



PRODUCT STANDARD

PULVERISERS

HYDERABAD

Product
STD no.

BA35054

Rev No. 00

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GRINDING ELEMENTS FOR BHEL HP BOWL MILLS

1.0 GENERAL:

This specification governs the procurement of grinding elements consisting of Grinding Rolls and matching Bull Ring Segments for OEM Supplies of HP-1103 Bowl Mill. The guaranteed wear life is 10000 running hours (without repair or rebuild of the wear area) for project coal as per Annexure-II, having ash content of about 36% - 46% & meeting the technical requirements / performance requirements for the Bowl Mills.

2.0 QUALIFYING REQUIREMENTS:

The bidder shall satisfy the following minimum qualifying requirements by submitting documentary evidences along with the technical offer, failing which the offers shall be summarily rejected.

2.0.1 **Proven Experience: Documentary evidence to be submitted for the following.**

Bidder should have manufactured and supplied Grinding rolls and matching bull ring segment for 500 MW or higher size pulverized coal fired power generating units to at least two different sites. Supplied grinding rolls and bull ring segments should have achieved a wear life of minimum 10000 hrs. (without repair or rebuild of the wear area) with typical high ash Indian coal as given in Annexure I prior to date of techno-commercial bid opening. End user certificate for satisfactory performance shall be furnish for the above supplies.

The evidences shall be submitted in the following format.

Name of Site	Power unit rating	Mill type	Size of grinding roll	Date of supply	Life achieved in hrs.

2.1 Manufacturing facilities and proven process:

2.1.1 Vendors to note that at present BHEL is using the Grinding elements as per the following details:

Rolls and Bull ring segments are manufactured using proven casting process. The Inserts of the rolls are made up of hard metal matrix composite comprising of high chrome and ceramic, the high chrome iron having following Chemical composition:

C = 2.5-3.4 %, Cr = 18.0-27.0 %, Mo= 0.5-1.3 %, Ni-0.3-1.3%,
Mn = 0.5 - 1.5 %, Si = 1.0 % max., S-0.1% Max, P-0.1% Max

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COPYRIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED, It must not be used directly or indirectly in any way detrimental to the interest of the company. This High-Chrome alloy is reinforced with ceramic particles, evenly distributed. The hardness of inserts is in the range of 58 – 66 RC. These inserts are embedded into a base metal, which is either ductile iron (SG iron) / Hi-Chrome / any other equivalent material, forming a roll by Static / centrifugal process with overall dimensions as per BHEL drawing. The Chemical composition of SG iron: C- 3.2-3.5%, Si-2.5-3.0%, Mn-0.3% max. Mg-0.04-0.07%. Any bidder following the above manufacturing process will be qualified subject to meeting the clause 2.0.1. However, the above Chemical Composition/Process/ technology do not absolve the supplier from guarantee responsibility. The Heat treatment procedure shall be established by the vendor and shall be indicated in Quality Plan. 2.1.2 <u>ANY OTHER PROCESS FOLLOWED & MEETING 2.0.1</u> In case the bidder is having a manufacturing process different from 2.1.1, the bidder shall have all the necessary facilities for the manufacture of Grinding rolls and bull ring segments. The process used for manufacture shall be a proven one. Details of their manufacturing facilities shall be submitted. In case any of the sub-process is out sourced / subcontracted, the tie-up letter with the agency along with details of their facilities and capabilities shall also be submitted for acceptance by BHEL. The information given by the bidder is liable for evaluation by BHEL 2.1.3 Traders / stockiest / mediators are not allowed to quote. Only manufacturers who are having relevant facilities, proven process and experience will be considered for the supply. 2.2 <u>Infrastructure for providing Technical Services for:</u> Bidder shall have the sufficient infrastructure for the following after sales services - Supervision of erection and commissioning. - Performance monitoring w.r.t wear life, output, fineness, coal characteristic etc. Documentary evidences/confirmation for the above shall be submitted. 3.0 <u>MATERIAL CODE:</u> See Table 4.0 <u>QUANTITY REQUIRED PER MILL</u> 1) 3 Nos. Grinding Rolls. 2) 1 set of matching Bull Ring Segments.					

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5.0 MANUFACTURING PROCESS AND QUALITY PLAN:

- 5.1** Dimensions: The overall dimensions of the Grinding Roll and Bull Ring Segments shall be as per BHEL Drawings.
- 5.2** A detailed manufacturing process (along with the process control parameters) and manufacturing and test facilities data shall be submitted for review by BHEL.
- 5.3** Material used for the manufacture of the Grinding rolls and Bull ring segments shall be specified along with the technical details. The specifications shall be submitted for acceptance by BHEL. The details of the patented portion of the technology need not be provided, however the generic name of the proven patented technology along with the broad details shall be provided.
- 5.4** A Quality plan with stage wise inspection and acceptance criteria shall be submitted for approval by BHEL and/or customer.

6.0 INSPECTION:

- 6.1** The inspection of items will be as per the approved Quality plan.
- 6.2** Inspection of the material will be based on the applicable process of manufacture acceptable to BHEL. The tests like chemical composition, microstructure, hardness and NDT etc as applicable will be part of the approved Quality plan.
- 6.3** The overall dimension of the grinding roll and bull ring segments shall be as per BHEL drawing.
- 6.4** The bullring segments shall be assembled in Check Bowl. After assembling of the segments, final gap should not be more than 20 mm. The drawing for the check Bowl and the arrangement for segment assembly on Check Bowl shall be furnished by BHEL.
- 6.5** The number of segments i.e. Plain, Half, Quarter, Keyed & Shim for each size of the mill shall be shown on Check Bowl drg. However, additional shims/ segment to fill the gap upto 20 mm shall be supplied by the vendor which may be required at site during assembly.

7.0 GUARANTEES:

Wear Life: The minimum guaranteed wear life shall be 10000 hours (without repair or rebuild of the wear area) for the range of coal mentioned in Annexure-II.

Supplier shall depute his representative while conducting the mill capacity and performance test with originally installed worn out grinding elements after the guaranteed wear life during the Performance Guarantee (PG) test of mills along with BHEL team as per the customer approved PG test procedure and guarantees given there off. Guaranteed wear life is considered to have been met with only when the mill PG test results are achieved. Typical Mill PG Test requirement is as per Annexure III.

