

1107969/2022/BAP-9781\_COML

## Pre-Qualification Requirement

To

## Participate in Tender for Chain Pulley Procurement

(To be submitted along with Offer for Technical BID Evaluation)

**ENQ. NO & DATE:****BIDDER'S NAME:****Following are the Pre-Qualification Requirement**


Sl No.	Criteria	Document proofs to be submitted	Bidder Compliance (Yes/No/Comment)
01	A) Bidder should be original manufacturer of Chain Pulley	Manufacturer's catalogue and general reference list shall be furnished along with the offer	
02	Suppliers shall indicate their experience for the tendered specifications.	At least One Set of PO copy (Priced/Un priced) and corresponding proof of supply (like Invoice or SRV or GR etc) for the same capacity or higher Capacity Chain pulley to be submitted.	
03	Suppliers shall not have been banned / black listed / by BHEL Ranipet or any other unit/region/sector of BHEL and Government of India.	Self-declaration to be submitted.	
04	Confirmation to the Specification / Drawing / Dimension / Size.	Sealed and Signed copy of Technical specification FWQS:039 Rev:00.	

- BHEL reserves the right to verify information / confirmation furnished by asking additional documents Proofs etc.
- BHEL reserves the right to visit supplier's works to audit and inspect to ensure the capability for technical evaluation.
- Compliance to all the above Pre-qualification requirements is mandatory. In absence of PQR compliance vendor's offer are liable for rejection.

**Declaration:**

We understand that all the proofs/documents submitted by our firm for all the above points are subject to verification and in case BHEL finds any discrepancy in any of the documents submitted by us like fake/false/forged documents, Certificates or information, action may be taken against our firm as per extant guidelines of BHEL.

**Bidder's Seal & Signature**

 <b>Technical Specification for</b> <b>CHAIN PULLEY BLOCK WITH TROLLEY</b>	<b>FWQS:039</b>
	<b>REV. No. 00</b>

**TECHNICAL SPECIFICATION**

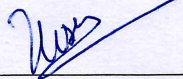
**OF**


**CHAIN PULLEY BLOCK WITH TROLLEY**

<b>Buyer(Purchaser)</b>	:	M/s.BHEL
<b>Application</b>	:	Wet Limestone Flue Gas Desulphurization

Bharat Heavy Electricals Limited


Ranipet – 632 406

00	27-08-2022	Fresh Release	<i>Jyotish Kumar Patel</i>	
			JYOTISH KUMAR PATEL (DM/EDC-FGD)	KESAVAN V (SDGM/EDC-FGD)
REV	DATE	DESCRIPTION	PREPARED	APPROVED

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## 1.0 INDENT OF SPECIFICATION

- 1.1 This specification along with data sheets, other specifications & attachments to inquiry/order describe and constitutes the minimum requirement for Hand operated Chain Pulley block (trolley type) to be used for equipment handling in the process of Flue Gas Desulphurization.
- 1.2 The intent of these requirements is to supplement the requirements as given in data sheets, and other applicable standards / codes referred to in this specifications.
- 1.3 Contractor and vendor shall make all possible efforts to comply strictly with the requirements of this specification and other aforesaid specifications / attachments to inquiry / order and no deviation and exception from this specification shall be permitted without written approval of Company.
- 1.4 In case any deviations are considered essential by vendor, these shall be separately listed in vendor's offer titled as "List of deviations / exceptions to the inquiry document", supported with proper reasons for the deviation for Company's considerations. Any deviation indicated elsewhere, but not listed in the deviation list shall not be considered applicable.
- 1.5 Compliance with this specification shall not relieve Contractor / vendor of the responsibilities of furnishing equipment and accessories / auxiliaries of proper design, materials and workmanship to meet the specified start up and operating conditions.
- 1.6 In case Contractor / vendor considers requirement of additional instrumentation, controls, safety devices and any other accessories / auxiliaries essential for safe and satisfactory operation of the equipment, he shall recommend the same along with reasons in a separate section along with his offer and include the same in his scope of supply.
- 1.7 Chain pulley block vendor/manufacturer shall have adequate engineering, manufacturing and testing facilities conforming to India standards / codes.
- 1.8 The chain pulley block offered shall be from a regular and established manufacturer of chain pulley blocks.
- 1.9 The chain pulley block offered shall be from the existing regular manufacturing range of chain pulley block vendor/ manufacturer and already type tested at either manufacturer's works or outside. Vendor's/ manufacturer's catalogue and general reference list shall be furnished along with the offer.

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- 1.10 Chain pulley block vendor/manufacturer shall assume responsibility for satisfactory performance of the equipment for the specified service.
- 1.11 Chain pulley block and all auxiliaries shall be suitable for the specified area classification.
- 1.12 Chain pulley block vendor/manufacturer shall not offer any alternative designs. Special tools and tackles required either for installation / erection or operation and maintenance of the chain pulley block shall be included in vendor's scope of supply.


## 2.0 SCOPE OF SUPPLY

- 2.1 Design, manufacture, testing and supply of Hand operated Chain pulley block (Trolley type) for the duty condition as specified in respective Technical Data Sheets.
- 2.2 Base frame, all mating flange, gaskets, bolts and fastening required for the Chain pulley block shall be furnished by the Bidder.
- 2.3 The part items of the equipment should be identified by Tag Nos and should be packed as to minimize the possibility of damage during storage or transit. The equipment shall be protected for a storage of 12 months at site or Store, if any extra precaution is to be taken by the Purchaser for storage beyond 12 months the same shall be explicitly indicated in the operation and maintenance manuals.
- 2.4 Hard copy of the O&M manual shall be sent along with the hoist. Ten (10) hard copies and five (05) sets of electronic copies of all documents are to be submitted in the English language. In addition, One (1) copy of operation and maintenance manuals shall be translated into "Bangla" and provided as paper copies and in electronic format.

## 3.0 CODES AND STANDARDS

The design and materials shall conform to the requirements of applicable codes and regulations of the latest edition. The design, manufacture, installation and testing of the Hand operated chain pulley blocks along with hand operated trolley shall follow the latest applicable IS:3832.GB standards are not acceptable.

**All chain pulley blocks shall be designed to IS: 3832 duty class 2**, the operating hand chain shall conform to standard of IS: 2429 grade 30 pitched and polished and the load chain of IS: 6216 grade 80. The chain pulley block shall be suitable for duty class 2. Hooks shall be as per of IS: 15560 & with antifriction bearing. Specification for Point hook with shank up to 25 Tons trapezoidal section shall be as per of IS:8610. Hook Shall be provided with safety latches.

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Any international standards may also be acceptable subject to their being equivalent or superior with prior approval of Company. For provisions not covered by the above codes & standards, applicable engineering practices & norms shall govern.

#### 4.0 TECHNICAL REQUIREMENTS

4.0.1 Design and manufacture of hand operated chain pulley block shall be consistent with capacity, lift, headroom and other parameters as specified in **Annexure – I**.

4.0.2 In design of chain pulley blocks, care shall be taken for following features.

- Minimum effort to lift a specified load.
- Self-braking system for holding the load in any position.
- Even loading of bearings.
- Ease of installation and maintenance.
- Compact design.

The chain pulley Block should have a **Chain collecting bag** / Bin for collecting load chain when chain Pulley block Bottom Block swivel Hook moving towards to extended position or shorten position.


4.0.3 **For all chain pulley blocks operating in hazardous area, the materials for non-lubricated rubbing parts shall be of Non-sparking type (non-ferrous).**

4.0.4 The suggested materials for such components are as follows:

Ratchet wheel, load chain wheel, hand chain wheel, chain guides for lifting mechanism.	Solid construction in Phosphor bronze or Gun metal or brass / Non Spark
Rims of un-gearred runners, geared runners, hand chain wheel and hand chain wheel guides for trolley mechanism Applicable for Trolley type	Phosphor bronze or Gun metal or brass / Non Spark
Load hook	Solid Phosphor Brass / Bronze coated / Non Spark
Hand chain	Zinc plated / / Non Spark

All materials used in construction of different components shall individually conform IS: 3832.

#### 4.1 Frame

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The frame shall be designed for proper strength built from steel plates with bolted / welded construction.

#### 4.2 Gear

Chain pulley blocks shall be supplied with helical or worm gear. The gear shall be designed for surface durability. All gears shall be machine cut from alloy steel and case hardened. In case of enclosed gearing, means shall be provided for ample lubrication.

#### 4.3 Load Brakes

Chain pulley block shall be provided with an automatic mechanical Ratchet and Pawl type load brake which will prevent self-lowering of the load and sustain and hold the load in all working positions. The load brake shall allow smooth lowering of the load without serious overheating which may impair efficient working of the block. The Pawl & Ratchet shall be made of steel hardened and tempered to provide satisfactory degree of wear resistance. The hardness of Pawl tip and Ratchet shall not be less than 40 and 30 HRC (Hardness, Rockwell C-Scale) respectively.

#### 4.4 Bearing

Only antifriction bearing shall be used. All the bearing shall be adequately lubricated type and arrangement of lubrication shall be clearly indicated on the cross section drawings.

#### 4.5 Hooks

The hooks (top and bottom applicable for Hook type Chain pulley and Only at Bottom for Trolley type) shall conform to of IS 8610. The bottom hook block shall be provided with thrust bearing to enable it to free swivel in the loaded condition without twisting the load chain. The top hook if required to swivel shall also be provided with thrust bearing. Hooks shall be provided with safety latches to prevent accidental unhooking. Suspension fitting other than hook shall be of sufficient strength to afford a **static factor of safety of not less than 4**.

#### 4.6 Load Chain


The load (link) chain shall be conforming to standard of IS: 6216 Grade 80. The chain shall be pitched and polished. Chain shall be made of material suitable for use with load chain employed and be of adequate strength and shall be designed to ensure effective operation

#### 4.7 Hand Chain

The hand chain shall be conforming to grade 30 of IS: 2429 (Part-II). The chains shall be pitched & polished. The chain link dimension shall be conforming to IS: 2429 (Part-I ) i.e. 6.3 mm nominal diameter chain. The length of chain shall be such that the lowest point of loop shall be 0.4 meter above the operating level.

#### 4.8 Chain Wheel

Wheel for load chain shall be made of material suitable for use with load chain employed and be of adequate strength and shall be designed to ensure effective operation. Wheel for hand chain shall be provided with flange. Wheels shall be provided with guides to prevent sagging of chain.

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#### 4.9 Idler Wheel

The chain pulley blocks shall be provided with idler wheels so shaped as to avoid twisting of the chain when passing round. The pitch diameter of the idler wheels shall not be less than 16 times of size of the chain.

#### 4.10 Trolley

The trolley for the chain pulley block shall be geared type, fabricated construction, 4 wheeled, driven by hand chain and shall have provision for mounting the chain pulley block. Trolley shall be designed to suit the suitable joist size and the hoisting capacity.

**Note: Applicable for Trolley type Chain pulley Block.**

### 5.0 INSPECTION AND TESTING

5.1 Unless otherwise specified all the chain pulley blocks shall be stage wise inspected and witness tested. Inspection at vendor works is applicable by BHEL/BHEL approved Inspection agency according to BHEL Specification / Approved Drawing / Approved Data sheet & Relevant indian standard.

5.2 As a minimum, tests shall be carried out as specified in the data sheets and elsewhere (if any). However, Company reserves the right to witness all mechanical and performance tests.

5.3 Contractor / vendor shall give at least 15 days' notice prior to commencement of testing.


5.4 Vendor shall notify his sub-vendor of Company's inspection and testing requirements.

5.5 All inspections shall be regarded as check-up only. However, acceptance of shop test shall not absolve / relieve Contractor and vendor from any of their responsibilities in any way, whatsoever.

5.6 All controls and safety devices shall be tested for satisfactory operation and settings.

5.7 Company's representative shall have access to vendor's / manufacturer's shop as well as to sub-vendor's shop at all times during manufacturing of the equipment's and vendor / manufacturer shall provide all requisite facilities including necessary monitoring and measuring devices to Company's representative for carrying out satisfactory inspection and witnessing the tests.

5.8 Equipment shall be subjected to stage wise inspection and testing at vendor's / sub-vendors works by third party inspection agency and/or by Company's authorized representative. Vendor shall furnish schedules for all inspections and tests to be conducted on all the equipment and auxiliaries in his scope of supply in a single document titled 'Inspection & Test Plan' within four weeks of placement of purchase order/ letter of intent for Company's review and approval. The

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extent of Company's participation and schedule of submission of inspection and test procedures as specified in inquiry / order shall also be reflected in 'Inspection and Test Plan'.

5.9 Each chain pulley block shall be subjected to **one and a half times the safe working load** through a length of lift which will ensure that every part of the block mechanism and each tooth of gears come under load. The trolley shall be tested for smooth operation when loaded.

5.10 Certificate of test and examination shall be issued with all the chain pulley giving the following information's.

- Safe working load.
- Range of lift.
- Load chain size and grade.
- Proof load applied

5.11 100% RT on tension joints, 10% RT on compression joints of butt welds shall be done.

5.12 Forging of dia-50mm or more shall be UT tested.

5.13 Chain pulley block shall be tested as per IS 3832.

5.14 Deflection, load, overload and travel check as per latest applicable indian standard shall be done on assembled Hand operated Trolley.

5.15 UT & MPI/DPT shall be done on gear blank, pinion shaft, axles.

5.16 Proof Load Test on hooks shall be carried out followed by DPT.


5.17 100% Radiography on weld joints under tension and 25% radiography on compression butt joints followed by 100% DPT shall be done for rope drum, girder, end carriage etc.

5.18 Complete hoists shall be tested for load and overload test as per latest applicable Indian standard.

## 6.0 GUARANTEE / WARRANTY

6.1 Contractor and equipment vendor shall guarantee all equipment's and components (including all auxiliaries) supplied in respect of design, materials and fabrication and / or workmanship for 24 months from the date of supply or 18 months from the date of successful commissioning, whichever is later.

6.2 If any defect or mal-performance occurs during the guarantee period, Contractor and equipment vendor shall make all necessary alteration, repairs, and replacements free of charge.

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- 6.3 Company's approval of the equipment design shall not relieve Contractor and equipment vendor of their responsibilities to ensure satisfactory performance of the items supplied.
- 6.4 Contractor and equipment vendor shall guarantee that all materials used are new, satisfactorily passed through acceptance procedure and is acceptable in quality, form and appearance.
- 6.5 Equipment vendor shall be responsible for overall performance of the equipment.

## 7.0 PROTECTION AND PAINTING

- 7.1 All exposed carbon steel parts to be painted shall be thoroughly cleaned from inside and outside to remove scale, rust, dirt and other foreign materials by wire brushing and sand blasting, as applicable.
- 7.2 Non-ferrous materials, austenitic stainless steels, plastic or plastic coated materials and Insulated surfaces of equipment not be painted.
- 7.3 Stainless steel surfaces both inside and outside shall be pickled and passivated.
- 7.4 Machined and bearing surface shall be protected with varnish or thick coat of grease.
- 7.5 Depending on the environment, following primer and finish coats shall be applied.  
**Refer Annexure-II** for painting scheme.

## 8.0 PACKAGING AND IDENTIFICATION

- 8.1 **Special Note:** Each hand operated Chain pulley & its accessories shall be packed in an **Individual** Wooden box / Crate.
- 8.2 The hand operated Chain pulley shall be properly packed to avoid damage during transit & storage. Wooden Box / Crate (fumigated) shall be covered with GI sheet of minimum 1mm thickness and same shall be used for packing various equipment / items as per shipping list. Lining with plastic sheet (water Proof) shall be provided inside the crate to avoid water entry during transit / storage.
- 8.3 Two sets of manual (hard copies) with drawing & data sheet shall be sent along with the packing box. Each packing shall be accompanied with packing slip & all relevant drawings.
- 8.4 The equipment shall be dismantled into major Components suitable for shipment and shall be properly packed to provide adequate protection during shipment. All assemblies shall be properly match marked for site erection. The packing shall be suitable for storing in the outer yard of the plant for a minimum period of 12 months.
- 8.5 Each package or shipping units shall be clearly marked or stenciled on at least two sides –  
BAP BHEL STORE ADDRESS (ADDRESS AS PER ENQUIRY), PO number, Supplier name. In addition, each package or shipping unit shall have the symbol painted in red on at least two sides of the package, covering one fourth of the area of the side.
- Items/components belong to a Chain Pulley Block shall be send to site in a single packing as far as possible or traceable identical number mark needs to mention in sub-assembly /sub parts.

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## 9.0 SPARE PARTS

- 9.1 Contractor / vendor shall submit recommended list of spare parts with recommended quantities for one year as well as first two years of operation of the equipment along with the itemized price list for all parts. Proper coding and referencing of spare parts shall be done so that later identification with appropriate equipment will be facilitated.
- 9.2 Recommended spares and their quantities should take into account related factors of safety, equipment reliability, effect of equipment downtime upon production, cost of parts and availability of vendor's service facilities around proposed location of equipment.
- 9.3 Vendor shall also submit a list of recommended commissioning spares with quantities and the itemized prices. However, supply of commissioning spares shall be in Contractor's / vendor's scope of supply without any extra cost to Company.


## 10.0 ERECTION AND COMMISSIONING (E&C)

The Erection of Pulley Blocks will be done by Owner as per Erection Manual and check List of Vendor.

## 11.0 ANNEXURES

Refer attached Annexures.

		<b>Bidders Acceptance / Comments</b>
<b>ANNEXURE – I</b> DATA SHEET FOR CHAIN PULLEY BLOCKS WITH TROLLEY.	Refer Enclosed specification.	
<b>ANNEXURE – II</b> PAINTING SCHEME	Refer Enclosed specification.	

 <b>BHEL</b> Maharashtra Company	<b>Technical Specification for CHAIN PULLEY BLOCK WITH TROLLEY</b>	FWQS:039
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### ANNEXURE – I

#### DATA SHEET FOR CHAIN PULLEY BLOCKS WITH TROLLEY.


Sl.No.	Description (Application area)	Capacity (Tons)	Range of List (in m)	Head Room (mm)	Quantity (Numbers)
1	Chain Pulley with Trolley	1.0	15	As minimum as possible, vendor to specify in their offer.	As per Enquiry
2	Chain Pulley with Trolley	1.0	30	As minimum as possible, vendor to specify in their offer.	As per Enquiry
3	Chain Pulley with Trolley	1.0	45	As minimum as possible, vendor to specify in their offer.	As per Enquiry

#### NOTE & VENDOR TO CONFIRM.

1. ALL CHAIN PULLEY BLOCKS SHALL BE DESIGNED TO IS : 3832 , DUTY CLASS 2.
2. MONORAIL BEAM / CHAIN PULLEY RUNWAY BEAM IS BHEL SCOPE.
3. MAXIMUM MANUAL EFFORT FOR OPARTAIION SHALL BE 30 KG.
4. THE CHAIN PULLEY BLOCK SHOULD HAVE A **CHAIN COLLECTING BAG** / BIN FOR COLLECTING LOAD CHAIN WHEN CHAIN PULLY BLOCK BOTTOM BLOCK SWIVEL HOOK MOVING TOWARDS TO EXTENDED POSITION OR SHORTEN POSITION.
5. EACH HAND OPERATED CHAIN PULLEY & ITS ACCESSORIES SHALL BE PACKED IN AN **INDIVIDUAL** WOODEN BOX / CRATE.

#### TENTATIVE MONORAIL BEAM SIZES ARE:

UB 254x146x37 OR ISMB 300 OR UB 305X165X46 OR NPB 300X150X42.25 OR NPB 400. THE BEAM SIZE WILL BE CONFIRM DURING DETAIL ENGEERING. VENDOR CHAIN PULLEY SHALL SUITABLE AS PER BHEL MONORAIL BEAM SIZES, VENDOR SHALL TAKE CARE THIS POINT PROVIDE THEIR OFFER IN TENDER.

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**ANNEXURE – II  
(PAINTING SCHEME)**

SI No	SURFACE LOCATION	SURFACE PREPARATION	PRIMER		FINISH		TOTAL DFT IN (µm min.)
			PAINT	DFT (µm min.)	PAINT	DFT (µm min.)	
1	Handling Equipment	Power Tool Cleaning to st3 (SSPC-SP3)	Red Oxide Zinc Phosphate Primer to IS: 12744 (Two coats) Idler roller shall be applied with two coats of 70 microns at shop	70	Synthetic Enamel to IS 2932 Shade: Grey white RAL 9002 (Two coats)	60	130

**Quality Assurance (Mech)**  
**CONTRACT QUALITY REQUIREMENT (CQR)**

Q-INDENT: CHAIN PULLEY BLOCK: 612

Dt. 25-10-2022

SL No	Item Name	Indent No	PGMA	Technical Spec / Drawing No.	QP Requirement
01	CHAIN PULLEY BLOCK WITH TROLLEY	P85127746	FW713	FWQS:039/ Rev:00, Dt:27.08.2022	Post Award Vendor to submit QP in line with attached Sample QP in this format only.

Projects: MOUDA, NORTHKARANPURA, NALCO, PANKI.

Following are Quality requirements:

1. For NTPC Projects, BHEL Approved Source is acceptable.
2. For Non NTPC Projects, Commercial concurrence to be obtained on Vendor acceptance if any.
3. All the items shall be inspected at Manufacturer works as per BHEL approved QP/Approved Drawing/Approved datasheet and Relevant Technical Specification.
4. Physical Inspection shall be done by BHEL/BHEL AIA at Manufacturer works.
5. After award of PO, in line with Attached QP, arrange Vendor specific QP incorporating PO No, Specification details for BHEL review and approval.
6. Packing of items shall be as per BHEL Engg Approved Packing Drawing/Packing Specifications.
7. BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO. The supplier shall inform BHEL in advance about the readiness of the goods for inspection and testing. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO. Material Test Certificates shall be submitted to BHEL.
8. Annexure 'Q' shall be part of enquiry File and shall be filled by Supplier with their duly sign and seal.
9. Supplier should be manufacturer not a trader/Agent. *(If the OEM/Principal engaging the services of an agent to participate on their behalf, vendor will be acceptable with respect to Quality requirement provided acceptance on Point No 3, 7 and 10 should be accepted to supplier)*
10. **General Inspection Notes:**
  - a. Latest version of standards & Specification shall be applied.
  - b. Materials shall be procured in compliance to Functional Technical specification.
  - c. Gauges and measuring instruments with valid calibration only shall be used.
  - d. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO.
  - e. BHEL /BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO.
  - f. In case of Vendor Drawing & Datasheet, it needs approval by BHEL Engineering.
  - g. This QP shall be read along with relevant PO, BHEL Specification / Approved Drawing/ Datasheet.

Post award arrange PO Specific QP from successful Vendor (as mentioned in SI No 5 above) for BHEL review and approval for this item.

Sd\ - Rakesh Kr Madhu  
Dy/Mgr-QA

Sd\ - K Renjith  
Mgr/QA

11/15/2022/115249/2022/BAP-QA_MECH Logo, if available	MANUFACTURER'S NAME & ADDRESS: BAP-QA_MECH			<b>MANUFACTURING QUALITY PLAN</b>				PROJECT: BHEL PO NO & DATE: MQP NO: DATE: DD/MM/YYYY				
	PRODUCT: Material Handling System				SUB-SYSTEM : Chain Pulley Block with Trolley				REV NO: PAGE: 1 OF 2			

SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	*	AGENCY			REMARKS
										M	C	N	
1	2	3	4	5	6	7	8	9	10	11			12

<b>1.0</b>													
1.1	Gear/Pinion	Chemical & Mechanical Test	Major	Measure	Each Heat/ Melt	Specification/ Approved Drawing/Data sheet/ Relevant Standard		Lab.repo rt./MTC	√	P	V	V	
1.2	Ratchet Wheel		Major	Measure					√	P	V	V	
1.3	Load chain	Calibration, proof load, brake load	Majore	Visual	100%	Appd.Drgs	ISO 3077	MTC	√	P	V	V	
1.4	Hand chain	Finish	Majore	Visual	Random	Roll on H.wheel	Roll on H.wheel	Report/ MTC	√	P	V	V	
1.5	Load Hooks	Chemical & Mechanical Properties	Majore	Mfg/TC	1 sample each lot	Appd.Drgs	Is:15560/BS 2903	MTC	√	P	V	V	
<b>2.0 INPROCESS CONTROLS:</b>													
2.1	Gear cutting Machining	Gear Teeth Dimension	Majore	Measure ment	Random	Specification/ Approved Drawing/Data sheet/ Relevant Standard		Report		P	V	-	
2.2	Assembly	Assembly	Majore	Visual	Random			Report		P	V	-	
2.3	Load Hooks	Dimensions, Proof load test	Majore	Measure & Load test	100%	Appd. Drgs	IS:15560/BS 2903	Report	√	P	V	V	
2.4	<b>NDT Checks.</b>	<b>All NDT Checks like DPT, MPI, UT and RT Shall be conducted as per technical specification CI: 5.11 &amp; 5.17. All the relevant NDT report shall be reviewed by BHEL/BHEL AIA during inspection.</b>											
<b>3.0 FINAL INSPECTION :</b>													
3.1	Load Test	Load test	Majore	150% SWL	One per each type & capacity	Approved Drawing/Data sheet		Report	√	P	W	W	

<b>MANUFACTURER SIGNATURE &amp; SEAL</b>	<b>LEGEND:</b> * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER, C:MAIN CONTRACTOR ( BHEL / BHEL AIA,) N: CUSTOMER; P: PERFORM, W: WITNESS, V: VERIFICATION; COC- CERTIFICATE OF CONFORMANCE MTC- MILL /MANUFACTURER'S TEST CERTIFICATE; IR- INSPECTION REPORT.	<b>REVIEWED &amp; APPROVED BY</b>
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11/15/2022/5 Logo, if available	MANUFACTURER'S NAME & ADDRESS: BAP-QA_MECH		MANUFACTURING QUALITY PLAN					PROJECT: BHEL PO NO & DATE: MQP NO: DATE: DD/MM/YYYY				REV NO: PAGE: 2 OF 2	
	PRODUCT: Material Handling System												
	SUB-SYSTEM : Chain Pulley Block with Trolley												

SL. NO	COMPONENT & OPERATIONS	CHARACTERISTICS	CLASS	TYPE OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENT	ACCEPTANCE NORMS	FORMAT OF RECORD	*	AGENCY			REMARKS
										M	C	N	
1	2	3	4	5	6	7	8	9	10	11			12
3.2		Capacity/Lift	Majore	Measure	One per Each type & capacity	Approved Drawing/Data sheet		Report	√	P	W	W	
<b>4.0</b>	<b>PAINTING, MARKING, PACKING AND PRESERVATION:</b>												
4.1	Cleaning & Painting	Surface Preparation & Painting	Majore	Visual	100%	As per PO	Specification	COC	√	P	--	--	
4.2	Identification packing & Preservations	Name plate stability	Majore	Verificati on	100%	As per PO	As per PO	COC	√	P	-	-	

**NOTES:**

1. Latest revision of standards & specifications shall apply.
2. Materials shall be procured in compliance to Functional Technical Specification.
3. Inspection shall be in compliance with approved Quality Control Procedure for the product.
4. Qualified Personnel shall carry out NDT with compliance to approved NDT Procedures and Acceptance Norms, as per ASME Section V.
5. Gauges and measuring Instruments, with valid calibration only shall be used
6. Cleaning and Painting of products shall be carried out as per Approved Painting Schedule as applicable.
7. Finished Products shall be packed to comply with approved Packing Schedule.
8. BHEL Authorized representatives shall have the right to witness the necessary inspection and testing of goods mentioned in the PO. Inspection / Inspection wavier / approval by BHEL does not absolve Supplier's responsibility for conformity of the specification as per the terms of PO.
9. QA Documentation package shall include copy of approved Data Sheets/ Drawings & QP, along with all Material Test Certificate (MTCs), CHPs, Material Dispatch Clearance Certificate for all items.
10. This QP is applicable for mandatory spare also as applicable.

Record of revision

SI No	Date Of Release	Remarks

MANUFACTURER SIGNATURE & SEAL	<b>LEGEND:</b> * RECORDS IDENTIFIED WITH "TICK" (√) SHALL BE ESSENTIALLY INCLUDED BY SUPPLIER IN QA DOCUMENTATION. ** M: MANUFACTURER, C:MAIN CONTRACTOR ( BHEL / BHEL AIA,) N: CUSTOMER; P: PERFORM, W: WITNESS, V: VERIFICATION; COC- CERTIFICATE OF CONFORMANCE MTC- MILL /MANUFACTURER'S TEST CERTIFICATE; IR- INSPECTION REPORT.	REVIEWED & APPROVED BY
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## Annexure Q

		Indent No:	Enquiry no:	
Sl.No	BHEL / Customer Requirements	## Specific confirmations by the manufacturer (Acceptable/Not acceptable)		
	<b>Quality Plan Requirement: (If SQP is not given &amp; Vendor QP applicable)</b>			
	(i) MQP (Manufacturing Quality Plan) shall be submitted in attached format for BHEL/Customer review & approval. Our SQP/Typical MQP/ MQP Format is attached for guidance & use.			
	(ii) MQP shall invariably cover w.r.t Inward inspection including on Raw material Procurement, In process and Final inspection in elaborated way/details.			
	(iii) Bidder shall also to give specific confirmation that on need basis, their competent officials shall visit to BHEL / customer for finalization of Quality plan including test procedure/methodology during preaward / post award approval / detailed engineering in the event of an order.			
	(iv) No deviation on BHEL/Customer approved MQP/ SQP (In case BHEL SQP is provided) is acceptable.			
1	(v) Bidder shall agree to submit all cross referred documents other than codes/standards to BHEL/Customer/Consultant.			
	<b>Important Notes shall be included in MQP :</b> (a) Latest revision of Standard s & Specification shall apply. Only International Standards are applicable. (b) Materials shall be procured in compliance to Functional Technical Specification. (c) Inspection shall be in compliance with Approved Quality Control Procedure for the Product. (d) NDT shall be carried out by Qualified Personnel with compliance to Approved NDT Procedures and Acceptance Norms, as per ASME standard. (e) Gauges and measuring Instruments, with valid calibration only shall be used. (f) Cleaning and Painting of products shall be carried out as per Approved Painting Schedule. (g) Finished Products shall be packed to comply with Approved Packing Schedule. (h) Welding shall be carried out by Qualified Personnel with compliance to Approved NDT Procedures and Acceptance Norms, as per ASME standard.			
2	<b>Domestic / Inland Inspection</b> will be carried out by BHEL/BHEL appointed Third Party Inspection Agency (TPIA) / Customer/Customer Appointed Inspection Agency/Consultant. This is applicable for all Stage inspection and Final Inspection identified as "W" - Witness or "CHP" - Customer Hold Point as per customer approved Quality Plan/ Technical specification / Approved Drawing/ Approved Data sheet / Scheme / PID / PFD / SLD (Process Instrumentation Diagram / Process Flow Diagram / Single Line Diagram) etc. (as applicable).			
3	<b>Inspection Agency for Foreign Bidders and also for Indian Bidder but importing from Foreign Sources:</b> (1) Any one of the following Third Party Inspection Agency (TPIA) shall be appointed by the bidder and same shall be furnished by the bidder in techno commercial bid itself. (2) The details of TPIA with contact details like Name of the official, Phone no, Email id shall also to be submitted during pre/post award. However cost for such inspection agency shall be borne by the bidder only. Inspection charges for such inspection agency shall be indicated separately so that if BHEL/Customer is undertaking the inspection by on their own , then these charges are non claimable by the bidder. For NTPC Project ensure TPI Approved by NTPC. Refer our QC Procurement email in this regard. <b>List of TPIA</b> 1.M/s Bureau Veritas 2.M/s TUV-Nord 3.M/s TUV-SUD 4.M/s TUV Rheinland 5.M/s Lloyds Register 6.M/s SGS 7.M/s Germanischer Lloyds 8.M/s QUEST 9.M/s Certification Engineers International 10.M/s Intertek 11.M/s IR Class Systems and Solutions 12.M/s DNV 13. M/s Fichtner 14. M/s ABS Inspection Services			

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Sl.No	BHEL / Customer Requirements	## Specific confirmations by the manufacturer (Acceptable/Not acceptable)
4	<b>Stage Inspection during manufacturing Process</b> : Stage Inspection during manufacturing shall be carried out as per approved quality plan and all necessary documents shall be provided for review, verification and clearance for further processing. This inspection call shall be given well in advance (at least 2 weeks before) to TPI/Bidder's own inspection agency to avoid delay in the manufacturing processes.	
5	<b>Inspection before despatch for domestic supplier</b> : Inspection before despatch at supplier's works shall be carried out by BHEL appointed Inspection agency (as in Sl no. 2). Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet .	
6	<b>Inspection at Foreign Source/Supplier:</b> (a) As in sl no: 3. shall be ensured without fail (b) No material / items shall be despatched without getting the written communication from BHEL / Customer inspection carried out by Bidder appointed Third Party Inspection Agency (As per Sl no.3) / Customer/Customer Appointed Inspection Agency/Consultant. This is applicable for all Stage inspection and Final Inspection identified as "W" - Witness or "CHP" - Customer Hold Point as per customer approved Quality Plan/ Technical specification / Approved Drawing/ Approved Data sheet / Scheme / PID / PFD / SLD (Process Instrumentation Diagram / Process Flow Diagram / Single Line Diagram) etc. (As applicable). Inspection before despatch for Foreign supplier : Inspection before despatch at supplier's works shall be carried out by bidder appointed inspection agencies having international presence at vendors and or vendor's sub vendor works. Inspection shall be done as per approved Quality plan/ Technical specification/ Approved Drawing/ Approved Data sheet by TPIA mentioned in Sl no: 03 at supplier's cost.	
7	<b>Painting</b> shall be done strictly as per BHEL/Customer approved painting schedule / scheme only. Paint Thickness / Paint shade shall be ensured as per BHEL / Customer approved painting schedule / specification / data sheet etc. No deviation is acceptable unless otherwise accepted by BHEL/Customer in writing. Any conflict if any among BHEL / Customer approved painting schedule / Spec / data sheet etc. shall be brought to the notice of BHEL well in advance before proceeding including the BOI being procured for assy / skid like motors etc.	
8	Specific conformation for document package in the event of an order (2 Hard copies & soft copy in PDF file) is to be given containing the following with proper linkages (i) Index Sheet (ii) MQP/RQP/Endorsement Sheet (As applicable) (iii) TCs identified by BHEL/ Customer for record for "CHP" / "W" and Verification portion ("V") as given in approved QP. (iv) Final inspection report + TC including Chemical + Mechanical + HT + NDT etc. (v) Third party Inspection report + TC (vi) Customer CHP/ MDCC (vii) Type test / Performance Test reports conducted (viii) Type test / Performance Test approval/ clearance obtained from BHEL/Customer (ix) BOM with As Build Drgs with actual make / rating used with BHEL/customer approved drawings.	
9	<b>Packing / Seaworthy Packing</b> shall be as per BHEL Packing schedule / approved drg / sketch. This shall be ensured to take care transit / handling / transshipment in Road / Sea / Air. Photographs are to be submitted for BHEL review before despatching the material as per contract conditions.	
10	<b>Outsourcing of test facilities:</b> Bidder shall ensure all the testing facilities in house. However If any of the test facilities are not available with successful bidder, then bidder shall ensure the same at NABL accredited third party lab / Govt / Govt Lab for major testing such as NDT, Electrical & Mechanical testing.	
11	<b>Important Note:</b> No deviation on the above requirement 01 to 10 is acceptable with respect to Quality Requirement and those offers not meeting these specific customer requirement is liable for rejection and hence the bidder shall submit all the required documentary evidences in the offer itself.	
12	## Necessarily to be filled up by the bidder at the time of offer itself otherwise the offer may not be considered w.r.t Quality Requirement being customer specific requirement.	

