

**BHARAT HEAVY ELECTRICALS LIMITED**

[A Government of India Undertaking]

Ramachandrapuram, Hyderabad, 502032, A.P. India
Phone 040-23184526, 23182322 FAX:040-23021910, 1954**भारत हेवी इलेक्ट्रिकल्स लिमिटेड**

(भारत सरकार का उपक्रम)

रामचन्द्रपुरम, हैदराबाद, 502032 आंध्र प्रदेश, भारत

RFQ NO :

PURCHASE DEPARTMENT**ENQUIRY****क्रय विभाग**

जांच (ई मेल : tenderbox@bhellhyd.co.in)

SHEET:1
OF :2HY17001 C
REV.NO.0Phone 091-40-23184526
091-40-23182322FAX : 091-40-23021910
091-40-23021954**PURCHASE DEPARTMENT**

GSTIN:

Enq/Collective No :B5E1W37831

Enq.Dt. : 10.05.2023

No.Of Items :*

DUE Dt. OF QUOTN. : 24.05.2023

Office Copy

Please submit your lowest quotation in sealed cover superscribed with Enquiry No./Collective No.(RFQ No) and due date subject to our terms and conditions attached ,for the materials mentioned below.Your offer has to reach us onor before due date by 11.00 Hours (IST) and will be opened at 14.00 Hours.(IST).If our Enquiry No./Collective No.(RFQ No) and tender due date are not super scribed on the tender cover , your offer shall be summarily rejected. Incomplete offers and late offers will not be considered.

SL NO	Purchase Req.no	item no	Material Code, HSN No.	Drg no - Ver , Rev & Spec - Ver , Rev,Spec-Var	Description	Unit	Qty	Delivery Date	Schedule Qty
1	5000037842	10	HY1070364754 72221999	NA-,,HY10764,11,	FLAT 75X46-SS-H&T GR X20CR13	KG	20,000.000	10.10.2023	20,000.000
2	5000037843	10	HY1070364800 72221919	NA-,,HY10764,11,	FLAT 76X55-SS-H&T GR X20CR13	KG	5,000.000	10.10.2023	5,000.000
3	5000037844	10	HY1070364819 72221919	NA-,,HY10764,11,	FLAT 89X55-SS-H&T GR X20CR13	KG	5,000.000	10.10.2023	5,000.000
4	5000037845	10	HY1070364835 72221999	NA-,,HY10764,11,	FLAT 95X60-SS-H&T GR X20CR13	KG	10,000.000	10.10.2023	10,000.000
5	5000037846	10	HY1070364843 72221919	NA-,,HY10764,11,	FLAT 95X70-SS-H&T GR X20CR13	KG	10,000.000	10.10.2023	10,000.000
6	5000037847	10	HY1070364851 72221919	NA-,,HY10764,11,	FLAT 110X75-SS-H&T GR X20CR13	KG	10,000.000	10.10.2023	10,000.000
7	5000037831	10	HY1070365203 72221999	NA-,,HY10765,03,	FLAT 25X6-SS-GR X20CR13V-H&T	KG	2,000.000	10.09.2023	2,000.000
8	5000037832	10	HY1070365254 72221999	NA-,,HY10765,03,	FLAT 30X6-SS-GR X20CR13V-H&T	KG	2,000.000	10.10.2023	2,000.000
9	5000037833	10	HY1070365300 72221999	NA-,,HY10765,03,	FLAT 45X8-SS-GR X20CR13V-H&T	KG	1,000.000	10.09.2023	1,000.000
10	5000037834	10	HY1070365351 72221999	NA-,,HY10765,03,	FLAT 55X8-SS-GR X20CR13V-H&T	KG	1,000.000	10.09.2023	1,000.000

TEST CERTIFICATE REQD:
GUARANTEE REQ :
SAMPLE REQD :
BID TYPE : TWO PART

For and on-behalf of
Bharat Heavy Electricals Limited.

E Vinod Kumar
Dy Manager



BHARAT HEAVY ELECTRICALS LIMITED
 [A Government of India Undertaking]
 Ramachandrapuram, Hyderabad, 502032, A.P. India
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 (भारत सरकार का उपक्रम)
 रामचन्द्रपुरम, हैदराबाद, 502032 आंध्र प्रदेश, भारत

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HY17001 C Phone 091-40-23184526 FAX : 091-40-23021910 **PURCHASE DEPARTMENT**
 REV.NO.0 091 40 23182322 091 40 23021954
 GSTIN: Enq/Collective No :B5E1W37831 Enq.Dt. : 10.05.2023 No.Of Items :* DUE Dt. OF QUOTN. : 24.05.2023

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SL NO	Purchase Req.no	item no	Material Code, HSN No.	Drg no - Ver , Rev & Spec - Ver , Rev,Spec-Var	Description	Unit	Qty	Delivery Date	Schedule Qty
11	5000037835	10	HY1070366013 72221919	NA-,,HY10766,11,	FLAT 24X13-SS-GR X22CRMV121	KG	10,000.000	10.09.2023	10,000.000
12	5000037836	10	HY1070366072 72221919	NA-,,HY10766,11,	FLAT 33X17-SS-GR X22CRMV121	KG	15,000.000	28.05.2024	15,000.000
13	5000037837	10	HY1070366080 72221919	NA-,,HY10766,11,	FLAT 34X21-SS-GR X22CRMV121	KG	15,000.000	10.09.2023	15,000.000
14	5000037838	10	HY1070366161 72221919	NA-,,HY10766,11,	FLAT 41X26-SS-GR X22CRMV121	KG	15,000.000	10.09.2023	15,000.000
15	5000037839	10	HY1070366366 72221919	NA-,,HY10766,11,	FLAT 48X34-SS-GR X22CRMV121	KG	10,000.000	10.09.2023	10,000.000
16	5000037840	10	HY1070366447 72221919	NA-,,HY10766,11,	FLAT 56X35-SS-GR X22CRMV121V	KG	20,000.000	10.09.2023	20,000.000
17	5000037841	10	HY1070366510 72221919	NA-,,HY10766,11,	FLAT 65X40-SS-GR X22CRMV121	KG	10,000.000	10.09.2023	10,000.000

Special Remarks

CheckList of Quality Interventions:
BHEL reserves the right to enforce any or all of the following checks during execution of the order.
There is no additional cost to the vendor on account of these checks.

TEST CERTIFICATE REQD: GUARANTEE REQ : SAMPLE REQD : BID TYPE : TWO PART	For and on-behalf of Bharat Heavy Electricals Limited. E Vinod Kumar Dy Manager
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Special Conditions of Contract (SCC)

TC Purchase Department
HPEP - RC Puram, Hyderabad - 502032

ITB Clause Ref No.	Clause	BHEL requirements	Bidder response
3	Mode of Submission	E- Procurement (https://eprocurebhel.co.in)	Non Deviatable
5	Type of Bid	Two Part	Non Deviatable
6	Indigenous purchase - Destination	BHEL 01 Stores, Hyd	Non Deviatable
	Mode of Shipment (In case of Imports)	NA	
	Imports purchase - Destination	NA	Non Deviatable
	Freight	Supplier Scope	
	Insurance	Supplier Scope	
	Basic Custom Duty	NA	Non Deviatable
9	Price validity	90 DAYS	
Others	Optional Spares price validity	NA	Non Deviatable
8	Delivery Period	04 Months	
18	Evaluation basis	Item wise L1 Evaluation	Non Deviatable
Others	Quantity Splitting	As per Annexure A	Non Deviatable
9	Price Variation Clouser (PVC)	Not applicable	Non Deviatable
12	Payment Terms	As per ITB Clause 12	
	Tender cost	Not applicable	Non Deviatable
	Earnest Money Deposit (EMD)	Not applicable	Non Deviatable
	E & C Supervision Charges	Not Applicable	Non Deviatable
	Bank Guarantee against milestone payment	Not applicable	Non Deviatable
Others	Contract execution Bank Guarantee	Not applicable	Non Deviatable
17	Performance Bank Guarantee	Not applicable	Non Deviatable
7	Additional documentation for payment	Not applicable	
13	Max Penalty applicable on	Delayed Portion (Non-Deviatable)	Non Deviatable
Others	Contract Specific Penalty Clause	NA	
16	Guarantee / Warranty Period	As per Standard ITB GC/WC	
	Contract Specific Guarantee / Warranty Period	NA	
48	Detailed Billing Breakup (BBU)	Not applicable	Non Deviatable
Others	Customer approval of vendor	Not applicable	Non Deviatable
	Drawing approval	Not applicable	Non Deviatable
	QAP approval	Applicable	Non Deviatable
36	Inspection by (All Indian supplier offers will be loaded by 0.198% for BHEL TPIA charges. This TPIA charges will be in BHEL Scope only)	BHEL/BHEL TPI	Non Deviatable
Others	Financial / Commercial PQC	Applicable	Non Deviatable
Others	Reverse Auction	Applicable	Non Deviatable
Others	Tolerance	+ or - 10% Tolerance applicable on weight basis	Non Deviatable

Others	Integrity Pact OEM 1 Shri Otem Dai, IAS (Retd.) iem1@bhel.in OEM 2 Shri Bishwamitra Pandey, IRAS (Retd.) iem2@bhel.in OEM 3 Shri Mukesh Mittal, IRS (Retd.) iem3@bhel.in	Applicable	Non Deviatable
Others	Price Bid: 1. Integrity Pact to be submitted by Vendor, 2. Load Distribution is applicable as per annexure A 3. Financial PQC is applicable as per Annexure A 4. Vendors has to quote FOR Destination. 5. Penalty: In the event of delay in supply of goods, penalty of 0.5% per week or part there of shall be levied on the undelivered portion subject to a maximum of 10% of the undelivered Portion		Non Deviatable
Others	Other than terms agreed in SCC, ITB & It's Annexures are final. Other terms mentioned anywhere in your offer, will not be applicable.		

Note: In case, Supplier is not filling the above sheet, it is understood that Supplier is accepting the BHEL Requirements mentioned as above.



TD219
Rev.00

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 107 64

REV. NO. 11

PAGE 1 OF 11

**VACUUM DEGASSED / ESR STAINLESS STEEL BARS FOR
STEAM TURBINE BLADES, HARDENED & TEMPERED
(GRADE: X20 Cr 13)**

1.0 GENERAL:

This specification governs the requirements of vacuum degassed / ESR processed, hardened & tempered stainless steel bars of grade X 20 Cr 13 for steam turbine blades.

2.0 APPLICATION:

For manufacture of steam turbine blades suitable for working temperatures up to 400°C.

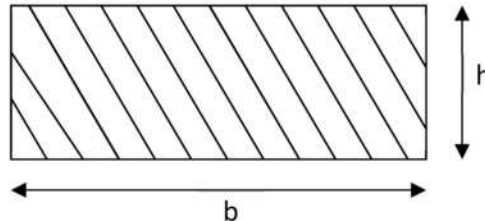
3.0 CONDITION OF DELIVERY:

Hot rolled/forged, Hardened & Tempered, sand/shot blasted and suitably protected with rust preventive coating, meeting the dimensions and tolerances required as per clause 4.0.

4.0 DIMENSIONS AND TOLERANCES:

4.1 Dimensions: Unless otherwise specified in the order, the bars shall be supplied in random lengths of 2 to 5 meters with a maximum of 10% shorts down to 1 metre. Other dimensions shall be as specified in the order.

4.2 Tolerances: The tolerances on cross sectional dimensions shall be as follows.



Note: The corners of the flats shall not have any radius.

4.2.1 Tolerances and Dimensions:

'b' width across flats, mm	Allowable deviation on 'b' mm	'h' thickness mm	Allowable deviation on 'h' mm
Upto 35	+1.5	Upto 20	+ 1.0
Over 35 and upto 75	+ 2.0	Over 20 and upto 40	+ 2.0
Over 75	+ 3.0	Over 40	+ 3.0

Note: Bending of the bars shall not be more than 1mm/metre at any section throughout the length of bars in supply condition. Bulging on the sides shall not be more than 0.01 x b and 0.01 x h respectively.

Revisions: Modified Cl. 14.1 & updated Quality Plan.

Issued :

**STANDARDS ENGINEERING & IPR
COORDINATION DEPARTMENT**

Rev. No. 11

Amd. No.

Reaffirmed:

Prepared:
Sr.ENGINEER,
MATLS. ENGG.

Approved:
AGM (R&D and EC,
Logistics)

Dt. of 1st issue:

Dt.07-07-2021

Dt.

Year:

JULY. 1981

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

TD219
Rev.00



4.2.2 Straightness tolerances (q_{max}) for rectangular section bar:

Straightness	Value of q_{max} (mm)	Condition
	$(L \times 1.5) / 2000$	B & S both ≤ 110
	$(L \times 2) / 2000$	B or S > 110

4.2.3 Out of section tolerance for rectangular section bar:

Out of section	Nominal Thickness (mm)	Tolerance (mm)
	$10 < S \leq 25$	$u \leq 0.5$
	$25 < S \leq 40$	$u \leq 1.0$
	$40 < S \leq 80$	$u \leq 1.5$
	$S > 80$	$u \leq 3.0$

5.0 MANUFACTURING AND INSPECTION SEQUENCE PLAN (MIP):

Before starting production, the manufacturer shall submit the following documentation to BHEL.

- 5.1 A manufacturing & inspection sequence plan (MIP) which is released after the prototype qualification, establishing the quality assured sequence of operations like steel melting, rolling/forging, heat treatment and inspection plan. Information about internal & external specifications shall also be mentioned in MIP. Every change in the established process or MIP needs written permission of BHEL.
- 5.2 Test instructions for non-destructive testing & destructive testing, which are performed, as part of manufacturer's quality assurance shall also be submitted. The test instructions shall include precise information on the test procedures, sample location plan (illustrated by sketches).

6.0 MANUFACTURE:

- 6.1 The steel shall be manufactured by basic electric furnace process and subsequently vacuum degassed / electroslag remelted.
- 6.2 The vacuum system shall have the capacity to maintain a vacuum of 2 torr or lesser during vacuum degassing process for the sufficient time so as to lower the gas contents in the steel.
- 6.3 The ingot castings shall be used for the manufacture of bars. A reduction ratio of 4 (minimum) shall be maintained from the ingot to final bar size. The information regarding the ingot size to the concerned final bar size shall be mentioned in the MIP.

7.0 HEAT TREATMENT

- 7.1 The following heat treatment is suggested to achieve the mechanical properties specified in Cl.12.0 of this specification.



TD219
Rev.00

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 107 64

REV. NO. 11

PAGE 3 OF 11

Harden in air or oil at 900 - 1050°C
Tempering temperature shall not be less than 650°C

7.2 If the bars need be straightened after heat treatment then the bars shall be stress relieved after the straightening operation at 30° C below the actual tempering temperature with a slow cooling rate.

7.3 The process parameters shall be selected with a view to achieve lowest possible residual stresses. The distortion of the finish machined part caused by slight residual stresses from the rolling/forging & heat treatment process shall not occur.

8.0 FREEDOM FROM DEFECTS:

8.1 The bars shall be free from cracks, scabs, seams and other harmful defects.

8.2 Decarburization and other material defects shall not exceed the dimensional tolerances as specified in clause 4.2.

9.0 FINISH:

9.1 The surface of the bars shall be smooth without any laps, rolled in scales etc. Dents roll marks, and scratches are permitted provided their depth does not exceed half the tolerance limits specified in clause 4.0.

9.2 The edges of bars shall be cut square by sawing or shearing and no crop ends are permissible.

10.0 TEST SAMPLES:

10.1 For Chemical Analysis: One sample for chemical analysis shall be taken from each melt.

10.2 For Mechanical tests: Bars of same size shall be grouped into lots belonging to same melt and heat treatment batch. This shall be treated as a single test unit and subjected to mechanical testing as per following plan.

10.2.1 The uniformity of the strength of the bars belonging to one lot (same melt and heat treatment batch of same size of bars = test unit) shall be verified by hardness test as per EN ISO 6506-1 or any other reputed international method. The hardness test shall be performed on 10% of each test unit, however on atleast 10 bars or on all the bars if the test unit comprises of less than 10 bars. The greatest permissible difference in hardness in a lot (test unit) shall not exceed 35 HBW.

10.2.2 Hardness tests are to be performed after all heat treatments including a possible stress relieving are undertaken.

10.2.3 Mechanical properties shall be determined on the hardest and softest bars identified by the hardness tests conducted as per 10.2.1 and 10.2.2.

10.2.4 The test samples locations shall be as per Annexure A and B. If the cross section of the bar is more than 200 cm², then mechanical properties must be determined both in the centre of the bar and at the side of the bar. With the exception of toughness, the difference in the properties across the bar cross section shall not exceed 7.5%.

10.2.5 The specimen for Metallography shall be taken in longitudinal direction with a minimum cross section area of 320 mm².

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

TD219
Rev.00



The positions of the specimens given in the Annexure A and B are meant for guidance only. Details concerning the locations of the specimens are to be agreed mutually and must be included in MIP with a sketch.

11.0 CHEMICAL COMPOSITION:

Heat analysis (in weight %) shall be achieved as follows.

Element	C	Si	Mn	P	S	Cr	Ni
Minimum	0.17	0.10	0.30	--	--	12.50	0.30
Maximum	0.22	0.60	0.80	0.030	0.020	14.00	0.80

12.0 MECHANICAL PROPERTIES:

The material in final delivery condition shall comply with the following mechanical properties.

Properties	0.2 %Yield Strength N/mm ²	Tensile Strength N/mm ²	% Elongation	Reduction in area %	Impact energy, J	Hardness HBW
Minimum	600	800	15	50	20	240
Maximum	--	950	--	--	--	280

NOTE: 1) The tensile test shall be carried out in accordance with EN10002 resp. ASTM E8M (round tension test specimen with $L_0 = 50$ mm and $d_0 = 10$ mm) or any other reputed National/International standard.