- 7.1** The supplier shall give back to back guarantee for wear life of grinding elements as per terms and conditions of applicable contract clauses given in Annexure IV- which gives calculation for replacement of grinding elements as part of Mill Warranty Shortfall Part Settlement.

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7.2 Consistency in mill output to minimum 90% of the rated capacity and pulverized fuel fineness of minimum 70% through 200 mesh and 99% through 50 mesh at the end of guaranteed wear life.

7.3 Failure due to manufacturing defects (generally leading to breakage/ catastrophic failure of grinding elements) shall be replaced and installed immediately.

8.0 **INSPECTION AT SUPPLIERS WORK**

 Tests and inspection are to be conducted in the presence of BHEL/ customer representatives as per approved Quality plan. The representatives shall have free access at all times while the work on the contract is being performed. The supplier shall offer all the tools and tackles required for inspection to the inspection agency.

9.0 **TEST CERTIFICATE:**

 All the rolls shall be identified with a serial number punched. The Bull ring segments set shall be numbered by paint for each set. Supplier shall supply 3 copies of Test certificates with following information for rolls and bull ring segments.

1. BHEL order number
 2. Supplier's reference and name.
 3. Heat No. / Roll no.
 4. Results of chemical analysis, Hardness Test and all other tests or any other tests as per approved QAP
 5. Drawing no., Material Code
 6. Consignment/ Identification no.

10.0 **ACCESSORIES**

 Wear measurement gauge for project site, and any other items/consumables required shall be supplied by the supplier at no extra charge to BHEL.

11.0 **DOCUMENTS**

11.1 Three Copies of test certificates are to be provided.

12.0 **PACKING:**

 Bull ring segments shall be suitably packed in seaworthy metallic boxes set wise to prevent Corrosion and damage during transit. Machined/ Ground surfaces shall be properly protected with suitable anti-corrosive compound. Bull ring segments and shims shall also be coated with anti-corrosive compound. Grinding rolls which are being directly dispatched to site shall be packed in seaworthy metallic boxes. Each package shall be legibly marked with following information.

1. BHEL Order No.
 2. Consignment/ Identification No.
 3. Roll No. / Set No.

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4. Drawing no., Material Code

5. Weight in Kg

6. Suppliers Name

Separate identification mark shall be given for spare grinding rolls and bull ring segments.

13.0 SUPERVISION & SERVICES:

13.1 Personnel for supervision for Erection and commissioning shall be deputed within a period of one week from the notice given by BHEL.

13.2 Supplier shall depute his representative while conducting the mill capacity and performance test with originally installed worn out grinding elements after the guaranteed wear life during the Performance Guarantee (PG) test of mills along with BHEL team.

14.0 TABLE FOR MATERIAL CODE

Var No.	Mill Type	Item Description	Drawing No.	Malt. Code
01	HP-1103	Grinding roll HP 1103	26101003169	BA9735054019
02	HP-1103	Bull ring segment set HP 1103	16111001564	BA9735054027

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ANNEXURE – I

TYPICAL COAL ANALYSIS (INDIAN COAL):

Parameter	Unit	Coal Analysis Data (as available)					
Proximate Analysis (as recd)		Coal 1	Coal 2	Coal 3	Coal 4	Coal 5	Coal 6
Moisture	%	18	14	18	16	15	15
Ash	%	46	45	38	45	45	45
Volatile Matter	%	16	20	20	19	20	19.5
Fixed Carbon	%	20	21	24	20	20	20.5
Hard Grove Index		45	47	60	50	47	42
Abrasion Index (YGP)	mg steel/ kg coal	85	80	80	80	80	80
Ash Analysis (as recd)							
Silica (SiO ₂)	%	64.86	62.4	59.79	59.54	62.5	59.6
Alumina (Al ₂ O ₃)	%	23.8	27.31	25.36	29	27.3	30.75
Iron Oxide (Fe ₂ O ₃)	%	6.52	4.96	7.2	6.42	4.9	6.5
Balance	%						

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V.II/Amend-1/Analysis
TABLE-I

PROXIMATE ANALYSIS OF COAL (As received Basis)					
Sl. No.	Description	Symbol	Design Coal	Worst Coal	Best Coal
1	Total Moisture	TM%	15.00	18.00	12.00
2	Ash	A%	40.00	46.00	36.00
3	Volatile Matter	VM%	19.00	18.00	22.00
4	Fixed Carbon	FC%	26.00	18.00	30.00
ULTIMATE ANALYSIS (As Received Basis)					
1	Carbon	C%	29.73	23.08	37.32
2	Hydrogen	H2%	3.70	3.54	3.92
3	Nitrogen	N2%	1.80	1.45	1.60
4	Oxygen (by difference)	O ₂ %	8.66	6.70	8.32
5	Sulphur.	S%	0.50	0.60	0.40
6	Carbonates	CO3%	0.58	0.60	0.40
7	Phosphorous	P ₂ %	0.03	0.03	0.04
8	Total Moisture	TM%	15	18	12
9	Ash	A%	40	46	36
10	Total	%	100	100	100
11	Gross Caloric Value (as received basis)	GCV Kcal/Kg	3300	2800	4000
12	Hard grove index	HGI	55	50	60
13	YGP index	mg/Kg	95	110	80

V.IIA/Amend-1/S-XII : 1

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ASH ANALYSIS

Sl. No.	Description	Symbol	Design Coal	Worst Coal	Best Coal
1	Silica	(SiO ₂)%	59.79	61.80	56.80
2	Alumina	(Al ₂ O ₃)%	25.36	26.50	23.20
3	Iron Oxide	(Fe ₂ O ₃)%	7.20	6.50	10.00
4	Titania	(TiO ₂)%	1.20	1.00	1.60
5	Phosphoric Anhydride	(P ₂ O ₅)%	2.60	1.90	3.00
6	Lime	(CaO)%	0.88	0.60	1.60
7	Magnesia	(MgO)%	0.55	0.40	1.00
8	Sulphuric Anhydride	(SO ₂)%	1.20	0.50	1.40
9	Alkalies (by diff.)	(Na ₂ O+K ₂ O)%	1.22	0.80	1.40

