTHORISED REPRESENTATIVE

NAME	DESIGNATIONS	SIGN & DATE	
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NOTES:

- For self manufactured items of bidder, cost of withdrawal of deviation will be applicable on the basic price (i.e. excluding taxes, duties & freight) only.
- For directly dispatchable items, cost of withdrawal of deviation will be applicable on the basic price including taxes, duties & freight.
- All the bidders have to list out all their Technical & Commercial Deviations (if any) in detail in the above format.
- Any deviation not mentioned above and shown separately or found hidden in offer, will not be taken cognizance of.
- Bidder shall submit duly filled unpriced copy of above format indicating "quoted" in "cost of withdrawal of deviation" column of the schedule above along with their Techno-commercial offer, wherever applicable.
- Bidder shall furnish price copy of above format along with price bid.
- The final decision of acceptance/ rejection of the deviations quoted by the bidder shall be at discretion of the Purchaser.
- Bidders to note that any deviation (technical/commercial) not listed in above and asked after Part-I opening shall not be considered.
- For deviations w.r.t. Payment terms, Liquidated damages, Firm prices and submission of E1/ E2 forms before claiming 10% payment, if a bidder chooses not to give any cost of withdrawal of deviation loading as per Annexure-VIII of GCC, Rev-06 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.
- Any deviation mentioned in priced copy of this format, but not mentioned in the un-priced copy, shall not be accepted.
- 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.
- 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.
- In case nature of cost of withdrawal (positive/negative) is not specified it shall be assumed as positive.
- In case of discrepancy in the nature of impact (positive/ negative), positive will be considered for evaluation and negative for ordering.

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited ¹ (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) having its registered office at _____ ² hereinafter referred to as the 'Contractor/Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----)/FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Contractor having agreed to provide a Contract Performance Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount Rs ----- (Rupees -----) without any demur, immediately on a demand from the Employer, .

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

We undertake to pay to the Employer any money so demanded notwithstanding any dispute or disputes raised by the Contractor/ Supplier in any suit or proceeding pending before any Court or Tribunal relating thereto our liability under this present being absolute and unequivocal.

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

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

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

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

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

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

Unless a demand or claim under this guarantee is made on us in writing on or before the⁷we shall be discharged from all liabilities under this guarantee thereafter.

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

Notwithstanding anything to the contrary contained hereinabove:

- a) The liability of the Bank under this Guarantee shall not exceed.....⁸
- b) This Guarantee shall be valid up to⁹
- c) Unless the Bank is served a written claim or demand on or before¹⁰ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

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

For and on behalf of
(Name of the Bank)

Dated.....

Place of Issue.....

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

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

³ DETAILS ABOUT THE NOTICE OF AWARD/CONTRACT REFERENCE

⁴ PROJECT/SUPPLY DETAILS

⁵ BG AMOUNT IN FIGURES AND WORDS

⁶ VALIDITY DATE

⁷ DATE OF EXPIRY OF CLAIM PERIOD

⁸ BG AMOUNT IN FIGURES AND WORDS.

⁹ VALIDITY DATE

¹⁰ DATE OF EXPIRY OF CLAIM PERIOD

Note:

1. Units are advised that expiry of claim period may be kept 2/3 months after validity date.
2. In Case of Bank Guarantees submitted by Foreign Vendors-
 - a. **From Nationalized/Public Sector / Private Sector/ Foreign Banks (BG issued by Branches in India)** can be accepted subject to the condition that the Bank Guarantee should be enforceable in the town/city or at nearest branch where the Unit is located i.e. Demand can be presented at the Branch located in the town/city or at nearest branch where the Unit is located.
 - b. **From Foreign Banks (wherein Foreign Vendors intend to provide BG from local branch of the Vendor country's Bank)**
 - b.1 In such cases, in the Tender Enquiry/ Contract itself, it may be clearly specified that Bank Guarantee issued by **any of the Consortium Banks only** will be accepted by BHEL. As such, Foreign Vendor needs to make necessary arrangements for issuance of Counter- Guarantee by Foreign Bank in favour of the Indian Bank (BHEL's Consortium Bank). It is advisable that all charges for issuance of Bank Guarantee/ counter- Guarantee should be borne by the Foreign Vendor. The tender stipulation should clearly specify these requirements.
 - b.2 In case, Foreign Vendors intend to provide BG from Overseas Branch of our Consortium Bank (e.g. if a BG is to be issued by SBI Frankfurt), the same is acceptable. However, the procedure at sl.no. b.1 will required to be followed.
 - b.3 The BG issued may preferably be subject to Uniform Rules for Demand Guarantees (URDG) 758 (as amended from time to time). In case, of Foreign Vendors, the BG Format provided to them should clearly specify the same.
 - b.4 The BG should clearly specify that the demand or other document can be presented in electronic form.

PRE - QUALIFYING
REQUIREMENTS

DOCUMENT NO: PE-TS-412-618-C002

REVISION NO: 0 DATE: 29-08-2017

SHEET: 1 of 1

ENQUIRY NO:

PROJECT: 2X660 MW ENNORE SEZ COAL BASED STPP UNIT- 1&2

PACKAGE: VIBRATION ISOLATION SYSTEM (VIS) FOR ID, PA & FD FAN FOUNDATION

CRITERIA FOR EVALUATION (TECHNICAL / FINANCIAL):

- a. Vendor should have **supplied and commissioned VIS** for Fan (Induced Draft-ID, Forced Draft-FD, Primary Air-PA) foundation or similar machine foundation in power plants (minimum 200 MW rating) and furnish experience list of at least two recently executed contracts where such systems have been successfully installed for such applications. 2 (two) nos. purchase orders shall be submitted which should not be more than 10 (ten) years old as on date of bid submission for establishing continuity in business. The vibration isolation system shall be of proven make and should be in successful operation for such foundation for at least one year.
- b. The vendor should have at least two year **design experience** in design of VIS module, selection and finalization of Layout of VIS as well as design of RCC deck slab resting on VIS and supporting the machine and be able to furnish static and dynamic analysis of the same. Calculation should establish that not more than 10% dynamic loads are transferred to the structure supporting the VIS and that the foundation system meets the amplitude and frequency requirement as required by the machine manufacturer. The isolation system and R.C.C. deck slab shall be able to withstand seismic loading in addition to other loadings i.e. dead, live, wind, dynamic etc. Seismic design shall conform to IS: 1893 (Criteria for Earthquake Resistant Design of Structures) or equivalent international standard. The vendor should furnish supporting documents for the same.
- c. **Performance certificate** (along with copy of relevant purchase order) from the end user/customer for at least two (different Customers) successfully executed contracts which are in successful operation for at least one year for the applying package shall be furnished.

OR

The supplier has been awarded **Repeat Purchase order** from same customer (placed with minimum gap of 1 (one) year after commissioning of machine supported on VIS of previous contract). Repeat purchase orders shall be furnished from two different customers.

In case supplier is not OEM, offer shall be evaluated as per point 1. of Notes to PQR available at <http://bhelpem.com/vensection/PMD/PMD.aspx>

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