2) The Charpy V – notch impact test shall be performed with standard test specimens in accordance with EN: 10045 or any other reputed National/International standard. An impact test shall consist of three specimens from a single test location; the minimum average value shall be as specified above. Only one value of the three can be below the specified minimum, but in no case below 14 J. All the three test results shall be reported in test certificate.

3) HBW 10/3000 or HBW 5/750 shall be used for hardness tests.

13.0 METALLOGRAPHY TESTS:

The examination of the cleanliness must be performed in the centre of one bar per lot. It can be conducted before or after the heat treatment. The microstructure must be uniform and free from porosity, excessive segregation and other in-homogeneities. The following properties concerning delta-ferrite and inclusions shall be achieved.

13.1 Delta ferrite content shall be less than 5%. Delta ferrite content shall be determined in a manner consistent with the evaluation technique described in ASTM E 45 Method A (Worst Field Method at a Magnification of 100X) with the specimen orientation in longitudinal direction. The distribution and size of delta ferrite must be such that it does not result in indication during MPI examination of the ready-machined surface.



TD219
Rev.00

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 107 64

REV. NO. 11

PAGE 5 OF 11

13.2 Inclusion content shall be tested as per ASTM E 45 Method A and with following limits.

13.2.1 "Thin series" inclusions shall not exceed 2.0 for Type A, B, C and 2.5 for Type D.

13.2.2 "Heavy series" inclusions shall not exceed 1.5 for all Types i.e. A, B, C and D.

13.2.3 All the type and sizes of the inclusions mentioned in 13.2.1 and 13.2.2 can exist simultaneously.

13.2.4 Maximum number and size of globular inclusions (type D):

$$IR(D) = (n1 + 2.5 n2) \leq 10$$

IR (D) is converted to an area of 160 mm².

n= number of globular inclusions.

n1 (25 μm – 50 μm); n2 (51 μm – 75 μm)

The size pertains not only to the globular inclusions themselves, but also the subsequent cavities, which can occur beside them. Inclusions and cavities which are more than 75 μm are not allowed.

13.3 Grain size: The grain size must be measured at the softest and the hardest bar after all heat treatments are performed. Grain size 4 or finer per ASTM E 112 or DIN 50601 must be achieved.

A deviation from the average size of more than 2 grain size is not permissible.

14.0 EXTERNAL AND INTERNAL QUALITY/NON DESTRUCTIVE TESTING:

14.1 Test Scope: The following NDT inspections shall be performed after all heat treatments are performed including stress relieving operations.

- Visual inspection of all bars
- UT of all flats shall be subjected to ultrasonic testing as per BHEL Standard HY 0850179, Rev 01 and acceptance norm shall be as per HY 0850179, Rev. 01. The UT shall be carried out in dispatch condition

Requirements: 100% of the volume shall be examined with the stipulated recording level of the material.

14.2 Criteria for Recording Limits and Decision on Further Use:

- a) Surface defects: Indication of surface defects, e.g., scoring caused by the rolling process are to be ground at least at both ends, in the center of the indications and in increments of ca.250 mm to check the extension below the surface. Surface defects extending ≥1 mm or greater than half the specified dimensional tolerances below the surface are not permissible.

**PLANT PURCHASING
 SPECIFICATION
 HYDERABAD**

TD219
 Rev.00



15.0 MATERIAL IDENTITY TEST:

At the time of delivery, all the bars shall be subjected to identification test by Spark test method or any other reliable means to ascertain that the material supplied is as required by the specification. Details of the instrument and the methodology followed shall be reported in Test certificate.

16.0 PROCESS QUALIFICATION:

A qualification review, performed jointly by the purchaser and supplier, is required before starting production for the first order. The process qualification review will include following as a minimum requirement.

16.1 This initial process qualification is required for each manufacturing, heat treatment and testing facility

16.2 The parameters used or stipulated during this phase form the basis of the MIP.

16.3 In addition to the scope of testing and examination stipulated in this specification, the following tests and examinations shall be performed.

16.3.1 Tensile and impact tests in transverse direction. If required, the sub-size test specimens may be used for the testing.

16.3.2 Hot tensile test: In accordance with ISO 6892-2 or equivalent standard, a tensile test in longitudinal direction has to be performed at 500°C. The following properties must be achieved:

0.2% Proof stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Reduction in area (%)
≥380	≥480	≥20	≥60

16.3.3 Determination of FATT according to ASTM A 370. FATT of < 30°C shall be achieved. Testing shall be carried out on minimum 10 specimens.

16.3.4 Magnetic particle testing: The distribution, type and size of micro-structural in-homogeneities (e.g. delta ferrite and segregation) shall not cause MP indications.

16.4 The MIP plan shall include the hot yield test. The manufacturer shall submit the results of tests conducted on the hardened and tempered samples of the steel produced by them of this grade of material.

17.0 INSPECTION AT SUPPLIER'S WORKS:

The representative of BHEL shall have free access to the supplier's works at all times during the execution of the order, to satisfy himself that the material is produced as per the quality requirements of this specification. All reasonable facilities shall be extended to him free of charge. He may also witness the sampling testing and marking called for in this specification.



TD219
Rev.00

PLANT PURCHASING SPECIFICATION HYDERABAD

HY 107 64

REV. NO. 11

PAGE 7 OF 11

18.0 QUALITY PLAN:

- 18.1** Vendor shall follow the Quality Plan Ref. BHEL/HY10764/Blade flats S-QAP Rev.02 attached as Annexure 'C' unless conditions stipulated in Cl.18.2 & 18.3 are applicable. A duly signed and stamped copy of this QAP shall be submitted by the vendor along with the technical offer.
- 18.2** In case Customer / Project related additional requirements are applicable in the enquiry / tender, vendor may be asked to submit a separate QP including such requirements.
- 18.3** In case of new vendors or first time supplies for the sizes mentioned in BHEL enquiry, a separate QP shall be submitted for approval by BHEL.

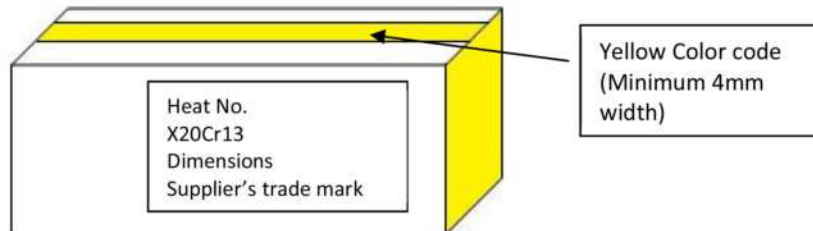
19.0 TEST CERTIFICATE:

Three copies of the test certificate shall be furnished (in English) giving the following details:

- Specification No.: HY10764 Rev.11
- BHEL Order No.
- Name of the supplier.
- Melt No.
- Process of Manufacture
- Heat treatment batch no. and HT charts
- Results of chemical analysis and mechanical tests (including hardness test results).
- Results of Metallographic tests with representative Photomicrographs.
- Results of Ultrasonic tests.
- Dimensional Inspection Report
- Results of any additional test (if applicable as per order)
- Confirmation of 'Material identity test' on all bars

20.0 MATERIAL IDENTIFICATION MARKING:

Marking of each individual bar at the front and side face shall be done as given below. For easy identification of the material during usage, each bar shall be painted with Yellow color code along the length of the bar on any of its face as indicated below:



Supplier shall ensure that the 'Yellow color' code is clearly visible in the final dispatch condition of the material.

21.0 PACKING:

The bars shall be suitably packed to prevent from corrosion and damage during transit.

22.0 REJECTION AND REPLACEMENT:

In the event of any material proving defective during the course of further processing or testing at BHEL, such material shall be rejected and the supplier shall make immediate arrangements to replace the same free of cost after all the commercial terms and conditions are satisfied.

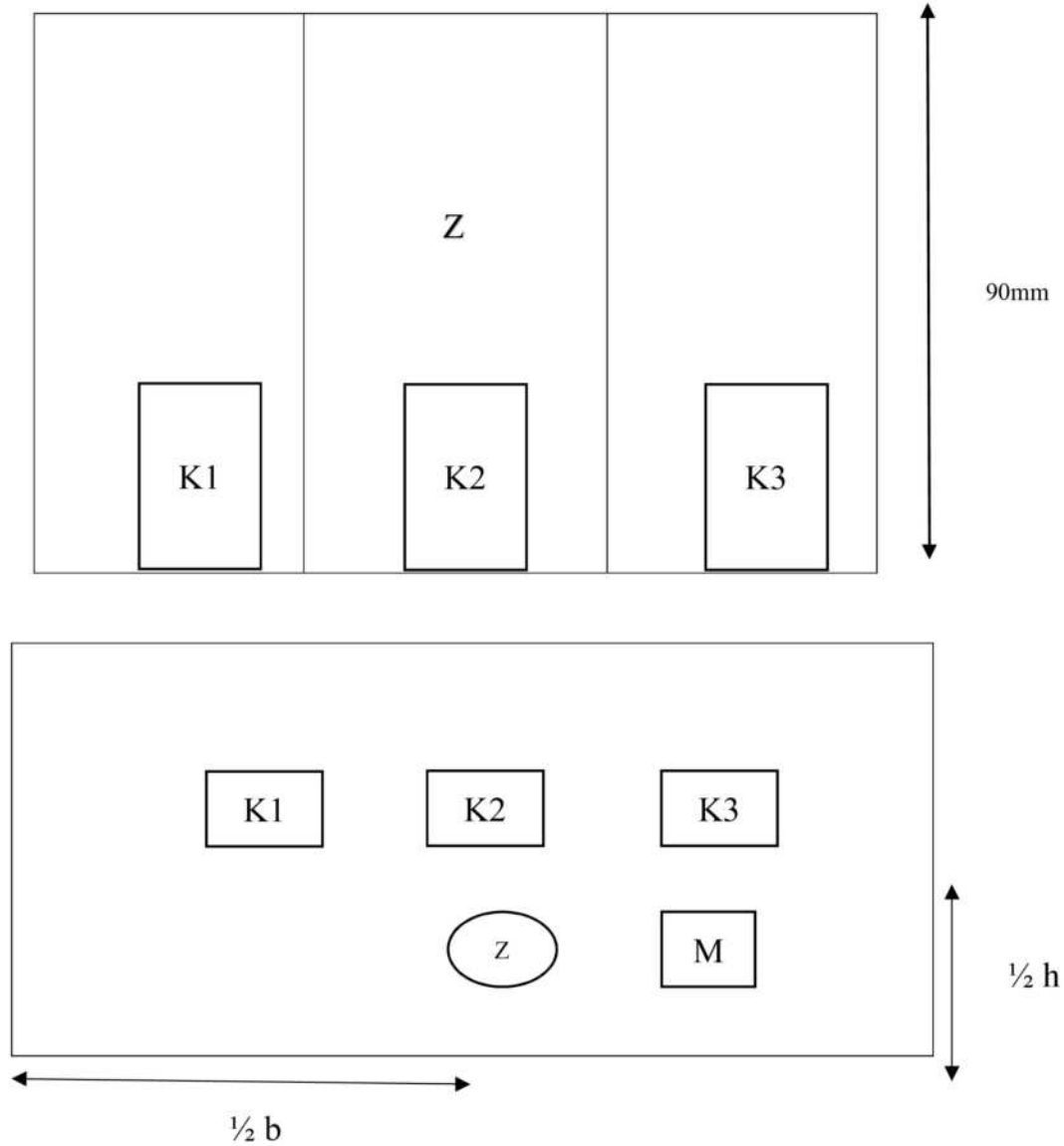
**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

TD219
Rev.00



ANNEXURE A

TEST SAMPLES LOCATIONS PLAN (CROSS SECTION AREA $\leq 200 \text{ CM}^2$)



Z = TENSILE SPECIMENS (LONGITUDINAL DIRECTION)

K1, K2 & K3 = IMPACT SPECIMENS

M = METALLOGRAPHY SPECIMENS

NOTE: Make sure that all specimens are located in the middle of the material thickness



TD219
Rev.00

PLANT PURCHASING SPECIFICATION HYDERABAD

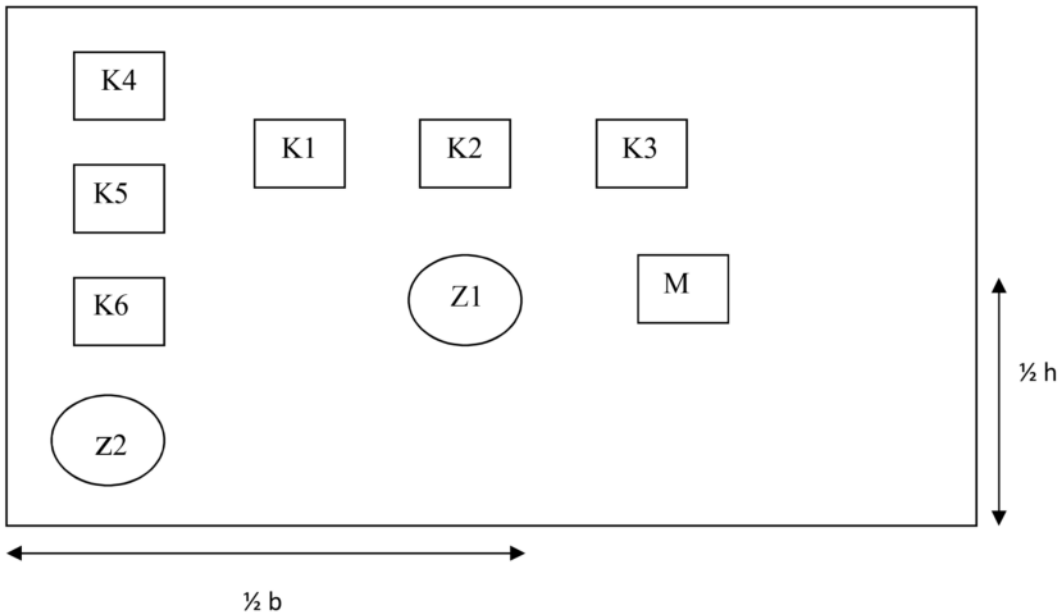
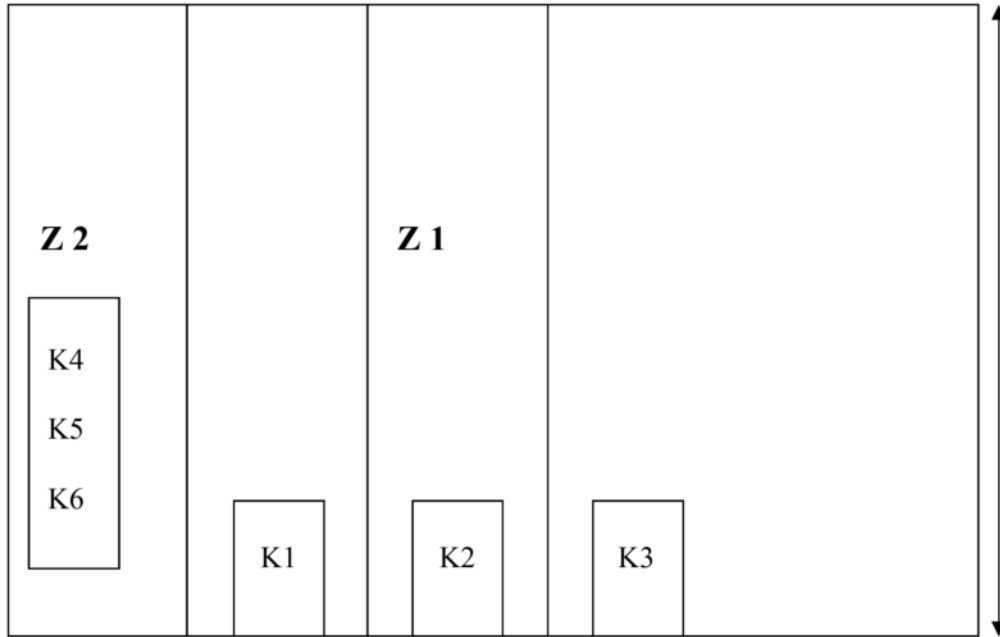
HY 107 64

REV. NO. 11

PAGE 9 OF 11

ANNEXURE B

TEST SAMPLES LOCATIONS PLAN (CROSS SECTIONAL AREA > 200 CM²)

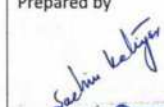



Z1, Z2 = TENSILE SPECIMENS (LONGITUDINAL DIRECTION)