ASH FUSION RANGE (Under reducing atmosphere)

1	Initial Deformation Temperature	IDT ^o C	1100	1100	1100
2	Hemispherical Temperature	HT ^o C	1300	1250	1350
3	Flow Temperature	ET ^o C	1400	1400	1400

V.IIA/Amend-1/S-XII : 2

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ANNEXURE-III

TYPICAL MILLS CAPACITY TEST REQUIREMENT

Coal Pulveriser Capacity at Rated Fineness

Performance testing shall be conducted on coal pulverisers towards establishing their guaranteed capacity meeting the specification requirement. Corrections may be applied for the variation in coal characteristics i.e. HGI & Total Moisture of test coal with respect to specified design coal.

Capacity demonstration test shall be carried out on 4 mills for the following conditions.

The Bidder shall guarantee a capacity output not less than the offered value, at each mill outlet, with coal fineness of not less than 70% through 200 mesh and not less than 98% through 50 mesh screen, when grinding coal having specified grindability index, total moisture content including surface moisture, etc. Bidder shall guarantee that the above capacity will be maintained and demonstrated with the originally installed grinding elements in nearly worn-out condition as mutually agreed for the purpose of ascertaining wear life of any of the wear parts or when pulveriser grinding elements have successfully completed the specified guaranteed hours of operation whichever is earlier. During the above-mentioned operating period of the mill, manufacturer's operation instructions will be followed and mill will be operated with the specified range of coal without any such readjustment that requires a shutdown of the mill or reduction of the load and/or any replacement of any mill wear parts.

For the purpose of testing to demonstrate the capacity, if grindability and surface moisture vary from those given above, the pulveriser measured capacity shall be corrected using the capacity correction curves furnished by the Bidder along with the offer. HGI vs. grindability factor curve shall be furnished for HGI variations up to a value above which the capacity remains constant.

Capacity guarantee shall be conducted on all the mills. However, should the results of test as conducted above indicate that deficiency in capacity guarantee is observed in case of one or two mills only and that Owner is further, convinced that such deficiency does not occur out of reasons attributable to mill manufacture and supplier, Owner may waive off the requirement of demonstration of capacity guarantee for such mills only.

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ANNEXURE-IV

COAL PULVERISER WEAR PART WARRANTY

1. The Bidder shall guarantee the wear life of all wear parts of the mill when grinding the specified range of coals. For this purpose the wear parts shall be defined as those parts of the mill which are in contact with coal or coal dust and are likely to wear out during the operation of the mill. The guarantee shall be demonstrated on each mill during the guarantee trial period (GTP) commencing after establishing successful operation of the mill continuously for a period of not less than 24hours at or near its guaranteed rated capacity. The guarantee trial period shall end as soon as the wear parts have completed their actual wear life or the guaranteed wear life (whichever is earlier) in at least 50% of pulverisers or minimum of five(5) coal pulverisers whichever is higher. The establishment of the guarantee will be based on actual total hours of operation of the mill regardless of the specified range of coal or fuel loading.

2. Minimum Guaranteed Life for grinding elements shall be as indicated in the Cl. 7.0 Page 4 of 12 of BHEL Standard BA35054.

3. The mill wear parts shall be considered to have passed their guaranteed operating life when they have demonstrated their capability to meet the full load rated capacity of the mill at the rated power consumption at the end of the guarantee trial period. In case any of the wear parts has worn out to such an extent that either the normal and safe operation of the mill is jeopardised if it is not replaced/repaired or its continued use may lead to exposure or wear of other parts which are not meant for the purpose, that part shall be deemed to have completed its life for the purposes of checking the short fall in wear life even if there is no reduction in mill rated capacity and rated power consumption shall be as quoted by the Bidder when grinding the coal having parameters specified in Annexure-2 and achieving the grind fineness of not less than 70% through 200 mesh and 99% through 50 mesh.

4. The vendor shall provide to the Employer/ Owner so as to compensate for the shortfall in wear life for a plant life of 05 years as has been established. At the end of the GTP, if it is found that any of the wear parts have achieved life of < 50% of guaranteed wear life, the contractor shall replace the wear parts free of cost and commence the GTP again till such time the wear parts are able to achieve wear part life higher than 50% of guaranteed wear life. For wear life between 50% and 100% the compensation to the owner shall be as explained in clause 5 of this section.

5. Compensation for shortfall in guaranteed/warranted wear life:
Bidder shall compensate the Owner for the shortfall in wear life for each type of wear parts separately for plant life of 05 years. For the purpose of ascertaining the wear life achieved following method shall be adopted.

The wear life of each set of wear parts/elements shall be recorded for each pulveriser. The average wear life of 50% of pulverisers or minimum of five (5) coal pulverisers whichever is higher to have completed the GTP shall be considered as wear life achieved by the wear parts/element as applicable.

For wear parts/elements that do not fulfill warranty requirements, vendor shall compensate the Employer separately for each type of wear parts for a plant life of 05 years. For example should

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an individual wear part have a warranty shortfall of "H" hours then the bidder shall compensate the owner by handing over as many wearing components calculated below:

$$\frac{(H \times \text{No. of such wearing element in each pulveriser} \times \text{no. of pulveriser} \times 25)}{\text{Guaranteed wear life}}$$

Should the bidder desires to compensate the owner in monetary terms, subject to owners consent, the landed cost at site of as many wearing compents as calculated above, for each type of components may also be offered.

