Domain :	bhel.abcprocure.com
Parent department:	BHEL Trichy

Unit name	:	BHEL Trichy			
Purchase group	:	FB Sub-Dely(Mech).	RFQ/NIT/Enquiry Officer	:	SRIKESH NAYAR
Event ID	:	45753	RFQ/NIT/Enquiry no.	:	1802000416
Enquiry Date	:	16/07/2020 05:30:00			
Tender Description	:	BURNER TILT POWER CYLINDER OF DIRECT LOADING TYPE WITH PNEUMATIC POSITIONER AS PER THE SPECIFICATION MOU/TPBHEL/BTPC/REV.01 FOR PANKI PROJECT			
Terms & Conditions	:	01) The Tender will be operated on TWO PART BID basis and you are requested to submit Techno-commercial bid and Price bids in E-procurement site.(Vendors who are not having DSC, shall obtain the same & quote accordingly). For details related to bidding through e-procurement site (abcprocure) please visit URL - https://bhel.abcprocure.com. Refer the following documents in the site -minimum system requirement & Bidder manual. 02) The supply shall be as per BHEL specification - MOU/TPBHEL/BTPC/REV.01 & Annexure-A attached with the enquiry. Pls. be noted that, QA:CI:STD:QP:42/05 is to be followed and signed SQP has to be submitted along with the offer. Your offer shall accompany with details of datasheet, dimensional drawing, Hook up & JB diagram, unit weight & point wise confirmation to our specification for evaluation. Incomplete offer will lead to rejection.Document approval by BHEL is applicable. 03)Please give point wise confirmation tothe above specifications. 04) Please fill up the PQR(Annxure-1) and applicable commercial terms and conditions (Annexure-A) and submit the same along with the supporting documents for meeting the PQR & the techno- commercial bid for evaluation. Pls. note that, offers not meeting the PQR criterias, will not be considered for further evaluation. 05) The tender will be considered as a single package basis for evaluation and ordering. Offers will be considered, SUBJECT TO TECHNO-COMMERCIAL SUITABILITY & CUSTOMER APPROVAL. Pls. note that, all the offers will be technically evaluated. However, the price bid will be considered for evaluation, subject to the customer approval, before price bid opening. 06) Delivery term: A. For Indigenous Suppliers: The quote shall be on FOR Panki project site basis inclusive of Packing & forwarding, Freight to your account. Transit Insurance is on BHEL scope.Total commodities rates shall include material cost, freight, packing & forwarding and type test charges (if any) etc. Ex-Works Contracts will not be entertained. B. For Import Suppliers: Bidders should submit their offer on CFR Chennai Seaport basis with freight break up details. Pls. indicate the freight breakup details. BHEL reserves the right to order on FOB or CFR basis. 07) The materials are required for Panki project & Paintingspecification/schedule for Panki (attached, refer Sl No-8) shall be followed. 08) Please take note of loading factors for commercial deviations indicated in the Annexure - A. Offer will be evaluated on total cost to BHELand after all loadings as applicable..			

9) Bid should be free from correction, overwritting, using corrective fluid. etc. Any interlineation, cutting, erasure or overwritting shall
be valid only if they are attested under full signature (s) of person (s) signing the bid.
10) The bidder has to keep track of any changes by viewing the addendum / Corrigendum's issued by the Purchaser on time-to- time basis in the E-Procurement platform. The Company calling for tenders shall not be responsible for any claims/problems arising out of this.
11) Before uploading scanned documents, the bidders shall sign on all the statements, documents, certificates uploaded by him, owning responsibility for their correctness / authenticity.
12) Disclaimer Clause : The Organization (Bharat Heavy Electricals Ltd.) nor the service provider (ABC procure.) is responsible for any failure of submission of bids due to failure of internet or other connectivity problems or reasons thereof.
13) Packing Req:-
a) All openings (fluid, pneumatic & electric) shall be firmly capped.
b) Item shall be packed in wooden boxes with water proof under cover.
c) Liberal Packing & struts shall be used to arrest rolling of items & to avoid transit damage.
d) Delicate C & I components shall be encapsulated properly with thermo cole.
Enclousers:
01) Annexure1 (Pre - Qualification Criteria).
02) Annexure-A (Applicable Commercial terms & conditions)
03) Annexure-C (MSE Clause)
04) BHEL specification:
a) MOU/TPBHEL/BTPC/REV.01
05) SQP-QA:CI:STD:QP:42/05
06) CA certificate format
07) No deviation format
08) Self declaration format for Make in India
09) APPLICABLE PAINTING SCHEDULE
10) Third party Non disclouser agreement
11) Drg No-3-45-000-01390

Product / service / work keywords	:	Power Cylinder,			
No. of Bid Parts	:	Multiple	Envelope	:	Techno-commercial bid , Price bid
Type of contract	:	Goods	Project duration / delivery or completion period	:	03 months from document approval
Download document	:	Before login	RFQ floated under the policy	:	PP-PURCHASE POLICY
Estimated Category	:	E	Delivery/Location At	:	FOR Site/CFR basis
Delivery Date	:	25/08/2020 05:30:00	Inspection by Agency	:	BHEL TPIA/BHEL/NTPC/Customer/Any IBR appvd agaency
Inspection Location	:	At vendor works, before dispatch	Min. bid required	:	01

Bid submission configuration

Bid evaluation	:	Grand Total Package	Bidding access	:	Open Tender
Base currency	:	INR	Bidding type	:	ICB/Global
Bidding currencies	:	YEN,EURO,USD,POUND,RUPIA,AED,MVR,MUR,OMR,SGD,IDR,SAR(Saudi Riyal),Sri Lankan Rupee (LKR),Swiss Franc,MXN (Mexican Peso),PHP (Philippine Peso),Taka (bangladesh),INR			

Key configuration

Pre-bid meeting	:	Don't allow

Dates configuration

Document downloading start date	:	16/07/2020 17:00:00	Document downloading end date	:	01/08/2020 14:00:00
Bid submission start date	:	16/07/2020 17:00:00	Bid submission end date	:	01/08/2020 14:00:00
Bid opening date	:	01/08/2020 14:01:00			

Document / EMD / Security fee detail

Document fees	:	Not required	EMD	:	Not required

Information for Online Participation

Bidder who wish to participate in this tender needs to procure Digital Certificate as per Information Technology Act-2000 using that they can digitaly sign their electronic bids. Bidders can procure the same from any or the CCA approved certifying agencies, or they may contact e-Procurement Technologies Ltd. at below mentioned address and they will assist them in procuring the same. Bidders who already have a valid digital Certificate need not to procure the same. In case bidders need any clarification regarding online participation, they can contact,

e-Procurement Technologies Ltd.
Corporate Office:
Address : A-201/208, Wall Street - 2, Opp. Orient Club,
Nr. Gujarat College, Ellis Bridge,
Ahmedabad - 380006, Gujarat(INDIA)

Digital Certificate Contacts

Contact Person : Mr. Himalay Vaishnav
Cell : +91-9099090830
Phone Nos. : +91-9099090830
Fax No :
e-Mail : info@abcProcure.com

Support Team Contacts

Contact Person : BHEL Support Team Ahmedabad
Cell : +91-9265562819
Phone Nos. : +91-79-68136849/72/50/09/48
Fax No :
e-Mail : Bhel.Support@abcProcure.com

Bidder who wish to participate in e-Tender need to fill data in predefined forms of Price bid available in respective tender only. After filling data in predefined forms bidders need to click on final submission link to submit their encrypted bid.Bidder need to submit Document Fees, EMD & Reference Documents in hard copy if such instruction are given by tendering authority.As Per the new Inter-operability guidelines released by Controller of Certifying Authorities(CCA), the Secured Socket Layer(SSL) certificate for a e-procurement application is generated on a new algorithm, SHA2.

Also, the Digital Certificates that will be applicable for these platforms have to be SHA2 algorithm complaint. For the same, the users have to ensure that they have Windows XP(SP3)/Windows Vista/Windows7 installed in their respective PC/Laptop.In case of Windows XP Service pack - 3, if you get any issue you can install the SSL patch, which is available at our download section of our e-Tender/e-Auction Portal and also at our corporate website www.abcprocure.com just below the label of "Knowledge section".

Fraud Prevention

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.

Preference to Make in India

For this procurement, Public Procurement (Preference to Make in India), order 2017 dated 15.06.2017 & 28.05.2018 and subsequent orders issued by the respective Nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable. Default margin of purchase preference shall be 20% to local suppliers with default minimum local content of 50%.

Memorandum of Understanding

M/s BHEL
Trichy – 620 014

and

(Vendor Code :)

For supplying

BTPC

MOU NO : MOU / TPBHEL / BTPC REV.01
Date : 01-Jan-2014
Valid upto : 31-Dec-2016

Memorandum of Understanding (MOU) for supplying BTPC.

1.0 GENERAL:

1.1.1 This MOU is signed for supplying of **BTPC** as per the agreed standardized specification so that these details need not be discussed again and again for future supplies.

1.2 The various aspects covered in this MOU are as follows.

1.2.1 The general points are covered in Section – 1.0 – General.

1.2.2 The specification requirements are covered in Section – 2.0 – Specifications.

1.2.3 The documents to be submitted along with the offer / after placement of Order / Along with the equipment are covered in Section 2.0.

1.2.4 The Inspection / Testing and Packing requirements are covered in Section – 2.0 Testing, Inspection and Packing.

1.2.5 The project specific details / data and if any customer specific requirements shall be covered in Section 3.0 – Project related Information. **DEVIATION ON PROJECT RELATED INFORMATION WILL LEAD TO REJECTION OF OFFER.**

1.2.6 **If any differences are found between the details given in data sheets and other sections, Data sheet shall be considered as final and the vendors shall meet this requirement for that particular project.**

1.3 Sections 1.0, 2.0 are standard and Section 3.0 alone will be furnished along with enquiry to the vendors for their acceptance.

1.4 It is agreed that no deviations will be taken by the vendors while submitting their offers against future enquiries.

1.5 Since the specifications are standardized and an understanding has been reached, the future enquiries will be floated on “SINGLE BID SYSTEM” only. Hence, if any offer is found with deviations, the same will be totally rejected and will not be considered for further evaluation.

1.6 The validity of this MOU is for TWO years from the date of signing. After the expiry of the period, the same can be extended further with or without any modifications. However, in case any changes are required, the MOU may be amended before the expiry of the validity.

1.7 Pre commissioning spares (if applicable) with price break up as per the list (vide Section 3.0) shall be supplied along with the equipment.

1.8 Two years recommended Spares list (vide Section 3.0) with price break up shall be enclosed (if applicable).

1.9 If any special or non-standard tools are required for installation, operation or maintenance, the same shall be supplied along with the equipment.