K1 TO K6 = IMPACT SPECIMENS

M = METALLOGRAPHY SPECIMENS

Annexure C											
VENDOR'S NAME & ADDRESS			STANDARD QUALITY PLAN (BLADE FLATS)					HY 10764 REV 11 (PAGE 10 OF 11)			
			BHEL ENQ/ P.O. No.					QP No.: BHEL/HY10764/Blade flats SQAP Rev.03			
			Date					PAGE 1 of 2			
SL No	Operation	Characteristics	Class	Type of check	Quantum of Check	Reference Document	Acceptance Norms	Format of Record	* D	Agency P W V	Remarks
1.	Melting & Refining (ESR or VD Process)	Chemical composition	Major	Chemical analysis	Each melt	HY 10764 Rev. 11	HY 10764 Rev. 11	Test certificate	✓	2 - 1	
2.	Hot rolling / Forging & Cutting	Dimensions	Minor	Dimensional	100%	Internal Standard	Internal Standard			2 - 1	
3.	Heat treatment	Soaking time & temperature	Major	Verification of HT time & temperature charts	All cycles	HY 10764 Rev. 11	HY 10764 Rev. 11	Original HT charts	✓	2 - 1	
4.	Dimensional inspection	Dimension & tolerances	Major	Dimensional checking	100%	As per PO & Spec.	As per PO & Spec.	Dimensional report	✓	2 1 -	Refer Note - 4
5.a	Mechanical properties	Hardness	Major	Hardness test	Each lot	HY 10764 Rev. 11	HY 10764 Rev. 11	TC	✓	2 1 -	
5.b		Tensile properties (0.2% Y.S, UTS, %El, % RA) & toughness	Major	Tensile & Impact testing	Hardest & softest bar from each lot	HY 10764 Rev. 11	HY 10764 Rev. 11	TC	✓	2 1 -	
6.a	NDT	Visual	Major	Surface defects & finish	Each bar	HY 10764 Rev. 11	HY 10764 Rev. 11	TC	✓	2 1 -	
6.b		UT	Major	Sub-surface defects	Each bar	HY 10764 Rev. 11	HY 10764 Rev. 11	TC	✓	2 1 -	

Legend: <ul style="list-style-type: none"> P Perform; W Witness; V Verification; Indicate 1 for BHEL or BHEL nominated Inspection agency & 2 for vendor/sub vendor as appropriate against each component /characteristic under P, W & V columns. * For items marked ✓ (tick) in column D, test certificates shall be submitted to BHEL for records. 	Prepared by	Approved by	#Vendor's confirmation
	 Signature and Stamp Sachin Kalyar	 Signature and Stamp	

कर्मिष्ठ अभियंता / गुणवत्ता आश्वासन
 Engineer / Quality Assurance
 ३०० एल. हैदराबाद BHEL HYD

Annexure C											
VENDOR'S NAME & ADDRESS			STANDARD QUALITY PLAN (BLADE FLATS)					HY 10764 REV 11 (PAGE 11 OF 11)			
			BHEL ENQ. /P.O No.					QP No.: BHEL/HY10764/Blade flats S-QAP			
			Date					Rev.03 PAGE 2 of 2			
SL No	Operation	Characteristics	Class	Type of check	Quantum of Check	Reference Document	Acceptance Norms	Format of Record	D	Agency P W V	Remarks
7.a	Metallurgical testing	Inclusion rating, microstructure & % delta ferrite	Major	Microstructure	One sample per lot	HY 10764 Rev. 11	HY 10764 Rev. 11	TC with micro-structure photographs	√	2 - 1	
7.b		Grain size	Major	Microstructure	On hardest & softest bar per lot	HY 10764 Rev. 11	HY 10764 Rev. 11		√	2 - 1	
8.	Material identity test	Material grade	Major	Chemical analysis	Each bars	HY 10764 Rev. 11	HY 10764 Rev. 11	TC	√	2 1 -	
9.	Packing, marking & color code	Packing & marking	Major	Hard Punching and Colour code	All bars	HY 10764 Rev. 11	HY 10764 Rev. 11			2 - 1	
10.	Verification & Certification	Documentation	major	Verification	All bars	HY 10764 Rev. 11	HY 10764 Rev. 11	TC	√	2 - 1	Endorsement of all documents by TPIA

Note:

- 1) This SQAP is applicable along with BHEL approved frozen Manufacturing Process Plan only.
- 2) Additional requirements as per BHEL customer / project and purchase order will also be applicable.
- 3) This SQAP is not applicable for first time supplies of the material as per HY10764, for which a separate MPP and QAP shall be submitted. In such cases process qualification requirements will be also be applicable.
- 4) The following shall be ensure & certified:
 - a. Size & Length of each bar as per purchase order.
 - b. Straightness of all bars.
 - c. Defect free surfaces.
 - d. Marking & punching on all bars.

<p>Legend:</p> <ul style="list-style-type: none"> • P Perform; W Witness; V Verification; • Indicate 1 for BHEL or BHEL nominated Inspection agency & 2 for vendor/sub vendor as appropriate against each component /characteristic under P, W & V columns. • * For items marked √ (tick) in column D, test certificates shall be submitted to BHEL for records. 	<p>Prepared by</p> <p><i>Sachin Kalijar</i></p> <p>सचिन कटियार Signature and Stamp Sachin Kalijar</p>	<p>Approved by</p> <p><i>B. Ashok Kumar</i></p> <p>B. Ashok Kumar AGM / QA S - 7.21 Signature and Stamp</p>	<p>#Vendor's confirmation</p> <p>Signature and Stamp</p>
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#To be submitted along with the technical offer.

परिचालन / गुणवत्ता आश्वासन
Engineer / Quality Assurance
- 3 - हैदराबाद BHEL.HYD-32



TD219
Rev. 00

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 107 65

REV. NO. 03

PAGE 1 OF 5

**VACUUM DEGASSED STAINLESS STEEL BARS FOR STEAM
TURBINE SHROUDING, HARDENED AND TEMPERED
(GRADE : X20 Cr 13V)**

1.0 GENERAL:

This specification governs the requirements of vacuum degassed, hot rolled/cold rolled, hardened & tempered, stainless steel bars of grade X20 Cr 13 for steam turbine shrouding.

2.0 APPLICATION:

For steam turbine shrouding.

3.0 CONDITION OF DELIVERY:

Hot rolled/cold rolled, hardened & tempered.

4.0 COMPLIANCE WITH STANDARDS

This specification complies in general with TLV:9238 01/07 Sep. 90 of M/s. Siemens, Germany.

5.0 DIMENSIONS AND TOLERANCES:

5.1 Dimensions: As specified in the order. Unless otherwise specified in the order, the bars shall be supplied in random lengths of 3 to 6 metres with a maximum of 10% shorts down to 1 metre.

5.2 Tolerances: The tolerances on width and thickness of the flat bars shall be as follows:

For cold rolled bars:

<u>Size</u>	<u>Tolerance on width</u>	<u>Tolerance on thickness</u>
All sizes	+ 0.2 0	+ 0.1 0

Revisions: Modified clause 3.0 and 5.0			Issued : STANDARDS ENGINEERING & IPR COORDINATION DEPARTMENT		
Rev.No. 03	Amd No.	Reaffirmed	Prepared: Matls. Engg. Standards	Approved: SR. M (QA&TS)	Dt of 1st issue
Dt. SEP.99	Dt.	Year: 2021			JUL.81

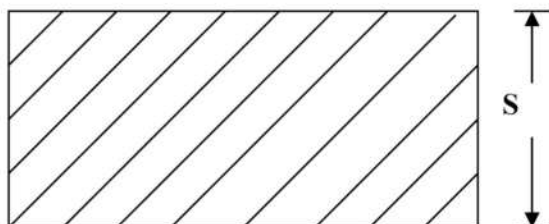
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**PLANT PURCHASING
 SPECIFICATION
 HYDERABAD**

TD219
 Rev. 00



For hot rolled bars:



'b' width across flats, mm	Allowable Deviation On 'b' mm	'S' thickness mm	Allowable deviation on 'S' mm
Upto 35	+ 1.5	Upto 20	+ 1. 0
Over 35 and upto 75	+ 2. 0	Over 20 and upto 4 0	+ 2. 0
Over 75	+ 3. 0	Over 4 0	+ 3.0

6.0 MANUFACTURE:

The steel shall be manufactured by basic electric furnace process and subsequently vacuum degassed.

7.0 HEAT TREATMENT:

The recommended heat treatment cycle shall be as follows:

Harden in air or oil at 980-1030° C
 Temper at not less than 650° C
 Soak for a minimum of 2 hours –cool in air.

The details of the actual heat treatment cycle followed shall be furnished in the test certificate.

8.0 FREEDOM FROM DEFECTS:

The bars shall be free from cracks, scabs, seams and other harmful defects.

9.0 FINISH:

The surface of the bars shall be smooth without any laps, rolled in scales etc. Dents, roll marks and scratches are permitted provided their depth does not exceed half the tolerance limits in clause 5.

TD219
Rev. 00**PLANT PURCHASING
SPECIFICATION
HYDERABAD****HY 107 65****REV. NO. 03****PAGE 3 OF 5**

The edges of bars shall be cut square by sawing or shearing and no crop ends shall be permissible.

10.0 TEST SAMPLES:

10.1 For Chemical Analysis: One test sample for chemical analysis shall be taken from each melt.

10.2 For Mechanical Tests:

10.2.1 One sample per size belonging to the same melt and heat treatment batch shall be taken for mechanical testing.

10.2.2 The test specimen shall be concentric with the bars for sectional dimension upto 40 mm. For sectional dimension exceeding 40 mm, the specimen location shall be 1/3rd the radius below the bar surface.

11.0 CHEMICAL COMPOSITION:

The melt analysis of the material shall be as follows:


Element	C	Si	Mn	Cr	Ni	P	S
%min.	0.17	0.10	0.30	12.50	0.30	-	-
%max.	0.22	0.50	0.80	14.00	0.80	0.030	0.020
Permissible variation in product Analysis	±0.02	±0.05	±0.04	±0.15	±0.03	+0.005	+0.005

12.0 MECHANICAL PROPERTIES:

The material shall comply with the following mechanical properties.

Tensile Strength N/mm ²	0.2% Proof Stress N/mm ² Min.	%Elongation (L=5d) Min.	% Reduction in area of Cross section Min.
800 - 950	600	15	50

NOTE: 1) The tensile test shall be carried out in accordance with IS:1608 or any reputed national standard.

HY 107 65	PLANT PURCHASING SPECIFICATION HYDERABAD	TD219 Rev. 00	
REV. NO. 03			
PAGE 4 OF 5			

13.0 RETESTS:

- 13.1** If any of the test specimen fails to meet the requirements specified in cl. 12, the sample bar from which the test specimen was cut shall be rejected and two further sample bars from the same lot shall be taken for retest.
- 13.2** If the retests also fail, manufacturer is at liberty to reheat-treat the bars in question. Not more than two reheat treatments are allowed. However, retempering is not considered as reheat treatment.
- 13.3** If after re-heat treatment, the mechanical properties are not complied with, the entire lot shall be rejected.

14.0 METALLOGRAPHIC TEST:

14.1 Microstructure: The micro structure shall be studied on the fractured tensile or impact specimens and the photomicrographs shall be furnished to B.H.E.L. The microstructure shall show predominantly tempered martensite. The average austenitic grain size of the steel shall be five or finer when tested as per ASTM: E112.

14.2 Non-metallic Inclusions: The sample for testing shall be taken in longitudinal direction. When tested as per ASTM: E45, part III, the inclusion rating should not exceed the following norms:

- 'A' Sulphide type : Thin series 2
- 'B' or 'D' Globular type oxide : Thin series 2
- 'C' Silicate type: Thin series 2

However, any one of the above can be allowed upto 2.5, provided the other two do not exceed 2.

15.0 ULTRASONIC TEST:

All the bars shall be ultrasonically tested to ensure freedom from defects. The following defects shall be unacceptable.

- i) Cracks, flacks, seams and laps.
- ii) Defects giving indications larger than that from a 4 mm diameter equivalent flaw.
- iii) Groups of defects with maximum indication less than that from a 4 mm diameter equivalent flaw which can not be separated at testing sensitivity if the back echo is reduced to less than 50%.
- iv) Defects giving indications of 2 to 4 mm diameter equivalent flaw separated by a distance less than four times the size of the larger of the adjacent flaws.



TD219
Rev. 00

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 107 65

REV. NO. 03

PAGE 5 OF 5

16.0 INSPECTION AT SUPPLIER'S WORKS:

The representative of BHEL shall have free access to the supplier's works at all times during the execution of the order, to satisfy himself that the material is produced as per the quality requirements of this specification. All reasonable facilities shall be extended to him, free of charge. He may also witness the sampling, testing and marking called for in this specification.

17.0 TEST CERTIFICATE:

Five copies of the test certificate shall be furnished giving the following details:

- a) Specification No. HY10765 Rev.03
- b) BHEL Order No.
- c) Name of the supplier
- d) Melt No.
- e) Heat treatment batch no.
- f) Process of Manufacture
- g) Results of chemical analysis and mechanical tests
- h) Results of Metallographic and Ultrasonic tests with representative photomicrographs.

18.0 PACKING AND MARKING:

18.1 Marking: All bars with cross-sectional size greater than 50 mm shall be stamped with the melt number, specification number and supplier's trade mark on both the end faces of the bars.

Bars of sectional size 50 mm and below shall be bundled as per each size and a metal label bearing the following information shall be securely attached to each bundle.

- a) BHEL Order No.
- b) BHEL Specification No. HY10765 Rev.03
- c) Melt No. & Heat treatment batch no.
- d) Size & Weight
- e) Supplier's trade mark.

18.2 Packing: The bars shall be suitably packed to prevent corrosion and damage during transit.

19.0 REJECTION:

In the event of any material proving defective during the course of further processing or testing, such material shall be rejected and the supplier shall make immediate arrangements to replace the same free of cost.



TD219
Rev.00

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 107 66

REV. NO. 11

PAGE 1 OF 11

**VACUUM DEGASSED / ESR STAINLESS STEEL BARS FOR
STEAM TURBINE BLADES, HARDENED & TEMPERED
(GRADE: X22 Cr Mo V 121)**

1.0 GENERAL:

This specification governs the requirements of vacuum degassed / ESR processed, hardened & tempered stainless steel bars of grade X 22 Cr Mo V121 for steam turbine blades.

2.0 APPLICATION:

For manufacture of steam turbine blades suitable for working temperature from 400-550°C.

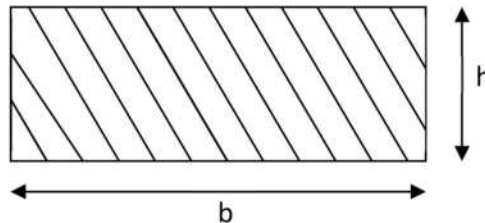
3.0 CONDITION OF DELIVERY:

Hot rolled/forged, Hardened & Tempered, sand/shot blasted and protected with rust preventive coating, meeting the dimensions and tolerances required as per Clause 4.0.

4.0 DIMENSIONS AND TOLERANCES:

4.1 Dimensions: Unless otherwise specified in the order, the bars shall be supplied in random lengths of 2 to 5 meters with a maximum of 10% shorts down to 1 metre. Other dimensions shall be as specified in the order.

4.2 Tolerances: The tolerances on cross sectional dimensions shall be as follows.



Note: The corners of the flats shall not have any radius.

4.2.1 Tolerance on dimensions:

'b' width across flats, mm	Allowable deviation on 'b' mm	'h' thickness mm	Allowable deviation on 'h' mm
Upto 35	+1.5	Upto 20	+ 1.0
Over 35 and upto 75	+ 2.0	Over 20 and upto 40	+ 2.0
Over 75	+ 3.0	Over 40	+ 3.0

Note: Bending of the bars shall not be more than 1mm/metre throughout the length of bars in supply condition. Bulging on the sides shall not be more than 0.01 x b and 0.01 x h respectively.

Revisions: Modified Cl. 14.1 & updated Quality Plan.

Issued :
**STANDARDS ENGINEERING & IPR
COORDINATION DEPARTMENT**

Rev. No. 11

Amd. No.

Reaffirmed:

Prepared:
**Sr.ENGINEER,
MATLS. ENGG.**

Approved:
**AGM(R&D and
EC, Logistics)**

Dt. of 1st issue:

Dt.07-07-2021

Dt.

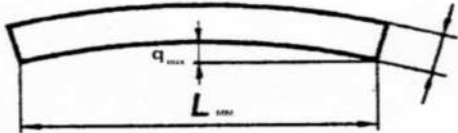
Year:

JULY, 1981

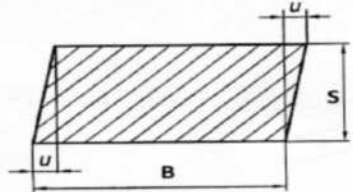
**PLANT PURCHASING
SPECIFICATION
HYDERABAD**



4.2.2 Straightness tolerances (q_{max}) for rectangular section bar:

Straightness	Value of q_{max} (mm)	Condition
	$(L \times 1.5) / 2000$	B & S both ≤ 110
	$(L \times 2) / 2000$	B or S > 110

4.2.3 Out of section tolerance for rectangular section bar:

Out of section	Nominal Thickness (mm)	Tolerance (mm)
	$10 < S \leq 25$	$u \leq 0.5$
	$25 < S \leq 40$	$u \leq 1.0$
	$40 < S \leq 80$	$u \leq 1.5$
	$S > 80$	$u \leq 3.0$

5.0 MANUFACTURING AND INSPECTION SEQUENCE PLAN (MIP):

Before starting production the manufacturer shall submit the following documentation to BHEL.

- 5.1 A manufacturing & inspection sequence plan (MIP) included with tensile test at 600°C and creep test released after the prototype qualification, establishing the quality assured sequence of operations like steel melting, rolling/forging, heat treatment and inspection plan. Information about internal & external specifications shall also be mentioned in MIP. Every change in the established process or MIP needs written permission of BHEL.
- 5.2 Test instructions for non-destructive testing & destructive testing, which are performed, as part of manufacturer's quality assurance shall also be submitted. The test instructions shall include precise information on the test procedures, sample location plan (illustrated by sketches).

6.0 MANUFACTURE:

- 6.1 The steel shall be manufactured by basic electric furnace process and subsequently vacuum degassed / electroslag remelted.
- 6.2 The vacuum system shall have the capacity to maintain a vacuum of 2 torr or lesser during vacuum degassing process for the sufficient time so as to lower the gas contents in the steel.
- 6.3 The ingot castings shall be used for the manufacture of bars. A reduction ratio of 4 (minimum) shall be maintained from the ingot to final bar size. The information regarding the ingot size to the concerned final bar size shall be mentioned in the MIP.