6. Pulveriser Warranty Shortfall Part Settlement (SPS) Procedure (With example)

For all wear parts of each vertical coal pulveriser:

S. No.	Description	Procedure	Example
1	Guaranteed wear life of wear part	(say X hours)	X= 15000 hours
2	Total life achieved by a particular wear part during GTP (say X1 hours by the original installed parts)		X1 = 13000 hrs
3	Shortfall "H" Hours	H = X- X1	i.e. 2000 hrs
4	Compensation for shortfall	as per formula	$= \frac{(2000 \times 3 \times 8 \times 5)}{15000}$ i.e. 16 nos. (to be rounded off to the nearest whole number, in case 0.5 or higher, rounded off to next higher number)

Wear Life during GTP, to be considered for pulveriser wear part warranty shall be as arrived at from the station record for each pulveriser, and as corrected for variation in YGP index of the coal being fired during GTP. For this purpose the coal YGP shall be the average tested value during GTP. The Vendor shall collect the coal samples and get them tested for YGP index at recognized, Employer's approved test lab, periodically. (The frequency of sampling and testing shall be mutually agreed between Contractor & Employer). The YGP index testing shall be done as per the specified BS standard. A jointly signed record shall be maintained during GTP.

Definitions:

Employer	WBPGL
Contractor	BHEL
Vendor	Agency supplying Grinding Elements to BHEL as per BA35054

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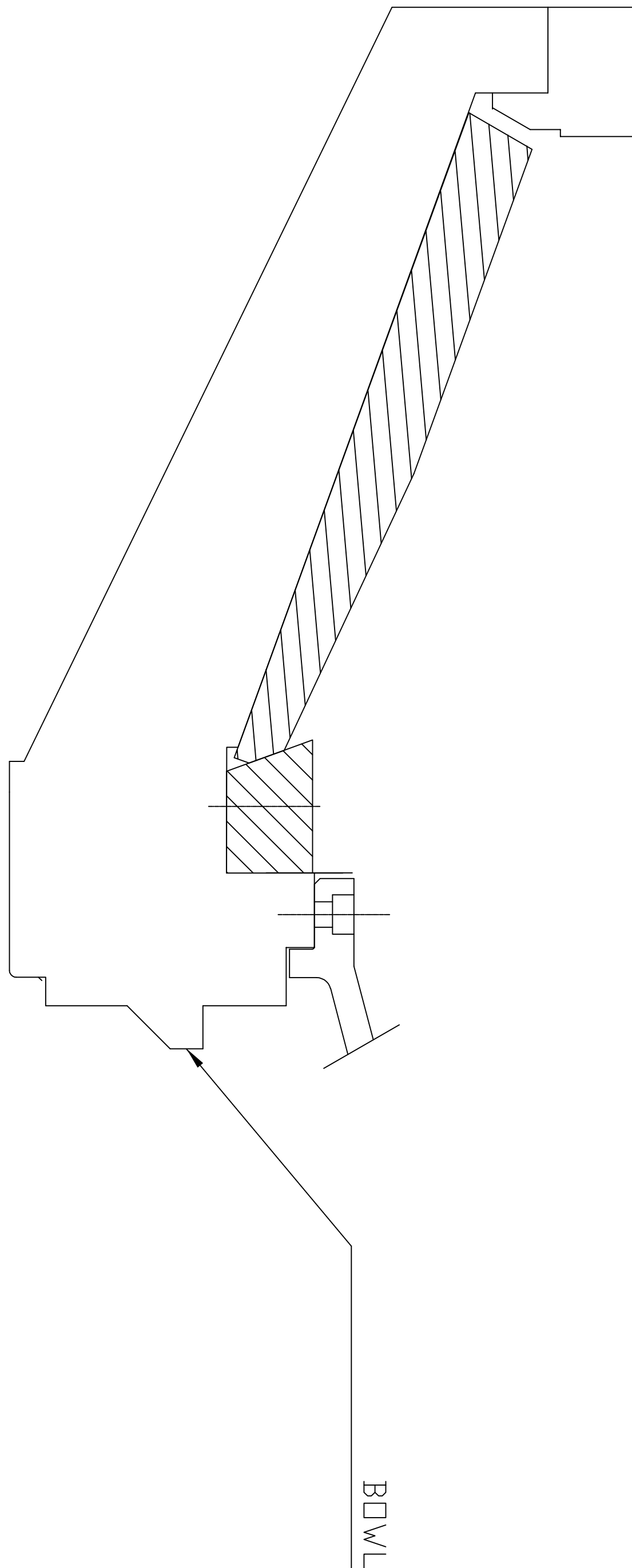
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BMW

NOTES:-

01. TOTAL NUMBER OF BULL RING SEGMENTS SHALL BE 52 Nos. (51 Nos. PLAIN & 1 No. KEYED BRSS).
02. IN THE ASSEMBLED CONDITION OF BRSS THE GAP BETWEEN SIDE FACES SHOULD BE LESS THAN 16 MM. THE GAP IS TO BE CONTROLLED TO LESS THAN 0.8 MM. OVER A LENGTH OF 75 MM. AT BOTH INNER AND OUTER DIAMETERS OF ASSEMBLY.
03. ALL THE SEGMENTS SHOULD BE ASSEMBLED AND MATCHED AS A SET IN CHECK BOWL & NUMBERED SERIALY.
04. REQUIRED QTY. OF QUATER AND HALF SEGMENTS CAN BE USED.
05. MS SHIMS OF THICKNESS 3.2 MM, 12 MM, 16MM & 18 MM WILL BE SUPPLIED WITH EACH SET.
06. THE BULL RING SEGMENTS SHOULD BE IN LEVEL WITH EACH OTHER WITHIN 3 MM.
07. AFTER ASSEMBLY OF 52 SEGMENTS, FINAL "ZERO" GAP TO BE ENSURED.
08. B R SEGMENT PLAIN 2-61-110-02904 (51 NOS).
09. B R SEGMENT KEYED 2-61-110-02905(1 ND).

ITEM NO.	DESCRIPTION	DRAWING NO.	VAR. NO.	RAW MATERIAL SIZE OR CASTING DRG. NO. OR FORGING DRG. NO.	MATERIAL CODE	NET WT.	GROSS WT.
					MATERIAL SPECN.	QUANTITY	

THE FOLLOWING CONDITIONS APPLY EXCEPT OTHERWISE STATED.