1.10 Trouble-free operation of the equipment shall be guaranteed for a period of 12 months from the date of commissioning OR 18 months from the date of dispatch whichever is earlier.

1.11 Dispatch clearance will be issued along with PGMA with DU Nos. for the ordered items to vendor after the receipt of acceptable Inspection Report . Vendor agreed to mark the PGMA with DU Nos. in the casing of the packing and in the Packing Slip.

1.12 Since the vendors' works alone is approved by BHEL, it is agreed the vendor will manufacture this item in their own works only and will not off-load the jobs to any other suppliers without the written approval by BHEL.

1.13 All components should be packed in such a way that it should not get damaged during transport.

1.14 BHEL and the Vendor shall have an involvement which will commence at bid stage and follow through the completion and acceptance, thus ensuring total conformity to Purchaser's requirements.

2.0 SPECIFICATIONS

2.1 Scope

This specification covers design, manufacture, inspection, testing and supply of Burner tilt power cylinder.

2.2 Codes & Standards:

The equipment shall be designed to meet the latest revisions of the relevant standards and other governing standards as applicable and also meet with the local standards where the equipment is installed.

2.3 Design & Constructional Requirements:

2.3.1 Application:

For tilting burner nozzle tips in a corner fired boiler.

2.3.2 Ambient conditions:

a. Atmospheric conditions: Dusty, corrosive & highly polluted
b. Ambient temp. 120 deg C max.
c. Relative humidity 90% max.

2.3.3 Construction Details

Trunnion mounted on swivel base, heavy duty without cushioned ends, with gaiter suitable for outdoor installation.

2.3.4 General Requirements:

a. Supply air pressure (for cylinder & positioner) : Min 4.5 & Max. 7.0 kg /sq.cm. (g)

b. Duty cycle : Continuous (Modulating)

c. Angle of movement of driven lever: 60 degrees or 76 degrees

d. Control signal air pressure : 0.2 to 1.0 kg /sq.cm. (g) (3 to 15 psig) or 4-20 mA as applicable

e. Positioner : Reverse acting. (shall be field reversible) with 4 gauges (one signal, one supply & two output)

f. Positioner type : Pneumatic or Electro-pneumatic as per enquiry

g. Rate of piston movement : 9mm/sec plus/minus 1mm/sec (shall be field adjustable)

h. Control characteristics :Linear. Provide Extra cams for square and square root characteristics to be supplied.

i. Accuracy + / - 1.0 % of full scale
ii. Dead band + / - 0.1 % of full scale
iii. Hysteresis + / -0.5 % of full scale
iv. Repeatability + / - 0.3 % of full scale:
v. Sensitivity + / - Better than 0.5 % of full scale

i. Air connections : 3/8" & 1/4" NPT(F) for supply & signal air respectively.

j. Pneumatic piping : Stainless steel tubes

k. Air consumption : Vendor to specify.

l. Airsets : Air filter regulator set with max set pressure of 7 kg/sq.cm shall be offered. Air set shall have one output pressure gauge.

m. Airlock valves : Provide self reset airlock relays for stay put position on air failure

n. Position Transmitter : Electronic Position Transmitter 24 V dc input & 4-20 mA output ,2 wire/3wire, noncontact type.

o. Limit switches : Four numbers limit switches of Honeywell EXDAR, Cherry, Omron or equivalent or cam operated enclosed rotary switches, with DPDT contacts (240 AC 10A) & 1/2 inch 14 NPSM female cable entry.

p. Materials of construction : Vendor shall specify specific grades of material offered by them.
   i. Cylinder Barrel-Seamless steel Pipe.
   ii. Barrel Inside coating-hard chrome plating
   iii. Piston- carbon steel
   iv. Piston Rod- Stainless steel/chrome moly steel
   v. with hard chrome plating
   vi. Piston rod bearing- leaded tin bronze
   vii. Piston Seals- viton
   viii. Wiper Seals- viton
   ix. Gaiter- vendor to specify

q. Piston Rod End Size :Male Threaded with Lock Nut

r. Painting :Anti - corrosive epoxy resin.

s. All equipment & accessories shall be weatherproof, water / oil tight to NEMA 4 & 13, suitable for outdoor installation & 120 deg C ambient.

t. Marking on pressure gauges shall be in kgs /sq.cm(g).

u. The power cylinders and accessories shall be piped up together. All accessories shall be wired to a junction box. The junction box shall be with minimum 36 terminals with NEMA 4 enclosure. Provide one outlet of 3/4" NPT(F) for conduit connection.

v. Following details shall be furnished by the suppliers along with offer:
   i. Spares recommended for commissioning.
   ii. Spares recommended for two years trouble free operation.
   iii. Unit weight of cylinder with accessories.
   iv. Dimensional layout drawing.
   v. Catalogues for all equipment.

w. Following documents shall be furnished by the vendor along with the supplies.
   i. Material test certificates.
   ii. Operational test certificates.

x. The air cylinder shall be marked permanently with paint, Project Name and BHEL material code (indent No:)

y. The air cylinders shall be packed in separate wooden boxes with seaworthy packing for export jobs & land-worthy jobs for inland jobs.

z. O&M Manuals: 5 sets of manuals required with following details are to be supplied:
   i. Catalogues of main equipment and all accessories with reference no. indicated. Internal parts shall be clearly identified and marked.
   ii. . Recommended spares for commissioning.
   iii. Recommended spares for two years trouble free service.
   iv. Dimensional layout drawing. (All accessories shall be shown , Including piping diagram. Disposition and dimensions shall be in line with BHEL drg. as applicable for the cylinder size)
   v. Trouble shooting guide
   vi. Full description on construction and operation

2.3.5 Variants of BTPC

Vendor shall submit for data sheets and dimensional drawings for each of the following variants. Vendor shall confirm against each size of BTPC that can be offered meeting the requirements of all above clauses of the specification.

Sl.no	BTPC size Bore X Stroke	Thrust required Kgf	Connecting lever length mm (by BHEL)	Torque required (Kgf.m)	Drawing no.	Rev
1	100X356 (4”X14”)	228	355	81	3-45-000-01390/Var 01	00
2	150X356 (6”X14”)	513	355	182	3-45-000-01390/Var 02	00
3	200X356 (8”X14”)	912	355	324	3-45-000-01390/Var 03	00
4	200X400 (8”X16”)	790	330	260	4-45-000-00654	01
5	254X356 (10”X14”)	1425	355	477	3-45-000-01390/Var 04	00
6	254X400 (10”X16”)	1365	330	450	4-45-000-00716	01
7	305X356 (12”X14”)	2020	355	717	3-45-000-01390/Var 05	00
8	305X400 (12”X16”)	2460	330	812	4-45-000-00885	02
9	350X465 (14”X18.5”)	3310	380	1260	4-45-000-00803	00
10	400X465 (16”X18.5”)	4341	380	1650	4-45-000-01472	00

BHEL will specify the BTPC size and positioner type in the enquiry. Vendor shall select the corresponding power cylinder and accessories.
All relevant documents will be approved while signing this MOU. The approval will have validity same as that of this MOU.

2.3.6 Material of Construction and Accessories

	MOC	Vendor to furnish considering all sizes
1	Cylinder Barrel-Seamless steel Pipe	
2	Barrel Inside coating-hard chrome plating	
3	Piston- carbon steel	
4	Piston Rod- Stainless steel/chrome moly steel with hard chrome plating	
5	Piston rod bearing- leaded tin bronze	
6	Piston Seals- viton	
7	Wiper Seals- viton	
8	Gaiter	
	ACCESSORIES	Make & Model
9	Position Transmitter make	
10	Limit Switch make	
11	Position Transmitter make	
12	Air Set make	
13	Junction Box make	
14	Air Lock valve	
15	Pneumatic positioner make	
16	Electro-Pneumatic positioner make	

MOU / TPBHEL / BTPC
Rev.01

DATA SHEET

Project Name :
Customer No. :

Enquiry No. / P.O.No. :
Material code :

SNo	Description	BHEL Specification	Vendor confirmation
01	Application	Tilting Burner nozzle tips	
02	construction	Trunnion mounted with swivel base heavy duty without cushioned ends with gaiter	
03	Operating medium	Compressed air at 4.5 -7 Kg/sqcm(g)	
04	Duty cycle	Continuous(modulating)	
05	Angle of movement of driven lever	76 degrees	
06	Cylinder bore & stroke		
	Thrust required		
	Connecting lever length		
	Torque required		
07	Ambient	120 deg C	
08	Relative humidity	90% max	
09	Atmospheric conditions	Dusty, corrosive & polluted	
10	Supply air pressure	4.5 min 7 max Kg/sq.cm(g)	
11	control signal	0.2 to 1 kg/sq.cm(g)	
12	Positioner	Reverse acting Action Field adjustable	
12.1	Positioner Type	Pneumatic or Electro-pneumatic	
13	Rate of movement	9 mm/sec (+/- 1mm./sec) Field adjustable	
14	Control characteristics	Linear	
		Extra cam for square	
		Extra cam for square root	
		Accuracy ± 1% of FS	
		Dead band ± 0.1% of FS	
		Hysteresis±0.5% of FS	
		Repeatability±0.3% of FS	
		sensitivity ±0.5% of FS	
15	Air connections	3/8” NPT(F) supply 1/4” NPT(F) signal	
16	Pneumatic piping	Vendor to confirm spec	
17	Air consumption	Vendor to specify	
18	Air set	Set pressure	
		output gauge	
19	Air lock valves	Self reset airlock relay	

20	Position Transmitter	24 V DC 4-20 mA out put 2/3 wire Specify non contact type	
21	Limit switches	4nos. Vendor to confirm type & make as per spec	
22	Materials of construction	Vendor to specify grade for all materials	
	cylinder barrel	Seamless cs pipe	
	Barrel inside coating	Hard chrome/polished	
	Piston	Carbon steel	
	Piston Rod	SS/Cr-Mo steel w/t HC plating	
	Piston rod bearing	Leaded Tin Bronze	
	Piston seals	Viton	
	Wiper seals	Viton	
	Gaiter	Vendor to specify	
23	Piston rod end size		
24	Painting	Epoxy	
25	Disposition	Confirm as per drg no:	
26	Enclosure	NEMA4	
27	PR Gauge marking	Kg/sq.cm(g)	
28	All accessories piped up	Vendor to confirm	
	Junction box	36TB, NEMA4, 3/4”NPT(F)	
29	Details submitted for	Commissioning spares	
		2 Years Spares	
		Unit wt	
		Dimensional drg.	
		Catalogues	
30	Inspection documents with supplies	Material test certificates Operational test cert.	
31	Marking	Vendor to confirm	
32	Packing	Sea worthy / Land worthy	
33	O&M Manuals	To be furnished for power cylinder & accessories	

Technical Pre-Qualification Requirement for Burner Tilt Power Cylinder (Annexure-1)

1. The vendor shall be an established Burner Tilt Power Cylinder of double acting (henceforth referred as BTPC) manufacturer having adequate Design, Engineering, Manufacturing, inspection and testing facilities and shall furnish technical backup documents for the proof of above requirements.
2. The BTPC offered shall be of sizes as per enquiry and from the existing regular manufacturing range of the supplier. Vendor shall provide the manufacturing catalogue or general reference list for the offered BTPC along with offer.
3. The supplier shall have experience of having supplied BTPC and its accessories for dusty, corrosive, high temperature & highly polluted atmospheric conditions or for the application of similar severity as specified in the enquiry. Supplier shall submit documents in proof of the same.
4. Proven track record is required. Minimum one end user certificate for the satisfactory operational performance of their supplied Power cylinder with accessories as per enquiry in similar ambient conditions is required as a proof.
5. In case of ordering, the vendor shall have the responsibility for the followings and same to be confirmed point wise.
   i) Vendor should have the component replacement responsibility in case of defect / failure.
   ii) Experts from vendor's side shall associate in commissioning activities at site, if required.
   iii) Vendor should ensure the product performance during erection & commissioning.

