

Scope of Enquiry**Item Name: Duct Section, Steam Distribution Manifold and Tube Bundle Header****Project: North Karanpura**

E-bids on GeM are invited from bidders for the supply of **Duct Section, Steam Distribution Manifold and Tube Bundle Header for 3x660 MW North Karanpura Project, Tandwa, Jharkhand** as per requirement mentioned below:

Sl. No.	Material Code & Item Description	Total Quantity (In No.)	Unit Weight (In KG.)	Total Weight (In KG.)	Date for Supply Completion
1	Material Code W97717001756 Manifold Section -2 As per drawing no. HAC-NKP-J-T07-07	01 No.	9121.6	9121.6	31/01/2023
2	Material Code W97717001764 Manifold Section-11 As per drawing no. HAC-NKP-J-T07-16	03 No.	4271.5	12814.5	31/01/2023
3	Material Code W97717001772 Manifold Section -12 As per drawing no. HAC-NKP-J-T07-17	03 No.	4246.8	12740.4	31/01/2023
4	Material Code W97717001489 Duct Section -10 As per drawing no. HAC-NKP-J-T06-16	01 No.	16478	16478	31/01/2023
5	Material Code W97717001780 Tube Bundle Header As per TDC No. HXE/SK/2318	01 SET	93400	93400	31/01/2023

Buyers Specific Additional Terms & Conditions in addition to GTC**Item Name: Duct Section and Steam Distribution Manifold****Projects: North Karanpura**

Sl. No.	Terms	Description	Your confirmation
1.	Confirmation to compliance of General terms and conditions on GeM 4.0 (Version 1.5)	In addition to the terms & conditions mentioned in below table, General terms and conditions on GeM 4.0 (Version 1.5) or subsequent rules/policies issued by GeM shall be applicable against this enquiry. Kindly confirm same is acceptable to you.	
2.	Documents Checklist:	<p>Kindly confirm that the following documents have been submitted along with your offer:</p> <ol style="list-style-type: none"> 1. Requisite EMD 2. Pre-Qualification Requirements (as defined in Annexure-1). 3. Any other document as specified in "Buyers Specific Terms & Conditions" <p>Please note that all details required in supplier registration form to be filled and submitted on online supplier registration portal on www.bhel.com along with complete documents.</p>	
3.	Pre-Qualification Requirements	The Pre-Qualification Requirements have been compiled and placed at ANNEXURE-1. All the bidders should ensure submission of complete details and documents as called for in these requirements. The Offers submitted by the bidders would be scrutinized with respect to Pre-Qualification Requirements first. Techno-Commercial offer of only those bidders shall be evaluated who meet the Pre-Qualification Requirements.	
4.	Special Instruction of Technical requirement	<ol style="list-style-type: none"> 1. Test Certificate and Guarantee Certificate are required. 2. Pl. refer technical delivery condition for procurement of below header assembly, steam duct and steam distribution manifold. Doc. No. HXE/SK/2318 3. +/-10% weight variation of assembly may be considered. 4. Total Wt. of item no. 1 (Mat Code W97717001756 = 9121.6 kg / no.) 5. Total Wt. of item no. 2 (Mat Code W97717001764 = 4271.5 kg / no.) 6. Total Wt. of item no. 3 (Mat Code W97717001772 = 4246.8 kg / no.) 7. Total Wt. of item no. 4 (Mat Code W97717001489 = 16478 kg / no.) 8. Total Wt. of item no. 5 (Mat Code W97717001780 = 93400 kg/ set) 9. For any deviation from BHEL manufacturing drgs vendor to take approval from BHEL, Haridwar before manufacturing of items. 10. Manufacturer to provide technological support to avoid any distortion during handling & transportation. 11. Manufacturer to submit detailed Erection/ Final assembly drgs for site erection. 	
5.	Evaluation criteria	Evaluation shall be done item wise based on total landed cost (for each individual material codes quantity) up to BHEL Project site.	
6.	Price basis	<p>Prices should be quoted on F.O.R. Destination basis including of freight, packing & forwarding charges, GST etc.</p> <p>Item to be supplied directly to 660 MW North Karanpura site.</p> <p>Bidder to Confirm that the prices will remain firm during the entire validity</p>	

		and execution of the Project.	
		Please note that transit insurance of material shall be in BHEL scope only. Please quote your offer accordingly.	
7.	GST Rate	Please mention here the applicable GST % rate included in the prices quoted by you.	
8.	BID TO RA	Opening of Price bid & RA shall be conducted for only those bidders who qualifies PQR and whose techno-commercial bid is acceptable to BHEL. RA will be done amongst 50% lowest priced technically qualified bidders as per GeM RA guidelines. Kindly accept.	
9.	Delivery	You are requested to offer your best possible delivery in number of weeks/ months from the date of Purchase Order/documents approval. BHEL reserve right to reject offer of the bidders not meeting BHEL's delivery requirement.	
10.	Engineering Document/ Document approval	Drawings/Data sheets/Documents/Type Test/ Quality Plan etc. as called for in the specifications shall be submitted for approval to BHEL for BHEL/customer approval within 07 days of purchase order. Any delay in delivery on account of late submission of drawings shall be to vendors account. BHEL will arrange the approval of the drawings/data sheets/ documents within 07 days of their receipt provided those are complete in all respect. Delays in approval shall be dealt on merit basis.	
11.	MDCC clause	Material shall be dispatched only after issue of material dispatch clearance certificate (MDCC) by BHEL. All test certificates and relevant documents are to be sent to BHEL before dispatch of material for issue of MDCC, which will be issued after review of test certificates etc. MDCC will be issued within 07 days of receipt of these documents once found complete in all respects. In case of any delay on account of BHEL in issuing MDCC, delivery shall be extended by no. of days in excess of 7 days taken by BHEL in issuing MDCC and delays shall be dealt on merit basis. Material is to dispatched within 07 days of receipt of MDCC from BHEL without waiting for PO amendment.	
12.	Quality Requirements	<p>Indented item is a customer (NTPC) control item in CAT-I.</p> <p>M/s ATV, M/s Vrinda and M/s Metal Fab , M/s RS Thermotech and M/s Ambabhawani to follow already NTPC approved QAP. NTPC approved QAP for respective vendor are attached and indicated below.</p> <p>For M/s ATV => 4410-001-110-QVM-Q398A, Rev: 01 with BHEL QA updation dated: 02.12.2021</p> <p>For M/s Vrinda=> 4410-001-110-QVM-Q-405, Rev: 01 with BHEL QA updation dated: 02.12.2021</p> <p>For M/s Metal Fab=> 4410-001-110-QVM-Q-398, Rev: 00 with BHEL QA updation dated: 02.12.2021.</p> <p>For M/s RS Thermotech = > 4410-001-110-QVM-Q-398B, Rev: 02 dtd. 04.05.2022</p> <p>For M/s Ambabhawani => 4410-001-110-QVM-Q-398VC, Rev: 00 dtd. 16.09.2022</p> <p>For new vendors: Vendor to endorse BHEL SQP no. "QA/BI/QP/ACC/DUCT, Rev:00" (enclosed) and submit along with the offer. Successful vendor's QAP shall be forwarded to NTPC for their review and approval. Vendor to confirm to follow NTPC to be approved QAP in totality in the bid.</p>	
		Inspection shall be done BHEL nominated inspection agency- TPIA (INTERTEK or as informed) and NTPC as per NTPC approved QAP (updated) or as approved. Please confirm.	

		<p>The charges of BHEL – Third Party Inspection agency nominated by Purchaser would be borne by Purchaser. However, coordination with the Purchaser (BHEL)'s nominated agency and NTPC would be the responsibility of the Contractor/Seller.</p> <p>Inspection calls should be raised by Contractor/Seller/sub-vendors on BHEL CQS website (WWW.CQIR.BHEL.IN). At least 15 days' notice period shall be given to the inspection agency for witnessing the inspection.</p>									
13.	Guarantee	<p>Kindly confirm that Guarantee would be provided for a period of “18 months from the date of despatch”.</p> <p>Supplier shall be responsible for free replacement of defective equipment / material at our site.</p>									
		<p>Please note that offers with guarantee period lesser than above mentioned guarantee period may result in rejection of the offer.</p>									
14.	Manufacturing clearance and sequence of supply	<p>In case of ordering, vendor has to take manufacturing clearance from BHEL before starting manufacturing of material. No manufacturing is to be started without getting clearance from BHEL. Kindly confirm.</p> <p>Vendor to supply material as per priority/sequence provided by BHEL after placement of PO. Kindly confirm.</p>									
15.	Sharing of Drawing	<p>bid bidders shall submit endorsed copy of attached FCA to get soft copy of drawings @ manojy@bhel.in and rahuls@bhel.in and sagargupta@bhel.in and rkrahi@bhel.in</p>									
16.	Make in India & MSE Purchase Preference guidelines:	<p>Make in India circular Ref. No. P-45021/2/2017-PP (BE-II) dtd. 04/06/2020 and subsequent orders shall be applicable for this procurement and only Class-I local supplier & Class-II local suppliers shall be eligible to bid in procurement. Purchase preference shall be given as per applicable Make in India guidelines and as per functionalities enabled on GeM portal.</p>									
17.	Packing	<p>Each item must be tagged with same description & Qty. as in Vendor Packing List. Kindly confirm.</p>									
		<p>Please ensure proper and sturdy packing suitable for handling at site or during transportation up to site in healthy condition.</p>									
18.	Penalty / LD Clause	<p>LD shall be as per clause no. 15 (iii) of General terms and conditions on GeM 4.0 (Version 1.1).</p>									
		<p>The date of LR (Lorry Receipt) would be treated as the date of delivery for penalty purposes.</p>									
19.	Payment Terms	<p>The payment term shall be done after issue of consignee receipt-cum acceptance certificate (CRAC) as per the below details:</p> <table border="1"> <thead> <tr> <th>Type of Bidder</th> <th>Payment Terms (Number of Days)</th> </tr> </thead> <tbody> <tr> <td>Micro & Small Enterprises (MSEs)</td> <td>45 days</td> </tr> <tr> <td>Medium Enterprises</td> <td>60 days</td> </tr> <tr> <td>Non MSME</td> <td>90 days</td> </tr> </tbody> </table>	Type of Bidder	Payment Terms (Number of Days)	Micro & Small Enterprises (MSEs)	45 days	Medium Enterprises	60 days	Non MSME	90 days	
		Type of Bidder	Payment Terms (Number of Days)								
Micro & Small Enterprises (MSEs)	45 days										
Medium Enterprises	60 days										
Non MSME	90 days										
		<p>Subject to submission of 08 Sets of non-discrepant documents along with original MDCC & LR as per terms & conditions of GEM contract.</p>									