 भारत भारती HEAVY ELECTRICALS LIMITED HYDERABAD	NAME	SIGN.	DATE	NO. OF VAR.
	DRN. R. RANJAN			
	CHD. A. SURIN			
	APPD. S. CHATGE			
			26.6.09	
			26.6.09	

DEPT. PLV ENG	UNITL. DIMS. GR.	SCALE	WEIGHT (KG)	REF. TO ASSY DRG.	ITEM NO.	NO. OF ITEMS
446	 $q/m/v$	NTS	1:2.75			

3. INTERNAL M/CO. CORNER RADII 1 TO 0.7					
4. THE SURFACE ROUGHNESS WHERE-EVER NOT SHOWN SHALL BE TAKEN FROM THE SURFACE ROUGHNESS SHOWN OUT SIDE THE BACK SLASH GIVEN OR THE TOP MOST RIGHT CORNER OF THE DRG.					
TITLE		BULL RING SEGMENT		DRAWING NO.	
446		1-61-110-01564		REV.	
SHEET NO. 01		NO OF SHEETS 01			

A circular diagram representing the 48 hours of the year. The circle is divided into 48 radial segments, each labeled with a number from 1 to 48. The segments are arranged in a circular pattern, with the numbers 1 through 48 distributed around the perimeter. A central circle is surrounded by a ring of 48 radial lines. The diagram is divided into four quadrants by a vertical and a horizontal dashed line. The segments are labeled with numbers 1 through 48, with the numbers 1 through 12 in the top quadrant, 13 through 24 in the right quadrant, 25 through 36 in the bottom quadrant, and 37 through 48 in the left quadrant. A label 'KETLED BRS' is located in the bottom-left quadrant, pointing to a specific segment.

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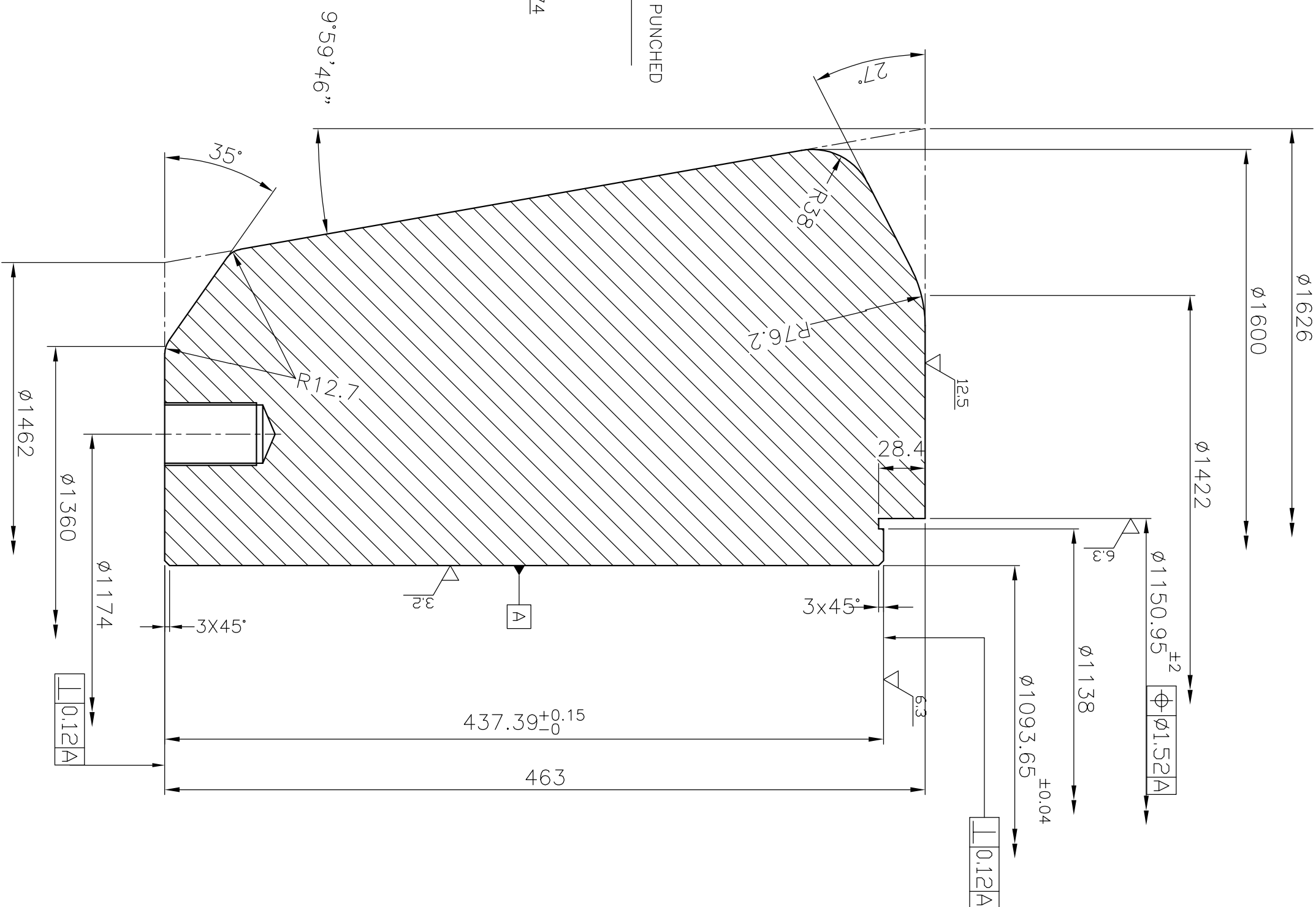
DRG. NO. 2-61-010-03169



AAE ROLLER IDENTIFICATION NUMBER TO BE PUNCHED
AT FINAL STAGE ON TOP & BOTTOM FACES _____

8 TAPPED HOLES EQUISPACED
1.5" - 6UNC X 63.5mm DEEP ON PCD 1174

ϕ	$\phi 1.27$	(S)	(P139.7	BA	(M)
$\perp$	0.25	B			



ENLARGED DETAIL: X

[illegible]

**SUPPLY OF GRINDING ROLLS WITH GWL 10000 HOURS AND MATCHING
BULL RING SEGMENTS FOR BOWL MILLS OF SIZE HP 1103
FOR WBPDCS SAGARDIGHI 1X660MW PROJECT**

CHECKLIST

		Supplier	BHEL
TECHNICAL BID:			
1	All pages of technical specifications Signed and enclosed		
2	All pages of the “CHECK LIST CUM GENERAL TERMS AND CONDITIONS” signed and enclosed		
3	Previous three years Balance Sheet including Profit and Loss account certified by Chartered Accountant submitted		
4	Third party no patent claim declaration in line with Clause 5 of this NIT		
5	List of Manufacturing facilities & processes as per clauses 2.2 & 5.2 of Technical Spec. submitted		
6	List of Outsourced Processes and control mechanism submitted		
7	Documentary proof of performance as per clause 2.0.1 of Technical Spec enclosed. <i>Date of Techno-Commercial bid opening shall be considered for the same as cut-off date.</i>		
8	Details of manpower, technical qualification and experience (with reference to clause 8 of NIT) submitted		
9	Present annual capacity with details submitted.		
10	Proof of supply as per Clause 2 of BHEL technical specification BA35054 – Purchase Order – Material receipt/acceptance by customer document – Life achieved certified by the end user. – Coal Analysis certified by the end user.		

Bidder should not make any changes in the Column depicting the required terms and conditions, of this document. Any comments / deviations should be brought out in the remarks column (separate sheet with linked reference may be added if necessary). Any changes, if made, would not only be treated as null but might also attract penal action.

**SUPPLY OF GRINDING ROLLS WITH GWL 10000 HOURS AND MATCHING
BULL RING SEGMENTS FOR BOWL MILLS OF SIZE HP 1103
FOR WBPDCS SAGARDIGHI 1X660MW PROJECT**

Sl. No	BHEL Standard Terms & Conditions	Supplier confirmation	Comments / Remarks
1	<u>OFFER VALIDITY</u> The offer would be valid for 90 days from the date of the technical bid opening.		
2	<u>GUARANTEE</u> Materials should be guaranteed for a period of 12 months from the date of commissioning or 18 months from the date of dispatch whichever is earlier. This guarantee clause is to be read along with the performance guarantee (clause 3 of this document)		
3	<u>Performance guarantee (As per Technical specification)</u> a) The wear components (Grinding rolls and matching bull ring segments) shall be guaranteed for a minimum wear life of 8000 hours. This wear life would deem to have been achieved when the Mill parameters are achieved during Performance test at the end of the Grinding Element Guaranteed Life as specified in the BHEL Customer contract. b) The supplier shall give back-to-back guarantee as applicable for BHEL customer for wear life of grinding elements as per terms and conditions of this contract. c) The successful bidder would have to provide free replacement of grinding elements as per clause 7 and Annexure-III of specification BA35054. d) In all the cases where Customer insists upon BHEL to give performance bank guarantee, the same shall be submitted by the supplier on back-to-back basis. e) Wherever Customer order provides for issue of Corporate Guarantee/ Indemnity bond, the same shall be submitted by the supplier to BHEL on back-to-back basis. f) All the guarantees are applicable for all the items supplied under the Orders released against the tender. It will be in force until the complete execution of the project.		
4	<u>INSPECTION:</u> BHEL/customer/third party might inspect equipment / material before dispatch as per PO and Quality Plan conditions. Stage inspection during manufacturing may also be carried out as per Approved Quality plan. Supplier shall send inspection call on prescribed format/web site, with an advance notice of at least 7 days.		
5	<u>THIRD PARTY CLAIMS</u> The bidder will have to declare that no third party has raised any patent claim against the bidder, which has gone against or is still unresolved, with respect to the product up to the date of the agreement. Successful bidder must further declare that in case any claims are raised during the validity of the agreement (which would be in force till complete execution of the contract) it would indemnify BHEL of any responsibility towards the claim and would reimburse BHEL for any loss suffered as a result thereof. It would be the responsibility of the bidder to settle such claims with the third party (claimant). In case it is unable to settle such claims, the bidder shall provide alternate technical solution, which it deems reasonable and is acceptable to BHEL pending resolution of any such (alleged) claim. This new solution would be such that it will not violate such patents and satisfy the terms and conditions of the present contract.		

**SUPPLY OF GRINDING ROLLS WITH GWL 10000 HOURS AND MATCHING
BULL RING SEGMENTS FOR BOWL MILLS OF SIZE HP 1103
FOR WBPDCS SAGARDIGHI 1X660MW PROJECT**

Sl. No	BHEL Standard Terms & Conditions	Supplier confirmation	Comments / Remarks
6	<u>FINANCIAL SOUNDNESS:</u> The Bidder shall have a financial stability and capability to meet the financial obligations pursuant to the works covered under the contract. The bidder should submit last three-year's balance sheet including the profit and loss account and net worth duly audited by a Chartered Accountant. The bidder should also have a consistency in turnover in the said last three years. All the foreign vendors shall submit a report from a reputed third party business rating agency like Dun & Bradstreet, Credit reform etc. or third party business rating agency empanelled by BHEL.		
7	<u>FACILITIES</u> The bidder must have the in-house facility to • Manufacture, • check and • control all the process parameters during all the stages of the production of the grinding elements. Documentary evidence in form of the process flow-chart with check and control mechanism should be submitted. Any processes outsourced must be informed, necessary approval must be taken from BHEL informing about the source, and control mechanism put by the bidder.		
8	<u>INFRASTRUCTURE</u> The bidder must have the necessary manpower, infrastructure and technical know-how to, - Supervise during the erection and commissioning of the items supplied. - Periodic site visits (if required) for mill tuning for optimization and wear life monitoring. - Assist BHEL in fine-tuning of the mills during Performance Guarantee test and prove performance with reference to the fineness, wear life output etc. during the same.		
9	<u>SUBCONTRACTING :</u> In case, at a later stage, further subcontracting of BHEL order or part thereof is envisaged, over and above those declared in the bid, the same can be done only after a written permission is obtained from BHEL. However, it shall not absolve the supplier of the responsibility of fulfilling BHEL purchase order requirements.		
10	<u>PENALTY</u> a) For Delay in Execution: In the event of delay in supply of goods, penalty of 0.5% per week or part thereof shall be levied on the undelivered portion subject to a maximum of 10% of the order value. Penalty amount so determined along with applicable GST thereon shall be recovered. b) For Performance Shortfall: Penalty imposed by the customer on BHEL (To be read along with Clause 3 of this document), a. In case of a financial penalty, on pro-rata "back to back" basis shall be borne by the supplier. b. In case the Penalty is in terms of free replacement, whether in part or full, the same shall be borne by the supplier.		