6. Backup document checklist to meet PQR:

S. No	Document description	Check list
1	Documents to meet Clause(1)	☐
3	Supply reference document (PO /Inspection Reports)	☐
4	Product Catalogues	☐
5	Min. one end user certificate	☐
6	Confirmation to clause (5)	☐

CONTROLS AND INSTRUMENTATION/QA/FB

STANDARD QUALITY PLAN FOR

PNEUMATIC ACTUATOR (POWER CYLINDER)

(OPEN / CLOSE AND REGULATING TYPE)

REV	DATE	PREPARED	REVIEWED		APPROVED	REVISION HISTORY
00	14/05/1993	Sd/-	Sd/-		Sd/-	Initial release.
01	16/06/1997	Sd/-	Sd/-		Sd/-	Format revised
02	21/06/2002	Sd/-	Sd/-		Sd/-	Department name changed, CTQ requirements added & general revisions
03	08/01/2004	Sd/-	Sd/-		Sd/-	Revised to include the Comments / feedback of internal discussion
04	14/09/2010	Sd/-	Sd/-		Sd/-	Format changed. Revised as per feedbacks from QC and Engineering during discussion
05	16/05/2017	V.AVINASH	RM.VAIRAVAN	V.M.SELVARAAJ	S.DAKSHINAMOORTHY	Revised to update the standards. Endurance test definition given in detail.

Sl. No	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc. & Acceptance STD	Format of record	AGENCY			Remarks
					M	B/C			M	B	C	
A	**Raw materials & Brought Out items inspection**											
1	cylinder	a. Material	Major	CHEM	OSPL	-	P.O Specification	TC/LGB	V	V	-	
		b. dimension	Major	MEAS	100%	-	Mfr. standard	LGB	P	-	-	
		c. Finish	Major	MEAS	100%	-	Mfr. standard	LGB	P	-	-	
2	Piston rod, Piston Cylinder caps, Piston rings	a. Material	Major	CHEM	OSPL	-	P.O Specification	TC/LGB	V	V	-	
		b. dimension	Major	MEAS	100%	-	Mfr. standard	LGB	P	-	-	
		c. Finish	Major	MEAS	100%	-	Mfr. standard	LGB	P	-	-	
3	"o " ring	a. Material	Major	CHEM	OSPL	-	P.O Specification	TC/LGB	V	V	-	
		b. dimension	Major	MEAS	100%	-	Mfr. standard	LGB	P	-	-	
4	House & Cover	a. Material	Major	CHEM	OSPL	-	Mfr. standard	TC/LGB	V	V	-	
		b. dimension	Major	MEAS	100%	-	Mfr. standard	LGB	P	-	-	
5	Air filter regulator	a. Make & Type	Major	PHYS	100%	-	P.O Specification/ Data sheet	LGB	P	V	-	
		b. Dimension of Process Connection, Filter size	Major	MEAS	100%	-	P.O Specification/ Data sheet	LGB	P	-	-	
		c. Pressure gauge range	Major	PHYS	100%	-	P.O Specification/ Data sheet	LGB	P	-	-	
		d. Calibration / accuracy test, Functional test	Major	PHYS	100%	-	Mfr. standard	LGB	P	v	-	
6	Limit switch	a. Make & Type	Major	PHYS	100%	-	P.O Specification/ Data sheet	LGB	P	v	-	
		b. Functional Check	Major	ELEC	100%	-	Mfr. standard	LGB	P	-	-	
7	Air lock relay	a. Make & Type	Major	PHYS	100%	-	P.O Specification/ Mfr. standard	LGB	P	-	-	
		b. Functional Check	Major	PHYS	100%	-	Mfr. standard	LGB	P	-	-	
8	Solenoid valve	a. Make & Type	Major	PHYS	100%	-	P.O Specification/ Data sheet	LGB	P	v	-	
		b. Functional Check	Major	ELEC	100%	-	Mfr. standard	LGB	P	-	-	
		c. Hydro test	Major	MECH	100%	-	Mfr. standard	TC/LGB	v	-	-	

Sl. No	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc. & Acceptance STD	Format of record	AGENCY			Remarks
					M	B/C			M	B	C	
9	Positioner (applicable only for regulating Type)	a. Make & Type	Major	VISU	-do-	-	P.O Specification/ Data sheet	LGB	P	V	-	Performance to be Checked during complete assembly testing
		Calibration / Hysteresis and accuracy test	Major	VISU	-do-	-	P.O Specification/ Data sheet	LGB	P	V	-	
10	Position feedback transmitter (applicable only for regulating Type)	a. Type	Major	VISU	100%	-	P.O Specification/ Data sheet	LGB	P	V	-	
		b. Functional type	Major	VISU	100%	-	P.O Specification/ Data sheet	LGB	P	V	-	
B	**In-Process Inspection**											
1	Routine test	a. Physical Verification of Mounting & Finish	Major	PHYS	100%	20%	P.O Specification/ Data sheet	IR	P	W	-	
		b. Dimensional Check including process connections	Major	MEAS	100%	20%	P.O Specification/ Data sheet	IR	P	W	-	
		c. Linkage Rod dimension	Major	MEAS	100%	20%	Drawing	IR	P	W	-	
		d. Verification of BOM	Major	PHYS	100%	20%	Data sheet	IR	P	W	-	
		e. Stroking length & Operating time	Critical	PHYS	100%	20%	Data sheet	IR	P	W	-	
		f. No load test	Critical	PHYS	100%	20%	Mfr. standard	IR	P	W	-	
		g. Pressure resistance test	Critical	PHYS	100%	Sample /size	Mfr. standard	IR	P	W	-	
		h. Response time test	Critical	PHYS	Sample /size	Sample /size	Mfr. standard	IR	P	W	-	
		i. Functional & Performance test (sensitivity , Repeatability, Accuracy & Hysteresis)	Major	MECH	100%	20%	P.O Specification/ Data sheet	IR	P	W	-	
		j. PFT feedback/functional verification	Major	MECH	100%	20%	P.O Specification/ Data sheet	IR	P	W	-	

Sl. No	Component & Operation	Characteristics	Class	Type of Check	Quantum of check		Ref Doc. & Acceptance STD	Format of record	AGENCY			Remarks
					M	B/C			M	B	C	
		k. Positioner - functional check	Major	MECH	100%	20%	P.O Specification/ Data sheet	IR	P	W	-	
		l. Stay put device operation	Critical	VISU	100%	20%	P.O Specification/ Data sheet	IR	P	W	-	
		m. Solenoid valve- coil voltage, duty cycle & coil insulation Resistance Test	Major	VISU	100%	20%	P.O Specification/ Data sheet	TC/COC	V	V	-	Applicable for Open / close type
		n. Air filter element size in microns	Major	VISU	100%	20%	P.O Specification/ Data sheet	COC	V	V	-	
		o. Manual operation check	Major	MECH	100%	20%	P.O Specification/ Data sheet	IR	P	W	-	
2	Type test	a. Load test	Critical	PHYS	One of design		Mfr. standard	TC	V	V	-	
		b. Durability test	Critical	PHYS	One of design		Mfr. standard	TC	V	V	-	In each Torque Range Refer Note :11

C.NOTES:

1.LEGENDS:

MECH	:	Mechanical	MEAS	:	Measurement
ELEC	:	Electrical	LGB	:	Log Book
CHEM	:	Chemical	TC	:	Test certificate
VISU	:	Visual	IR	:	Inspection Report
PHYS	:	Physical	COC	:	Certificate of compliance
OSPL	:	One sample per lot			