20.	Quantity Variation	<p>BHEL reserves the right to cancel tender or reject any or all the quotations without assigning any reasons thereof.</p> <p>BHEL also reserves the right to Increase or decrease the tendered quantities or quantity of individual material code may be dropped as a whole also.</p> <p>Vendors should be prepared to accept order for reduced Quantity without any extra charges. Vendor should also be prepared for giving discount in case of Increase in Quantity.</p> <p>Vendor has to take manufacturing clearance from BHEL before starting manufacturing of material. In case ordered quantity is reduced at the time of manufacturing clearance, then payment shall be made accordingly as per decreased quantity. Kindly confirm.</p>	
21.	Risk Purchase	<p>In case of abnormal delays (beyond the maximum late delivery period as per LD clause) in supplies / defective supplies or non-fulfilment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material from elsewhere / alternative source at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract or under General Law. Kindly confirm.</p>	
22.	Action against Bidders / vendor / supplier / contractor in case of default	<p>In order to protect the commercial interests of BHEL, BHEL shall take action against supplies / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc.</p> <p>Suspension of Business Dealings could be in the form of “Hold” or “Banning” a supplier/ contractor or a bidder and shall be as per “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” available at BHEL’s website “https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors”</p>	

SPECIAL NOTE FOR BIDDERS:

Following documents are an integral part of this tender enquiry and endorsed copies of these documents (duly signed and stamped on each page, as a token of acceptance) are to be uploaded along with offer on GeM procurement portal.

1. Please submit signed & Stamped copy (each page) of duly filled of confirmation column of “Buyers Specific Terms & Conditions (Annexure-B)” and its clause wise supporting documents where required.
2. Please submit signed & stamped copy (each page) of PQR documents with proper filled information and related supporting documents as mentioned in PQR.
3. Please submit signed & stamped copy (each page) of FCA documents for obtaining BHEL drawing from BHEL for subject NIT with proper filled information and related supporting documents as mentioned in FCA.
4. Signed & Stamped copy (each page) of Standard Quality Plan (SQP) from bidder.

Pre-Qualification Requirements for “Item Name: Duct Section and Steam Distribution Manifold”
Projects: North Karanpura

Sl. No.	Pre-qualification requirements	Vendor's Response
1	Bidder/ Vendor should have manufactured and supplied Ducts/Rolled Cylindrical Sections as per following details: i) Minimum 72 Tons in not more than two orders (in one financial year) ii) Size: Diameter-Minimum 1300 NB Thickness-Minimum 8 mm iii) Date of supply of each order should not be earlier to 7 years from the enquiry date.	
2	In support of the above Clause 1, Bidder /vendor to submit following documents. i) Un-priced copy of purchase order. ii) Internal quality documents or dispatch documents duly signed and stamped. iii) Drawing /Documents stating/establishing the item details and quantity.	

Note:

1. Against vendor's replies, BHEL reserves the right to ask for more information / documents/clarifications.
2. Vendor's offer shall not be considered if vendor fails to furnish the document / information / clarifications as mentioned above or vendor doesn't meet the acceptance criteria (mentioned above from sl. no. 1 to 2).
3. In case of information/data furnished by the vendor found false/incorrect, BHEL reserves the right to reject their offer for the above item.

(Sign & Seal)

INDENT No. - 20221603 dt. 06-10-2022

PRE QUALIFICATION REQUIREMENTS for DUCTS/ ROLLED CYLINDRICAL SECTIONS

1. Bidder/Vendor should have manufactured and supplied Ducts/ Rolled Cylindrical Sections as per following details:
 - i) Minimum 72 Tons in not more than two orders (in one financial year).
 - ii) Size:
Diameter - Minimum 1300NB
Thickness - Minimum 8mm
 - iii) Date of supply for each order should not be earlier to 7 years from the enquiry date.
2. In support of the above Clause 1, Bidder/Vendor to submit following documents:
 - i) Un-priced copy of Purchase Order.
 - ii) Internal quality documents or dispatch documents duly signed and stamped.
 - iii) Drawing /Documents stating/ establishing the item details and quantity.

L.S.P. + J
06-10-2022
(Lokesh Singh Pangtey)
Manager/HXE

Axay Kumar
06/10/2022
(Axay Kumar)
Manager/HXE

Naveen
06/10/22
(Naveen Prakash)
AGM/HXE

Manufacturer name & Address		Manufacturing Quality Plan					PROJECT : North Karanpura (3 X 660 MW) PACKAGE : Air Cooled Condenser (ACC) CONTRACT NO:-4410-001-110 PO. NO. : MAIN SUPPLIER: BHEL, Haridwar					CAT-1			
ITEM: Misc. Fab. Items		QAP No.: QA/BI/QP/ACC/DUCT, Rev: 00			Date:- 02.12.2021		SUBSYSTEM : Main Duct, Distribution Duct, Condensate Collection Duct. Drawing No :- As per PO								
Sl.No.	COMPONENTS/ OPERATION	CHARACTERISTICS/ CHECK	CLASS	TYPE/ METHOD OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	Acceptance Norms	Format of Record			Agency	Remarks		
					M	C/N			9	D*	M	C	N		
A	RAW MATERIAL														
A1	Structural Steel, Section, Bars etc.	Dimension	Major	Measurement	100%				IR		P	V	V	Co-related MTC to be submitted for review. Refer note 1 and 2 Direct procurement from NTPC approved sources.	
		Chemical Composition	Major	Lab. Test	1/Heat		Approved Drg / Tech Spec.	Approved Drg / Tech Spec.	TC	√	P	V	V		
		Mechanical Properties	Major	Lab. Test	1/Heat				TC	√	P	V	V		
		Internal Flaw (UT On Plate > 40 mmThk)	Major	UT Report	100%			ASTM A578 level B-52	UT Report	√	P	V	V		
B	INSPECTION-IN PROCESS														
B.1	Marking, Cutting and Preparation	Completeness	Major	Visual and Measurement	100%				IR		P	V	V		
		Dimension	Major	Measurement	Random				IR		P	V	V		
B.2	Rolling and Fit-up	Rolling Process	Major	Visual and Measurement	100%				IR		P	V	V		
		Edge Preparation	Major	Visual	100%		Approved Drg / Tech Spec.	Approved Drg / Tech Spec.	IR		P	V	V		
		Fit-up	Major	Visual	100%				IR		P	V	V		
B.3	Welding	Dimensions	Major	Measurement	100%	100%		ASME Sec IX	Record	√	P	V	V	WPS Shall be approved by BHEL & Welders qualified by BHEL or BHEL Appointed TPIA like BVQL, Loydies. TUV Shall be deployed for welding. If lifting lugs are to be welded to ducts for site erection, 100% DPT will be carried out for even fillet weld	
		WPS, PQR, WPQ	Major	Review	100%			Approved Drg / Tech Spec.	IR	√	P	V	V		
		Size	Major	Measurement	100%				IR	√	P	V	V		
		Weld Defects							IR	√	P	V	V		
		i) Butt Weld	Major	UT	10%	10%	ASME SEC XIII DIV. 1 Appendix 12		UT Report	√	P	W	W		
		ii) Fillet Weld	Major	DPT	100%	10%	ASME SEC XIII DIV. 1 Appendix 8		PT Report	√	P	W	W		
		iii) Heat Treatment	Major	DPT	10%	10%	ASME SEC XIII DIV. 1 Appendix 8		PT Report	√	P	W	W		
		iv) Heat Treatment	If Applicable	HEAT Treatment	100%	100%	ASME SEC XIII DIV. 1 Appendix 8		SR Report	√	P	R	R		
C	FINAL INSPECTION	Completeness	Major	Visual				Approved Drg / Tech Spec.	IR	√	P	W	W		
		Dimension	Major	Measurement		10% randomly from offered lot		Approved Drg / Tech Spec.	IR	√	P	W	W	Large Size ducts shall be sent to site in parts after rolling and fit up shall be done at site by BHEL/HAC/ Other erection contractor. The checks random 10% witness for trial assembly at shop accordingly.	
		Marking	Major	Visual				Approved Drg / Tech Spec.	IR	√	P	W	W		
		Identification	Major	Visual				Approved Drg / Tech Spec.	IR	√	P	W	W		
D	TRIAL ASSEMBLY of Red Branch, Transition Ducts.	Dimensions	Major	Visual & Measurement	100%	10%		Approved Drg/Tech. Spec.	IR	√	P	W	W		
		Marking	Major						IR	√	P	W	W		
E	SURFACE PREP, PACKING AND	Visual & Measurement	Major	Random	100%			Approved Drg./Tech.	Approved Drg./Tech.	IR	√	P	V	V	Refer Note-03 for Packing and Transportation

SEND - RECORDS IDENTIFICATION WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN DOCUMENTATION. *M- MANUFACTURER/ SUB-SUPPLIER, C- MAIN SUPPLIER, N- NTPC, P- PERFORM, W- WITNESS AND V- VERIFICATION AS APPROPRIATE. CHP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"

Signature: _____ Date: 2018.10.01 12:15:15 +05'30'

Digitally signed by Sugandh Agarwal Date: 2018.10.01 12:15:15 +05'30'

Note-1 : Rolled sections shall be of grade designation E250 Quality A/BR semi killed/killed conforming to IS 2062. All steel plates shall be of grade designation E250, Quality BR. (fully killed), conforming to IS 2062 and shall pass the impact test value at room temperature. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be 100% ultrasonically tested as per ASTM-A578 level B-S2. (FOR MILD STEEL)

Note-2 : Rolled sections shall be of grade designation E350 Quality BO (Fully Killed) conforming to IS 2062. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be ultrasonically tested as per ASTM-A572 level B-S2. (FOR MEDIUM AND HIGH TENSILE STEEL)

Note-3 : Proper Locking of circular Duct parts shall be ensured in such a way that curvature is intact during transportation and handling at site.