7.0 HEAT TREATMENT

- 7.1 The following heat treatment is suggested to achieve the mechanical properties specified in Cl.12.0 of this specification.



TD219
Rev.00

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 107 66

REV. NO. 11

PAGE 3 OF 11

Harden in air or oil at 1020-1070°C
Tempering temperature shall not be less than 650°C

7.2 If the bars need be straightened after heat treatment then the bars shall be stress relieved after the straightening operation at 30° C below the actual tempering temperature with a slow cooling rate.

7.3 The process parameters shall be selected with a view to achieve lowest possible residual stresses. The distortion of the finish machined part caused by slight residual stresses from the rolling & heat treatment process shall not occur.

7.4 The details of the actual heat treatment cycle followed shall be furnished in the Test Certificate.

8.0 FREEDOM FROM DEFECTS:

8.1 The bars shall be free from cracks, scabs, seams and other harmful defects.

8.2 Decarburization and other material defects shall not exceed the dimensional tolerances as specified in Cl. 4.2

9.0 FINISH:

9.1 The surface of the bars shall be smooth without any laps, rolled in scales etc. Dents roll marks, and scratches are permitted provided their depth does not exceed half the tolerance limits specified in clause 4.

9.2 The edges of bars shall be cut square by sawing or shearing and no crop ends are permissible.

10.0 TEST SAMPLES:

10.1 **For Chemical Analysis:** One sample for chemical analysis shall be taken from each melt.

10.2 **For Mechanical tests:** Bars of same size shall be grouped into lots belonging to same melt and heat treatment batch. This shall be treated as a single test unit and subjected to mechanical testing as per following plan.

10.2.1 The uniformity of the strength of the bars belonging to one lot (same melt and heat treatment batch of same size of bars = test unit) shall be verified by hardness test as per EN ISO 6506-1 or any other reputed international method. The hardness test shall be performed on 10% of each test unit, however on atleast 10 bars or on all the bars if the test unit comprises of less than 10 bars. The greatest permissible difference in hardness in a lot (test unit) shall not exceed 35 HBW.

10.2.2 Hardness tests are to be performed after all heat treatments including a possible stress relieving are undertaken.

10.2.3 Mechanical properties shall be determined on the hardest and softest bars identified by the hardness tests conducted as per 10.2.1 and 10.2.2.

10.2.4 The test samples locations may be as per Annexure A and B. If the cross section of the bar is more than 200 cm², then mechanical properties must be determined both in the centre of the bar and at the side of the bar. With the exception of toughness, the difference in the properties across the bar cross section shall not exceed 7.5%.

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**



10.2.5 The specimen for Metallography shall be taken in longitudinal direction with a minimum cross section area of 320 mm².

The positions of the specimens given in the Annexure A and B are meant for guidance only. Details concerning the locations of the specimens are to be agreed mutually and must be included in MIP with a sketch.

11.0 CHEMICAL COMPOSITION:

Heat analysis (in weight %) shall be achieved as follows.

Element	C	Si	Mn	P	S	Cr	Mo	Ni	V
Minimum	0.18	0.10	0.30	--	--	11.00	0.80	0.30	0.25
Maximum	0.24	0.50	0.80	0.020	0.020	12.50	1.20	0.80	0.35

12.0 MECHANICAL PROPERTIES:

The material in final delivery condition shall comply with the following mechanical properties.

Properties	0.2 %Yield Strength, N/mm ²	Tensile Strength, N/mm ²	% Elongation	% Reduction in area	Impact energy, J	Hardness (BHN)
Minimum	700	900	11	35	20	265
Maximum	--	1050	--	--	--	310

NOTE: 1) The tensile test shall be carried out accordance with EN10002 resp. ASTM E8M (round tension test specimen with L₀ = 50 mm and d₀ = 10 mm) or any other reputed National/International standard.

2) The Charpy V – notch impact test shall be performed with standard test specimens in accordance with EN: 10045 or any other reputed National/International standard. An impact test shall consist of three specimens from a single test location; the minimum average value shall be as specified above. Only one value of the three can be below the specified minimum, but in no case below 14 J. All the three test results shall be reported in test certificate.

3) HBW 10/3000 or HBW 5/750 shall be used for hardness tests.

13.0 METALLOGRAPHY TESTS:

The examination of the cleanliness must be performed in the centre of one bar per lot. It can be conducted before or after the heat treatment. The microstructure must be uniform and free from porosity, excessive segregation and other in-homogeneities. The following properties concerning delta-ferrite and inclusions shall be achieved.

13.1 Delta ferrite content shall be less than 5%. Delta ferrite content shall be determined in a manner consistent with the evaluation technique described in ASTM E 45 Method A (Worst Field Method at a Magnification of 100X) with the specimen orientation in longitudinal direction. The distribution and size of delta ferrite must be such that it does not result in indication during MPI examination of the ready-machined surface.



TD219
Rev.00

**PLANT PURCHASING
SPECIFICATION
HYDERABAD**

HY 107 66

REV. NO. 11

PAGE 5 OF 11

13.2 Inclusion content shall be tested as per ASTM E 45 Method A and with following limits.

13.2.1 "Thin series" inclusions shall not exceed 2.0 for Type A, B, C and 2.5 for Type D.

13.2.2 "Heavy series" inclusions shall not exceed 1.5 for all Types i.e. A, B, C and D.

13.2.3 All the type and sizes of the inclusions mentioned in 13.2.1 and 13.2.2 can exist simultaneously.

13.2.4 Maximum number and size of globular inclusions (type D):

$$IR(D) = (n_1 + 2.5 n_2) \leq 10$$

IR (D) is converted to an area of 160 mm².

n = number of globular inclusions.

n₁ (25 μm – 50 μm); n₂ (51 μm – 75 μm)

The size pertains not only to the globular inclusions themselves, but also the subsequent cavities, which can occur beside them. Inclusions and cavities which are more than 75 μm are not allowed.

13.3 Grain size: The grain size must be measured at the softest and the hardest bar after all heat treatments are performed. Grain size 4 or finer per ASTM E 112 or DIN 50601 must be achieved.

A deviation from the average size of more than 2 grain size is not permissible.

14.0 EXTERNAL AND INTERNAL QUALITY/NON DESTRUCTIVE TESTING:

14.1 Test Scope: The following NDT inspections shall be performed after all heat treatments including stress relieving operations are completed on the bars

- Visual inspection of all bars
- UT: All flats shall be subjected to ultrasonic testing as per BHEL Standard HY 0850179, Rev. 01 and acceptance norm shall be as per HY 0850179, Rev. 01. The UT shall be carried out in dispatch condition of the material.

14.2 Criteria for Recording Limits and Decision on Further Use:

- a) Surface defects: Indication of surface defects, e.g., scoring caused by the rolling process are to be ground at least at both ends, in the center of the indications and in increments of ca.250 mm to check the extension below the surface. Surface defects extending ≥1 mm or greater than half the specified dimensional tolerances below the surface are not permissible.

15.0 HIGH TEMPERATURE PROPERTIES:

The supplier shall guarantee the elevated temperature properties as per EN10269 for this grade of material.

**PLANT PURCHASING
 SPECIFICATION
 HYDERABAD**

TD219
 Rev.00



16.0 MATERIAL IDENTITY TEST:

At the time of delivery, all the bars shall be subjected to identification test by Spark test method or any other reliable means to ascertain that the material supplied is as required by the specification. Details of the instrument and the methodology followed shall be reported in Test certificate.

17.0 PROCESS QUALIFICATION:

A qualification review, performed jointly by the purchaser and supplier, is required before starting production for the first order. The process qualification review will include the following as a minimum requirement.

- 17.1 This initial process qualification is required for each manufacturing, heat treatment and testing facility
- 17.2 The parameters used or stipulated during this phase form the basis of the MIP.
- 17.3 In addition to the scope of testing and examination stipulated in this specification, the following tests and examinations shall be performed.

17.3.1 Tensile and impact tests in transverse direction. If required, the sub-size test specimens may be used for the testing.

17.3.2 **Hot tensile test:** In accordance with ISO 6892-2 or equivalent standard, a tensile test in longitudinal direction has to be performed at 600°C. The following properties must be achieved:

0.2% Proof stress (N/mm ²)	Tensile strength (N/mm ²)	Elongation (%)	Reduction in area (%)
≥285	≥380	≥18	≥60

17.3.3 Determination of FATT according to ASTM A 370. FATT of < 25°C shall be achieved. Testing shall be carried out on minimum 10 specimens.

17.3.4 Magnetic particle testing: The distribution, type and size of micro-structural in-homogeneities (e.g. delta ferrite and segregation) shall not cause MP indications.

17.4 The manufacturer shall provide the sample to BHEL for evaluation or testing before carrying out creep tests at any suitable labs. Only sample which are evaluated and certified by BHEL shall be subjected to creep tests.

17.5 The MIP plan shall include the Creep and hot yield test. The manufacturer shall submit the results of creep tests conducted on the hardened and tempered samples of the steel produced by them of this grade of material. The test parameters like test temperature, duration of test and number of test samples shall be mutually agreed upon between the manufacturer and BHEL. The results of these creep tests shall form the basis of high temperature property guarantee to be given by the manufacturer for their supplies of blade flats as per CI.15.0.

18.0 INSPECTION AT SUPPLIER'S WORKS:

The representative of BHEL shall have free access to the supplier's works at all times during the execution of the order, to satisfy himself that the material is produced as per the quality requirements of this specification. All reasonable facilities shall be extended to him free of charge. He may also witness the sampling testing and marking called for in this specification.



TD219
Rev.00

PLANT PURCHASING SPECIFICATION HYDERABAD

HY 107 66

REV. NO. 11

PAGE 7 OF 11

19.0 QUALITY PLAN:

- 19.1** Vendor shall follow the Quality Plan Ref. BHEL/HY10766/Blade flats S-QAP Rev.02 attached as Annexure 'C' unless conditions stipulated in Cl.19.2 & 19.3 are applicable. A duly signed and stamped copy of this QAP shall be submitted by the vendor along with the technical offer.
- 19.2** In case Customer / Project related additional requirements are applicable in the enquiry / tender, vendor may be asked to submit a separate QP including such requirements.
- 19.3** In case of new vendors or first time supplies for the sizes mentioned in BHEL enquiry, a separate QP shall be submitted for approval by BHEL.

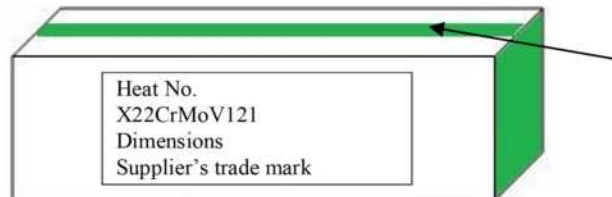
20.0 TEST CERTIFICATE:

Three copies of the test certificate shall be furnished (in English) giving the following details:

- Specification No.: HY10766 Rev.11
- BHEL Order No.
- Name of the supplier.
- Melt No.
- Process of Manufacture
- Heat treatment batch no. and HT charts.
- Results of chemical analysis and mechanical tests (including hardness test results).
- Results of Metallographic tests with representative Photomicrographs.
- Results of Ultrasonic tests.
- Dimensional inspection report
- High temperature guarantee certificate
- Confirmation of 'Material identity test' on all bars
- Results of any additional test (if applicable as per order)

21.0 MATERIAL IDENTIFICATION MARKING:

Marking of each individual bar at the front and side face shall be done as given below. For easy identification of the material during usage, each bar shall be painted with Green color code along the length of the bar on any of its face as indicated below:



**Green color code
(minimum 4mm
width)**

Supplier shall ensure that the green color code is clearly visible in the final dispatch condition of the material.

22.0 PACKING:

The bars shall be suitable packed to prevent from corrosion and damage during transit. Bars of lengths within 1 metre variation are to be separately bundled to avoid bending during transit or storage.

23.0 REJECTION AND REPLACEMENT:

In the event of any material proving defective during the course of further processing or testing at BHEL, such material shall be rejected and the supplier shall make immediate arrangements to replace the same free of cost after all the commercial terms and conditions are satisfied.

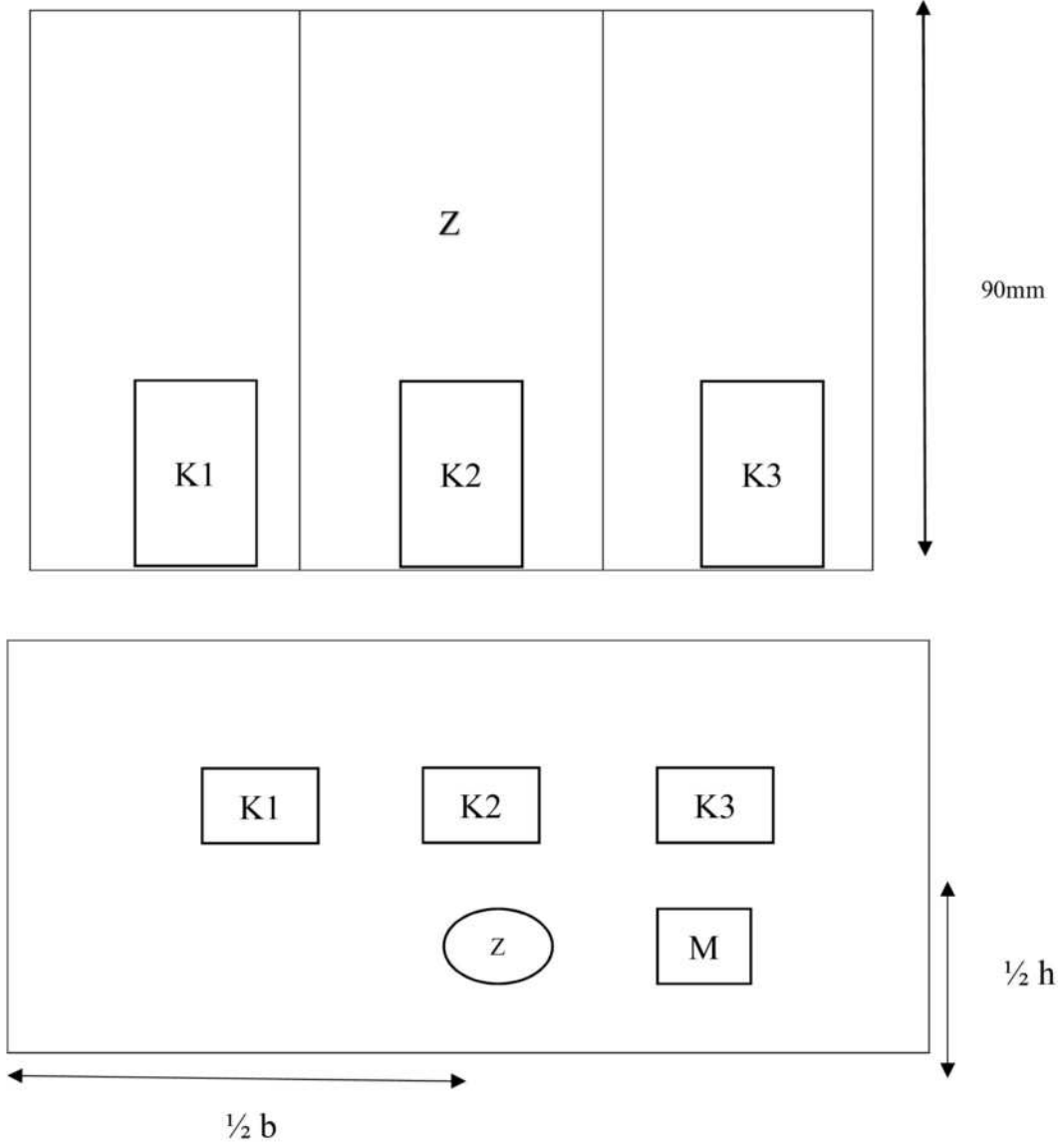
PLANT PURCHASING
SPECIFICATION
HYDERABAD

TD219
Rev.00



ANNEXURE A

TEST SAMPLES LOCATIONS PLAN (CROSS SECTION AREA <= 200 CM²)



Z = TENSILE SPECIMENS (LONGITUDINAL DIRECTION)
K1, K2 & K3 = IMPACT SPECIMENS
M = METALLOGRAPHY SPECIMENS

NOTE: Make sure that all specimens are located in the middle of the material thickness

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It must not be used directly or indirectly in any way detrimental to the interest of the company.