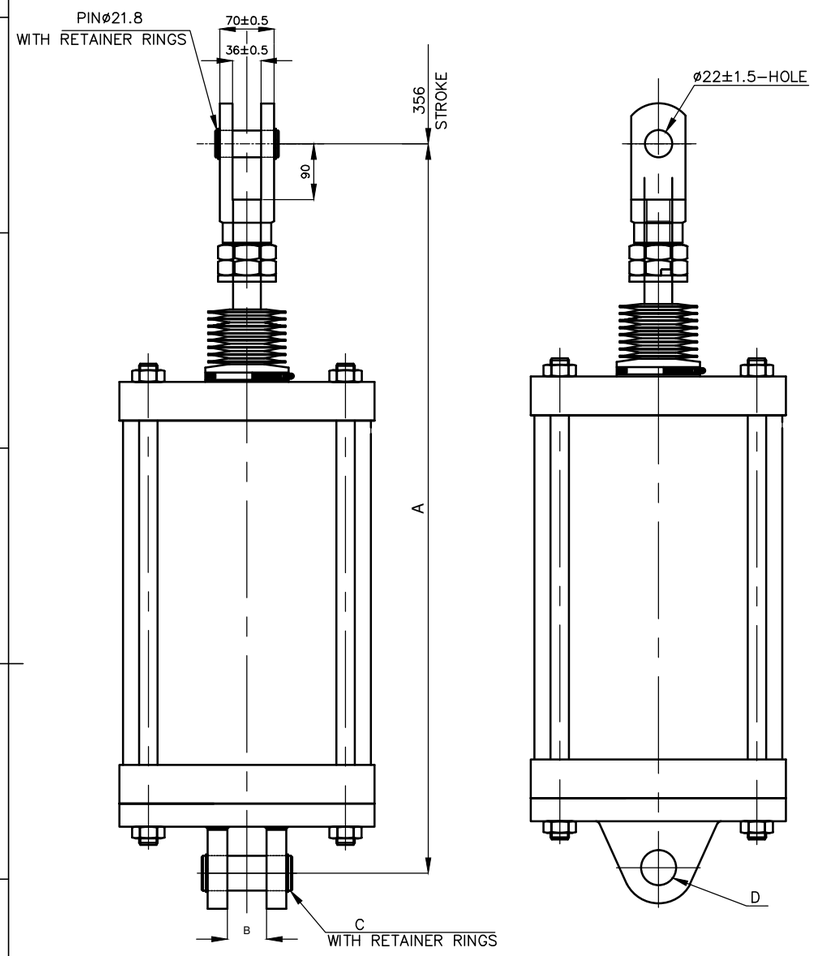
2. The vendor at their works shall arrange all testing facilities. Tests for which facilities are not available are to be carried out at recognized National Test Houses like ETDC/CIL/NPL/ERTL etc., at vendor cost.
3. Through Log Book / any other documents available at the vendor's works, it shall be possible to correlate the finished products with raw material and in process stage checks / inspection carried out.
4. All Measuring and Testing Instruments shall be periodically calibrated by the Laboratory accredited by NABL and certificate shall be provided during inspection.
5. All Test certificates/ Report shall be submitted to GSECL/DCPL for verification.
6. Type test certificate shall not be earlier than 5 years from the date of Purchase enquiry.
7. BHEL approved specification , drawing and data sheet shall be used
8. Vendor to given tentative inspection program in advance and confirm exact date two weeks in advance for arranging inspection.
9. Packing shall be as per the "PACKING PROCEDURE" indicated in the specification.
10. Inspection / verification will be carried out by BHEL / Authorized Inspection Agency at vendor works.
11. Durability Test: The number of stroking cycles shall be conducted as below:

Torque Range	No. of cycles to be conducted
0-50kgm	250000
50-200kgm	200000
200-1000kgm	100000

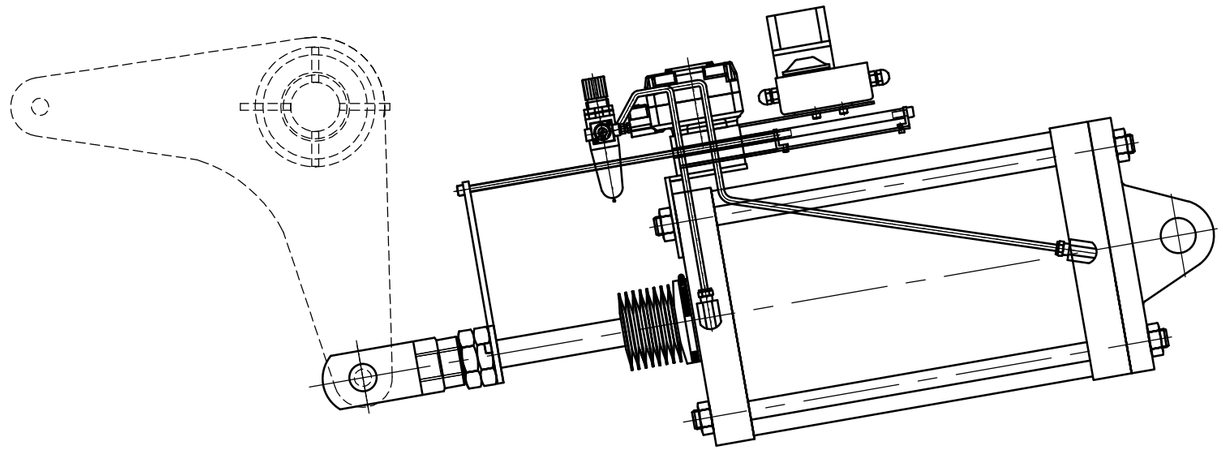
One Cycle consist of nominal 90 degree angular travel in both the directions (90 degree to open and 90 degree to close). For angular other than 90 degree, the endurance shall be agreed between the purchaser and manufacture / supplier. This test shall be conducted on any one size (Bore x Dia) of Power Cylinder.

DRAWING NO: 3-45-000-01390

FOR TOLERANCES OF UNTOLERANCED DIMENSIONS DURING MANUFACTURE REFER PLANT STD. NO TP 023 0299



VAR.NO	SIZE IN INCHES (BORE X STROKE)	A±1.5	$B^{+1.0}_{0.0}$	$C^{+0.0}_{-0.1}$ PIN DIA	$D^{+0.1}_{0.0}$ HOLE DIA
01	4" X 14"	784	40	25.5	25.7
02	6" X 14"	816	40	25.5	25.7
03	8" X 14"	819	40	25.5	25.7
04	10" X 14"	873	48	48.5	48.7
05	12" X 14"	892	48	48.5	48.7



ARRANGEMENT OF BTPC

ACCESSORIES: (REFER SPECIFICATION CONTRACT REQUIREMENT).

1. DOUBLE ACTING POSITIONER SUITABLE FOR 0.2 TO 0.1 BAR SIGNAL & 7 BAR SUPPLY AIR.
2. ELECTRONIC POSITION TRANSMITTER SUITABLE FOR 14–30V DC, 4–20MA OUTPUT WITH TWO LIMIT SWITCHES 240V AC, 5A RATING.
   IP55 ENCLOSURE WITH TERMINAL STRIP AND 1"NPT FEMALE CABLE ENTRY.
   SHOULD BE POSSIBLE TO MOUNT TWO MORE LIMIT SWITCHES OF SAME RATING.
   THERE SHOULD BE FACILITY FOR SETTING THE LIMIT SWITCHES AT ANY POSITION.
3. DOUBLE ACTING AIR LOCK VALVE PREFERABLY OF SINGLE UNIT DESIGN.
4. 3 PRESSURE GAUGES (INTEGRAL WITH POSITIONER PREFERED); ONE FOR SIGNAL AIR AND TWO FOR SUPPLY AIR.
5. AIR FILTER CUM REGULATOR SET WITH OUTPUT PRESSURE GAUGE.
6. MECHANICAL POSITION INDICATOR.
7. COMPLETELY PIPED UP WITH 1/4" NPT(F) FOR SIGNAL AIR AND 3/8" NPT(F) FOR SUPPLY AIR.
8. PINS AND RETAINER RINGS SHALL BE SUPPLIED ALONG WITH BTPC.

TYPE OF PRODUCT OR NAME OF CUSTOMER/PROJECT

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

	NAME	SIGNATURE	DATE
DRN	M.V	-sd-	04.08.12
CHD	G.S.K	-sd-	04.08.12
APPD	M.T.P	-sd-	04.08.12

355-053

REV	DATE	ALTERED :
01		CHD & APPD :

ZONE

DEPT: FS | CODE: 129 | ALL DIMENSIONS ARE IN MM | PROJECTION | SCALE: N.T.S | WEIGHT (Kg) | REF TO ASSY / OLD DWG

TITLE: BURNER TILT POWER CYLINDER (MOUNTING DIMENSIONS AND ACCESSORIES)

DRAWING NO : 3-45-000-01390 | REV 00

429-024	**PURCHASE / MM / FB** **SUB DELIVERY – ENQUIRY - DEVIATION**		
	Page	OF	
	DATE		
DESCRIPTION	BTPC		
SPECIFICATION	a) MOU/TPBHEL/BTPC REV.01	DRG. No.	3-45-000-01390/Var 02 & 05
QUALITY PLAN	QA:CI:STD:QP:42/05		
DOC. REFERENCE	BHEL ENQ. CALLED FOR	FIRM'S ALTERNATE OFFER	

CERTIFIED THAT OTHER THAN THE ABOVE DEVIATIONS, WE ARE ACCEPTING ALL THE OTHER SPECIFICATIONS AND REQUIREMENTS IN FULL TO YOUR ENQUIRY

STATION:

DATE: SIGNATURE OF FIRMS REPRESENTETIVE FIRM SEAL

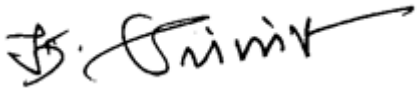
NOTE: 1. Deviations should be taken only in the extreme case.

2. If necessary, use additional sheets with page control number.

BHARAT HEAVY ELECTRICALS LIMITED
Tiruchirappalli - 620 014

UPRVUNL - PANKI THERMAL POWER STATION EXTN., 1X660MW, KANPUR NAGAR DIST, U.P.
CUSTOMER NO: U6/1728
PAINTING SCHEDULE

NTPC Drawing No: 9962-001-TR-102-PVM-B-800

Prepared by	**K. Srinivasan** **Senior Engineer/ Plant Lab**		**Document No: PL: C3 - PS/ 1728**
Reviewed by	**S Thiagarajan** **AGM/ PE/ FB**		**Revision No: 03 Dated: 21-01-2019**
Approved by	**A. Santhakumari** **AGM / Plant Lab**		**Sheet No. 01 of 13**

m:\ chem. \ contracts 15\ UPRVUNL-PANKI 1X660 MW TPS\psword_00.doc

RECORD OF REVISIONS

Rev. No	Date	Details of revision	Remarks
00	**15-09-2018**	**New**	**Prepared in line with bid resolutions between UPRVUNL/ DCPL & BHEL on BID spec No. 14A14-SPC-G-0001 Ref: Annexure – I C, SG-Quality, SG-Paints 1x660MW PANKI TPS.**
01	**19-11-2018**	Sheet 3, Sheet 4, Sheet 5 – Scheme modified in sl.no.1 & 4. Sheet 8 – DFT indicated in sl. no. 11. Sheet 9 – Scheme modified in sl.no.13. Sheet 13 – Painting of damaged areas included.	**Modified as per comments for CAT. II approval by NTPC 'Transmittal for comments on subject PANKI, EPC-SG painting scheme – Boiler Ref: null 102: 408 Dt. 25.10.2018 & NTPC drawing no: 9962-001-TR-102-PVM-B-800.**
02	**11-12-2018**	Sheet 3 – Scheme modified in sl.no.3. Spec. clause indicated in sl.no.1 & 3. Sheet 4 – insulated components included in sl.no.4 Sheet 5 – two coats of primer indicated in sl.no.7. Sheet 6 – bid resolution reference indicated in sl.no.8 Sheet 7 – comments included in sl.no.10. Sheet 8 - Grade I & II indicated according to temperature. Sheet 12 – DFT changed in sl.no 9 & 10.	**Modified as per comments for CAT. II approval by NTPC 'Transmittal for comments on subject PANKI, EPC-SG painting scheme – Boiler Ref: null 102: 814 Dt. 07.12.2018 & NTPC drawing no: 9962-001-TR-102-PVM-B-800.**
03	**21-01-2019**	Sheet 4 – (min) included for all coats of sl. no. 3.	**Included as per comments for CAT. II approval by NTPC 'Transmittal for comments on subject PANKI, EPC-SG painting scheme – Boiler Ref: null 102: 1132 Dt. 09.01.2019 & NTPC drawing no: 9962-001-TR-102-PVM-B-800.**