FOR NTPC USE REVIEWED BY APPROVED BY APPROVAL SEAL

Note:- 4) All the guide vanes will be dispatched to site in welded condition.

Note:- 5) Temporary stiffener must be welded in the duct to avoid deformation in the duct material while transportation at the site.


Note:- 6) Vendor to ensure compliance of attached check list. Clauses (as applicable) shall be endorsed by both i.e. TPIA and respective vendor during inspection activities at vendor works.


All material of construction shall be as per approved drawing / data sheet meeting NTPC technical specification requirements.

CHECK LIST

Name of item:
 Drawing no.:
 Name of vendor:
 Date and Place of inspection:

Sl. No.	Characteristics / Checks (as applicable)	(Yes/No)		Remarks
		Vendor	TP/A	
1.	Are all dimensions of drawing checked?			
2.	Are technical requirements mentioned in drawing complied?			
3.	Is NDT performed and found OK?			
4.	Is soundness of weld seams (subjected to leakage test at site) ensured? <ul style="list-style-type: none"> • Weld seam of ring with header pipe • Weld seam between tube bundle and tube sheet 			
5.	Is weld edge made as per drawing?			
6.	Are stiffeners / supports provided for maintaining shape of large diameters items?			
7.	Are sizes of different welding as per drawing?			
8.	Is any bulging seen in fan ring (FRP) material?			
9.	Are holes size and their spacing as per drawing?			
10.	Are profiles of segments as per drawing (e.g. coplanar or as per drawing)?			
11.	Is assembly complete as per drawing?			
12.	Is chequered plate bend as per drawing?			
13.	Are items identified?			


 S. H. R. S. H. R. S.
 (SHEI, HSR)


 K. R. S. H. R. S.
 (K R Support)

(Signature of Vendor)

(Signature of TP/A)



Reference: CC110:24322

Date:06-10-18

From:	O.P. OBEROI AGM	To:	BHEL-HARIDWAR M/S BHEL-HARIDWAR
		CC:	- -
SUBJECT : NKSTPP, STEAM TURBINE GENERATOR			
Please find enclosed following drawings/documents for necessary action at your end as indicated in purpose code.			
VENDOR DRG NO:	BHEL		
NTPC DRG NO:	4410-001-110-QVM-Q-398		
REVISION NO:	00		
DRG TITLE:	GAP FOR STREAM DISTRIBUTION MANIFOLD FOR ACC NORTH KARANPURA UNIT-2		
APP CATEGORY:	IV		
RELEASE DATE:	06-10-18		
COMMENTS:	Approved in Cat-1 with minor comment.		



Engineering Division
ISO 9001:2008 Certified

उद्योगिकी कार्यालय परिसर, प्लॉट नं. - ए, 8ए, सेक्टर-24, पॉस्ट बॉक्स नं. - 13, नोएडा (उ.प्र.) पिन-201 307
टेलिफोन नं. - 0120-2410333, 2410116 फॉक्स-0120-2410136, 2410137
पंजीकृत कार्यालय: एन टी पी सी लिमिटेड, क्षेत्रीय कार्यालय, 7 इंस्टीट्यूशनल एरिया, लोधा रोड, नई दिल्ली-110 003
टेलिफोन नं. - 011-24361018 फॉक्स-011-24361018, वेबसाइट: www.ntpc.co.in
ENGINEERING OFFICE COMPLEX, Plot No: A-8A, Sector-24, Post Box No: 13, Noida (UP), Pin-201 307
Telephone No: 0120-2410333, 2410116 Fax-0120-2410136, 2410137
Registered Office: NTPC Bhawan, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi-110 003
Telephone No: 011-24360100 Fax-011-24361018, Website: www.ntpc.co.in

Sl.No.	COMPONENTS/ OPERATION	CHARACTERISTICS/ CHECK	CLASS	TYPE/ METHOD OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	Acceptance Norms	Format of Record			Agency	Remarks				
					M	C/N			9	D*	M			C	N		
<p>Manufacturing Quality Plan</p> <p>PROJECT : Steam Ducts-A/c (3 x 660MW) North Karanpura Super Thermal Power Project PACKAGE : Air Cooled Condenser (ACC) CONTRACT NO:- HAC/IND/ACC/NKP/014 Dt.: 22.08.2018 PO. NO. : MAIN SUPPLIER: Harbin Air Conditioning Co. Ltd.</p>																	
Metalfab Hightech Pvt. Ltd. E-21-25 & 33 B/2 M.I.D.C. Industrial Area, Hingna Road, Nagpur- 440 028.		ITEM: Misc. Fab. Items SUBSYSTEM : Main Duct, Distribution Duct, Condensate Collection Duct. Drawing No. :- As per ACC GA			GAP No.: MF/QAP/HAC/18/01 REV.-00		Date: 10.08.2018 Page No. 1 of 1										
1	2	3	4	5	M	C/N	7	8	9	D*	M	C	N	11			
A	RAW MATERIAL																
A1	Structural Steel, Section, Bars etc.	Dimension Chemical Composition Mechanical Properties Internal Flaw (UT On Plate > 40 mmThk)	Major Major Major Major	Measurement Lab Test Lab Test UT Report	100% 1/Heat 1/Heat 100%		Approved Drg/ Tech.Spec. Approved Drg/ Tech.Spec. ASTM A578 level B-52	Approved Drg / Tech Spec. Approved Drg / Tech Spec. UT Report	IR TC TC	✓ ✓	P P P	V V V	V V V	Co-related MTC to be submitted for review. Refer note 1 and 2 Direct procurement from NTPC approved sources.			
B	INSPECTION-IN PROCESS																
B.1	Marking, Cutting and Preparation	Completeness Dimension	Major Major	Visual and Measurement Measurement	100% Random				IR IR		P P	V V	V V				
B.2	Rolling and Fit-up	Rolling Process Edge Preparation Fit-up	Major Major Major	Visual and Measurement Visual Visual	100% 100% 100%		Approved Drg / Tech.Spec. Approved Drg / Tech.Spec.	Approved Drg / Tech Spec. Approved Drg / Tech Spec.	IR IR IR		P P P	V V V	V V V				
B.3	Welding	Dimensions WPS, PQR, WPQ Size Weld Defects i) Butt Weld ii) Fillet Weld iii) Heat Treatment	Major Major Major Major Major Major Major	Measurement Review Measurement UT DPT DPT HEAT Treatment	100% 100% 100% 10% 100% 100% 100%	100% 100% 100% 10% 10% 100%	ASME Sec IX Approved Drg / Tech.Spec. ASME SEC XIII DIV 1 Appendix 12 ASME SEC XIII DIV 1 Appendix 8 ASME SEC XIII DIV 1 Appendix 8 ASME SEC XIII DIV 1 Appendix 8	Record IR UT Report PT Report PT Report SR Report	✓ ✓ ✓ ✓ ✓ ✓ ✓	P P P P P P P	V V V W W W R	V V V V V V R	WPS Shall be approved by BHEL & Welders qualified by BHEL or BHEL Appointed TPIA like BVQL, Lloydes, TUV Shall be deployed for welding If lifting lugs are to be welded to ducts for site erection, 100% DPT will be carried out for even fillet weld				
C	FINAL INSPECTION	Dimension Weld Making Identification Orientation	Major Major Major Major	Visual Measurement Visual Visual	100% 100% 100% 100%	10% randomly from offered lot	Approved Drg / Tech.Spec. Approved Drg / Tech.Spec. Approved Drg / Tech.Spec. Approved Drg / Tech.Spec.	IR IR IR IR	✓ ✓ ✓ ✓	P P P P	W W W W	W W W W	Large size ducts shall be sent to site in parts after rolling and fit-up shall be done at site by BHEL / HAC/ Other erection contractor. The checks random 10% witness for trial assembly at shop accordingly				
D	TRIAL ASSEMBLY of Red Branch, Transition Ducts.	Dimensions Weld Marking	Major Major	Visual & Measurement Visual	100% 100%	10%	Approved Drg/Tech. Spec.	IR	✓	P	W	W	W				
E	SURFACE PREP PACKING AND NTPC EOC	Dimensional & Measurement	Major	Random	100%		Approved Drg /Tech.	Approved Drg /Tech.	IR	✓	P	V	V	Refer Note-03 for Packing and Transportation			
<p>REVISIONS: *RECORDS, IDENTIFICATION WITH "TICK" (✓) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN DOCUMENTATION. **M:- MANUFACTURER/ SUB-SUPPLIER, C- MAIN SUPPLIER, N- NTPC, P PERFORM, W- WITNESS AND V- VERIFICATION AS APPROPRIATE, CHP: NTPC SHALL IDENTIFY IN COLUMN "N" AS "W"</p>																	
MFD SUB SUPPLIER									FOR NTPC USE			REVIEWED BY		APPROVED BY		APPROVAL SEAL	

Note-1 : Rolled sections shall be of grade designation E250 Quality A/BR semi killed/killed conforming to IS 2062. All steel plates shall be of grade designation E250, Quality BR (fully killed), conforming to IS 2062 and shall pass the impact test value at room temperature. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be 100% ultrasonically tested as per ASTM-A578 level B-S2. (FOR MILD STEEL)

Note-2 : Rolled sections shall be of grade designation E350 Quality BO (Fulley Killed) conforming to IS 2062. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be ultrasonically tested as per ASTM-A572 level B-S2 (FOR MEDIUM AND HIGH TENSILE STEEL)

Note-3 : Proper Locking of circular Duct parts shall be ensured in such a way that curvature is intact during transportation and handling at site.