TD219
Rev.00

PLANT PURCHASING SPECIFICATION HYDERABAD

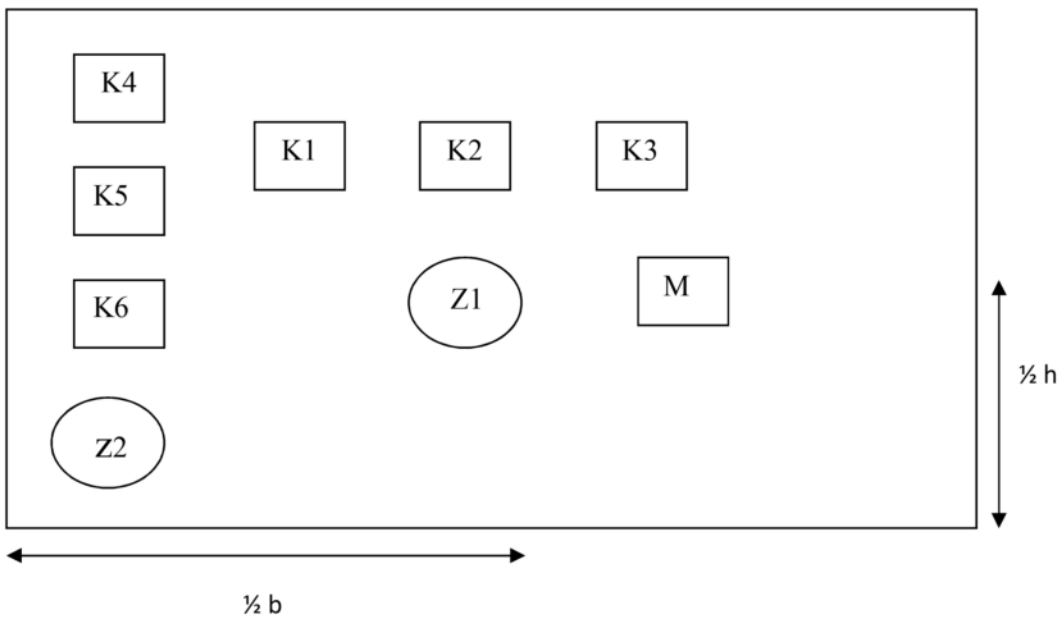
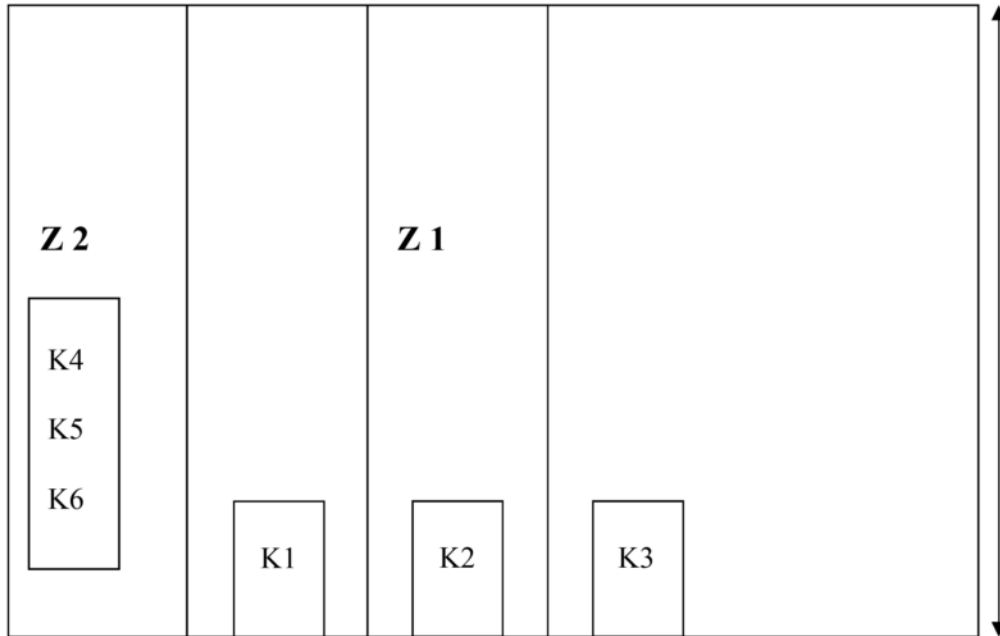
HY 107 66

REV. NO. 11

PAGE 9 OF 11

ANNEXURE B

TEST SAMPLES LOCATIONS PLAN (CROSS SECTIONAL AREA > 200 CM²)

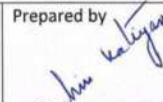



Z1, Z2 = TENSILE SPECIMENS (LONGITUDINAL DIRECTION)

K1 TO K6 = IMPACT SPECIMENS

M = METALLOGRAPHY SPECIMENS

Annexure C													
VENDOR'S NAME & ADDRESS			QUALITY PLAN (BLADE FLATS)					HY 10766 REV 11 (PAGE 10 OF 11)					
			BHEL ENQ/ P.O. No.					QP No.: BHEL/HY10766/Blade flats SQAP Rev.03 PAGE 1 of 2					
			Date										
SL No	Operation	Characteristics	Class	Type of check	Quantum of Check	Reference Document	Acceptance Norms	Format of Record	*	Agency			Remarks
									D	P	W	V	
1.	Melting & Refining (ESR or VD Process)	Chemical composition	Major	Chemical analysis	Each melt	HY 10766 Rev. 11	HY 10766 Rev. 11	Test certificate	√	2	-	1	
2.	Hot rolling / Forging & Cutting	Dimensions	Minor	Dimensional	100%	Internal Standard	Internal Standard			2	-	1	
3.	Heat treatment	Soaking time & temperature	Major	Verification of HT time & temperature charts	All cycles	HY 10766 Rev. 11	HY 10766 Rev. 11	Original HT charts	√	2	-	1	
4.	Dimensional inspection	Dimension & tolerances	Major	Dimensional checking	100%	As per PO & Spec.	As per PO & Spec.	Dimensional report	√	2	1	-	Refer Note - 4
5.a	Mechanical properties	Hardness	Major	Hardness test	Each lot	HY 10766 Rev. 11	HY 10766 Rev. 11	TC	√	2	1	-	
5.b		Tensile properties (0.2% Y.S, UTS, %El, % RA) & toughness	Major	Tensile & Impact testing	Hardest & softest bar from each lot	HY 10766 Rev. 11	HY 10766 Rev. 11	TC	√	2	1	-	
6.a	NDT	Visual	Major	Surface defects & finish	Each bar	HY 10766 Rev. 11	HY 10766 Rev. 11	TC	√	2	1	-	
6.b		UT	Major	Sub-surface defects	Each bar	HY 10766 Rev. 11	HY 10766 Rev. 11	TC	√	2	1	-	

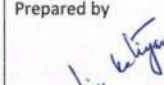



Legend: <ul style="list-style-type: none"> • P Perform; W Witness; V Verification; • Indicate 1 for BHEL or BHEL nominated Inspection agency & 2 for vendor/sub vendor as appropriate against each component /characteristic under P, W & V columns. • * For items marked V (tick) in column D, test certificates shall be submitted to BHEL for records. 	Prepared by  Sachin Katiyar Signature and Stamp	Approved by  B. Ashok Kumar AGM / QA 8-7-21 Signature and Stamp	#Vendor's confirmation Signature and Stamp
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वरिष्ठ अभियंता / गुणवत्ता आश्वासन
 Engineer / Quality Assurance
 ०६ एम हैदराबाद, BHEL, HYD-32

Annexure C													
VENDOR'S NAME & ADDRESS			QUALITY PLAN (BLADE FLATS)					HY 10766 REV 11 (PAGE 11 OF 11)					
			BHEL ENQ. /P.O No.					QP No.: BHEL/HY10766/Blade flats SQAP Rev.03 PAGE 2 of 2					
			Date										
SL No	Operation	Characteristics	Class	Type of check	Quantum of Check	Reference Document	Acceptance Norms	Format of Record	*	Agency			Remarks
									D	P	W	V	
7.a	Metallurgical testing	Inclusion rating, microstructure & % delta ferrite	Major	Microstructure	One sample per lot	HY 10766 Rev. 11	HY 10766 Rev. 11	TC with micro-structure	V	2	-	1	
7.b		Grain size	Major	Microstructure	On hardest & softest bar per lot	HY 10766 Rev. 11	HY 10766 Rev. 11	photographs	V	2	-	1	
8.	Material identity test	Material grade	Major	Chemical analysis	Each bars	HY 10766 Rev. 11	HY 10766 Rev. 11	TC	V	2	1	-	
9.	High temp. properties	Guarantee for elevated temperature properties as per EN10269.				HY 10766 Rev. 11	HY 10766 Rev. 11		V	2	-	1	Guarantee certificate shall be submitted
10.	Packing, marking & color code	Packing & marking	Major	Hard punching & colour code	All bars	HY 10766 Rev. 11	HY 10766 Rev. 11			2	-	1	
11.	Verification & Certification	Documentation	major	Verification	All bars	HY 10766 Rev. 11	HY 10766 Rev. 11	TC	V	2	-	1	Endorsement of all documents by TPIA

Note:

- 1) This SQAP is applicable along with BHEL approved frozen Manufacturing Process Plan (MPP) only.
- 2) Additional requirements as per BHEL customer / project and purchase order will also be applicable.
- 3) This SQAP is not applicable for first time supplies of the material as per HY10766, for which a separate MPP and QAP shall be submitted. In such case process qualification requirements will be also be applicable.
- 4) The following shall be ensure & certified:
 - a. Size & Length of each bar as per purchase order.
 - b. Straightness of all bars.
 - c. Defect free surfaces.
 - d. Marking & punching on all bars.

Legend: <ul style="list-style-type: none"> • P Perform; W Witness; V Verification; • Indicate 1 for BHEL or BHEL nominated Inspection agency & 2 for vendor/sub vendor as appropriate against each component /characteristic under P, W & V columns. • * For items marked v (tick) in column D, test certificates shall be submitted to BHEL for records. 	Prepared by	Approved by	#Vendor's confirmation
	 सचिन खटियार Signature and Stamp  Sr. Engineer / Quality Assurance एन.ई.एल. हैदराबाद, BHEL, HYD-37	 B. Ashok Kumar Signature and Stamp  AGM / QA 8-7-21 HYD-37	Signature and Stamp

#To be submitted along with the technical offer.

ANNEXURE - B
PRE QUALIFYING CRITERIA FOR SUPPLIERS OF BLADE FLATS
OF GRADES X22 Cr Mo V 121 (HY10766) AND X 20Cr13 (HY10764)

Suppliers of the blade flats shall confirm / fulfill the following conditions:

1.0 MANUFACTURING AND TESTING FACILITIES:

The details of the manufacturing and testing facilities of the Mills / manufacturer shall be submitted in the format enclosed as Annexure-C for assessment by BHEL. The company catalogues or company's website addresses which gives complete information as required by this tender conditions can also be provided along with the offer.

Only manufacturers are permitted to quote for the present tender. No trader/intermediaries will be accepted for ordering.

2.0 FIRST PIECE QUALIFICATION / PROCESS QUALIFICATION:

Suppliers shall explicitly confirm their acceptance for the process qualification as specified in HY10766 Rev.11 & HY10764 Rev.11. However, if any of the suppliers are able to submit the evidences of their supplies of Steam turbine blade flats to M/s Siemens, Germany or already supplying blade flats to BHEL Hyderabad, they can be considered for the waiver of process qualification.

(In case of supplies made to M/s Siemens Germany, the evidences like purchase order copies and corresponding material test certificates, creep test reports as applicable, etc. shall be submitted.)

3.0 HIGH TEMPERATURE TESTS (For "process qualification" when waiver as per 2.0 above is not applicable)

AA) CREEP TESTS FOR X22 CrMoV121Material grade:

i) All the manufacturers who are required to carry out Process Qualification as per Clause 2.0 mentioned above shall explicitly confirm their acceptance for carrying out creep tests on the sample of the first lot of the blade flats of material X22 Cr Mo V 121 (HY10766) as per the following test parameters.

No. of samples to be tested	:	One
Test temperature	:	550 °C (Minimum)
Stress, Min	:	180 MPa (Minimum)
Minimum time before rupture	:	1000 hrs.

Samples for creep test will be approved by BHEL Hyderabad before carrying out creep tests. The test reports will be reviewed and the dispatch clearance for the first lot will be given only after acceptance of creep test results for the above orders by BHEL Hyderabad

ii) If the manufacturer has already tested any sample of same grade of material (utilizing same manufacturing processes and facilities by them which will be used for the supply of blade flats as per the present enquiry) for creep testing as per the above given test parameters, then the "Creep test certificate" clearly indicating the above test parameters in the test report can be submitted along with their technical offer for consideration of waiver for creep tests requirement for the present enquiry.

4.0 INSPECTION OF THE FIRST LOT OF EACH MATERIAL GRADE AND SIZE OF THE BLADE FLATS where process qualification is applicable:

Inspection of the first lot of each material grade and size will be carried out in the presence of BHEL Hyderabad representative / TPIA as per order conditions. A QAP shall be submitted along with the technical offer for review and acceptance by BHEL.

(The QAP as given in BHEL specifications is not applicable for the present tender for the suppliers who are required to undergo process qualification and creep tests as per Clause no. 2.0 & 3.0 above).

5.0 PAST EXPERIENCE:

- i) The manufacturers who are having experience of manufacturing and supplying blade flats for OEMs of steam turbines (including BHEL and Siemens Germany) will be considered for the present enquiry subjected to the fulfillment of requirements mentioned against Clause 2.0 and 3.0.
- ii) The vendor shall submit at least one reference including unpriced PO copy and manufacturer's test certificates as evidences for any of the size range mentioned in the items of this enquiry with minimum quantity of 2000 Kg. Reference PO shall not be more than five years old from the date of enquiry.

(The vendors who has supplied blade flats to BHEL Hyderabad in the past will be acceptable based on the review of records available with BHEL)

ANNEXURE -C

DETAILS OF THE MILLS SUPPLYING BLADE FLATS TO BHEL HYD

BHEL ENQ. NO. :

DATE:

1.0	ORGANISATIONAL INFORMATION		BHEL REMARKS
1.1	MILL NAME :		
1.2	HEAD OFFICE		
	ADDRESS: TELEPHONE NO. WEB SITE		
1.3	FACTORY / WORKS		
	ADDRESS: TELEPHONE NO. E-MAIL (of the chief contact person)		
1.4	BRANCH OFFICE / MARKETING OFFICE		
	ADDRESS TELEPHONE E-MAIL(of the chief contact person)		
2.0	MANUFACTURING FACILITIES:		
2.1	MELTING FACILITIES :	CAPACITY / SIZE	
2.2	HOT / COLD ROLLING OR/AND FORGING FACILITIES	CAPACITY / SIZE	
2.3	HEAT TREATMENT FACILITIES (INCLUDING QUENCHING FACILITIES) FOR MINIMUM 2.5m OF LENGTHS)		
2.4	STRAIGHTENING FACILITIES		
2.5	TESTING FACILITIES:		
	TESTING FACILITY	EQUIPMENTS/MACHINES	CAPACITY / SIZE
2.51	CHEMICAL		
2.52	MECHANICAL TEST		
2.53	MPI/DP		
2.54	ULTRASONIC TEST (Dimensions/Straightness measurement)		
2.55	OTHER FACILITIES		
3.0	MILLS PAST EXPERIENCE / CREDENTIALS		
3.1	CUSTOMER REFERENCE LIST OF SAME ITEMS		
3.2	MILLS PRODUCTION RANGE (SIZE AND MATERIAL GRADES)		
3.3	COPY OF VALID ISO 9000 CERTIFICATE FOR THE MILL		
3.4	ANY OTHER INFORMATION LIKE REGISTRATION / SUPPLIES TO SISTER UNITS OF BHEL WITH EVIDENCES (OPTIONAL INFORMATION)		

- Note: 1) The above data shall be furnished / certified by the manufacturer or mill only. Data certified by any other agencies will not be accepted
 2) Any of the process / operation is sub-contracted, shall be mentioned by giving the details of the facilities and tie - up letter.
 2) Mills catalogues shall also be provided
 3) The above information will be used for scrutinizing the technical offers for the above mentioned enquiry

SIGNATURE AND COMPANY STAMP OF THE MILL



(Attachment to Enquiry No. XXXXXXXXXXXX Due on Date XX.XX.XXXX for submission by 11.00 hrs to open from 14.00 hrs.)

INSTRUCTIONS TO BIDDER (ITB)**NOTE: Bidder to confirm in affirmative by typing "YES" or "Applicable Data" in the response column. Deviations, if any shall be recorded in deviations/comments column (Separate sheet can be attached if needed). Non deviatable clauses are indicated as "NON DEVIATABLE".**

Sl. No.	DETAILED TERMS & CONDITIONS	BIDDER RESPONSE (YES/NO)	DEVIATIONS / COMMENT
1	SCOPE OF SUPPLY:		
	Signed & Sealed offers are invited for the Scope of Supply of goods or services or both as detailed in the enquiry. Relevant enclosures/supporting documents / catalogue, if any shall be enclosed to the technical offer.		
2	DEFINITIONS		
A	'The Buyer' means BHEL-HPEP, Ramachandrapuram, Hyderabad-502 032 of Bharat Heavy Electricals Limited (A Govt. of India Undertaking) incorporated under the companies Act having its registered office at BHEL House, Siri fort, New Delhi-110049, India and shall be deemed to include its successors and assigns. It may also be referred to as BHEL.		
B	'The Bidder' means the persons, firm, company or organization on whom the Purchase order is placed and shall be deemed to include the bidder's successors, representatives, heirs, executors and administrator as the case may be. It may also be referred to as Contractor, supplier or bidder.		
C	'Contract' shall mean and include the Purchase order incorporating various documents viz., Notice Inviting Tender (NIT), Offer, Letter Of Intent/Acceptance (LOI/LOA), Instruction to Bidders (ITB) and Special Conditions of Contract (SCC), specifications, inspection/quality plan, schedule of prices and quantities, drawings, if any, enclosed by Bidder/ provided by the Buyer or his authorized nominee and the samples or patterns if any to be provided under the provision of the contract. In case of any inconsistency or contradiction between any of the documents, the order of precedence shall be Purchase Order, LOI/LOA followed by Minutes Of Meeting (MOM), NIT, SCC, ITB.		
D	'Parties to the contract' shall mean the bidder and the buyer as named in the main body of the Purchase Order.		
E	'Goods/Material' shall include Works and Services which are incidental or consequential to supply.		
3	GENERAL INSTRUCTIONS:		
A	Mode of submission of offer shall be as indicated in SCC		Non Deviatable
B	The quotation should be neatly typed and free from over writing/ erasures. Any correction or addition must be authenticated. The offer including annexures and brochures should be submitted in English / Hindi. All Pages of Techno Commercial Bids (Main Pages), ITB, SCC should be signed and Stamped. If there is a conflict in case of bilingual submission, the submission in English will be final. Prices shall be quoted both in figures and words. In case of any discrepancy in value, the prices quoted in words shall be considered for evaluation and establishing L1 Status. Any discount / revised offer / bids submitted by a bidder on his own shall be considered, provided it is received on or before the due date and time of offer / bid submission (Part-1). Conditional discounts shall not be considered for evaluation of tenders.		Non Deviatable
C	Incomplete offers are liable for rejection.		Non Deviatable
D	Bidders to please note that the Terms & conditions contained in this document and SCC are to be read fully before submission of quotations.		Non Deviatable
E	Bidders are advised to comply with ITB and SCC, should there be any deviations (where deviations are permitted), it shall be entered in the deviation column. BHEL reserves the right to reject such offers or load the bid suitably for evaluation.		Non Deviatable
F	Offers shall be submitted directly, only by the bidder or by their authorized representative / agent and the offer should be in line with the regulatory guidelines (i.e. A valid Agency agreement between principal bidder and agent / representative shall be attached and the agreement shall cover the scope of services rendered by Agent, Agency Commission and any other information called for as per the regulatory guidelines). OEM / Mill details shall be provided if bidder is not a manufacturer. Bid envelopes shall bear the name of Bidder. In case of submission through authorized representative/agent, the name of representative/agent should also be mentioned apart from bidder name.		Non Deviatable
G	Offer received after the specified time and date of submission will be rejected. No further correspondence shall be entertained.		Non Deviatable
H	Unsolicited offers will not be considered.		Non Deviatable
4	OTHER PARTICULARS (Please indicate applicable data)		
A	Name of the Bid currency (freely tradable foreign currency for imports and Indian Rupees for indigenous purchase).		
B	Name of the Port of loading and Port of Discharge (applicable to imports).		