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT µm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
1 PS1Z3	Collector & Separator Vessels, temperature >400^{0}C & <500^{0}C (Except Internals), (Spec. Sl. No. 3, sheet 12 of 15, chapter 7, Vol.II) 04 –321,323;	Blast cleaning to SA2 ½ (Near white metal) with surface profile 35-50 µm	Inorganic Ethyl Zinc Silicate Primer DFT=60µm per coat	1	--	--	--	--	GREY	60
2 PS5B	Collector & Separator Vessels internals and DD (Direct dispatch) items (threaded and machined surfaces only) 04-347;07-331,360,361,362,393; 08-911,912,913;09-304; 12-306,314,317,324,327,328,344,348,354,393; 17-304,306,319;19-306,307;21-602,605,700; 24-352,700,803,818,827,842;28-700; 32-700;35-190,700,701;36-700;39-700; 41-710;42-700,710;43-710;45-710; 47-710;48-019,700;65-710;67-710; Foundation materials: 35-010, 39-012	SSPC – SP3 Power Tool Cleaning	Rust Preventive Fluid to PR: CHEM: 09 – 04 DFT=20µm per coat	2	--	--	--	--	--	40
3 PS19C5	Structural components, temperature <120^{0}C (Spec. Sl. No. 1, sheet 12 of 15, chapter 7, vol. II) Buck stays 08-001,003,006,007,111,501,503,901, 910; Boiler supporting structures, Columns, Girders, Bracings 34-100,200,300,390,400,500;35-111,112, 35-121,122,130,140,141,150,211, 35-212,213,214,221,222,231,232,311,312, 35-321,322,331,332,341,342,351,352,361, 35-362,381,382,383,384,385,386,387,390, 35-441,442,443,444,445,446,447,451,452, 35-453,454,455,456,457,511,512,513,514,	Blast cleaning to SA2 ½ (Near white metal) with surface profile 35-50 µm	Inorganic Ethyl Zinc Silicate Primer DFT=80µm per coat. (min)	1	Epoxy Based MIO Pigmented Intermediate Coat DFT=120µm per coat (min)	1	Aliphatic acrylic Polyurethane paint to DFT 30µm (min)	2	Dark admiralty Grey Shade No: 632 of IS5	260

S. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT µm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
3 PS19C5 (Contd.)	35-515,516,517,521,522,523,524,525,526,527 35-531,532,533,534,535,536,537,993,995; Galleries, Stair-ways & inter connecting Walkways 36-110,130,150,311,312,313,314,315,316,321, 36-322,323,324,325,326,331,332,333,334,335, 36-336,337,338,341,342,343,344,345,346,351, 352,353,354,355,356,361,362,363,364,365, 36-366,391,392,393,394,395,610,613,620,740; 38-210,299,310,381,410,510,610,611,710; ID system structures. 39-101,102,141,142,150,299,300,301,304, 39-305,306,993; Duct supports 48-015,115,145,205,225,235,265,345,355, 48-365,385,435,465,485,495,665;	Blast cleaning to SA2 ½ (Near white metal) with surface profile 35-50 µm	Inorganic Ethyl Zinc Silicate Primer DFT=80µm per coat (min)	1	Epoxy Based MIO Pigmented Intermediate Coat DFT=120µm per coat (min)	1	Aliphatic acrylic Polyurethane paint to DFT 30µm (min)	2	Dark admiralty Grey Shade No: 632 of IS5	260
4 PS1Z3	Components >95° C Insulated other than components in Sl.No.7 &9 (Spec. Sl. No. 3, sheet 12 of 15, chapter 7, vol.II) Ring Headers, Down Comers, Hot air Headers outside the gas path etc. 05-155,227,231,251,327,330,350; 07-102,110,125,217,223,231,232; 10-135,174,176,178,191,235,274,276,278, 10-283,284,285,291;12-178,850,852,900; 15-136,178,236,278;17-407,476,807; 18-001,002,010,701;19-701,702,903;21-600; 24-800, 805, 808,809,811,815,824,828, 836, 24-837,840; 42-020,030,065,070,120,128,150,154,158; 45-802,804,805; Cold air duct: 48-012,014,112,114; Tempering Air: 48-142,144;	Blast cleaning to SA2 ½ (Near white metal) with surface profile 35-50 µm	Inorganic Ethyl Zinc Silicate Primer DFT=60µm per coat	1	--	--	--	--	GREY	60

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate Coat		Finish coat			Total DFT µm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
4 PS1Z3 (Contd.)	Hot Air: 48-018,202,204,207,208,212,214; 48-222,224,232,234,262,264,267,662,664,667; Flue Gas: 48-342,344,352,354,362,364,372,382,384,388, 48-389,432,434,462,464,482,484,492,494,498;	Blast cleaning to SA2 ½ (Near white metal) with surface profile 35-50 µm	Inorganic Ethyl Zinc Silicate Primer DFT=60µm per coat	1	--	--	--	--	GREY	60
5 PS 9	<u>Components >95° C uninsulated other than components coming in gas path.</u> (bid resolutions annexure – I C (SG quality), Sl. No. 4.) <u>Temp: >95°C & <400°C</u> 20-511;24-807,820,860,865,867;42-200,300,358; Instrument tappings, doors: 48-200,915;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr. II DFT=20 µm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr. II 20 µm per coat	1	Aluminum	40
6 PS 10	Components uninsulated other than components coming in gas path. Temp: >400°C & <600°C (bid resolutions annexure – I C (SG quality), Sl. No. 4.) 09-003,004,005; 28-220;	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr. I DFT=20 µm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr. I 20 µm per coat	1	Aluminum	40
7 PS2A	<u>Loose tubes, SH, RH & Eco. Coils (exposed to gas path)</u> 11-074,078,374,378,406,467,469,487,491,494,606, 11-608,684,694,716,717,718,767,768,769,787,791, 11-916,917,918,967,968,969,987,991;12-179,181, 12-184,187,368,405,514,524,544,554,600,800,803, 12-805,862,903,914,917,924,927,928,944,948,954, 12-968;16-201,202,203,270,278,379; 19-092,402,804,814,824,853,914,924;	SSPC – SP2 or SSPC – SP3 Hand tool / Power tool cleaning	Red Oxide Zinc Phosphate Dip coat primer to PR: CHEM: 09 – 03 DFT=35µm per coat	2*	--	--	--	--	Red Oxide	70

*-Wherever dip painting is not possible, 2 coats of brush painting of Red oxide Zinc Phosphate primer to a coating thickness of 60µ is also permitted in line with Sr.No.9.

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate Coat		Finish coat			Total DFT µm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
8 PS1A	Components uninsulated < 95° C –Other than components in Sl.No.3. (bid resolutions annexure – I C (SG quality), Sl. No. 2.) **Miscellaneous and casing sheets** 04-147,547; 07- 409,431,460,461,462,502,503,509,531,560; 12-506,906,907;17-919;21-601,604,606; 24-350,351,354,801,804,806, 24-810,817,825,826,835,841,855, 24-950,955,960;30-233,234;36-611,621; 39-302; 45-806; 95-088; 97-585;24-855; Spares: 41-997;42-997;43-997;45-997; 47-997;65-997;67-997; Fuel firing: 41-350,390,500; Steam blowing piping 42-001,002,005,010,046,152; 42-157; 43-004,104, 200; 45-200,801, 858; 47- 261,263,858; Duct plates, expansion joints: 48-911,912; $ Handling Equipments: 99-099,100,300,400,502,600; Coal Feeding 65-736;67-204,272,276,283,801,802,803;95-088,089,091,485;96-186;97-585,591,592; **Seal air ducting: 43-005, 105;** Cold Air duct: 48-141;	SSPC-SP3/ Power Tool Cleaning	Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744 DFT= 30µm per coat	1	--	--	Synthetic Enamel paint (Long Oil Alkyd) to IS 2932 DFT= 20µm per coat	2	Smoke Grey Shade No: 692 of IS5	70

$ - Final Shade is Golden yellow for Under hung crane, Chain Pulley Block, Ratchet Lever and Trolley with hoist. Black shade for Hook.

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT µm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
9 PS3	**Components >95° C coming in the gas path, Headers, Commissioning Spares &erection Materials etc.,** (bid resolutions annexure – I C (SG quality), Sl. No. 7.) 05-137,147; 06-400,401,431,434,437,441,444,447, 06-451,453,455,500,501,515,731,732,734,735, 06-737,741,744,745,747,751,752,753,755,759; 07-309,315,316,318,423,883,993; 10-182,183,184,185; 11-474;12-993; 17-174,504,506,900,903; 19-704,753,763,783,793,802,850,851,852; 20-998; 24-822,823,993; 30-103,105,211,215,219,223,224,235; 31-010,104; 32-010,210; 37-010; 42-858; 48-993; 65-200; 67-200; 96-193; 97-282,590; 99-501; 20-988; 21-987; 24-987,989; 41-988; 42-988;	SSPC-SP3/ Power Tool Cleaning	Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744 DFT= 30µm per coat	2	--	--	--	--	Red oxide	60
10 PS6	**Hand rails and posts, ladders / rungs & stairs** (Spec. Cl. No. 17,2 –v) sheet 2 of 21, chapter 17, Vol.VI) 34-820,850; 35-821,822,823,851; 36-820,851,852,853; 38-820,850; 39-820,850; **Floor Grills, guard plates** (Spec. Sheet 8 of 15, chapter 7, Vol. II) 34-810; 35 – 811,812; 36-811,812,813,814; 38 – 810; 39 – 810;	Acid pickling to SSPC-SP8	Hot dip Galvanizing to a coating weight of 610 g/m^2 (minimum) and coating thickness of 80 microns (min). Immediately after galvanizing, post treatment chromating shall be applied. Refer Notes given below **							

Notes **: The Guard plates, Hood Ladders, Stringer channels, angles and plates shall be painted as per painting scheme prescribed in Sl. No: 03.