Signature Not Verified by Samir Kumar
 Date: 2018.10.06
 Time: 12:43:16 IST
 Location: NTPC EOC
 Reason: CAI IV

Digitally signed by Sugandh Agarwal
 Date: 2018.10.01 12:15:15 +05'30'

QP no:4410-001-110-QVM-Q-398

Note:- 4) All the guide vanes will be dispatched to site in welded condition.
 Note:- 5) Temporary stiffener must be welded in the duct to avoid deformation in the duct material while transportation at the site.
 Note:- 6) Vendor to ensure compliance of attached check list. Clauses (as applicable) shall be endorsed by both i.e. TPIA and respective vendor during inspection activities at vendor works.

All material of construction shall be as per approved drawing / data sheet meeting NTPC technical specification requirements.

CHECK LIST

Name of item:

Drawing no.:


Name of vendor:

Date and Place of inspection:

Sl. No.	Characteristics / Checks (as applicable)	(Yes/No)		Remarks
		Vendor	TP/A	
1.	Are all dimensions of drawing checked?			
2.	Are technical requirements mentioned in drawing complied?			
3.	Is NDT performed and found OK?			
4.	Is soundness of weld seams (subjected to leakage test at site) ensured? <ul style="list-style-type: none"> • Weld seam of ring with header pipe • Weld seam between tube bundle and tube sheet 			
5.	Is weld edge made as per drawing?			
6.	Are stiffeners / supports provided for maintaining shape of large diameters items?			
7.	Are sizes of different welding as per drawing?			
8.	Is any bulging seen in fan ring (FRP) material?			
9.	Are holes size and their spacing as per drawing?			
10.	Are profiles of segments as per drawing (e.g. coplanar or as per drawing)?			
11.	Is assembly complete as per drawing?			
12.	Is chequered plate bend as per drawing?			
13.	Are items identified?			



 Asher, HMR
 27/12/2011



 TP/A
 27/12/2011

(Signature of Vendor)

(Signature of TP/A)



एनटीपीसी लिमिटेड

(भारत सरकार का उद्यम)

NTPC Limited

(A Govt. of India Enterprise)

(Formerly National Thermal Power Corporation Ltd.)

केन्द्रीय कार्यालय नोएडा

Corporate Centre NOIDA

Reference: CC110:32456

Date:04-05-22

From:	Ayaskanta Jena AGM	To:	BHEL-HARIDWAR M/S BHEL-HARIDWAR
		CC:	- - -
SUBJECT : NKSTPP, STEAM TURBINE GENERATOR			
Please find enclosed following drawings/documents for necessary action at your end as indicated in purpose code.			
VENDOR DRG NO:	BHEL		
NTPC DRG NO:	4410-001-110-QVM-Q-398B		
REVISION NO:	02		
DRG TITLE:	QP FOR ACC DUCT STREAM DISTRIBUTION MANIFOLD (M/s R S Thermotech)		
APP CATEGORY:	IV		
RELEASE DATE:	04-05-22		
COMMENTS:	Endorsed in Cat-I.		



Engineering Division
ISO 9001:2008 Certified

अभियांत्रिकी कार्यालय परिसर, प्लॉट नं.- ए 8ए, सेक्टर-24, पोस्ट बॉक्स नं.- 13, नोएडा (उ प्र) पिन-201 307

टेलिफोन नं.- 0120-2410333, 2410116 फैक्स-0120-2410136, 2410137

पंजीकृत कार्यालय: एनटीपीसी भवन, स्कोप कॉम्प्लेक्स, 7 इंस्टीट्यूशनल एरिया, लोधी रोड, नई दिल्ली-110 003

टेलिफोन नं.- 011-24361018 फैक्स-011-24361018, वेबसाइट: www.ntpc.co.in

ENGINEERING OFFICE COMPLEX, Plot No: A-8A, Sector-24, Post Box No: 13, Noida (UP), Pin-201 307

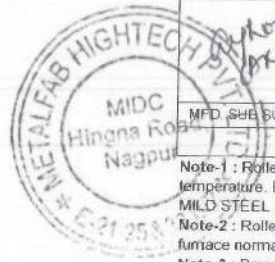
Telephone No: 0120-2410333, 2410116 Fax-0120-2410136, 2410137

Registered Office: NTPC Bhawan, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi-110 003

Telephone No: 011-24360100 Fax-011-24361018, Website: www.ntpc.co.in

M METALFAB		Manufacturing Quality Plan					PROJECT : Steam Ducts-A/c (3 x 660MM) North Karanpura Super Thermal Power Project PACKAGE : Air Cooled Condenser (ACC) CONTRACT NO:- HAC/IND/ACC/NKP/014 Dt.: 22.08.2018 PO. NO. : MAIN SUPPLIER: Harbin Air Conditioning Co. Ltd.								
Metalfab Hightech Pvt. Ltd. E-21-25 & 33 B/2 M.I.D.C. Industrial Area, Hingna Road, Nagpur-440 028.		ITEM: Misc. Fab. Items	QAP No.: MF/QAP/HAC/18/01	REV.-00	Date: 10.08.2018 Page No. 1 of 1										
SUBSYSTEM : Main Duct, Distribution Duct, Condensate Collection Duct. Drawing No. - As per ACC GA		CHARACTERISTICS/ CHECK		CLASS	TYPE/ METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	Acceptance Norms	Format of Record		Agency		Remarks		
Sl.No.	COMPONENTS/ OPERATION	3		4	5	M	C/N	7	8	9	D*	M	C	N	11
A	RAW MATERIAL														
A1	Structural Steel, Section, Bars etc.	Dimension	Major	Measurement	100%			Approved Drg / Tech Spec.	Approved Drg / Tech Spec.	IR		P	V	V	Co-related MTC to be submitted for review. Refer note 1 and 2 Direct procurement from NTPC approved sources.
		Chemical Composition	Major	Lab Test	100%					TC		P	V	V	
		Mechanical Properties	Major	Lab Test	100%					TC		P	V	V	
		Internal Flaw (UT On Plate > 40 mm Thk)	Major	UT Report	100%			ASTM A578 level B-S2		UT Report		P	V	V	
B	INSPECTION-IN PROCESS														
B.1	Marking, Cutting and Preparation	Completeness	Major	Visual and Measurement	100%					IR		P	V	V	WPS Shall be approved by BHEL & Welders qualified by BHEL or BHEL Appointed TPIA like BVQL, Lloydes, TUV Shall be deployed for welding. If lifting lugs are to be welded to ducts for site erection, 100% DPT will be carried out for even fillet weld.
		Dimension	Major	Measurement	Random					IR		P	V	V	
B.2	Rolling and Fit-up	Rolling Process	Major	Visual and Measurement	100%			Approved Drg / Tech Spec.	Approved Drg / Tech Spec.	IR		P	V	V	
		Edge Preparation	Major	Visual	100%					IR		P	V	V	
		Fit-up	Major	Visual	100%					IR		P	V	V	
		Dimensions	Major	Measurement	100%	100%				IR		P	V	V	
B.3	Welding	WPS, PQR, WPQ	Major	Review	100%			ASME Sec IX		Record		P	V	V	
		Size	Major	Measurement	100%			Approved Drg / Tech Spec.		IR		P	V	V	
		Weld Defects													
		i) Butt Weld	Major	UT	10%	10%		ASME SEC XIII DIV 1 Appendix 12		UT Report		P	W	V	
		ii) Fillet Weld	Major	DPT	100%	10%		ASME SEC XIII DIV 1 Appendix 8		PT Report		P	W	V	
		iii) Heat Treatment	If Applicable	HEAT Treatment	100%	100%		ASME SEC XIII DIV 1 Appendix 8		SR Report		P	R	R	
C	FINAL INSPECTION	Completeness	Major	Visual		10%		Approved Drg / Tech Spec.		IR		P	W	V	Large size ducts shall be sent to site in parts after rolling and fit-up shall be done at site by BHEL/ HACC/ Other erection contractor. The checks random 10% witness for that assembly at shop accordingly
		Dimension	Major	Measurement	100%	10%		Approved Drg / Tech Spec.		IR		P	W	W	
		Marking	Major	Visual		10%		Approved Drg / Tech Spec.		IR		P	W	W	
		Identification	Major	Visual		10%		Approved Drg / Tech Spec.		IR		P	W	V	
D	TRIAL ASSEMBLY of Red Branch, Transition Ducts.	Dimension	Major	Visual & Measurement	100%	10%		Approved Drg/Tech Spec.		IR		P	W	W	
E	SURFACE PREP, PACKING AND NTPC EOC	Dimension & Measurement	Major	Random	100%			Approved Drg /Tech.	Approved Drg /Tech.	IR		P	V	V	Refer Note 03 for Packing and Transportation

Certification signature by Sachin Kumar
 samindia@ntpc.co.in
 Date: 10.08.2018, 10:06 AM
 Location: CAT IV



Note-1 : Rolled sections shall be of grade designation E250 Quality A/BR semi killed/killed conforming to IS 2062. All steel plates shall be of grade designation E250, Quality BR, (fully killed), conforming to IS 2062 and shall pass the impact test value at room temperature. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be 100% ultrasonically tested as per ASTM-A578 level B-S2. (FOR MILD STEEL)
 Note-2 : Rolled sections shall be of grade designation E350 Quality BO (Fully Killed) conforming to IS 2062. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be ultrasonically tested as per ASTM-A572 level B-S2. (FOR MEDIUM AND HIGH TENSILE STEEL)
 Note-3 : Proper Locking of circular Duct parts shall be ensured in such a way that curvature is intact during transportation and handling at site.