5	BID SUBMISSION PROCEDURE FOR CONVENTIONAL TENDER:	
A	For Single Part Bids:	
	The complete bid shall be submitted in a single sealed cover superscribing the Tender number and due date, addressed to Sr DGM/CMM, Vendor Complex, BHEL, Hyderabad and sent by appropriate mode to above address or dropped in tender box located at vendor complex on or before the specified time and date of submission of offers, preferably in the bidder's envelope. E- mail bids shall be sent to mail ID pricebid_hyd@bhel.in only as an attachment.	Non Deviatable
B.	For two-Part Bids:	
i	<p>The offer is to be submitted in two parts viz., Techno-commercial Bid - (Part-I), with all technical specification & scope including bill of material etc., Earnest Money Deposit (EMD)(wherever applicable) and unpriced bid with all applicable Commercial Terms and Conditions, rates of agency commission, duties, taxes and other charges, Signed and Stamped ITB and SCC, <u>except the price</u>, shall be kept in a separate sealed cover, superscribing enquiry No. (Techno-Commercial Bid) and due date AND Price Bid (Part-II), containing ONLY the price (including agency commission, if any) and the applicable duties/taxes/other charges shall be kept in a separate sealed cover superscribing Enquiry no. (Price bid) & due date.</p> <p>Both the above covers (Part –I & II) shall be kept in a Third cover superscribing Enquiry no. & due date.</p> <p>Bidder can also submit offer through email. Technical offer to be submitted to mail ID technicalbid_hyd@bhel.in, and price bid to be submitted to mail ID pricebid_hyd@bhel.in only as an attachment. Interchanging the information in the mails may lead to rejection of the offer. Bidder shall have no claim on e-mail offers sent to any other e-mail ID.</p> <p>In case of e-mail offers, the mail subject should contain Enquiry Number, Due date and Bidder name. Bidder address including contact details shall be mentioned in the content of the mail. Without these details, the offer is liable for rejection.</p> <p>All techno commercial terms & conditions mutually agreed prior to price bid opening shall prevail and supersede any terms and conditions specified otherwise in price bid.</p>	Non Deviatable
ii	The bidders whose bids are techno commercially not accepted will be informed and EMD shall be returned wherever submitted.	
iii	Bidders will be allowed to submit the impact on their quoted prices due to changes in technical scope, specifications, and commercial terms/conditions as specified in NIT which in the opinion of BHEL , warrant changes in prices.	Non Deviatable
C	Bids shall be opened on due time and date in the presence of bidders who may like to be present. Only one representative of each bidder shall be permitted to attend the bid opening. Only the price bids of bidder (in case of two part bid) whose techno commercial bids are accepted will be opened later on a specified date.	Non Deviatable
6	DELIVERY TERMS	
A	Indigenous Purchase	
	<p>a. Terms of Delivery for dispatches to BHEL Hyderabad (HPEP) shall be FOR Destination.</p> <p>b. Terms of Delivery for Direct Dispatch (DD) items shall be Ex Works.</p> <p>i. In case specified in SCC that insurance is in customer/BHEL scope, price quoted shall include Freight charges up to Destination.</p> <p>ii. Otherwise, price quoted shall include Freight and Insurance upto Destination. However, beneficiary for insurance shall be BHEL.</p>	
B.	Imports	
	The goods shall be delivered on FCA capital airport basis in case of freight by Air and CIP basis in case of freight by Sea.	
7	Documentation for Payment	
A	Indigenous Purchase	
	<p>Following documents shall be submitted immediately on dispatch of material to BHEL HPEP / Site</p> <p>a. Original Tax Invoice (Refer ITB clause no 11 for Tax Compliance)</p> <p>b. Packing List - clearly showing number of packages, gross weight and net weight.</p> <p>c. Test/Warranty/Guarantee certificates, O&M Manual (If specified in SCC)</p> <p>d. Insurance intimation/declaration certificate</p> <p>e. Pre-dispatch Inspection report /Third Party Inspection Certificates.</p> <p>f. Consignee copy of LR signed & stamped by Customer/Site representative for DD Items</p> <p>g. e-waybill</p> <p>h. Any other documents as specified in SCC.</p> <p>Softcopies of the above documents shall be uploaded in Pradan portal https://hpep.bhel.com/mm immediately after dispatch of the material.</p>	Non Deviatable



B	Imports	<p>i) Bidder shall inform BHEL the readiness of material along with packing details 30 days in advance from the date of delivery.</p> <p>ii). Bidder shall also upload the soft copy of the dispatch documents consisting of BL / AWB, Invoice, delivery note, packing list, country of origin & Test certificates and other documents as specifically indicated in the SCC in PRADAN Portal (https://hpep.bhel.com/mm) within Five days from the B/L date for sea shipment and One day from AWB date for Air shipment and sent to email ids: mssea@bhel.in, msair@bhel.in, cmmfe@bhel.in.</p> <p>iii) AWB/BL must contain the information of BHEL GST no., and PAN no.</p> <p>iv) Air Shipments: Bidder shall ensure the following</p> <ul style="list-style-type: none"> a) Port of discharge -- Mumbai/Chennai/Hyderabad (as indicated in SCC). b) Consignee shall be BHEL, Hyderabad. Material shall be air freighted through cargo mode only and not through Courier. c) Upon handing over the cargo to the forwarder, bidder shall ensure the acknowledgement receipt with wordings" Cargo handed over in sound condition for Air freighting". <p>Note: Warehouse receipt will not be considered for penalty calculations.</p> <ul style="list-style-type: none"> d) In case of CIF/ shipments, bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within one day from the date of Shipment. e) Following dimensions of single package may be noted. <ul style="list-style-type: none"> i). Maximum dimension of the cargo(ODC) -- 125" x 88" x 63" ii). Maximum weight of the cargo -- 3.5 MT. <p>If any package dimension or weight exceeds the above set limits, it will be treated as Over Dimension Cargo (ODC) or Over Weight Cargo and bidder shall inform BHEL 30 days in advance to the delivery date to enable BHEL to finalize the freight forwarder.</p> f). If package falls under Hazardous category, bidder shall communicate BHEL 30 days in advance period with document support. <p>v) Sea Shipments:- bidder shall ensure the following</p> <ul style="list-style-type: none"> a). Port of discharge -- Nhavaseva/Mumbai/Chennai. b). Place of Delivery / Final Destination for CIP shipments - Nhavaseva CFS / Chennai CFS. c). In case of FOB shipments, bidder shall handover the material to BHEL nominated forwarder and obtain the cargo receipt. d). If the material cannot be containserised in 20 or 40 GP containers, an advance information of 30 days prior to the delivery date shall be communicated to BHEL for necessary arrangements and finalisation of freight forwarder. e). For CIP shipments <ul style="list-style-type: none"> 1. In case of FCL shipments, Detention free period must be 14 days. 2. Bidder shall also inform BHEL the information about discharge port agent details and cargo arrival information within 5 days from the date of Shipment. 3. No charges for the services rendered till place of destination will be payable by BHEL. Incase liner / forwarder insist for charges, not in the scope of BHEL, the same will be adjusted from bidder account. 4. In case of CIF shipments -- Bidder must select a forwarder/liner whose discharge port published tariff for THC and other services is available. Any charges over and above the published tariff will not be borne by BHEL or will be adjusted from the bidder's bill. 5. bidder must insure the cargo for 110% of material value including the freight amount. (vi). Recovery charges for non-submission of documents: - Bidder shall submit all the required documents to BHEL as prescribed in the Purchase order and NIT. <p>If BHEL incurs any charges such as Penalty, demurrage, container detention, wharfage, storage, Ground rent etc., due to non - compliance / non - submission of documents prescribed in Purchase Order/ NIT/Letter of credit, the same shall be recovered from the bidder as under:</p> <p>1. EUROPE/USA/Black Sea/ Far East/Middle East/South East sector</p> <p>A. For FOB Sea Consignments:-</p> <p>Penalty for late submission / negotiation of documents beyond 14 days shall be as under:</p>	
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Sl. no	Period (From Date of Bill of Lading)	Recoverable Charges			Recoverable Charges per day per container	
		LCL Break per day	per week/ bulk cargo	per day	20FT Container	40FT Container
i	Upto 14th day	Nil			Nil	Nil
ii	15th day onward	USD 10			USD 110	USD 200



	<p>B. For CIP Sea Shipments: - Bidder shall provide rates for detention charges after free period at the time of offer itself in case of engagement of 20FT Container and 40FT category. In case of late presentation of documents to the bank recovery will be effected from the Bidder as per the rates quoted by the Bidder at the time of offer in this regard. In case of Break bulk cargo and LCL, Demurrage charges shall be recovered at the rate of USD 1 per Ton per day and storage charges at the rate of USD 10 per week respectively shall be charged as late presentation charges.</p> <p>(vii) Description of items in invoice, packing list, BL / AWB or LR shall be same as PO item description. Bidders shall ensure that invoice shall contain PAN nos. of both bidder and BHEL along with other tax related numbers. BHEL PAN AAACB4146P and BHEL TAN HYDB00086C Any other additional documents sought by the statutory authorities, the same shall be produced by the bidder on priority basis.</p> <p>(viii) Bidder shall provide package details including number of packages, gross weight, net weight etc.</p> <p>(ix) The bidder shall provide the following documents at the time of submission of offer: a) No Business Connection in India declaration issued by the bidder as per the format specified. (or) b) (i) No Permanent Establishment in India declaration issued by the bidder as per the format specified. (ii) Tax Residence Certificate issued by the bidder's tax authorities. (iii) Form 10F, as attached in Annexure V, to be issued by the bidder. c) In case the bidder has a Business Connection in India as per Section 9 of Income Tax Act or significant economic presence in India as per rule 11 UD of IT Act or Permanent Establishment in India as per Article 5 of Double Taxation Avoidance Agreement between India and the bidder's country, the bidder shall provide a withholding tax order issued by the Indian Income Tax authority for recovery of applicable tax.</p>		
8	Delivery Schedule		
	The tendered goods shall be delivered within the period stipulated in NIT/ SCC as accepted. Inordinate delay/early supply are liable for rejection/hold on payment.		Non Deviatable
9	Pricing Terms		
	Quoted price shall be inclusive of Packing & Forwarding and shall remain firm and valid during the execution of PO. Offers with PVC will be rejected outright except in cases where specifically called for in the SCC.		Non Deviatable
10	PRICE VALIDITY :		
	Unless otherwise specified, offer shall be valid for a period of 90 days from the date of bid opening (Technical bid /part-I in case of two part bid). However the prices quoted for spare parts of the Main equipment shall be kept valid for a period as specified in SCC.		Non Deviatable
11	Taxes & Duties (RATE TO BE INDICATED by the bidder against the space provided)		
A	Indigenous Purchase i) Only valid GST registered bidders will be considered for the tender. The GSTIN of the bidder should be clearly mentioned in the offer. ii) If bidder is exempted from GST registration under any provision of the GST Law, a declaration with due supporting documents should be furnished for considering the offer. iii) Bidder to quote the applicable taxes in the following manner: - Harmonized System of Nomenclature (HSN) of Goods - Services Accounting Code(SAC) of Services. - IGST/CGST/SGST/UTGST: Rate of Tax to be quoted as extra in % against the space provided iv) Bidders to ensure correct applicability of IGST/CGST/SGST/UTGST based on the Inter / Intra state movement of goods/services. v) In case Bidder has opted for GST Composition Scheme, the same may be stated explicitly both in their technical and price bids. An undertaking to the effect that any change in the status of the bidder will be intimated. vi) Any other taxes & duties not covered anywhere above may be indicated separately. Taxes deducted at source: - TDS as per the extant statutes shall be deducted. - In case bidder does not provide PAN details, higher rate of tax shall be deducted as per the Act. - Concessional certificates, if any, should be provided well in time for lower deduction of tax.		Non Deviatable



	<p>Terms & Conditions to be complied</p> <ol style="list-style-type: none"> 1. All invoices (incl. Credit Notes, Debit Notes) to contain BHEL HPEP GSTIN ie 36AAACB4146P1ZG. Invoices submitted should be in the format as specified under GST Law. All details as mentioned in Invoice Rules including Dealer GST registration number (GSTIN), invoice number with date of issue, quantity, rate, value, taxes with nomenclature – CGST, SGST, UGST, IGST mentioned separately, HSN Code / SAC Code etc. 2. Reimbursement of GST amount will be made only upon completion of the following: <ol style="list-style-type: none"> i. Bidder declaring such invoice in their GSTR-1 Return/ IFF ii. Receipt of Goods or Services and Submission of Tax invoice by BHEL iii. The tax invoice is reflected in the GSTR2B of BHEL, HPEP (buyer). Payment of GST will be made only if it is matching with data uploaded by the Bidder in GST portal. 3. In case of discrepancy in the data uploaded by the bidder in the GSTN portal vis-a-vis the tax invoice or in case of any shortages or rejection in the supply, then BHEL will not be able to avail the tax credit. The same would be available in PRADAN Portal for the bidder's information. Bidder has to rectify the data discrepancy in the GSTN portal or issue credit note or debit note (details also to be uploaded in GSTN portal) for the shortages or rejections in the supplies or additional claims for processing of such invoices. 4. In cases where invoice details have been uploaded by the bidder but failed to remit the GST amount to GST Department within stipulated time, then GST on the invoices in default will be recovered from the bidder along with the applicable interest. 5. In case GST credit is delayed/denied to BHEL due to non/delayed receipt of goods and/or tax invoice or expiry of timeline prescribed in GST law for availing such ITC, or any other reasons not attributable to BHEL, such GST amount will be recoverable from bidder along with interest levied/leviable on BHEL. 6. Under GST regime, BHEL has to discharge GST liability on LD recovered from bidders. Hence applicable GST shall also be recoverable from bidders on LD amount. For this Tax Invoice digitally signed will be issued by BHEL indicating the respective supply invoice number. The same can be downloaded from PRADAN Portal. 7. GST TDS deducted as per GST Act, is uploaded in GSTN portal along GSTR7. Bidders can directly download the GST TDS Certificate from the GSTN Portal. 8. Bidders to note that Rules & Regulations pertaining to E-way bill system are to be strictly adhered to, as and when notified by Govt. authorities. 		
<p>B.</p>	<p>Foreign Purchase (Imports)</p> <p>The offered price shall be inclusive of all the Taxes and duties as applicable in country of export / country of dispatch for the quoted price.</p> <p>Taxes deducted at source:</p> <ol style="list-style-type: none"> a. In case of goods or services subject to Income tax in India, such tax as per the extant statute shall be recovered. b. In case bidder does not provide necessary documents for beneficial taxation (Refer clause 7-B-(ix) a-c of ITB), the TDS deduction shall be at the maximum percentage stipulated as per the provisions of Income Tax Act. 		<p>Non Deviatable</p>
<p>12</p>	<p>Payment Terms: Unless otherwise specified in SCC, following shall be the terms of Payment.</p>		
<p>A</p>	<p>Indigenous:</p> <ol style="list-style-type: none"> a. Micro & Small Enterprises (MSEs) - 100% Direct EFT payment within 45 days b. Medium Enterprises - 100% Direct EFT payment within 60 days c. Non MSME Bidders - 100% direct EFT Payment within 90 Days <p>Note</p> <ol style="list-style-type: none"> A. Above due date is reckoned from the date of Receipt of material or 15 days from the date of submission of complete set of documents as per PO whichever is later. Payment will be made on acceptance of Material. B. MSEs (covered under MSME Act) need to register and renew periodically and update the same with BHEL C. The taxes that are reimbursed are limited to applicable taxes as on the Purchase Order delivery date or the amount actually paid whichever is less. D. Adherence to the above time schedule of payment is contingent upon Bidder complying with GST provisions and availment of Input Tax Credit by BHEL before the date of payment. E. In case of packaged items, 10% of supply value will be retained till completion of total supplies. F. Bidders to comply with clause 11 on GST requirements 		
<p>B</p>	<p>Imports:</p> <ol style="list-style-type: none"> i) 100% payment (less Indian Agency Commission, if any) shall be through Wire Transfer with a credit period of 60 days - Cash Against Documents (CAD) ii) In case Bidder opts for Letter of Credit payment, the LC Usance period shall be 90 days with respective bank charges to respective accounts and loading of 0.50% iii) Indian Agency commission if payable and so specified in the Purchase order shall be paid in Indian Rupees, considering the SBI TT selling exchange rate, as on the date of payment after successful completion of the contract. 		