PAINTING SCHEME FOR VALVES

Sl.No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT µm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
11 @PS 9/10	**Cast carbon steel valves (Conventional)** **Cast alloy steel valves (Conventional)** **All API valves, QCNRV, SV & SRV Silencers,** **21-800,825, 24-885;** **Safety valves & ERV** **21-850; 24-880,881;**	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr. II/I DFT=20 µm per coat	1	--	--	Heat Resistant Aluminium Paint to IS 13183 Gr. II/I DFT=20 µm per coat	1	Aluminum	40
	Forged valves	Chemical cleaning	Phosphating to a coating weight of 1500 mg per Sq.ft.	--	--	--	--	--	--	--
1AS	**Soot Blower housing components, temperature <95 deg.C** **20-051,054,201,204,794,962;**	SSPC-SP3/ Power Tool Cleaning	Red Oxide Zinc Phosphate Primer (Alkyd Base) to IS 12744 DFT= 30µm per coat	2	--	--	Syn. Enamel paint (Long Oil Alkyd) to IS 2932 DFT= 20µm per coat	2	Verdigris Green Shade No. 280 of IS5	100
	HP / LP system	SSPC-SP3/ Power Tool Cleaning	Heat Resistant Aluminium Paint to IS 13183 Gr.I	2	--	--	--	--	--	40

@ Heat resistant aluminum paint to IS 13183 Gr.II shall be applied for temperature up to 400 deg.C, Gr. I shall be applied for temperature >400 deg.C and < 600 deg.C

Sl. No.	PGMA / Description	Surface Preparation & Surface Profile	Primer coat		Intermediate coat		Finish coat			Total DFT µm (min)
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
12 PS15	**For CLH & VLH*** PGs 07,08,12,17,19,21,24,45,47,48 & 80 07-402,403,405,505;12-517,528; 17-904,906 19-506,507,904,905, 906,907; 24-353; 48-206,395;	Blast cleaning to SA2 ½ (Near white metal) with surface profile 35-50 µm	Epoxy zinc rich primer To IS 14589 Gr. II %VS=35, (min) DFT=40 microns per coat	1	--	--	Aliphatic acrylic Poly-urethane paint %VS=40.0 (min) DFT=30.0 microns per coat	1	Phirozi Blue Shade No. 176 of IS5	70
13 PS10B4	**Components > 95°C, un-insulated Fuel pipes** (Spec. Sl. No. 7, sheet 12 of 15, chapter 7, Vol.II) 47-200, 269;	Blast cleaning to SA2 ½ (Near white metal) with surface profile 35-40 µm	Inorganic Ethyl Zinc Silicate Primer DFT=40µm per coat	1	Heat Resistant Aluminium Paint to IS 13183 Gr. III DFT 20 µm per coat	1	Heat Resistant Aluminium Paint to IS 13183 Gr. III DFT 20 µm per coat	1	Aluminum	80
14 PS 1BE	All Columns below '0' level (embedded in concrete) PGs 34,35,36,38 39	SSPC-SP3/ Power Tool Cleaning	Chlorinated Rubber Based Zinc Phosphate primer DFT=50µm per coat	1	--	--	--	--	Grey	50

*- For components other than CLH & VLH, painting scheme shall be as given in Sl. No. 8.

NOTES:

1. **Rust Preventive Coating should be given on HSFG Bolt and nut threads.**

2. Machined surfaces and all retainers are to be applied with a coating of Temporary Rust Preventive oil.

3. All threaded and other surfaces of foundation bolts and its materials, insulation pins, Anchor channels, Sleeves, shall be coated with Temporary Rust Preventive Fluid and during execution of civil works; the dried film of coating shall be removed using organic solvents.

4. Ground shade/ Colour of Finish paints & identification tag/Band for equipments, pipings pipe service, boiler supporting structures and other boiler components shall be followed as per doc. No. Vol-II Chapter 7 Painting.

5. PGMAs under Sub-Vendor items are not indicated. For all bought-out and sub-vendors items including PGMAs mentioned above falling under the scope of BHEL the same scheme as for main equipment as covered in this document shall be followed. For SCR system, vendor's painting scheme to be followed.

6. This painting Schemes is valid for only Customer No: U6/1728, UPRVUNL PANKI TPS - 1X660 MW.

7. No painting is required for Stainless Steel, non-ferrous & galvanized components.

08. Wherever inside surfaces of components under PGMA 48 – XXX & others, need protection till erection, two coats of Red-oxide zinc phosphate primer paint to IS12744 to a DFT of 60 microns shall be applied, after power tool cleaning.

09. The Temporary Rust Preventive coating that already been applied on any components, tubes, pipes etc., shall be visually inspected for good adherence. If the coating is intact, direct coating of alkyd based red oxide paints over the coating is permitted. In case, the coating has peeled off over a large area, then the coating is to be removed by suitable solvents / heating to 350 –400 °C for an hour before primer paint application –but, in this case, it should be ensured that the minimum surface cleanliness required for primer paint application shall be SSPC – SP2 (equivalent – Hand Tool cleaning).

10. In components, wherever plates / sheets of thickness less than or equal to 5 mm and rods of <25mm/tubes/drain pipes are used, power tool / hand tool cleaning to SSPC – SP3 / SP2 shall be followed and the painting shall be done as described in Sl.No.8.

11. For all commissioning components-erection materials (xx-993) two coats of Red oxide Zinc Phosphate Primer shall be applied to meet the temporary protection till erection, after power tool cleaning.

12. Touch-up paintings, making good any damaged shop painting and completing any unfinished portion of the shop coat shall be carried out as per clause applicable painting scheme.

13. All components covered under different PGMA's are to be painted. In case any component is left out, the same shall be deemed to be included under the relevant section based on paint logic approved.

14. For very small components like clamps, bent rods, small plates etc. which don't have feasible dimensions for blast cleaning, Sl.No.8 shall be followed.

15. For very small components with weldable primer at edges, the entire component shall be applied with weldable primer. Structural members having welded connections at site, relevant area can be painted with primer paint instead of Weldable primer.

16. Painting scheme for all temporary structures like 04-196, shall be PS 1AE i.e. 1 coat of Red oxide Zinc Phosphate primer (Alkyd Base) to IS 12744-DFT-30µ and 2 coats of Synthetic Enamel paint (Long Oil Alkyd) to IS 2932-DFT-2X20µ Shade Yellow –Shade No. 356 of IS 5- Total DFT 70µ. These are to be cut & removed at site after erection. (It excludes components covered under Sr. No. 3 & 10 of description table).

17. For internal protection of Pipes, tubes, headers and other pressure parts, Volatile Corrosion Inhibitor (VCI) pellets shall be put (after sponge testing/ draining/ or drying) and subsequently end capped. The dosage of VCI pellets shall be approximately 100 g/ Cu.m. For tubes typically 4 – 5 tablets per end are to be put. For C & I items the dosage of self-indicating Silica Gel (colourless) shall be 250 g/ cu.m. (About 2 to 3 bags weighing approximately 100 grams each). VCI pellets shall not be used for stainless steel components and its composite associates.

18. All threaded components of spring assemblies and turnbuckles shall be galvanized and achromatized to 15 microns minimum thickness.

19. Soot blower components i.e Valve head assembly having high surface temperature (> 200 and <600 deg. C) shall be applied with protective coating as per PS9 (up to 400 deg.C) and PS10 (up to 600 deg.C)

20. Corner plate, sheet channel and fixing pins of PGMA 32-210 shall be painted as per scheme PS3 to total DFT of 60 microns.

21. It is mandatory that for finish coat each layer shall have a permanent DFT and free from any paint defects like sags, wrinkles etc. Total DFT of a component correspond to respective painting scheme has to be ensured and recorded by inspection agency as per QP.

22. For chequered plates having thickness <=5mm, surface preparation can be power tool cleaning to St3 and painting shall be in line with Sl. No. 8.

23. Handrails of PGMA under Sl. No. 3 need to be galvanized in line with scheme for handrails (i.e. Sl. No. 10).

24. Inside surfaces of fabricated structure (e.g. Box type column) shall be painted with two coats of red oxide primer paint during fit up stage.

25. Painting of bunker structures to be in line with painting scheme of supporting structures (Sl. No. 3).

26. Corrosivity environment C3 considered for painting scheme of structural components as per the requirement of technical specification.

Painting Scheme – Details for procurement & application purposes

Sl. No.	Generic nature of paint	Theoretical Covering Capacity Sq.m per Litre.	No. of pack	Volume solids, % (min)	DFT in microns per coat (min.)	Shade	Shade No. to IS5	Mode of appln.	Over coating interval, Hrs.
1	Epoxy Zinc rich primer to IS14589 Gr.II (latest)	8	2	35	40	Grey	--	Spray	24
2	Aliphatic acrylic polyurethane paint to IS 13213 (latest)	13	2	40	30	Phirozi – Blue/ Dark admiralty grey	176/ 632	Spray	24
3	Heat resistant Aluminium paint to IS 13183 Grade I/II (latest)	10	1	-	20	--	--	Brush / Spray	24
4	Red oxide zinc phosphate primer paint to IS 12744 (latest)	10	1	--	30	-	--	Brush / Spray	12
5	Red oxide Zinc Phosphate Dip coat primer paint to PR: CHEM: 09-03	10	1	--	35	--	---	Dip	12
6	Long oil alkyd synthetic enamel finish paint to IS2932 (latest)	17	1	35	20	Reqd. shade	Corrpdg. Shade no.	Brush / Spray	12
7	Temporary Rust preventive fluid to PR: CHE: 09 – 04	10	1	--	25	--	--	--	12
8	General purpose Aluminium paint to IS 2339 (latest)	10	2	--	20	Aluminum	--	Brush	12
9	Epoxy based polyamide cured MIO pigmented intermediate coat.	8	2	60	120	Brown	--	Spray	24
10	Inorganic ethyl zinc silicate primer to IS 14946 (%Zn on dry film= 75min)	8	2	60	80	Grey	--	Spray only	16
11	Chlorinated Rubber Based Zinc Phosphate Primer-Colour Grey	8	1	40	50	Grey	--	Brush / Spray	12

The covering capacity of paints specified is only approximate.
The paints and Rust Preventive fluid shall be procured from BHEL's approved suppliers.