Digitally signed by Sugandh Agarwal
 Date: 2018.10.01 12:15:15 +05'30'

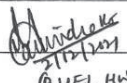
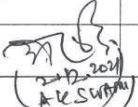
QP no:4410-001-110-QVM-Q-398

All material of construction shall be as per approved drawing / data sheet meeting NTPC technical specification requirements.

CHECK LIST

Name of item:
 Drawing no.:
 Name of vendor:
 Date and Place of inspection:

Sl. No.	Characteristics / Checks (as applicable)	(Yes/No)		Remarks
		Vendor	TPIA	
1.	Are all dimensions of drawing checked?			
2.	Are technical requirements mentioned in drawing complied?			
3.	Is NDT performed and found OK?			
4.	Is soundness of weld seams (subjected to leakage test at site) ensured? <ul style="list-style-type: none"> • Weld seam of ring with header pipe • Weld seam between tube bundle and tube sheet 			
5.	Is weld edge made as per drawing?			
6.	Are stiffeners / supports provided for maintaining shape of large diameters items?			
7.	Are sizes of different welding as per drawing?			
8.	Is any bulging seen in fan ring (FRP) material?			
9.	Are holes size and their spacing as per drawing?			
10.	Are profiles of segments as per drawing (e.g. coplanar or as per drawing)?			
11.	Is assembly complete as per drawing?			
12.	Is chequered plate bend as per drawing?			
13.	Are items identified?			


 (BHEL, HWR)

 (A.K. SINGH)

(Signature of Vendor)

(Signature of TPIA)



एन टी पी सी लिमिटेड

(भारत सरकार का उद्यम)

NTPC Limited

(A Govt. of India Enterprise)

(Formerly National Thermal Power Corporation Ltd.)

केन्द्रीय कार्यालय नोएडा

Corporate Centre NOIDA

Reference: CC110:28724

Date:29-10-19

From:	O.P. OBEROI AGM	To:	BHEL-HARIDWAR M/S BHEL-HARIDWAR
		CC:	- - -
SUBJECT : NKSTPP, STEAM TURBINE GENERATOR			
Please find enclosed following drawings/documents for necessary action at your end as indicated in purpose code.			
VENDOR DRG NO:	BHEL		
NTPC DRG NO:	4410-001-110-QVM-Q-398A		
REVISION NO:	01		
DRG TITLE:	QP FOR ACC DUCT STREAM DISTRIBUTION MANIFOLD (M/s ATV PROJECTS INDIA LTD MATHURA)		
APP CATEGORY:	IV		
RELEASE DATE:	29-10-19		
COMMENTS:	Approved in Cat-I.		



Engineering Division
ISO 9001:2008 Certified

अभियंत्रिकी कार्यालय परिसर, प्लॉट नं.- ए 8ए, सेक्टर-24, पोस्ट बॉक्स नं.- 13, नोएडा (उ प) पिन-201 307

टेलिफोन नं.- 0120-2410333, 2410116 फैक्स-0120-2410136, 2410137

पंजीकृत कार्यालय: एनटीपीसी भवन, स्कोप कॉम्प्लेक्स, 7 इन्स्टीट्यूशनल एरिया, लोधी रोड, नई दिल्ली-110 003

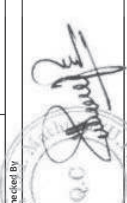
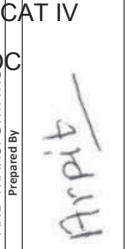


टेलिफोन नं.- 011-24361018 फैक्स-011-24361018, वेबसाइट: www.ntpc.co.in

ENGINEERING OFFICE COMPLEX, Plot No: A-8A, Sector-24, Post Box No: 13, Noida (UP), Pin-201 307

Telephone No: 0120-2410333, 2410116 Fax-0120-2410136, 2410137

Registered Office: NTPC Bhawan, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi-110 003

Telephone No: 011-24360100 Fax-011-24361018, Website: www.ntpc.co.in

BH&L Approved vendor		Quality Assurance Plan						Project Details					
ATV Projects India Ltd. Delhi-Agra Road, Post: Krishna Nagar Post Box No.71, Mathura-281 004 (U.P.)		ITEM: Steam Distribution Manifold						Date:	12.10.2019				
QAP No.: ATV/QC/QAP/19/06, Rev-01		QAP No.: ATV/QC/QAP/19/06, Rev-01						Page 1 of 1	Main Supplier: BHEL Supplier - Harbin Air Conditioning Co. Ltd.				
Serial No	2	3	4	5	6	7	8	9	10	11	12	13	
1	COMPONENTS/OPERATION	CHARACTERISTICS/ CHECK	CLASS	TYPE/METHOD OF CHECK	QUANTUM CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	Agency	M	B	C	Remarks
A	RAW MATERIAL												
A1	Structural Steel, Section, Bars etc.	Dimension Chemical Composition Mechanical Properties Internal Flaw (UT on Plate ≥ 40 mm Thk)	Major Major Major Major	Measurement MTC MTC MTC/IR	100% I/HEAT I/HEAT 100%	Approved Drg/Tech Spec. Approved Drg/Tech Spec. ASTM A578 Level-B	Approved Drg/Tech Spec. Approved Drg/Tech Spec.	MTC MTC MTC/IR	S S S	R R R	R R R	R R R	Co-related MTC to be submitted for review. Direct procurement from NTPC approved sources. *UT to be done if not mentioned in Mill T.C for Thk.≥ 12mm
B	INSPECTION IN-PROCESS												
B1	Marking, Cutting and Preparation	Completeness Dimension Rolling Process Edge Preparation Fit-up Dimension	Major Major Major Major Major	Visual & Measurement Measurement Visual & Measurement Visual Visual Measurement	100% Random 100% 100% 100%	Approved Drg/Tech Spec.	Approved Drg./Tech Spec.	IR IR NA NA NA IR	P P P P P	R R R R R	R R R R R	R R R R R	WPS shall be approved by BHEL & Welders qualified by BHEL or its TPIA shall be deployed for welding. If lifting lugs are welded to ducts for site erection, 100% IPT will be carried out for even fillet weld.
B2	Rolling and Fit-up	Dimension	Major	Measurement	100%	Approved Drg./Tech Spec.	Approved Drg./Tech Spec.	Record	P	R	R	R	
B3	Visual examination of all welds seams	Size Weld Defects i) Butt Weld ii) Fillet Weld	Major Major Major Major	Review Measurement MT DPT RT DPT	100% 100% 100%/10% 100%/10% As per Drg. 100%/10%	ASME Sec IX Approved Drg./Tech Spec.	ASME SEC VII Div.1 App.6 ASME SEC V Art.4 ASME SEC VIII Div.1 U-1 ASME SEC VIII Div.1 U-2 ASME SEC VIII Div.1 U-5 ASME SEC VIII Div.1 App.8	IR IR MT Report PT Report RT Report PT Report	P P P P P P	R R R R R R	R R R R R R	R R R R R R	Where MPI is not possible RT Films to be review
C	POST WELD HEAT TREATMENT (IF ANY)												
C1	PWHT	Treatment	Major	Visual	100%	Approved Drg/Tech Spec.	Approved Drg./Tech Spec.	SR Graph	P	R	R	R	
D	FINAL INSPECTION												
D1	FINAL INSPECTION	Implementation Measurement Visual Visual	Major Major Major Major	Visual Measurement Visual Visual	100%/10% from offered lot	Approved Drg./Tech Spec. Approved Drg./Tech Spec. Approved Drg./Tech Spec. Approved Drg./Tech Spec.	Approved Drg./Tech Spec.	IR IR IR IR	P P P P	W W W W	R R R R	R R R R	
E	TRIAL ASSEMBLY (IF ANY)												
E1	ASSEMBLY	Visual & Measurement	Major Major	Visual & Measurement	100%/10% from offered lot	Approved Drg./Tech Spec.	Approved Drg./Tech Spec.	IR	P	W	W	W	
F	SURFACE PREPARATION & PAINTING												
F1	SURFACE PREPARATION, PAINTING AND TRANSPORTATION	Measurement	Major	Random	100%	Approved Drg./Tech Spec.	Approved Drg./Tech Spec.	IR	P	W	R	R	to be check
<p>Checked By: </p> <p>Prepared By: </p> <p>QC Engineer: </p> <p>Signature: </p> <p>Date: 2019.10.29 13:05:11 IST</p> <p>Reason: CAT IV</p> <p>Location: NTPC</p> <p>Prepared By: Arpit</p>													
<p>LEGENDS: H- Hold M- Manufacturer/Sub-Manufacturer S- Supplier B- BHEL nominate agency C- Client IR- Inspection Report W- Work Item R- Remarks</p> <p>Name & Sign of Approved Authority, & Seal</p> <p>Note-1: Rolled sections shall be of grade designation E250 Quality A/BR semi killed/killed conforming to IS 2062. All steel plates shall be grade designation E250 Quality BR (fully killed), conforming to IS 2062 and shall pass the impact test value at room temperature. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be 100% ultrasonically tested as per ASTM-A578 Level B-52. (FOR MILD STEEL)</p> <p>Note-2: Rolled sections shall be of grade designation E350 Quality RO (Fully Killed) conforming to IS 2062. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be ultrasonically tested as per ASTM-A572 Level B-52. (FOR MEDIUM AND HIGH TENSILE STEEL).</p> <p>Note-3: Proper locking of circular Duct parts shall be ensured in such a way that curvature is intact during transportation and handling at site.</p>													

Note:- 4) All the guide vanes will be dispatched to site in welded condition.