C	<p>Conditions for both Inland & Foreign LC: a. LC validity period will be 90 days and for any extension, applicable charges will be to bidder's account. b. LC will be opened 7 working days after receipt of request along with successful pre dispatch inspection completion report / material readiness intimation with Material Test Certificate (MTC), prior to the scheduled / agreed delivery date.</p>	<p>Non Deviatable</p>
D	<p>Conditions for both Indigenous & Foreign Bidders: a. In case Bidders insist for lesser Credit period, loading of 0.60% for every 15 days reduction will be applicable. b. In case PBG as required is not furnished, Payment will be released deducting the BG amount, which will be paid after expiry of warranty period against submission of supplementary claim. c. Payment does not imply in any respect whatsoever a waiver of Buyer's right to performance of the Order. Buyer is entitled to set off claimable debts against claimable liabilities with the bidder by means of a setoff Note.</p>	<p>Non Deviatable</p>
E	<p>Wherever EMD is applicable, the EMD will be paid back to unsuccessful bidders within fifteen days after award of the contract. Successful bidder's EMD will be retained till submission of Performance Bank Guarantee (PBG). Tender Fee wherever applicable is not refundable. No interest shall be payable by BHEL on earnest money or security deposit or any money due to the contractor by BHEL.</p>	<p>Non Deviatable</p>
13	<p>Penalty clause: In the event of delay in supply /part-supply of goods, Penalty as detailed below is leviable a. Penalty of 0.5% per week or part there of shall be levied, limited to a max of 10% (ten percent) of delayed portion value / order value (as specified in SCC). b. Penalty applicable for delay in documentation is as per SCC. c. Date Reckoned for Penalty - Indigenous Orders with delivery terms FOR HPEP: C Note date. - Indigenous Orders (Others): Date of e-waybill. - Imports: For CIP/CIF Orders: IGM date - Imports: For FOB Orders: AWB / BL date - Imports: For FCA/Ex Work Orders: Date of acknowledgement from Freight Forwarder. d. In case of Deviation to above Penalty clause, loading applicable to the extent to which not agreed by Bidder. e. Timelines as mentioned in the Annexure 1 will be considered for reckoning delivery. Penalty amount so determined along with applicable GST (for Indigenous orders) thereon shall be recovered. Imposition, recovery or settlement of this penalty shall not affect BHEL's right to performance, compensation and termination of the order.</p>	
14	<p>Excess materials supplied beyond tolerance limit as specified in PO will not be paid and bidder may raise credit note for the excess/unaccepted material as per GST law.</p>	<p>Non Deviatable</p>
15	<p>Rejected materials, if any, shall be collected by the bidder within 90 days of such communication to the bidder. Beyond this period the bidder forfeits their right to the materials.</p>	<p>Non Deviatable</p>
16	<p>Guarantee / Warranty Period: Wherever required, and so provided in the specifications/SCC/Purchase Order, the bidder shall guarantee that the goods supplied shall comply with the specifications laid down, for materials, workmanship and performance. a. Guarantee period shall be 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier. b. In case erection & commissioning is involved, guarantee period shall be 12 months from the date of commissioning. c. In case of equipment bought as a package which are intended to be incorporated in installations or systems, the guarantee period shall be 12 months from the date of commissioning of such equipment. The guarantee period shall be extended by the period during which the goods are not in compliance. If the delivery is found to be non-complaint, bidder shall replace, repair or re-execute the as requested by BHEL. If the bidder defaults on his obligations, buyer has the right to proceed to replace, repair or re-execute at the bidder's expense. A guarantee period as described above shall apply afresh to replaced, repaired or re-executed parts of a delivery. Loading for deviation: In case warranty specified in SCC is over and above the period mentioned in b & c above; loading will be 1% per annum for the deviation in warranty end period, on the contract value. Expected commissioning period is as indicated in SCC.</p>	<p>Non Deviatable</p>



17	<p>PERFORMANCE BANK GUARANTEE (PBG) (Applicable in case mentioned in SCC)</p> <p>In case enquiry specifically spells out PBG requirement, PBG is to be submitted by Bidder in requisite format as per Annexure VII. Further detailing on PBG as specified in SCC. The PBG shall be for the performance of the goods and shall remain binding notwithstanding such variations, alterations or extensions of item as may be made, give, conceded or agreed to between the Bidder and BHEL under these Terms and conditions or otherwise.</p>		Non Deviatable																									
<p>NOTE: Deviations (Commercial as well as Technical) from the tender specifications and conditions are generally not acceptable. However, deviation if any, shall be brought out clearly with proper justification in the offer. The deviation, if considered by BHEL, shall be loaded for comparison, while evaluating the offer. If a bidder unconditionally withdraws any deviation before price bid opening, the same shall not be loaded. Loading criteria in respect of major commercial conditions where deviations if any are accepted shall be as per clause No.18. The Bidders may specifically note the following.</p>																												
<p>18 Evaluation and Loading Criteria:</p>																												
<p>i) Evaluation Currency for this tender shall be "INR". ii) Evaluation of prices shall be done item-wise unless otherwise specified in the SCC. iii) Evaluation shall be on the basis of delivered cost, i.e. "Total Cost to BHEL" w.r.t the finalized technical scope and commercial conditions (after considering incidence of applicable taxes and duties and loading). iv) In the course of evaluation, if more than one Bidder happens to occupy L1 status, effective L1 will be decided by soliciting discounts from the respective L1 Bidders. In case more than one Bidder happens to occupy the L1 status even after soliciting discounts, the L1 Bidder shall be decided by a toss/draw of lots, in the presence of the respective L1 Bidders or their representatives. Ranking will be done accordingly. BHEL decision in such situations shall be final and binding.</p> <p>INDIGENOUS</p> <p>a. Bidder shall ensure to indicate the applicable taxes against each line item, failing which the same will be considered as inclusive/NIL. b. Ex-works offers received (as against FOR Destination mentioned in enquiry) shall be loaded by 2% of Ex-works value. c. GST and any other charges quoted will be added to the base price. However, in case input credit is available for GST (SGST, CGST/IGST), the same shall be excluded for arriving at "Total Cost to BHEL"</p> <p>IMPORTS</p> <p>For evaluation of offers in foreign currency, exchange rate (TT selling rate of State Bank of India) as on the date of bid opening (Part-I, in case of two-part bids) shall be considered. If the relevant day happens to be a bank holiday, then the forex rate as on the previous bank (SBI) working day shall be taken. In case of foreign Bidders, the quoted CIP price shall be loaded by the following factors to arrive at "Total Cost to BHEL": - Import duty as applicable on the date of Part-I bid opening. - Loading will be as per the table below</p> <table border="1" data-bbox="240 1058 734 1419"> <thead> <tr> <th></th> <th>Ex Works</th> <th>FOB/FC A</th> <th>CIF/CFR</th> <th>CIP</th> </tr> </thead> <tbody> <tr> <td>Foreign Inland freight and insurance</td> <td>2%</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Marine freight and marine insurance</td> <td>3%</td> <td>3%</td> <td></td> <td></td> </tr> <tr> <td>Destination Port handling charges</td> <td>0.50%</td> <td>0.50%</td> <td>0.50%</td> <td></td> </tr> <tr> <td>clearing charges & inland freight and insurance</td> <td>2%</td> <td>2%</td> <td>2%</td> <td>2%</td> </tr> </tbody> </table> <p>COMMON LOADING FOR IMPORTS & INDIGENOUS that will be added for arriving the "Total Cost to BHEL" A. Loading on Deviated Penalty clause shall be 10% or to the extent to which the bidder has opted for deviation. B. Loading for payment terms as per clause 12 of ITB C. Loading for deviation in Warranty & PBG as per clause 16,17.</p>					Ex Works	FOB/FC A	CIF/CFR	CIP	Foreign Inland freight and insurance	2%				Marine freight and marine insurance	3%	3%			Destination Port handling charges	0.50%	0.50%	0.50%		clearing charges & inland freight and insurance	2%	2%	2%	2%
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19	<p>Procurement directly from the manufacturers/ suppliers shall be preferred. However, no agent shall be allowed to represent more than one manufacturer/ supplier in the same tender. Moreover, either the agent could bid on behalf of the manufacturer/ supplier or the manufacturer / supplier could bid directly but not both. In case bids are received from both from the manufacturer/ supplier and the agent, bid received from the agent shall be ignored.</p>																											
20	<p>RIGHT OF REJECTION /NON- PLACEMENT OF PO: BHEL reserves the right to accept or reject any or all bid/s in full or part without assigning any reason whatsoever.</p>																											
21	<p>INTEGRITY PACT Bidders shall have to enter into Integrity Pact with BHEL as per Annexure VI - for Tender value of rupees two crores and above and shall be signed by the authorized signatory along with the offer, failing which Bidder's offer will be rejected.</p>																											
22	<p>Public Procurement</p>																											
A	<p>Make in India For this Procurement, the local content to categorize a bidder as a Class I local bidder / Class II local bidder / Non-Local bidder and purchase preference to Class I local bidder, is as defined in Public Procurement (Preference to Make in India) order No P-45021/2/2017-PP(BE-II) dated 04-06-2020 issued by DPIIT as amended from time to time. Proforma for self-certification for minimum local content and auditor's certification is given in Annexure III.</p>																											



B	Any Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with competent authority. GOI website https://www.mea.gov.in/ to be referred for latest details of competent authority and exemptions . Proforma for self-certification for compliance is given in Annexure IV.
C	Startups: For Start-ups duly registered with DPIIT (Copy of certificate to be provided), condition of prior turnover and prior experience in Public Procurement may be relaxed subject to meeting of Quality and Technical Specifications. Startups are exempt from paying EMD.
23	Benefits earmarked for Purchase from Micro & Small Enterprises (MSEs) – Indigenous Purchase
A	All Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy are exempt from Paying EMD. NSIC/UDYAM registered bidders shall submit NSIC/UDYAM Certificate along with bid documents. Date to be reckoned for determining the deemed validity will be the last date of Technical bid submission. Non- submission of such document will lead to consideration of their bid, at par with other bidders and MSE status of such bidders shall be shifted to Non- MSE Category till the bidder submits these documents.
B	In tender, MSEs quoting price within price band of L1+15% shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply at least 25% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately. Out of these 25% minimum 3% shall be earmarked for MSEs owned by women and 6.25% for MSEs owned by SC/STs who submit the relevant documents.
C	If an enterprise falling under MSME category as defined in the Act, graduates to a higher category from its original category or beyond the purview of the Act, it shall continue to avail all non-tax benefits of its original category notified by the Ministry of Micro, Small and Medium Enterprise for a period of three years from the date of such graduation to the higher category.
D	BHEL HPEP is registered with RXIL (TReDS) platform. MSME bidders are requested to get registered with RXIL (TReDS) platform to avail the facility as per the GOI guidelines.
24	Inspection Measuring and Test Equipment (IMTE) used by the Bidder/ Contractor or sub-contractor shall be calibrated, maintained and controlled. Calibration shall be valid and IMTE maintained in sound condition during usage.
25	ISO-9001, ISO14001 & OHSMS 45001 shall be complied.
26	If BHEL registered supplier is not quoting against this NIT, supplier shall send regret letter positively with valid reasons for not participating. Repeated lack of response on the part of supplier may lead to deletion of such registered supplier from BHEL's approved supplier's list as per BHEL SEARP Guidelines.
27	Risk Purchase clause: In case bidder fails/delays to supply whole or part of the ordered items or supplies defective items or fails to fulfil any other terms and conditions given in Purchase Order/Contract, BHEL has the right to terminate the order/contract or withdraw balance scope of work/supply and make the purchase of such material / services from elsewhere at the risk and cost of the defaulted bidder. The bidder is liable for the additional expenditure / difference in Cost, if any, including consequential losses which BHEL may sustain by reason of risk purchase in addition to the applicable LD as per the order/contract. Non-performance of contract attracts penal provisions in line with BHEL guidelines for Suspension of Business Dealings (SBD).
28	Any other terms and conditions of the bidder attached / referred against the tender enquiry will not be considered.
29	All drawings, patterns and tools supplied by BHEL or made at BHEL's expense are BHEL's property. These cannot be used or referred to any other party and must be used only in the execution of BHEL's orders.
30	Any amount payable by the bidder under any of the conditions of this contract shall be liable to be adjusted against any amount payable to the bidder under any other work / contract awarded by BHEL HPEP or any other BHEL Units. This is without prejudice to any other action as may be deemed fit by BHEL.
31	The bids of the bidders who are on the banned list and also the bids of the bidders, who engage the services of the banned firms, will be rejected. The list of firms banned by BHEL is available on BHEL web site: www.bhel.com
32	Ordering and confirmation of order The bidder shall send the order acceptance within one week from the date of LOI/Purchase order or such other period as specified/agreed by the Buyer. Buyer reserves the right to revoke the order placed if the order confirmation differs from the original order placed. Buyer shall be legally bound, only if agreed for any deviation explicitly in writing. The acceptance of deliverables or supplies by Buyer as well as payments made in this regard shall not imply acceptance of any deviations. The Purchase order will be deemed to have been accepted if no communication to the contrary is received within one week (or the time limit as specified /agreed by the Buyer) from the date of P.O. Buyer, is at liberty to send signed P.O. through electronic media such as e-mail and the receipt of which shall be treated as receipt of order.
33	Execution The whole contract is to be executed in the most workman like manner, substantial and approved as per the contracted terms.
34	Progress Report The bidder shall render such report as to the progress of work and in such form as may be called for by the Buyer from time to time. The submission and acceptance of such reports shall not prejudice the rights of the buyer in any manner. Bidder shall communicate to BHEL immediately, the change of address, ownership, contact person(s), the mobile numbers and e-mail of the dealing person concerned. Milestones shall be periodically updated by bidder through PRADAN Portal (https://hpep.bhel.com/mm/). Non updation will adversely affect service rating of bidder performance.



35	Non-disclosure Obligations
	<p>Drawings, technical documents or other technical information received by one party shall not without the consent of the other party, be used for any other purpose than that for which they were provided. They may not, without the consent of the submitting party, otherwise be used or copied, reproduced, transmitted or communicated to third parties. All information and data contained in general product documentation, whether in electronic or any other form, are confidential and binding only to the extent that they are by reference expressly included in the contract.</p> <p>The bidder shall, as per agreed date/s but not later than the date of delivery, provide free of charge any information and/or drawings which are necessary to permit the Buyer to erect, commission, operate and maintain the product. Such information and drawings shall be supplied as specified in technical specification.</p> <p>All intellectual properties, including designs, drawings and product information etc. exchanged during the formation and execution of the contract shall continue to be the property of the submitting party.</p> <p>The bidder shall provide Buyer with all information pertaining to the delivery in so far as it could be of importance to Buyer. The bidder shall not reveal confidential information to its own employees not involved with the tender/contract and its execution and delivery or to third parties, unless Buyer has agreed to this in writing beforehand. The bidder shall not be entitled to use the Buyer's name in advertisements and other commercial publications including website without prior written permission from Buyer.</p> <p>In the event of violation of the confidentiality as agreed, BHEL will take legal action as deemed fit. Non-disclosure agreement to be entered as per Annexure- II wherever applicable.</p>
36	Inspection and Testing
A	The goods and stores shall be manufactured by approved quality system and each part/component may be inspected and tested by the Buyer prior to shipment and shall comply with relevant requirements. Buyer has the right to inspect at any stage during manufacture/ delivery.
B	<p>Buyer or his authorized representative shall be entitled at all reasonable times during execution to inspect, examine and test at the bidder's premises the material and workmanship of all stores to be supplied under the contract, and if the part of the stores are being manufactured at other premises, the bidder shall obtain for buyer or his authorized representative permission to inspect, examine and test as if the said stores are being manufactured at the bidder's premises. Such inspection, examination and testing, if made shall not release the bidder from any obligation under the contract.</p> <p>For indigenous bidders all costs related to first inspection request shall be borne by the buyer and the cost of subsequent inspections due to non-readiness of material/rework/ rejections shall be borne by the bidder. In case of imports all inspection charges including third party inspections if any shall be borne by the bidder. The cost of inspection staff/third party specified by the Buyer shall be borne by bidder unless otherwise specifically agreed. If the contract provides for tests on the premises of the bidder or any of his sub-contractor/s, bidder shall be responsible to provide such assistance, labor, materials, electricity, fuels, stores, apparatus, instruments as may be required and as may be reasonably demanded to carry out such tests efficiently.</p> <p>Cost of any type test or such other special tests shall be borne by the bidder unless otherwise specifically agreed in the contract. The Bidder shall give the authorized representative of the buyer reasonable notice in writing of the date on and the place at which any stores will be ready for inspection/ testing as provided in the Contract. Annexure – I, may strictly be complied with for the time lines. Any delay in submission of the documents by the bidder will not alter the delivery date.</p>
37	Quality and Condition of the Deliverables
	The bidder shall be responsible for compliance with applicable technical, safety, quality, environmental requirements and other regulations in relation to products, packaging and raw and ancillary materials.
38	Packaging and Dispatch
	<p>The bidder shall package the deliverables safely and carefully and pack them suitably in all respects considering the peculiarity of the material for normal safe transport by sea/air/rail/road to its destination suitably protected against loss, damage, corrosion in transit and the effect or tropical salt laden atmosphere. The packages shall be provided with fixtures/hooks and sling marks as may be required for easy and safe handling by mechanical means. Special packaging conditions/ environmental conditions as defined in the NIT shall be fully complied.</p> <p>Each package must be marked with consignee name, address, P.O. number, Package Number, gross weight & net weight, dimensions (L x B x H) and bidder's name. The packing shall allow for easy removal and checking of goods on receipt and comply with carrier's conditions of packing or established trade practices. Packing list for goods inside each package with P.O. item No. & quantity must also be fixed securely outside the box to indicate the contents. If any consignment needs special handling instruction, the same shall be clearly marked with standard symbols/instructions. Hazardous material should be notified as such and their packing, transportation and other protection must conform to relevant regulations.</p>
39	Contract variations; Increase or decrease in the scope of supply
	<p>Buyer may vary the contracted scope during execution due to exigencies of project requirement.</p> <p>If the bidder is of the opinion that the variation has an effect on the agreed price or delivery period, Buyer shall be informed of this immediately in writing along with technical details, and in the event of additional work, submit a quotation with regards to the price and period involved, as well as the effect this additional work will have on the other work to be performed by the bidder. Wherever unit rates are available in the contract, the same shall be applied to such additional work. The bidder shall not perform additional work before buyer has issued written instructions/amendment to the purchase order to that effect. The work which the bidder should have or could have anticipated in terms of delivering the service (s) and functionality (ies) as described in this agreement should be executed by the bidder without any price implication.</p> <p>In case of no change in the scope / technical specifications, bidder shall endeavor to keep the material ready and intimate the same to BHEL within the contractual delivery date, failing which, the delay if any will be attributed to supplier, and any upward price variation thereof for delivery at a later date is not admissible.</p>
40	Rejected/Short shipments/ warranty/guarantee replacements
	In case of any short shipment during initial supply which is subsequently dispatched by the bidder or any guarantee / warranty replacements shall be dispatched on "DDP-Delivered duty paid BHEL stores" basis for imported items and "FOR-BHEL Stores/designated destination" basis for indigenous items.
41	Export Administration Regulations
	If a delivery includes such technology and / or supply that is subjected to the export regulations the bidder shall obtain due permissions, approvals, license etc.