Painting of Damaged Areas

(Areas where the paint has deteriorated badly by erosion and areas where the paint film has lost its adhesion and where the steel has rusted appreciably, should be repainted as follows)

Sl.No.	Components	Surface Prepa-ration	Primer coat		Intermediate coat		Finish coat			Total DFT µm
			Paint	No. of coats	Paint	No. of coats	Paint	No. of coats	Shade	
1	Paint damaged components fall under Sl.no: 3	Power tool cleaning to bare metal	Epoxy zinc rich primer to IS 14589 Grade II	2 T.DFT 80µ (min)	As given in scheme	1	As given in scheme	2	As given in scheme	As given in scheme

An ISO 9001
Company

Bharat Heavy Electricals Limited
(High Pressure Boiler Plant)
Tiruchirappalli-620 014, Tamil Nadu, India
Dept: MATERIALS MANAGEMENT/BOI

Annexure – A Terms and Conditions

ACCEPTANCE OF TECHNO - COMMERCIAL TERMS & CONDITIONS BY THE BIDDERS

Description of the Equipment:	**Burner Tilt Power Cylinder for Panki project**
Enquiry No:	**Enq No 1802000416/14 dt.16.07.2020**

Sl. No.	**Terms and conditions**	**Vendor's confirmation**
1 (a)	**Technical:** Supply shall be as per BHEL's Technical Specifications (Sl No-4 of MOU/TPBHEL/BTPC, Rev.01) attached with the enquiry, without deviation. Pl note that document approval by BHEL and NTPC/Customer is applicable.	
1 (b)	QA:CI:STD:QP:42/05 has to be followed	
1 (c)	Inspection by BHEL Approved Third Party Inspection Agencies/BHEL/NTPC/Customer/Any IBR approved TPI agency at vendor works before dispatch is applicable. Shipment shall be made only after obtaining despatch clearance from BHEL/MDCC from NTPC/Customer.	
1 (d)	Confirmation & submission of all PQR documents as per annexure -1 (Technical pre-qualification requirements) **Note: Vendors not meeting PQR will be rejected.**	
1 (d)	Offer will be considered as package basis for evaluation & ordering, as indicated in the tender. Evaluation will be on total cost to BHEL, after all loadings as applicable.	
1 (e)	Pl note that your offer consideration is subject to Techno- Commercial Suitability **& customer approval before Price bid opening**.	
2	**Firm Price:** The quoted / finalised rates shall be Firm till execution of the supplies. Offer with Price Variation Clause (PVC) will not be considered.	
3	The tender will be operated in two part bid system. One-part consisting of Technical bid with Commercial terms & conditions and other part is Price Bid. Based on the above and other conditions, as well as technical capability, vendors will be short-listed. The Techno-commercial bid will be opened on the due date and based on the suitability of techno-commercial bid, the price Bid of the techno-commercial suitable qualified vendors will be considered and opened on a suitable date with due intimation to vendors.	
4	**Delivery term For indigenous Suppliers:** The quote shall be on FOR Panki project site basis (Uttar Pradesh state). Packing & forwarding and Freight to yours account. Transit Insurance is on BHEL scope **Ex-Works Contracts will not be entertained.**	

	Delivery term For Import Suppliers Bidders should submit their offer on CFR Chennai Seaport basis with freight break up details. Pls. indicate the freight breakup details. FOB rate will be arrived by subtracting the corresponding freight break up from the CFR rate. BHEL reserves the right to order on FOB or CFR basis. Insurance on BHEL scope.	
5	**Payment terms for Indigenous Suppliers:** "100% direct EFT payment after 60 days from the date of dispatch against site acknowledgement". **Payment terms for Import Suppliers:** BHEL Payment term is 100% payment on CAD basis after 60 days from the date of receipt of documents, specified in PO, at BHEL bank. **If supplier insists for LC, only Usance LC with 60 days credit will be opened one month prior to material readiness, further loading @ 1.5% on the offered value will be considered. If Hence supplier shall intimate the material readiness accordingly for opening of L.C. LC validity period will be 90 days and for any extension, applicable charges will be to supplier's account.** **For New suppliers** For new suppliers not registered with BHEL, Trichy for the product, Payment shall be made 60 days after receipt and acceptance of materials In case of foreign supplier, first lot of mutually agreed quantity shall be supplied with payment as CAD basis after 60 days from the date of receipt & acceptance of material. If insisted for LC, after acceptance of first lot, only LC with 60 days credit will be opened one month prior to material readiness.	
6 (a)	**Liquidated damages:** Delivery of the goods specified in the purchase order should be made within the time prescribed. Failure to dispatch the materials in the time as per the delivery quoted in our Purchase Order would make the supplier liable to an un-conditional LD at the rate of 0.5% of the order value per week of the delay or part thereof subject to a maximum of 10% of the total order value. In case of PO placements, required documents have to be submitted for approval within 15 days from the date of PO & reply for any further clarification has to be within 7 days. Any delay beyond the above specified period will be considered during LD calculation.	
6 (b)	**Loading Criteria on LD term for arriving the L1 rate:** Any deviation on BHEL LD clause, loading (Offered Value) will be applied to the extent to which it is not agreed by the bidder. *Acceptance of LD on undelivered portion will be loaded at the rate of 10% (max).	

7 (a)	**Guarantee / Warranty Period:** The offered system shall be guaranteed for 18 months from the date of supply or 12 months from the date of commissioning, whichever is earlier	
7 (b)	**Loading Criteria:** **Guarantee / Warranty Period:** No Deviation is permitted. If still vendor offered any deviation on the Guarantee / warranty period, it may lead to rejection of offer.	
8	**Risk purchase:** If the supplier fails to deliver the goods within the delivery specified in the Purchase Order, BHEL will be entitled to terminate the contract and to Purchase elsewhere at the risk and cost of the seller either the whole of the goods or any part which the supplier has failed to deliver or despatch within the delivery period mentioned in the Purchase Order.	
9	**Delivery Period:** 03 months from document approval	
10	**For Indigenous Vendor–** LR date will be considered for LD calculation. **For Import Suppliers-** OBL date will be considered for LD calculation.	
11	**Validity:** 90 days minimum from techno commercial bid opening (Part-1). Any Deviation with respect to validity your offer is liable for rejection. Ensure your quoted rates will have 90 days minimum validity from techno commercial bid opening. The delay in responding to BHEL technical clarification beyond four days will be subsequently added to the validity period, Revised Price Bids will not be encouraged.	
12	**For Import Suppliers, PORT OF LOADING SHOULD BE INDICATED WITHOUT FAIL. Weight of the Total Consignment shall be indicated in the offer.** **PORT OF DISCHARGE – Chennai.**	
13	**Inspection and testing requirements:** Inspection and testing requirements are to be carried out as per the specification and BHEL/Customer approved Drawing (All documents shall be submitted within 15 days from the date of PO for our approval), Technical spec &QP and all test certificates are to be submitted in complete set. Inspection notice period: For TPI inspector visit to vendor works, a minimum of 3 working days' notice period for indigenous vendors and 30 working days' notice period for import vendors is required well in advance from the proposed date of inspection	
14	**Repair & replacements:** Within the guarantee period vendor has to replace / rectify the defective/ damaged items on free of cost within a reasonable time of reporting from our end.	
15	**For Import Suppliers** a) Foreign Exchange rate prevailing on Techno – Commercial bid opening rate will be taken for calculation. If the date of opening happens to be a bank holiday, then the forex rate as on previous bank (SBI) working day shall be taken. b) Test certificate shall be submitted prior to despatch for our review and approval. Shipment shall be made only after obtaining despatch clearance from BHEL/MDCC from Customer.	

16	Documents are to be submitted along with technical bid (Part-1) 01. Covering letter 02. Unpriced offer. 03. Filed technical specification 04. Filed BHEL Terms and condition sheet (Annexure-A) 05. Catalogue's 06. PQR (Special Conditions annexure -1) 07. List of Spare parts Documents are to be submitted along with Price bid (Part-2) 01. Priced offer Note: All the pages of documents are to be signed and stamped by authorized signatory of the company.	
17	**MSE Applicability as per Annexure C. The vendors shall furnish valid certificates (Latest audited CA certificate & UAM) as per annexure C, for availing the benefits of MSE with deemed validity in the offer itself.**	
18	**Make in India:** For this procurement, Public Procurement (Preference to Make in India), order 2017 dated ***15.06.2017, 28.05.2018, 29.05.2019 & 04.06.2020*** and subsequent orders issued by the respective Nodal ministry shall be applicable even if issued after issue of this NIT but before finalization of contract/PO/WO against this NIT. In the event of any Nodal Ministry prescribing higher or lower percentage of purchase preference and/ or local content in respect of this procurement, same shall be applicable. Default margin of purchase preference shall be 20% to local suppliers with default minimum local content of 50%. For more details, pls. refer the Public Procurement (Preference to Make in India), order 2017 dated ***15.06.2017, 28.05.2018, 29.05.2019 & 04.06.2020*** and subsequent orders issued by the respective Nodal ministry.	
19 a	**Important Information for Indigenous Suppliers:**	
	Kindly indicate the GST No of your Firm	
	Kindly Indicate the HSN Code for the Enquiry item.	
	Please indicate the applicable GST % (IGST, SGST, CGST)	
	Kindly Note the BHEL Trichy Unit GST NO : 33AAACB4146P2ZL	
	Response to Tenders for Indigenous supplier will be entertained only if the vendor has a valid GST registration number which should clearly have mentioned in the offer. If any specific exemption is available, a declaration with due supporting documents need to be furnished for considering the offer.	
	In Case of Order Placement: Supplier shall mention their GSTN registration number in all their invoices and invoices shall be in the format as specified/prescribed under GST laws. Invoices shall necessarily contain Invoice number (in case of	

19 b	multiple numbering system is being followed for billing like SAP invoice no, commercial invoice no etc., then the Invoice No which is linked/uploaded in GSTN network shall be clearly indicated), item description as per PO, Quantity, Rate, Value, applicable taxes with nomenclature (like IGST, SGST, CGST & UTGST) separately, HSN/ SAC Code, etc.	
	All invoices shall bear the HSN Code for each item separately (Harmonized System of Nomenclature)/ SAC code (Services Accounting Code).	
	A declaration to the effect that all invoice particulars are/were uploaded in the GSTN network/ portal & all tax liability as per GST rules and regulations have been and will be discharged, shall be mentioned in the invoice. If not mentioned in the invoice, a separate declaration shall be submitted as per the requirement of BHEL.	
	All dispatch and quality documents like Mill Test Certificate, LR copy, Guarantee/Warrantee certificate, work completion certificate, any other document mentioned in PO, shall be sent along with the vehicle/consignment. For all consignments received within the calendar month, input credit will be availed within that month in line with monthly returns filing cycle. In case of any discrepancy in the document or non-submission of documents mentioned in the PO, then BHEL will not be able to accept or account the material, in such case availing of tax credit will be deferred to next month or so	
	In case of discrepancy in the data uploaded by supplier in the GSTN portal or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit and will notify the supplier of the same. Supplier has to rectify the data discrepancy in the GSTN portal or issue credit note (details to be uploaded in GSTN portal) for the shortages or rejections in the suppliers, within the calendar month notified by BHEL	
	For any such delay in availing of tax credit for reasons attributable to supplier (as mentioned above), interest (calculated @ SBI Base Rate + 6%) along with penalty if any will be deducted for the delayed period i.e. from the month of receipt till the month tax credit is availed, from the running bills.	
	Under GST regime, BHEL has to discharge GST liability on LD recovered from suppliers/contractors. Hence applicable GST shall also be recoverable from suppliers/contractors on LD amount. For this Debit note will be issued by BHEL indicating the respective supply invoice number. For this, Debit note will be issued by BHEL indicating the respective supply invoice number. Debit note will be available on our B2B portal.	
20	**<u>Important Information for Import Suppliers</u>:** **<u>FOR CFR INCO TERMS – CONTAINERIZED CARGO</u>** • For CFR terms, moved through CONTAINERS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis including extra charges, if any, like Container Imbalance Charges, Trade Imbalance charges or any other charges payable to the Liner. No other charges other than the quoted Freight rate will be paid by BHEL excepting applicable Terminal Handling Charges, Container cleaning Charges, DO charges to Shipping Liner at Discharge Port. 14 FREE DAYS FOR Container detention shall be provided. If any deviation is taken by Tenderer, a loading of 22% on the freight rate per MT shall be considered by BHEL for arriving at the Total Landed Cost.	