VENDOR SIGN AND STAMP:

Vendor Name &amp; Address:

\*(To be submitted In the company letter head by supplier)

## Form - 1

**Subject:** Public Procurement (Preference to Make In india)

**References:**

- 1.P-45021/2/2017-B.E-II dated. 15<sup>th</sup> June-2017,
- 2.P-45021/2/2017-PP(BE-II) dated. 28<sup>th</sup> May-2018 ,
- 3.P-45021/2/2017-PP(BE-II) dated. 29<sup>th</sup> May-2019.
- 4.P-45021/2/2017-PP(BE-II) dated. 4<sup>th</sup> June-2020

We hereby declare with reference to above subject and references that M/s -----(Tick whichever is applicable as below)

"Class-I local supplier" meeting the requirement of minimum local content equal to 50%(fifty percent) or more defined in the above government notification for the goods and services (or)

"Class-II local Supplier" meeting the requirement of local content 20% to less than 50%(fifty percent) defined in the above government notification for the goods and services

Please mention the details against the following:

Enquiry no:----- dated. -----

Type of Supplier (Class-I/Class-II) .....

Product:-----

Project:.....

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

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

Authorized Signature M/s \_\_\_\_\_

(Signature and seal)

Place:.....

Date:.....

From.

M/s \_\_\_\_\_

Address: \_\_\_\_\_

**Note:** For offer value INR 10 crores or more, shall be vetted/endorsed by statutory auditor or cost auditor, for the declared local content.

**\*(To be submitted In the company letter head by supplier)**

## **Form – 2**

I/we are bidder from \_\_\_\_\_ (Address with country). We do not belong to any of the below category mentioned.

1. Any of entity/office/workshop of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.
2. Any of subsidiary of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.
3. Any of entity/office/workshop of your organisation/incorporation, controlled in a country sharing land border with India, If yes, provide the full address of all such locations.
4. Any of entity whose beneficial owner is situated in a country sharing land border with India, If yes, provide the full name, address of all such locations.
5. Any Indian Agent available, If so, Provide details of address and contacts.
6. Any employee/directors who is/are citizen of country sharing land border with India, If yes, provide the full name, employee code and address of all such locations.
7. Any of consortium/joint venture of your organisation/incorporation, established in a country sharing land border with India, If yes, provide the full address of all such locations.

### **Meaning of beneficial owner**

- 1) In case of a company or limited liability partnership, beneficial owner is the natural person, who, whether acting alone or together, or through one or more judicial person, has a controlling ownership interest or who exercises control through other means.

### **Explanation**

- a) Controlling ownership interest means ownership of or entitlement to more than twenty-five percent of shares or capital or profits of the company.
  - b) “control” shall include the right to appoint majority of the directors or to control the management rights or shareholder’s agreement or voting agreement.
- 2) In case or a partnership firm the beneficial owner is the natural person (s) who whether acting alone or together or through one or more judicial person, has ownership of the entitlement to more than fifteen percent of capital or profits of the partnership.
  - 3) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together or through one or more judicial person, has ownership of the entitlement to more than fifteen percent of the property or capital or [profits of such association or body of individual.
  - 4) Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official.
  - 5) In case of a trust, the identification of beneficial owner (s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust and any other

**\*(To be submitted In the company letter head by supplier)**

natural person exercising the ultimate effective control over the trust through a chain of control of ownership.

- 6) An agent is a person employed to do any act for another, or to represent another in dealing with third person.

We have read the clause regarding restriction on procurement from a bidder of a country which shares a land border with India, we hereby declare that we do not belongs to any such country and are eligible to be considered.

In case, any of information is found to be false, even after bid acceptance, immediate termination may happen and action will be taken as per law.

Format is being filled without altering any of the clause mentioned in the given format\*\*

Dated: \_\_\_\_\_

Authorised Sign and stamp\_\_\_\_\_