42 Force Majeure	<p>The bidder shall not be considered in default if delay occurs due to causes beyond their control such as Acts of God, Natural calamities, Fire, Frost, Flood, Civil War, civil commotion, riot, Government Restrictions.</p> <p>Only those causes that have duration of more than seven days shall be considered cause of force majeure. Notification to this effect duly certified by local chamber of commerce/statutory authorities with supporting documents shall be given by the bidder to BHEL by registered letter/courier service immediately without loss of time.</p> <p>In the event of delay due to such causes the delivery schedule shall be extended for a length of time equal to the period of Force Majeure or at the option of BHEL the order may be cancelled. Such cancellation would be without any liability whatsoever on the part of BHEL.</p> <p>In the event of such cancellation the bidder shall refund any amount advanced or paid to the bidder by BHEL and deliver back any material issued to him by BHEL and release facilities, if any provided by BHEL.</p>
43 Non-waiver of Defaults	<p>If any individual provision of the contract is invalid, the other provisions shall not be affected.</p>
44 Settlement of Disputes	<p>Except as otherwise specifically provided in the contract, all disputes concerning questions of the facts arising under the contract, shall be decided by the Buyer, subject to written appeal by the bidder to the buyer, whose decision shall be final.</p> <p>Any disputes of differences shall to the extent possible be settled amicably between the parties thereto, failing which the disputed issues shall be settled through arbitration</p> <p>The bidder shall continue to perform the contract, pending settlement of disputes(s).</p>
45 Conciliation clause	<p>CONCILIATION CLAUSE FOR CONDUCTING CONCILIATION PROCEEDINGS UNDER THE BHEL CONCILIATION SCHEME, 2018: The Parties agree that if at any time (whether before, during or after the arbitral or judicial proceedings), any Disputes (which term shall mean and include any dispute, difference, question or disagreement arising in connection with construction, meaning, operation, effect, interpretation or breach of the agreement, contract or the Memorandum of Understanding, penalty deduction, time extension), which the Parties are unable to settle mutually, arise inter-se the Parties, the same may, be referred by either party to Conciliation to be conducted through Independent Experts Committee to be appointed by competent authority of BHEL from the BHEL Panel of Conciliators.</p> <p>The proceedings of Conciliation shall broadly be governed by Part-III of the Arbitration and Conciliation Act 1996 or any statutory modification thereof and as provided in Procedure in http://www.bhel.com/index.php/story_details?story=2454 . The Procedure together with its Formats will be treated as if the same is part and parcel hereof and shall be as effectual as if set out herein in this ITB</p>
46 ARBITRATION (WITH SOLE ARBITRATOR)	<p>Except as provided elsewhere in this Contract, in case amicable settlement is not reached between the Parties, in respect of any dispute or difference; arising out of the formation, breach, termination, penalty deduction, validity or execution of the Contract; time extension, 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 to the sole arbitration . Sole arbitrator to be appointed by Head of the Unit - BHEL , HPEP .</p> <p>The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the Parties.</p> <p>Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or 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 Sangareddy / Hyderabad, Telangana. The language of arbitration shall be English and the documents shall be submitted in English.</p> <p>The cost of arbitration shall initially be borne equally by the Parties subject to the final apportionment of the cost of the arbitration in the award of the Arbitrator.</p> <p>Subject to the arbitration in terms of clause 45, the courts at Sangareddy, Telangana State shall have exclusive jurisdiction over any matter arising out of or in connection with this contract.</p> <p>Notwithstanding the existence or any dispute or differences and/or reference for the arbitration, the Contractor shall proceed with and continue without hindrance the performance of its obligations under this Contract with due diligence and expedition in a professional manner except where the Contract has been terminated by either Party in terms of this Contract.</p>
	ARBITRATION FOR CONTRACT WITH PUBLIC SECTOR ENTERPRISE (PSE) OR A GOVERNMENT DEPARTMENT
	<p>In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs/ Port Trusts inter se and also between CPSEs and Government Departments/Organizations (excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through AMRCD as mentioned in DPE 0M No 4(1)/2013-DPE(GM/FTS 1835 dated 22-05-2018</p>
47 Applicable Laws and jurisdiction of Courts	<p>This agreement shall be construed and interpreted in accordance with the laws of India and shall have exclusive jurisdiction of Sangareddy/Hyderabad courts, Telangana, India.</p>
48 BHEL-Fraud prevention policy shall be adhered to.	<p>The Bidder along with its associate/ Collaborators/ Sub-contractors/ sub-bidders/ 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.</p> <p>List of nodal officers is hosted on BHEL Hyderabad website https://hpep.bhel.com/.</p>
49 Suspected Cartel Formation	<p>The Bidder declares that they will not enter into any illegal or undisclosed agreement or understanding, whether formal or informal with other Bidder(s). This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process. In case , the Bidder is found having indulged in above activities, suitable action shall be taken by BHEL as per extant policies / guidelines .</p>

Note: Purchase officer has to fill Annexure-I while sending enquiry

Annexure-I

Major Activity timelines shall be considered for indigenous purchases

S No	Activity	Agency	Timeline	Acceptance / Remarks
1	PO acknowledgement	Vendor	04 days from the date of receipt of PO	
2	Engineering inputs from BHEL	BHEL/Customer	07 days from the date of issuance of PO	
3	First submission of Drawings and QP Rev-00	Vendor	15 days from Engineering Inputs.	
4	commented / approved drawings / data sheets and QP to vendor	BHEL/Customer	07 days from the receipt of Rev-00 submission.	
5	Subsequent submission of revised drawings / data sheets and QP	Vendor	07 days from the receipt of commented drawings / data sheets and QP	
6	Subsequent Approved /commented Drawings and QP to vendor	BHEL/Customer	07 days from the date of receipt of revised drawings / data sheets and QAP.	
7	Raising of Inspection Call	Vendor	07 days before the proposing inspection date. (BHEL will provide approved QP before raising inspection call)	
8	Inspection completion	BHEL Third party inspection agency / Customer	07 days from inspection call date.	
9	Despatch Instructions	BHEL	07 days from the date of receipt of final approved inspection report to BHEL.	
10	Receipt of Material at BHEL stores/ site	Vendor	15 days from Despatch instructions	

Absence of this annexure in NIT will entail non processing of delivery extension cases in case of delay in supplies of goods owing to reason attributable to BHEL.

Vendor's Signature

(To be executed on Non- Judicial Stamp Paper for an appropriate value.
To be stamped as an agreement)

(For Suppliers on Unit's / Division's PMD)

ANNEXURE-II

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 Suppliers.
- 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 Contract 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 right 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 Improvements 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 This Supplier undertakes and agrees not to make copies or extracts of and not to disclose to other 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 in portions on different dates, 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 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 forgoing 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 9 (f) hereinabove, the Company shall have a right to withhold, recovery 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:

1. Except as provided elsewhere in this contract, in case amicable settlement is not reached between the parties, in respect of any dispute or difference; arising out of the formation, breach, termination, validity or execution of the contract; 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 to the sole arbitration of an arbitrator appointed by head of the BHEL unit issuing the contract. The Arbitrator shall pass a reasoned award and the award of the Arbitrator shall be final and binding upon the parties.

Subject as aforesaid, the provisions of Arbitration and Conciliation Act 1996 (India) or 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 Hyderabad.

The cost of arbitration shall be borne as per the award of the Arbitrator.

Subject to the arbitration in terms of clause 55, the courts at Sangareddy, Telangana State shall have exclusive jurisdiction over any matter arising out of or in connection with this contract.

Notwithstanding the existence or any dispute or differences and / or reference for the arbitration, the contractor shall proceed with and continue without hindrance the performance of its obligations under this contract with due diligence and expedition in a professional manner except where the contract has been terminated by either party in terms of this contract.

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 by either party for arbitration to the sole arbitrator 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. The parties to the dispute will share equally the cost of arbitration as intimated by the arbitrator.

2. INTEREST CLAUSE:

In order to bring uniformity in all the contracts / agreements entered between BHEL and its contractors / vendors / suppliers / service providers etc., it is hereby advised to incorporate the following clause in all tenders and agreements.

“No interest shall be payable by BHEL on earnest money or security deposit or any money due to the contractor by BHEL.”

11. Governing Law & Jurisdiction:

This agreement shall be construed and interpreted in accordance with the laws of India and shall have exclusive jurisdiction of Sangareddy/Hyderabad courts, Telangana, India.

SIGNATURE

WITNESSES

1

Name:

Address:

2

Name:

Address:

Annexure - III

Proforma for self-certification by Supplier for minimum local content on their letter head for order value less than Rs 10 Crore

"We _____ (Name of Manufacturer) undertake that we meet the mandatory minimum Local Content (LC) requirement i.e. _____ (to be filled as notified in the policy) for claiming Purchase Preference linked with Local Contents under the Govt. policy against tender no. _____."

Note: As per GOI circular, the bidders offering Imported items falls under the category Non-Local Supplier. They can't claim as Class I Local Supplier/Class II Local Suppliers by claiming the services as transportation, Insurance, Installation, Commissioning & training and after sales service support like AMC/CMC etc as local value addition

Auditor's certification with respect to minimum local content on the letter head of Statutory Auditor for order value above Rs.10 crore

"We _____ the statutory auditor of M/s _____ (name of the bidder) hereby certify that M/s _____ (name of manufacturer) meet the mandatory Local Content requirements of the Goods and/or Services i.e. _____ (to be filled as notified in the policy) quoted vide offer No. _____ dated _____ against BHEL's tender No. _____ by M/s _____ (Name of the bidder)."

Note: As per GOI circular, the bidders offering Imported items falls under the category Non-Local Supplier. They can't claim as Class I Local Supplier/Class II Local Suppliers by claiming the services as transportation, Insurance, Installation, Commissioning & training and after sales service support like AMC/CMC etc as local value addition

ANNEXURE IV

Proforma for self-certification by Supplier for Compliance to Clause No 20 (B)

I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and I certify that M/s _____ **(Name of firm)**

(Tick the Appropriate)

Is not from such a country

Is from such a country and has been duly registered with the Competent authority.

I hereby certify M/s _____ **(Name of firm)** fulfills all requirements in this regard and is eligible to be considered (where applicable, valid registration by the competent authority shall be attached)

Sd/-
Authorized Signatory with Stamp

INTEGRITY PACT

Between

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

and

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

Preamble

The Principal intends to award, under laid-down organizational procedures, contract/s for

_____. The Principal values full compliance with all relevant laws of the land, rules and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder(s)/ Contractor(s).

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

Section 1 – Commitments of the Principal

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

Section 2 – Commitments of the Bidder(s)/ Contractor(s)

- 2.1 The Bidder(s)/ Contractor(s) commit himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - 2.1.1 The Bidder(s)/ Contractor(s) will not, directly or through any other person or firm, offer, promise or give to the Principal or to any of the Principal's employees involved

in the tender process or the execution of the contract or to any third person any material, immaterial or any other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

- 2.1.2 The Bidder(s)/ Contractor(s) will not enter with other Bidder(s) into any illegal or undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.
- 2.1.3 The Bidder(s)/ Contractor(s) will not commit any penal offence under the relevant IPC/ PC Act; further the Bidder(s)/ Contractor(s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
- 2.1.4 The Bidder(s)/ Contractor(s) will, when presenting his bid, disclose any and all payments he has made, and is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- 2.2 The Bidder(s)/ Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 – Disqualification from tender process and exclusion from future contracts

If the Bidder(s)/ Contractor(s), before award or during execution has committed a transgression through a violation of Section 2 above, or acts in any other manner such as to put his reliability or credibility in question, the Principal is entitled to disqualify the Bidder(s)/ Contractor(s) from the tender process or take action as per the separate "Guidelines on Banning of Business dealings with Suppliers/ Contractors". framed by the Principal.

Section 4 – Compensation for Damages

- 4.1 If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover the damages equivalent Earnest Money Deposit/Bid Security.
- 4.2 If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

Section 5 – Previous Transgression

- 5.1 The Bidder declares that no previous transgressions occurred in the last 3 years with any other company in any country conforming to the anti-corruption approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- 5.2 If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 – Equal treatment of all Bidders/ Contractors/ Sub-contractors

- 6.1 The Bidder(s)/ Contractor(s) undertake(s) to obtain from all subcontractors a commitment consistent with this Integrity Pact and report Compliance to the Principal. This commitment shall be taken only from those sub-contractors whose contract value is more than 20 % of Bidder's/ Contractor's contract value with the Principal. The Bidder(s)/ Contractor(s) shall continue to remain responsible for any default by his Sub-contractor(s).
- 6.2 The Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors.
- 6.3 The Principal will disqualify from the tender process all bidders who do not sign this pact or violate its provisions.

Section 7 – Criminal Charges against violating Bidders/ Contractors /Sub-contractors

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

Section 8 –Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible Independent External Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

- 8.2 The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the CMD, BHEL.
- 8.3 The Bidder(s)/ Contractor(s) accepts that the Monitor has the right to access without restriction to all contract documentation of the Principal including that provided by the Bidder(s)/ Contractor(s). The Bidder(s)/ Contractor(s) will grant the monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his contract documentation. The same is applicable to Sub-contractor(s). The Monitor is under contractual obligation to treat the information and documents of the Bidder(s)/ Contractor(s) / Sub-contractor(s) with confidentiality.
- 8.4 The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the contract provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- 8.5 As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or heal the situation, or to take other relevant action. The Monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- 8.6 The Monitor will submit a written report to the CMD, BHEL within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- 8.7 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.8 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant IPC / PC Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the

Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8.9 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.

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

Section 9 – Pact Duration

9.1 This Pact begins and shall be binding on and from the submission of bid(s) by bidder(s). It expires for the Contractor 12 months after the last payment under the respective contract and for all other Bidders 6 months after the contract has been awarded.

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

Section 10 – Other Provisions

10.1 This agreement is subject to Indian Laws and jurisdiction shall be registered office of the Principal, i.e. New Delhi.

10.2 Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

10.3 If the Contractor is a partnership or a consortium, this agreement must be signed by all partners or consortium members.

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

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

For & On behalf of the Principal

For & On behalf of the Bidder/ Contractor

(Office Seal)

(Office Seal)

Place-----

Date-----

Witness: _____

Witness: _____

(Name & Address) _____

(Name & Address) _____

BANK GUARANTEE FOR PERFORMANCE SECURITY

Bank Guarantee No:

Date:

To

NAME

& ADDRESSES OF THE BENEFICIARY

Dear Sirs,

In consideration of the Bharat Heavy Electricals Limited ¹ (hereinafter referred to as the 'Employer' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Companies Act, 1956 and having its registered office at _____ through its Unit at.....(name of the Unit) having awarded to (Name of the Vendor / Contractor / Supplier) having its registered office at _____² hereinafter referred to as the 'Contractor/Supplier', which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns), a contract Ref No.....dated³ valued at Rs.....⁴ (Rupees -----)/FC.....(in words.....) for⁵ (hereinafter called the 'Contract') and the Contractor having agreed to provide a Contract Performance Guarantee, equivalent to% (.... Percent) of the said value of the Contract to the Employer for the faithful performance of the Contract,

we,, (hereinafter referred to as the Bank), having registered/Head office at and inter alia a branch at being the Guarantor under this Guarantee, hereby, irrevocably and unconditionally undertake to forthwith and immediately pay to the Employer a maximum amount Rs ----- (Rupees -----) without any demur, immediately on a demand from the Employer, . Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. _____.

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