**SUPPLY OF GRINDING ROLLS WITH GWL 10000 HOURS AND MATCHING
BULL RING SEGMENTS FOR BOWL MILLS OF SIZE HP 1103
FOR WBPDCS SAGARDIGHI 1X660MW PROJECT**

Sl. No	BHEL Standard Terms & Conditions	Supplier confirmation	Comments / Remarks
11	<u>TERMS OF DELIVERY:</u> a) <u>For Indigenous Bidders</u> <u>Main Requirement:</u> 24 Nos- Grinding Rolls- FOR BHEL Hyderabad 8 Sets- Bull Ring Segments- FOR WBPDCS Sagardighi site <u>Mandatory Spares Requirement:</u> 42 Nos- Grinding Rolls- FOR WBPDCS Sagardighi site 14 Sets- Bull Ring Segments- FOR WBPDCS Sagardighi site Note: The project consists of 8 Mills. There shall be phase gap between main supply and mandatory spares supply which shall be informed by BHEL after order placement. Any pre-ponement/deferment of supply shall be at the discretion of BHEL with advance intimation.		
12	Annexure-I to be signed and sealed.		
13	Annexure-II (Non-Disclosure Agreement) to be signed and sealed.		
14	Indemnity Bond to be signed and sealed.		
15	Integrity Pact to be signed and sealed.		

Bidders must enter the appropriate phrase in each of the row of the “Supplier Confirmation” column to signify their acceptance of the respective clause.

DEVIATIONS:

- 1) **Technical Qualification & Experience**
No deviations accepted. The bid will be rejected.
- 2) **Guarantee Clause**
No deviations accepted. The bid will be rejected.

Annexure-I			
Major Activity timelines shall be considered for indigenous purchases			
S No	Activity	Agency	Timeline
1	PO acknowledgement	Vendor	7 days from PO
2	Submission of Drawings and QP	Vendor	15 days from PO
3	Approval of Drawings and QP	BHEL/Customer	15 days from submission date
4	Submission of approved BBU to vendor	BHEL/Customer	60 days before scheduled delivery
5	Raising of Inspection Call	Vendor	30 days before scheduled delivery
6	Inspection completion	Customer/BHEL/Third party inspection agency	7 days from inspection call date
7	Dispatch Instructions	BHEL	3 days from inspection report/MDCC/Clearance Report
8	Receipt of Material at BHEL/Site	Vendor	20 days from Dispatch instructions/PO amendment date in case of full truck load and 25 days from Dispatch instructions/PO amendment date in case the consignment is on part load basis (less than 9 T)

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.

(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:

(To be executed on Rs.200/- Non-judicial Stamp paper and notarized)

INDEMNITY BOND

THIS INDEMNITY BOND is executed this day of 2018 by M/s. (hereinafter called as “Contractor or Indemnifier which expression shall unless excluded by or repugnant to the context be deemed to include its successors and permitted assigns) in favour of Bharat Heavy Electricals Limited, a company registered under the Companies Act,1956, having its Registered Office at Asiad Village, Siri fort, Asiad, New Delhi 110049 through its HPEP Unit at Ramachandrapuram, Hyderabad hereinafter called as ‘BHEL or Indemnified’ which expression shall unless excluded by or repugnant to the context be deemed to include its successors and permitted assigns)”

Whereas, the Contractor has agreed to execute an Indemnity Bond in favour of BHEL in case of any third party claims against him in terms of Clause 5 of the BHEL NIT Ref. No. dt. on becoming the Successful bidder.

Whereas the Contractor since now became the Successful bidder in the NIT for supply of

Whereas, BHEL proposes to enter into contract with M/s. subject to the indemnifier herein indemnifies BHEL as hereinafter mentioned below:

NOW, THEREFORE, the Indemnifier hereby declare and agree as follows:

The Contractor hereby agrees to indemnify BHEL, for all conditions and situations mentioned in this clause, in a form and manner acceptable to BHEL. The contractor agrees to indemnify BHEL and its officers, servants, agents from and against any costs, loss, damages, expense, claims including those from third parties or liabilities of any kind howsoever suffered, arising or incurred inter alia during and after the Contract period out of:

- (a) any negligence or wrongful act or omission by the Contractor or its agents or employees or any third party associated with Contractor in connection with or incidental to the proposed Contract; or
- (b) any infringement of patent, trade mark/copyright or industrial design rights arising from the use of the supplied Goods and Related Services or any part thereof.

The Contractor shall also indemnify BHEL against any privilege, claim or assertion made by third party with respect to right or interest in, ownership, mortgage or disposal of any asset, property, movable or immovable as mentioned in any intellectual Property Rights, licenses and permits.

Without limiting the generality of the provisions of this clause, the Contractor shall fully indemnify, hold harmless and defend BHEL from and against any and all suits, proceedings, actions, claims, demands, liabilities and damages which BHEL may hereafter suffer, or pay by reason of any demands, claims, suits or proceedings arising out of claims, of infringement of any domestic or foreign patent rights, copyrights or other intellectual property, proprietary or confidentially rights with respect to any Goods, Related Services, information, design or process supplied or used by the Contractor in performing the Contractor's obligations or in any way incorporated in or related to the Contract. If in any such suit, action, claim or proceedings, a temporary restraint order or preliminary injunction is granted, the Contractor shall make every reasonable effort, by giving a satisfactory bond or otherwise, to secure the suspension of the injunction or restraint order. If, in any such suit, action, claim or proceedings, the Goods or Related Services, or any part thereof or comprised therein, is held to constitute an infringement and its use is permanently enjoined, the Contractor shall promptly make every reasonable effort to secure for BHEL a license, at no cost to BHEL, authorizing continuous use of the infringing work. If the Contractor is unable to secure such license within a reasonable time, the Contractor shall, at its own expense, and without impairing the specifications and standards, either replace the affected work, or part, or process thereof with non-infringing work or part or process, or modify the same so that it becomes non-infringing.