Note:- 5) Temporary Stiffener must be welded in the duct to avoid deformation in the duct material while transportation at site.

Note:- 6) Vendor to ensure compliance of attached check list. Clauses (as applicable) shall be endorsed by both i.e. TPIA and respective vendor during inspection activities at vendor works.

All material of construction shall be as per approved drawing/datasheet meeting NTPC technical specification requirements.

Doc no: 4410-001-110-QVM-Q398A

Digitally signed by Sugandh Agawal
Date: 2019.10.29 08:26:08 +05'30'

CHECK LIST

Name of item:

Drawing no.:

Name of vendor:

Date and Place of inspection:

Sl. No.	Characteristics / Checks (as applicable)	(Yes/No)		Remarks
		Vendor	TPIA	
1.	Are all dimensions of drawing checked?			
2.	Are technical requirements mentioned in drawing complied?			
3.	Is NDT performed and found OK?			
4.	Is soundness of weld seams (subjected to leakage test at site) ensured? <ul style="list-style-type: none"> • Weld seam of ring with header pipe • Weld seam between tube bundle and tube sheet 			
5.	Is weld edge made as per drawing?			
6.	Are stiffeners / supports provided for maintaining shape of large diameters items?			
7.	Are sizes of different welding as per drawing?			
8.	Is any bulging seen in fan ring (FRP) material?			
9.	Are holes size and their spacing as per drawing?			
10.	Are profiles of segments as per drawing (e.g. coplanar or as per drawing)?			
11.	Is assembly complete as per drawing?			
12.	Is chequered plate bend as per drawing?			
13.	Are items identified?			

(Handwritten Signature)
 21/12/2021
 (BHEL, HWR)

(Handwritten Signature)
 21/12/2021
 (AKS)

(Signature of Vendor)

(Signature of TPIA)



एनटीपीसी लिमिटेड

(भारत सरकार का उद्यम)

NTPC Limited

(A Govt. of India Enterprise)

(Formerly National Thermal Power Corporation Ltd.)

केन्द्रीय कार्यालय नोएडा

Corporate Centre NOIDA

Reference: CC110:32875

Date:16-09-22

From:	Ayaskanta Jena AGM	To:	BHEL-PEM Noida
		CC:	- - -
SUBJECT : NKSTPP, STEAM TURBINE GENERATOR			
Please find enclosed following drawings/documents for necessary action at your end as indicated in purpose code.			
VENDOR DRG NO:	BHEL		
NTPC DRG NO:	4410-001-110-QVM-Q-398C		
REVISION NO:	00		
DRG TITLE:	QP of DUCT & SDM (Vendor M/s AMBABHAVANI)		
APP CATEGORY:	IV		
RELEASE DATE:	16-09-22		
COMMENTS:	Endorsed with minor comment.		



Engineering Division
ISO 9001:2008 Certified

अभियांत्रिकी कार्यालय परिसर, प्लॉट नं.- ए 8ए, सेक्टर-24, पोस्ट बॉक्स नं.- 13, नोएडा (उ प्र) पिन-201 307

टेलिफोन नं.- 0120-2410333, 2410116 फैक्स-0120-2410136, 2410137

पंजीकृत कार्यालय: एनटीपीसी भवन, स्कोप कॉम्प्लेक्स, 7 इंस्टीट्यूशनल एरिया, लोधी रोड, नई दिल्ली-110 003


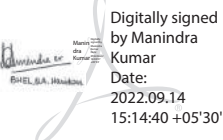

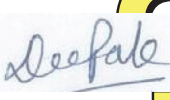
टेलिफोन नं.- 011-24361018 फैक्स-011-24361018, वेबसाइट: www.ntpc.co.in

ENGINEERING OFFICE COMPLEX, Plot No: A-8A, Sector-24, Post Box No: 13, Noida (UP), Pin-201 307

Telephone No: 0120-2410333, 2410116 Fax-0120-2410136, 2410137

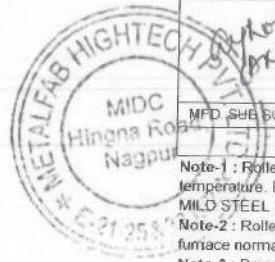
Registered Office: NTPC Bhawan, Scope Complex, 7 Institutional Area, Lodhi Road, New Delhi-110 003

Telephone No: 011-24360100 Fax-011-24361018, Website: www.ntpc.co.in

ENDORSEMENT SHEET FOR QP REFERENCE / STANDARD / FIELD QUALITY PLAN (<u>RQP</u> / SQP/RFQP/SFQP)			
TO BE FILLED IN BY SUPPLIER AT TIME OF SUBMISSION			To be filled in by NTPC
PROJECT NAME	NORTH KARANPURA (3 X 660 MW)	REVIEW & ENDORSEMENT BY NTPC PROJECT SPECIFIC QP NUMBER ALLOTTED	
CONTRACT NO.:	4410-001-110		
MAIN SUPPLIER	BHEL, HEEP, HARIDWAR	QP NO.: 4410-001-110-QVM-Q-398C	
MANUFACTURER WORKS & ADDRESS	M/s Ambabhavani Fab Engineering Works LLP Magarlotta, Tedesara, PO-Somini Dist-Rajnadgaon, Chhattisgarh		
ITEM /EQUIPMENT / SYSTEM/ SUB-SYSTEM DETAILS i.e. MODEL TYPE/SIZE/RATING etc.	ACC DUCT	REV. NO.: 00	DATE: 14.09.2022
APPROVED QP NO.: QP	4410-001-110-QVM-Q-398		
Confirmation by Main Supplier (TICK WHICHEVER APPLICABLE)		<i>(TICK APPLICABLE)</i>	
I. That the item/ component is identical to that considered for QP approval. OR		The QP is endorsed for this project without any change	
II. That there are minor changes in the item/ component with respect to that considered for QP approval, however the same do not affect the contents of QP. OR			
III. That there are minor changes in the item/ component with respect to that considered for QP approval, however the same affect the QP slightly, as indicated below / in attached sheet.			
NOTE: i) All the guide vanes (If applicable) will be dispatched to site in welded conditions. ii) Temporary stiffener must be welded in the duct to avoid deformation in the duct material while transportation at site. iii) During Final inspection, Items shall also be verified for compliance with BHEL checklist for ACC ducts.		<u>DISTRIBUTION OF ENDORSEMENT OF</u> A) RQP/SQP: 1. MAIN SUPPLIER (WITH A COPY OF QP) 2. MANUFACTURER 3. RIO 4. CQA-SPL 5. CQA-O/C 6. NTPC	
 Digitally signed by Manindra Kumar Date: 2022.09.14 15:14:40 +05'30'		 Certification signature Digitally signed <dkjain01@ntpc.co.in> by Manindra Kumar Date: 2022.09.14 15:06:23 +05'30' Reason: CQA O/C Location: NTPC	1. MAIN SUPPLIER (WITH A COPY OF QP) 2. MANUFACTURER 3. RIO 4. CQA-SPL 5. CQA-O/C 6. NTPC
SIGN.: (Main Supplier)	DATE: 14.09.22	SIGN.: (Manufacturer)	DATE: 14.09.2022
		NTPC (Reviewed /Approved by/ Date & Seal)	

M METALFAB		Manufacturing Quality Plan					PROJECT : Steam Ducts-A/c (3 x 660MM) North Karanpura Super Thermal Power Project PACKAGE : Air Cooled Condenser (ACC) CONTRACT NO:- HAC/IND/ACC/NKP/014 Dt.: 22.08.2018 PO. NO. : MAIN SUPPLIER: Harbin Air Conditioning Co. Ltd.							
Metalfab Hightech Pvt. Ltd. E-21-25 & 33 B/2 M.I.D.C. Industrial Area, Hingna Road, Nagpur-440 028.		ITEM: Misc. Fab. Items	QAP No.: MF/QAP/HAC/18/01	REV.-00	Date: 10.08.2018 Page No. 1 of 1									
Sl.No.	COMPONENTS/ OPERATION	CHARACTERISTICS/ CHECK	CLASS	TYPE/ METHOD OF CHECK	QUANTUM OF CHECK		REFERENCE DOCUMENT	Acceptance Norms	Format of Record		Agency			Remarks
1	2	3	4	5	M	C/N	7	8	9	D*	M	C	N	11
A	RAW MATERIAL													
A1	Structural Steel, Section, Bars etc.	Dimension Chemical Composition Mechanical Properties Internal Flaw (UT On Plate > 40 mm Thk)	Major Major Major Major	Measurement Lab Test Lab Test UT Report	100% 100% 100% 100%		Approved Drg / Tech Spec. ASTM A578 level B-S2	Approved Drg / Tech Spec. UT Report	IR TC TC	✓ ✓ ✓	P P P	V V V	V V V	Co-related MTC to be submitted for review. Refer note 1 and 2 Direct procurement from NTPC approved sources.
B	INSPECTION-IN PROCESS													
B.1	Marking, Cutting and Preparation	Completeness Dimension	Major Major	Visual and Measurement Measurement	100% Random				IR IR		P P	V V		
B.2	Rolling and Fit-up	Rolling Process Edge Preparation Fit-up	Major Major Major	Visual and Measurement Visual Visual	100% 100% 100%		Approved Drg / Tech Spec.	Approved Drg / Tech Spec.	IR IR IR		P P P	V V V		
B.3	Welding	Dimensions WPS, PQR, WPQ Size Weld Defects i) Butt Weld ii) Fillet Weld iii) Heat Treatment	Major Major Major Major Major Major Major	Measurement Review Measurement UT DPT DPT HEAT Treatment	100% 100% 100% 10% 100% 100% 100%	100%	ASME Sec IX Approved Drg / Tech Spec. ASME SEC XIII DIV. 1 Appendix 12 ASME SEC XIII DIV. 1 Appendix 8 ASME SEC XIII DIV. 1 Appendix 8 ASME SEC XIII DIV. 1 Appendix 8	Record UT Report PT Report PT Report SR Report	✓ ✓ ✓ ✓ ✓	P P P P P	W W W W R	V V V V R	WPS Shall be approved by BHEL & Welders qualified by BHEL or BHEL Appointed TPIA like BVQL, Lloydies, TUV Shall be deployed for welding. If lifting lugs are to be welded to ducts for site erection, 100% DPT will be carried out for even fillet weld.	
C	FINAL INSPECTION	Dimension Marking Identification Orientation	Major Major Major Major	Visual Measurement Visual Visual	100% 100% 100% 100%	10% randomly from offered lot	Approved Drg / Tech Spec. Approved Drg / Tech Spec. Approved Drg / Tech Spec.	IR IR IR	✓ ✓ ✓	P P P	W W W	W W W		
D	TRIAL ASSEMBLY of Red Branch, Transition Ducts.	Dimension Marking	Major Major	Visual & Measurement Visual	100% 100%	10%	Approved Drg/Tech Spec.	IR	✓	P	W	W	W	Large size ducts shall be sent to site in parts after rolling and fit-up shall be done at site by BHEL/ HAC/ Other erection contractor. The checks random 10% witness for trial assembly at shop accordingly.
E	SURFACE PREP PACKING AND NTPC EOC	Dimension & Measurement	Major	Random	100%		Approved Drg /Tech.	Approved Drg /Tech.	IR	✓	P	V	V	Refer Note 03 for Packing and Transportation