- In case of shipment through Containers on CFR basis, the BL should bear the endorsement that "14 free days for Container Detention is applicable".

BREAKBULK CARGO

- For CFR terms, moved through BREAK BULK BASIS (Suppliers should clearly specify this in their offer) it would be presumed by BHEL that the freight charges quoted is on LILO (LINER IN LINER OUT) basis. The materials will be Custom cleared from Port itself.
- The Indian Customs imposed, a penalty on late filing of Bill of Entries (Air/Sea Shipments) by the importer. The maximum free time allowed is 24 hrs from the time of arrival of cargo at final port of discharge. Rs.5000/- per day (for Initial 03 days) & Rs.10000/- per day (thereafter)
- The vendor should furnish the Non-Negotiable Documents (Air Way Bill/Bill of Lading, Commercial Invoice, Packing List, and Certificate of Origin) either by email or post/courier to BHEL well before the landing of cargo at final port of discharge.
- Vendor will be held responsible for the penalty arises against the late filing of Bill Of entry due to:
    - Non availability of Non-Negotiable Documents (NNDs) before the cargo arrival
    - Discrepancy in documents
    - Short landing of Consignments (For shipments on CFR/CPT/CIF/CIP – Chennai Port)
- All the shipments for the contracts (POs) finalized on CFR -Chennai Port basis

(i) Delivery Orders involving multiple agencies like liners/freight forwarders are not allowed. There must be a single agency office at the final discharge Port (Chennai) for issuing the Delivery Order to BHEL.

(ii) The detention/demurrage charges arise due to the delay in collection of Delivery Orders from multiple agencies of liner/freight forwarder also whose offices are not at available Chennai, the same amount will be deducted from Vendor's bills only.

(iii) Apart from the normal charges like Terminal Handling Charges, Container cleaning Charges, Delivery Order Charges at final port of discharge no other charges will be borne by BHEL.

(iv) The liner/freight forwarders should be properly communicated by the Vendor for not to claim such charges for issuing Delivery Order. If the liner/freight forwarder claims such charges in their invoices, the same amount will be deducted from the Vendor bills without any prior intimation in order to avoid the delay in Customs clearance. The likely additional/hidden costs or charges are:

a. CIC - Container Imbalance Charges/Surcharges
b. EIC - Equipment Imbalance Charge/Surcharges
c. CAF - Container/Currency Adjustment Factor
d. BAF - Bunker adjustment Factor
e. RDS - Rupee Depreciation Surcharge
f. CDS - Currency Depreciation Surcharge

Transport Conditions for Import:

The Original Documents (Bill of Lading, Invoice, Packing List, Certificate of

	Origin & Test Certificate) shall reach BHEL well in advance before the vessel arrival. The soft copies of the above shall be forwarded to BHEL immediately after shipment. • In the event of delayed submission of documents by the supplier, an amount up to 5% of the invoice value will be retained towards demurrage & other charges and the difference if any between actual charges and recovery will be settled separately through supplementary invoice. • In such cases, the Supplier shall authorize the Steamer / Shipping agent / transporter to freely release the consignment to BHEL by providing a "Surrender Bill of Lading". • Otherwise, No-objection Certificate shall be issued to the Liner, authorizing BHEL to get the Delivery Order without producing the Original Bill of Lading. • This is required to ensure avoidance of demurrage at Chennai Sea-port that may arise in case of delayed presentation of documents by the Seller. • **Following details to be endorsed in OBL** a. Import & Export Code (IEC) of importer : *0588138690* b. GST Identification No (GSTIN) of importer : *33AAACB4146P2ZL* c. Official email id of importer:*santoshj@bhel.in ; asvasalu@bhel.in*	
Note:	BHEL may negotiate the L1 rate, if not meeting our budget/estimated cost. BHEL may re-float the tender opened, if L1 price is not the acceptable price to BHEL. Any deviation in specified commercial terms- Annexure B, will lead to rejection of offer. **Any other Techno –Commercial Terms indicated by the vendor in their offer elsewhere will be ignored. BHEL will proceed with tender evaluation as per Annexure A only.**	

Vendor's Seal and Signature

/ On Bidder's office letter pad /

Self-Declaration

Enquiry No.	
Enquiry Date	

In line with Government public procurement order Number P-45021/2/2017-B.E-II dated 15.06.2017, and further modified order dt. 28.05.2018,

I / We hereby declare that I / We are a "Local Supplier" meeting the requirement of minimum local content (.....%) defined in the above government notification for the goods against above mentioned enquiry Number.

Details of location at which local value addition will be made is as follows:

Door No.	
Street / Address 1	
Street / Address 2	
District	
State	
Country	
PIN Code	

We also understand that the false declarations will be considered as breach of Integrity and liable for action.

For Company Name:
Seal:
Signature:

Date:
Place:

(Please fill all the yellow color field)

Annexure C

Clause: Special Provisions for Micro and small Enterprises (MSE):

1. In case MSE vendor participating in the tender quotes within the price band of L1+15%, they will be allowed to supply the complete package requirement subject to acceptance of L1 price by MSE vendor.

2. In case of more than one such MSE, the counter offering will be to the lowest quoted MSE vendor subject to fulfilment of Point No.1

3. MSE suppliers can avail the intended benefits only if they submit along with the offer, attested copies of either EM II certificate having deemed validity (Five years from the date of issue of acknowledgement in EM II) or valid NSIC certificate or EM II certificate along with CA certificate (Format enclosed) applicable for the year, certifying quantum of investment in plant and machinery within the permissible limit as per the act for relevant status (Micro or small) where the deemed validity of EM II is over. Date to be reckoned for determining the deemed validity will be the last date of technical bid submission. Non submission of such documents will lead to consideration of their bids at par with other bidders and MSE status of such suppliers shall be shifted to Non MSE supplier till the supplier submits these documents.

4. Declaration of UAM number by MSE bidders is mandatory. Failing which, such bidders will not be able to enjoy the benefits as per Public Procurement Policy for MSEs Order, 2012.

5. Payment for MSE Indigenous vendors will be as per MSMED Act 2006

THIRD PARTY NON-DISCLOSURE AGREEMENT

I, _____, on behalf of the _____ (Name of Company), acknowledge that the information received or generated, directly or indirectly, while working with BHEL, Trichy on contract is confidential and that the nature of the business of the BHEL, Trichy is such that the following conditions are reasonable, and therefore:

I warrant and agree as follows:

I, or any other personnel employed or engaged by our company, agree not to disclose, directly or indirectly, any information related to the BHEL, Trichy Without restricting the generality of the foregoing, it is agreed that we will not disclose such information consisting but not necessarily limited to:

- Technical information: Methods, drawings, processes, formulae, compositions, systems, techniques, inventions, computer programs/data/configuration and research projects.

- Business information: Customer lists, project schedules, pricing data, estimates, financial or marketing data,

On conclusion of contract, I, or any other personnel employed or engaged by our company shall return to BHEL, Trichy all documents and property of BHEL, Trichy, including: drawings, blueprints, reports, manuals, computer programs/data/configuration, and all other materials and all copies thereof relating in any way to BHEL, Trichy 's business, or in any way obtained by me during the course of contract. I further agree that I, or any others employed or engaged by our company shall not retain copies, notes or abstracts of the foregoing.

This obligation of confidence shall continue after the conclusion of the contract also.

I acknowledge that the aforesaid restrictions are necessary and fundamental to the business of the BHEL, Trichy and are reasonable given the nature of the business carried on by the BHEL, Trichy I agree that this agreement shall be governed by and construed in accordance with the laws of country.

I enter into this agreement totally voluntarily, with full knowledge of its meaning, and without duress.

Dated at _____, this ____ day of _____, 20__.

Name

Company

Signature

Annexure - I

Certificate by Chartered Accountant on letter head

This is to Certify that M/S ....., (hereinafter referred to as 'company') having its registered office at ..... is registered under MSMED Act 2006, (Entrepreneur Memorandum No (Part–II) ..... dtd:....., Category: ..... (Micro/Small)). (Copy enclosed).

Further verified from the Books of Accounts that the investment of the company as per the latest audited financial year ..... as per MSMED Act 2006 is as follows:

1. **For Manufacturing Enterprises:** Investment in plant and machinery (i.e. original cost excluding land and building and the items specified by the Ministry of Small Scale Industries vide its notification No.S.O.1722(E) dated October 5, 2006 :
   Rs.....Lacs
2. **For Service Enterprises:** Investment in equipment (original cost excluding land and building and furniture, fittings and other items not directly related to the service rendered or as may be notified under the MSMED Act, 2006:
   Rs.....Lacs

(Strike off whichever is not applicable)

The above investment of Rs.....Lacs is within permissible limit of Rs.....Lacs for .....Micro / Small **(Strike off which is not applicable)** Category under MSMED Act 2006.

Or

The company has been graduated from its original category (Micro/ Small) **(Strike off which is not applicable)** and the date of graduation of such enterprise from its original category is ..... (dd/mm/yyyy) which is within the period of 3 years from the date of graduation of such enterprise from its original category as notified vide S.O. No. 3322(E) dated 01.11.2013 published in the gazette notification dated 04.11.2013 by Ministry of MSME.

Date:

(Signature)

Name -

Membership number -

Seal of Chartered Accountant