If any Product delivered to BHEL is held to infringe any patent, trademark, trade secret or copyright, or other proprietary right and BHEL or its customer is enjoined from using that Product, Contractor will, as soon as is reasonably possible, using all reasonable efforts and at its expense, do one of the following: (i) procure for BHEL the right to continue to use the Product free from any liability for that infringement, or (ii) replace the Product with a non-infringing substitute which substantially complies with the requirements of the proposed Contract mentioned above or (iii) if actions at (i) and (ii) do not materialize within reasonable time, thereby, affecting progress of the project for which the material is intended, the contract or herein authorizes BHEL to resort to risk purchase and recover additional cost incurred along with its Overheads.

IN WITNESSES WHERE OF the contractor/Indemnifier M/s has caused these presents to be executed on its behalf in the manner hereinafter mentioned on the day and year first hereinabove written.

Signed and delivered by

.....

M/s. in the presence of:

Witnesses:.

(1)

(2)

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 Indian Penal Code (IPC) and Prevention of Corruption 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 Foreign Bidder(s)/ Contractor(s) shall disclose the name and address of agents and representatives in India and Indian Bidder(s)/ Contractor(s) to disclose their foreign principals or associates. 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.
- 2.3 The Bidder(s)/ Contractor(s) shall not approach the Courts while representing the matters to IEMs and will await their decision in the matter.

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 Principal will enter into agreements with identical conditions as this one with all Bidders and Contractors. In case of sub-contracting, the Principal contractor shall be responsible for the adoption of IP by his sub-contractors and shall continue to remain responsible for any default by his sub-contractors.
- 6.2 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 /Subcontractors

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

Section 8 - Independent External Monitor(s)

- 8.1 The Principal appoints competent and credible 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 in line with Non- disclosure agreement.
- 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 The role of IEMs is advisory, would not be legally binding and it is restricted to resolving issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidders. At the same time, it must be understood that IEMs are not consultants to the Management. Their role is independent in nature and the advice once tendered would not be subject to review at the request of the organization.
- 8.6 For ensuring the desired transparency and objectivity in dealing with the complaints arising out of any tendering process, the matter should be examined by the full panel of IEMs jointly as far as possible, who would look into the records, conduct an investigation, and submit their joint recommendations to the Management.
- 8.7 The IEMs would examine all complaints received by them and give their recommendations/ views to CMD, BHEL, at the earliest. They may also send their report directly to the CVO and the Commission, in case of suspicion of serious irregularities requiring legal/ administrative action. IEMs will tender their advice on the complaints within 10 days as far as possible.
- 8.8 The CMD, BHEL shall decide the compensation to be paid to the Monitor and its terms and conditions.
- 8.9 IEM should examine the process integrity, they are not expected to concern themselves with fixing of responsibility of officers. Complaints alleging mala fide on the part of any officer of the organization should be looked into by the CVO of the concerned organisation.
- 8.10 If the Monitor has reported to the CMD, BHEL, a substantiated suspicion of an offence under relevant Indian Penal Code/ Prevention of Corruption Act, and the CMD, BHEL has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- 8.11 The number of Independent External Monitor(s) shall be decided by the CMD, BHEL.
- 8.12 The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

- 9.1 This Pact shall be operative from the date IP is signed by both the parties till the final completion of contract for successful bidder and for all other bidders 6 months after the contract has been awarded. Issues like warranty / guarantee etc. should be outside the purview of IEMs.
- 9.2 If any claim is made/ lodged during currency of IP, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/ determined by the CMD, BHEL.

Section 10 - Other Provisions

- 10.1 This 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

(Office Seal)

Place-----

Date-----

Witness:_____

(Name & Address) _____

For & On behalf of the Bidder/

Contractor

(Office Seal)

Witness:_____

(Name & Address) _____

Clause on IP in the tender

Integrity Pact (IP)

(a) IP is a tool to ensure that activities and transactions between the company and its Bidders/Contractors are handled in a fair, transparent and corruption free manner. Following independent External Monitors (IEMs) on the present panel have been appointed by BHEL with the approval of CVC to oversee implementation of IP in BHEL.

SI	IEM	Address	Email
1	Shri Arun Chandra Verma, IPS (Retd.)	Flat No. C -1204, C Tower, Amrapali, Platinum Complex, Sector 119, Noida (U.P.)	acverma1@gmail.com
2	Shri Virendra Bahadur Singh, IPS (Retd.)	H. No. B-5/64, Vineet Khand, Gomti Nagar, Lucknow - 226010	vbsinghips@gmail.com

(b) The IP as enclosed with the tender is to be submitted (duly signed by authorized signatory) along with techno-commercial bid (Part-I, in case of two/three part bid). Only those bidders who have entered into such an IP with BHEL would be competent to participate in the bidding. In other words, entering into this pact would be a preliminary qualification.

(c) Please refer Section-8 of IP for Role and Responsibilities of IEMs. In case of any compliant arising out of the tendering process, the matter may be referred to any of the above IEM(s). All correspondence with the IEMs shall be done through email only.

Note:

No routine correspondence shall be addressed to the IEM (phone/post/email) regarding the clarifications, time extensions or any other administrative queries, etc on the tenders issued. All such clarification/issues shall be addressed directly to the tender issuing (procurement) department's officials whose contact details are provided below.

Details of contract person(s)

(1) Ramakrishna B

Sr. Officer
Purchase/Pulverisers
BHARAT HEAVY ELECTRICALS LIMITED
Ramachandrapuram | Hyderabad | Telangana- 502032 | India |
Landline No. : 040-2318-2380
Email : ramakrishnab@bhel.in

(2) Ramakrishna Rao A

AGM/Pulv./Pur.
BHARAT HEAVY ELECTRICALS LIMITED
Ramachandrapuram | Hyderabad | Telangana- 502032 | India |
Landline No. : 040-2318-2394
Email : ark@bhel.in