Certification signature by Sachin Kumar
 samindia@ntpc.co.in
 Date: 10.08.2018, 10:06 AM
 Location: CAT IV



Note-1 : Rolled sections shall be of grade designation E250 Quality A/BR semi killed/killed conforming to IS 2062. All steel plates shall be of grade designation E250, Quality BR, (fully killed), conforming to IS 2062 and shall pass the impact test value at room temperature. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be 100% ultrasonically tested as per ASTM-A578 level B-S2. (FOR MILD STEEL)
 Note-2 : Rolled sections shall be of grade designation E350 Quality BO (Fully Killed) conforming to IS 2062. Plates beyond 12mm thickness and upto 40mm thickness shall be normalized rolled. Plates beyond 40mm thickness shall be vacuum degassed furnace normalized and shall also be ultrasonically tested as per ASTM-A572 level B-S2. (FOR MEDIUM AND HIGH TENSILE STEEL)
 Note-3 : Proper Locking of circular Duct parts shall be ensured in such a way that curvature is intact during transportation and handling at site.

Digitally signed by Sugandh Agarwal
 Date: 2018.10.01
 12:15:15 +05'30'

QP no:4410-001-110-QVM-Q-398

All material of construction shall be as per approved drawing / data sheet meeting NTPC technical specification requirements.

CHECK LIST

Name of item:

Drawing no.:

Name of vendor:

Date and Place of inspection:

Sl. No.	Characteristics / Checks (as applicable)	(Yes/No)		Remarks
		Vendor	TPIA	
1.	Are all dimensions of drawing checked?			
2.	Are technical requirements mentioned in drawing complied?			
3.	Is NDT performed and found OK?			
4.	Is soundness of weld seams (subjected to leakage test at site) ensured? <ul style="list-style-type: none"> • Weld seam of ring with header pipe • Weld seam between tube bundle and tube sheet 			
5.	Is weld edge made as per drawing?			
6.	Are stiffeners / supports provided for maintaining shape of large diameters items?			
7.	Are sizes of different welding as per drawing?			
8.	Is any bulging seen in fan ring (FRP) material?			
9.	Are holes size and their spacing as per drawing?			
10.	Are profiles of segments as per drawing (e.g. coplanar or as per drawing)?			
11.	Is assembly complete as per drawing?			
12.	Is chequered plate bend as per drawing?			
13.	Are items identified?			

(Handwritten Signature)
 21/12/2021
 (BHEL, HWR)

(Handwritten Signature)
 21/12/2021
 (AKS)

(Signature of Vendor)

(Signature of TPIA)

Sample Format for Certification under preference to Make in India order

(To be provided from the Statutory Auditor or Cost Auditor of the Company (in case of companies) or from a practicing Cost Accountant or practicing Chartered Accountant (in respect of suppliers other than companies))

Certificate

In line with Government Public Procurement Order No. P-45021/2/2017-PP (BE-II) dated 04.06.2020, we hereby certify that we M/s _____ (supplier name) are local supplier. The percentage of local content in the items _____ offered by us against Enquiry No. _____ is _____% (percentage).

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

We also understand, false declarations will be in breach of the Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law.

Authorised Signatory.

Framework Confidentiality Agreement cum Undertaking

This Agreement made on this the _____ day of (month) _____ 20____ (“Effective Date”) by and between
M/s BHARAT HEAVY ELECTRICALS LIMITED, having registered office at “BHEL House”, Siri Fort, New Delhi – 110049 (India), acting through its _____ Unit (hereinafter may be referred to as “BHEL” or “the Company”).

And

M/s _____ (address) _____
represented by authorized representative Sri _____ (herein after referred to as the “Supplier”).

The Supplier and the Company may, unless the context otherwise requires, hereinafter be collectively referred to as “Parties” or singly as the “Party”.

RECITALS

Whereas, BHEL is engaged in the design, engineering, manufacturing, construction, testing, commissioning and servicing of a wide range of products, systems and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable energy, Oil & Gas and Defence and providing associated services to varied customers in relation to which BHEL/its affiliates own valuable information of a secret and confidential nature.

Whereas the Company may, in connection with Contract(s) (as defined hereunder) placed or to be placed upon the Supplier, or otherwise, from time to time, make available, Technical Information as is defined hereunder.

And Whereas BHEL is willing to provide such Technical Information to the Supplier from time to time and the Supplier understands and acknowledges that such Technical Information is valuable for the Company and as such is willing to protect confidentiality of such information, subject to the terms and conditions set out hereunder.

Now therefore, in view of the foregoing premises and in consideration of the mutual covenants and agreements hereinafter set forth, the Parties agree as under:

1. Definitions:

Unless the context so requires, in this Agreement, the following terms will bear the meaning ascribed to the said term in this clause.

- A. **“Contract”** means the Contract entered into with a Supplier and includes a Purchase Order, or a Work Order for procurement of any goods or for provision of any services.
- B. **“Effective Date”** means the date of this Agreement as mentioned in the preamble of this Agreement.

- C. **“Supplier”** includes a Contractor or a Vendor of the Company whether for supplying of goods or for providing any services under a Contract or both.
 - D. **“Technical Information”** includes Drawings, and/or Product Standards and/or Specifications and/or Corporate / Plant Specifications and/or Technological Process Sheets and/or Technical Data Sheets and/or Jigs & Fixtures and/or Pattern & Dies and/or Special Gauges and/or Tools etc. belonging to or wherein the Company has acquired from a third party a right of user and includes any improvement thereto from time to time whether carried out by the Company or by the Supplier.
 - E. **“Intended Purpose”** means the purpose for which the Technical Information is provided to the Supplier under or in connection with a Contract.
 - F. **“Improvement”** includes any modification made to, or adaptation of, the Technical Information which enhances or is calculated to enhance the performance (whether in terms of effectiveness or in terms of efficiency or both) of the product and/or the service to be provided by the Supplier under a Contract.
2. This Agreement shall come into force/deemed to have come into force, as the case may be, on the Effective Date; or, on the first date when the Technical Information or any part thereof is provided by BHEL to the Supplier; whichever is earlier.
3. **Agreement deemed to be incorporated in each Contract:** Unless and to the extent otherwise stipulated in the Contract, the conditions of this Agreement are deemed to be incorporated in all Contracts which may be entered into between the Company and the Supplier. Further, unless otherwise stipulated, the obligations under this Agreement are and will be independent of the obligations under the Contracts and such obligations of the Supplier hereunder will remain of full effect and validity notwithstanding that the period of validity of the Contracts has expired by efflux of time stipulated therein; or, the contract has been discharged by performance or breach; or, the termination of the Contracts for any reason whatsoever.
4. **Ownership:**
- 4.1 The Company may, from time to time, make available to the Supplier, Technical Information on a non-exclusive basis by way of loan.
 - 4.2 The Supplier acknowledges and agrees that all Technical Information and copies thereof that are or may be provided by the Company to the Supplier, are and shall remain the property of BHEL or that of the concerned entity from whom BHEL has obtained the Technical Information and such Technical Information are and shall constitute trade secrets of the BHEL. Nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any patent, copyright or design or any other intellectual property rights of whatsoever description that subsists or may hereinafter exist in the Technical Information. Furthermore, nothing in this Agreement or in any disclosures made hereunder by or on behalf of the Company shall be construed as granting upon the Supplier any license or rights of use of such patent, copyright or design or any other

intellectual property rights of whatsoever description which may now or hereafter exist in the Technical Information except for use of the Technical Information strictly in accordance with this Agreement and the Contract and/or as directed in writing by the Company, solely for the Intended Purpose under the Contract.

- 4.3 Neither Party is obligated by or under this Agreement to purchase from or provide to the other Party any service or product and that any such purchase/sale of any product and/or service by one Party to the other Party will be governed by the Contract if any, that may be entered into by and between the Company and the Supplier.
- 4.4 The Supplier is/has been made well aware and acknowledges that the Technical Information being/which may be shared with it by the Company has been either generated by the Company by incurring huge investment and cost or obtained from foreign collaborators under Technical Collaboration Agreement (TCA) with stringent confidentiality conditions.
- 4.5 The Supplier agrees and undertakes to adhere to confidentiality requirements as applicable to BHEL under a TCA and also ensure that the confidentiality requirements are adhered to by all its concerned employees or sub-contractors/suppliers (where permitted to be engaged by BHEL). Any damages, losses, expenses of any description whatsoever, arising out of or in connection with a breach of the confidentiality requirements under a TCA owing to any act or omission on the part of the Supplier or its employees or sub-contractors/suppliers that is claimed by a foreign collaborator from the Company shall be wholly borne by the Supplier and it shall keep BHEL fully indemnified in this behalf. The demand by the Company shall be conclusive upon the Supplier who shall thereupon forthwith pay to the Company without demur, dispute or delay the amount as demanded without demanding any further proof thereof.
- 4.6 The Supplier agrees and undertakes that unless so decided and advised by the Company in writing all rights/title to any Improvement to the Technical Information shall vest in the Company. The Supplier undertakes and agrees to inform forthwith to the Company of any such Improvement made to the Technical Information and transfer all drawings/documents or other materials connected with such Improvement to the Company and also agrees to fully cooperate with the Company for protecting the Company's interests in such Improvement in the Technical Information including but not limited to obtaining necessary protection for the intellectual property rights in such improvement, if so desired by the Company. If a question arises whether a modification amounts to Improvement to the Technical Information, the same shall be decided by the Company and such decision shall be final and binding upon the Supplier.

5. Use and Non-Disclosure:

- 5.1 Unless otherwise stipulated by the Company, all Technical Information made available to the Supplier, by the Company shall be treated as Confidential irrespective of whether the same is marked or otherwise denoted to be Confidential or not.

- 5.2 The Supplier undertakes and agrees that the Technical Information in its possession shall be held in strict confidence and will be used strictly in accordance with this Agreement and solely for the Intended Purpose under the Contract. Use of the Technical Information for any other purpose other than Intended Purpose is prohibited.
- 5.3 In particular, the Supplier shall not use Technical Information or any Improvement in its possession for the manufacture or procurement of the Product(s) or components or parts thereof or use the Technical Information or any portion thereof or any modification or adaptation thereof in any form to provide any product and/or service to any third party, without the prior written consent of the Company.
- 5.4 The Supplier shall not disclose any of such Technical Information to any third party without the prior written consent of the Company. The Supplier agrees that without prior written consent of the Company, the Supplier shall not disclose to a third party about the existence of this Agreement, or of the fact that it is/was in possession of or has experience in the use of any Technical Information nor shall the Supplier share in any manner whatsoever, with a third party, the name or details of any Contract(s) awarded by the Company to it or performed by the Supplier or the scope of work thereof or share any document or correspondence by and between the Company and the Supplier in or in connection with this Agreement or such Contract(s). Notwithstanding what is stated elsewhere, the overall responsibility of any breach of the confidentiality provisions under this Agreement shall rest with the Supplier.
- 5.5 The Supplier undertakes and agrees not to make copies or extracts of and not to disclose to others any or all of the Technical Information in its possession, except as follows:
- (a) The Supplier may disclose the Technical Information to such of its officers and employees strictly to the extent as is necessary for such officer or employee for the Intended Purpose, provided that the Confidential Information (or copies thereof) disclosed shall be marked clearly as the confidential and proprietary information of Company and that such officers and employees shall similarly be bound by undertakings of confidence, restricted use and non-disclosure in respect of the Technical Information. The Supplier shall be responsible for any breach of such confidentiality provisions by such officers and employees.
 - (b) With the prior written consent of Company, the Supplier may disclose for the Intended Purpose such Technical Information as is provided for in such consent to such of its professional advisers: consultants, insurers and subcontractors who shall be similarly bound by undertakings of confidence, restricted use and non-disclosure in respect of such Technical Information.
 - (c) The Supplier shall not be prevented to make any disclosure required by (i) order of a court of competent jurisdiction or (ii) any competent regulatory authority or agency where such disclosure is required by law, provided that where the Supplier

intends to make such disclosure, it shall first consult Company and take all reasonable steps requested by it to minimize the extent of the Technical Information disclosed and to make such disclosure in confidence and also shall cooperate with the Company in seeking any protective order or any other remedy from proper authority in this matter.

6. Exceptions:

The obligations of the Supplier pursuant to the provisions of this agreement shall not apply to any Confidential Information that:

- a) was/is known to, or in the possession of the Supplier prior to disclosure thereof by the Company;
- b) is or becomes publicly known, otherwise than as a result of a breach of this agreement by the Supplier.
- c) is developed independently of the Disclosing Party by the Supplier in circumstances that do not amount to a breach of the provisions of this Agreement or the Contract;
- d) is received from a third party in circumstances that do not result in a breach of the provisions of this Agreement.

7. The obligation of maintaining confidentiality of the Technical Information on each occasion, shall subsist for the entire duration during which the Technical Information / equipment is in possession of the Supplier and shall thereafter subsist for a further period of --- years from the date when the complete Technical Information has been returned to the Company and if Technical Information has been returned in portions on different dates then, the period of ---- years will be reckoned from the date when the last portion of the Technical Information has been returned. Notwithstanding the expiry of the confidentiality obligation, the obligation of the Supplier under clause 5.4 shall continue to subsist for a further period of ----- years.

8. Warranties & Undertakings:

a) The Supplier undertakes to ensure the due observance of the undertakings of confidence, restricted use and non-disclosure by its persons to whom it discloses or releases copies or extracts of the Technical Information.

b) The Supplier shall keep the Technical Information or improvement made therein properly segregated and not mix up the same with any other material/documents belonging to him/it or to any other third party.

c) The Supplier further undertakes that he/it shall not hypothecate or give on lease or otherwise alienate or do away with any of the Technical Information and/or equipment of the Company, made available to him/it, and undertakes that he/it shall hold the same as a trustee, in capacity of custodian thereof and use/utilise the same solely for the purpose of executing the Contract awarded by the Company.

d) The Supplier further undertakes that he/it shall return all the equipment and/or Technical Information as far as practicable in the same condition in which the same was made available to him/it by the Company together with any Improvement thereon and the documents connected with such Improvement, to the Company forthwith upon completion of the scope

of work or Contract for which such Technical Information was provided by the Company to it or as directed by the Company together with a confirmation by way of an affidavit or in such manner as directed by the Company that it has not retained any equipment and/or Technical Information/Improvement thereof. In case any such equipment and/or Technical Information or Improvement thereof shall remain in his possession or is not capable of being returned, the retention and use of such Technical Information or Improvement thereto shall continue to be governed by this Agreement.

e) The Supplier undertakes to indemnify the Company for all the direct, indirect and/or consequential losses, damages, expenses whatsoever including any consequential loss of business, profits suffered by the Company owing to breach by the Supplier of its obligations under this Agreement and/or the confidentiality requirements, if any, contained in the Contract and that the Supplier hereby agrees that the decision of the Company in all such or any such matter/s shall be final and binding on the Supplier. On mere written demand of the Company, the Supplier shall forthwith and without demur or delay pay to the Company any such sum as determined by the Company as the amount of loss or damage or expense which has been suffered by the Company. The Supplier agrees that the Company shall be entitled to withhold and appropriate any amount payable to the Supplier under any Contract then existing between the Company and the Supplier, in case the Supplier fails to make payment, in terms of the written demand, within 7 days thereof. Without prejudice to the foregoing actions, in respect to any breach of this Agreement, the Company shall be entitled to take any other action against the Supplier as per applicable laws, the Contract, Company's applicable policies, guidelines rules, procedures, etc.

9. Without prejudice to any other mode of recovery as may be available to the Company for recovery of the amount determined as due as per Clause 8(e) hereinabove, the Company shall have a right to withhold, recover and appropriate the amount due towards such losses, damages, expenses, from any amount due to the Supplier in respect of any other Contract (s) placed on him/it by any department/office/Unit/Division of the said Company.

10. Arbitration & Conciliation:

a) In case amicable settlement is not reached between the Parties, in respect of any dispute
or

difference or claim or controversy arising out of the formation, breach, termination, validity or execution of the Contract(or Agreement) or the respective rights and liabilities of the parties or in relation to interpretation of any provision of the Contract or in any manner touching upon the Contract, then, either Party may, by a notice in writing to the other Party refer such dispute or difference or controversy or claim, (except as to any matters, the decision of which is specifically provided for therein) to the sole arbitration by the arbitrator appointed by Head/In-Charge of the Unit/Division/Region.

b) The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties to the dispute.

c) Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India), or other statutory modifications or re enactments thereof and the rules made thereunder and for

the time being in force shall apply to the arbitration proceedings under this clause. The seat of arbitration shall be at ----- **(Insert the name of the city/town of the concerned BHEL Unit/Division).**

d) In case of Contract with Public Sector Enterprise (PSE) or a Government Department, the following shall be applicable:

In the event of any dispute or difference relating to the interpretation and application of the provisions of the Contract, such dispute or difference shall be referred to by either party to the arbitration of one of the arbitrators in the department of public enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The Arbitration and Conciliation Act, 1996 shall not be applicable to arbitration under this clause. The award of the arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law and Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary or Additional Secretary when so authorized by the Law Secretary, whose decision shall bind the parties hereto finally and conclusively.

e) Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Supplier shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner.

11. Governing Law & Jurisdiction:

This Agreement shall be governed by and be construed as per applicable Indian Laws in force at the relevant time.

Subject to clauses 10(a) and 10(d) hereinabove, all matters in connection with the subject agreement shall be subject to exclusive jurisdiction of Courts situated at -----**(insert the name of the place where the BHEL Unit/Division is located)**

SIGNATURE

WITNESSES

1.

Name

Address:

2.

Name:

Address: