

## अनुबंध | Contract



अनुबंध क्रमांक | Contract No: GEMC-511687767408158

अनुबंध तिथि | Generated Date : 29-Mar-2025

बोली/आरए/पीबीपी संख्या | Bid/RA/PBP No.: [GEM/2024/B/5614115](#)

संगठन विवरण   Organisation Details	खरीदार विवरण   Buyer Details
प्रकार   Type : Central PSU मंत्रालय   Ministry : Ministry of Coal विभाग   Department : COAL INDIA LIMITED संगठन का नाम   Organisation Name : Mahanadi Coalfields Limited कार्यालय क्षेत्र   Office Zone : MCL Sambalpur Odisha	पद   Designation : mmpur1b संपर्क नंबर   Contact No. : 0663-2542521-2734 ईमेल आईडी   Email ID : mmpur1b.mcl@coalindia.in जीएसटीआईएन   GSTIN : 21AABCM5188P1Z3 पता   Address : MAHANADI COALFIELDS LIMITED, PO - JAGRUTI VIHAR, BURLA, SAMBALPUR, ODISHA-768020, India

वित्तीय स्वीकृति विवरण   Financial Approval Detail	भुगतान प्राधिकरण विवरण   Paying Authority Details
आईएफडी सहमति   IFD Concurrence : No प्रशासनिक अनुमोदन का पदनाम   Designation of Administrative Approval : General Manager MM/HOD वित्तीय अनुमोदन का पदनाम   Designation of Financial Approval : GM Finance	Role: PAO भुगतान का तरीका   Payment Mode: Offline पद   Designation : DEEPAK KUMAR BURMA MGR FIN ईमेल आईडी   Email ID : dkburma@coalindia.in जीएसटीआईएन   GSTIN : 21AABCM5188P1Z3 पता   Address : MAHANADI COALFIELDS LIMITED, AT / PO - JAGRUTI VIHAR, BURLA, SAMBALPUR, ODISHA-768020, India

विक्रेता विवरण   Seller Details
जेम विक्रेता आईडी   GeM Seller ID : 6A56180000660944 कंपनी का नाम   Company Name : TIL LIMITED संपर्क नंबर   Contact No. : 03366332845 ईमेल आईडी   Email ID : CHENNAI.TIL@TILINDIA.COM पता   Address : 1, TARATOLLA ROAD, GARDEN REACH, Kolkata, WEST BENGAL-700024, - एमएसएमई पंजीकरण संख्या   MSME Registration number : - जीएसटीआईएन   GSTIN : 19AABCT0704G1ZO (R), 33AABCT0704G1ZY (S), 19AABCT0704G1ZO (M), (M)

खरीदार द्वारा मूल्यांकित एमआईआई स्थिति   MII Status as evaluated by buyer : Not Verified खरीदार द्वारा सत्यापित एमएसएमई स्थिति   MSME Status as verified by buyer : Not Verified
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\*जिसके नाम के पक्ष में GST/TAX इनवॉइस पेश किया जाएगा | GST / Tax invoice to be raised in the name of - Consignee

वितरण निर्देश | Delivery Instructions : NA

#	आइटम विवरण   Item Description	आइटम विवरण   Ordered Quantity	इकाई   Unit	इकाई मूल्य (INR)   Unit Price (INR)	कर विभाजन (INR)   Tax Bifurcation (INR)	मूल्य (INR में सभी शुल्क और कर सहित)   Price (Inclusive of all Duties and Taxes in INR)
1	उत्पाद का नाम   Product Name : TIL Rough Terrain Hydraulic Mobile Crane 129 kW with Lift Capacity 40 tonne tonne ब्रांड   Brand : TIL ब्रांड प्रकार   Brand Type : Registered Brand कैटलॉग की स्थिति   Catalogue Status : OEM verified catalogue कैसे बेचा जा रहा है   Selling As : OEM श्रेणी का नाम और चतुर्थांश   Category Name & Quadrant : Rough Terrain Hydraulic Mobile Crane (Q2) मॉडल   Model : RT740B एचएसएन कोड   HSN Code : 84261200	5	pieces	14,912,000	NA	74,560,000
कुल ऑर्डर मूल्य   Total Order Value (in INR)						74,560,000

क्र.सं.   S.No	परोक्षिती   Consignee	वस्तु   Item	लॉट नंबर   Lot No.	मात्रा   Quantity	दिनांक के बाद डिलीवरी शुरू करना है   Delivery Start After	वितरण पूरा कब तक करना है   Delivery To Be Completed By
1	पद   Designation : - ईमेल आईडी   Email ID : depot-off-ibva.mcl@coalindia.in संपर्क   Contact : -9438493827- जीएसटीआईएन   GSTIN : 21AABCM5188P1Z3 पता   Address : Office of the General Manager, Ib-Valley Area, MCL,	TIL Rough Terrain Hydraulic Mobile Crane 129 kW with Lift Capacity	-	2	29-Mar-2025	26-Aug-2025

	Brajrajnagar, Dist: Jharsuguda, ODISHA-768216, Jharsuguda, ODISHA-768216, India	40 tonne tonne				
2	पद   Designation : - ईमेल आईडी   Email ID : depot-off-lina.mcl@coalindia.in संपर्क   Contact : 943-8494207- जीएसटीआईएन   GSTIN : 21AABCM5188P1Z3 पता   Address : LINGARAJ AREA, MAHANADI COALFIELDS LIMITED, AT/PO: Deulbera Colliery, Angul, ODISHA-759102, India	TIL Rough Terrain Hydraulic Mobile Crane 129 kW with Lift Capacity 40 tonne tonne	-	1	29-Mar-2025	27-Jul-2025
3	पद   Designation : - ईमेल आईडी   Email ID : depot-off-jaga.mcl@coalindia.in संपर्क   Contact : 0094-38073316- जीएसटीआईएन   GSTIN : 21AABCM5188P1Z3 पता   Address : Office of the Depot Officer, Central/Regional Stores, Jagannath /Area, P.O. Baland, ANGUL, ODISHA-759116, India	TIL Rough Terrain Hydraulic Mobile Crane 129 kW with Lift Capacity 40 tonne tonne	-	1	29-Mar-2025	25-Sep-2025
4	पद   Designation : - ईमेल आईडी   Email ID : depot-off-bhra.mcl@nic.in संपर्क   Contact : 06760-296236- जीएसटीआईएन   GSTIN : 21AABCM5188P1Z3 पता   Address : OFFICE OF THE GENERAL MANAGER, BHARATPUR AREA, AT PO N.S.Nagar, Bharatpur, Via Talcher, Dist Angul 759148, ANGUL, ODISHA-759148, India	TIL Rough Terrain Hydraulic Mobile Crane 129 kW with Lift Capacity 40 tonne tonne	-	1	29-Mar-2025	25-Sep-2025

### Product Specification for TIL Rough Terrain Hydraulic Mobile Crane 129 kW with Lift Capacity 40 tonne tonne

विनिर्देश   Specification	उप-विनिर्देश   Sub-Spec	मूल्य   Value
Description	Description	A Rough Terrain hydraulic mobile crane is a heavy-duty lifting machine with a hydraulic telescopic boom with integrated chassis, 360 deg. continuous slew on either side, with power shift transmission, 4 wheel drive with 4 wheel steer, having lifting duties on outriggers, on tyres and pick and carry operations powered by hydraulic systems for precise lifting and positioning of heavy loads in construction, defence, power plants, petrochemical industries, infra projects, mining, forest, industry, ports and others.
Engine Parameters	Engine Make and Model	Cummins; Model: QSB 6.
	Engine Maximum Power at Rated RPM (kW)	129
	Rated RPM at Engine Maximum Power (@rpm)	2200
	Max Torque at Rated RPM (Nm)	881
	Rated RPM at Max Torque (@rpm)	1300
	Vehicle Emission Compliance	CEV Stage IV / CEV Stage V
	Type of Aspiration	Turbocharged
	No of Cylinders (Nos)	6
	Engine Cooling System	Water Cooled
	Fuel Type	Diesel
	Fuel Tank Capacity (Litres)	227 liter
Overall Dimensions	Overall Length (Tolerance ±10%) (mm)	12789 millimeter
	Overall Width (Tolerance ±10%) (Over Tyre) (mm)	2997 millimeter
	Overall Height (Tolerance ±10%) (mm)	3630 millimeter
	Wheel Base (Tolerance ±10%) (mm)	3810 millimeter
	Minimum Ground Clearance (Tolerance ±10%) (mm)	450 millimeter
	Gradeability in % (Unladen)	45
	Type of Tyre	Pneumatic Industrial / Earthmovers
	Number of Tyres per Axle	2
	Front Tyres Size Designation with Ply Rating (mm)	18.00 X 25 - 32 PR earthmover tyres.
	Rear Tyres Size Designation with Ply Rating (mm)	18.00 X 25 - 32 PR earthmover tyres.
	Weight of Equipment (Unladen weight, kg (weight in travel mode with 90% fuel,	30077 kilogram

	accessories and tools) as per CMVR Certificate)	
Performance Parameters	Type of Wheel Drive	Four wheel Drive
	Type of Power Steering	Four wheel Steering
	Minimum Turning Radius as per CMVR (mm) (Tolerance $\pm 10\%$ )	6390 millimeter
	Slewing Speed (RPM) (Tolerance $\pm 10\%$ )	2
	Number of Outriggers	4
	Specified radius from the centre of slew	3 meter
	Rated Lift Capacity at specified radius from the centre of slew on fully extended outriggers (360 deg slew)	40 tonne
	Maximum Lift Capacity at specified radius from the centre of slew on mobile over front (upto 4km/hr speed)	17.35 tonne
	Maximum Lift Capacity at specified radius from the centre of slew free on wheel (360 deg slew)	11.25 tonne
	Maximum Speed (Unladen) (km/h)	26
Constructional Parameters	Type of Gear Box	Powershift Transmission with Torque Converter
	Number of Forward Gears (Nos)	6
	Axle	Front: Drive-steer with differential and planetary reduction hubs rigidly mounted to the chassis frame. Rear: Drive-steer with differential and planetary reduction hubs, pivot mounted at centre of the chassis frame.
	Hook Block	40.0 Tonnes; 4 Sheaves - 8 falls.
	Minimum Boom Elevation Angle (Degree)	-3
	Maximum Boom Elevation Angle (Degree)	78
	Slew Movement 360 deg continuous rotation	Yes
	Service Brake Type	Service Brakes are multiple disc brake for both Front and Rear. Foot operated dual line hydraulic brake acting on all wheels.
	Parking Brake Type	Spring applied, hydraulically released parking brake operating on front axle, caliper type.
	Auxiliary Brake	Fully hydraulic, split circuit operating on all wheels. Spring applied, hydraulically released front axle mounted parking brake.
	Hydraulic Oil change period (in hours)	1000 hour
	Instrument Panel	Hour Meter, Fuel Gauge / Indicator, Coolant Temperature Gauge / Indicator, Battery Not Charging Indicator, Low Engine Oil Pressure Indicator, Horn
	Battery Type	Dry
	Battery Rating	2 nos. 12V each, rating - 180 AH
	Electrical Alternator & Starter	Alternator Rating - 24V Starter rating - 24V Starter control - As per engine manufacturer
	Lights	Front Lights, Rear Lights, Parking Lights, Brake Lights, Indicators Lights, Cabin Lights
	Operator Cabin	Single Revolving Cabin fully enclosed wide view
	Cabin Instrumental panel with audio indicators / visual indicators	Yes
	Rear view mirror	Yes
	Front screen wiper	Yes
	Reverse Alarm	Yes
	Adjustable driver seat	Yes
	Door with toughened glass and locking mechanism	Yes
Paint	Standard automobile paint to the exterior body as per CVMR rules	

	Rope Length	152 meter
	Boom	4 Part hydraulically operated
	Hydraulic system	Load sensing hydraulic system provides adequate pressure and flow of hydraulic oil for independent crane operation.
	Hoist Mechanism	Gear type hydraulic motor driving hoist barrel via reduction gear unit. Fitted with counterbalance valve for controlled lowering of the load. Spring applied hydraulically released multi plate brake. Limit switch provided to prevent overlowering.
	Hoist Speed Single Line (Unladen) (Tolerance ±10%) (Mtrs/Min)	105
	Safety System	Safe load indicator with hydraulic cut off, Safety brakes on hoist, Hose protection failure device, Over hoist & over load cut off
	Additional Content	Head & tail light assembly, Reverse gear hooter annunciator/reflectors, Tools kits, Fire extinguisher, Operator's Manual and Parts Catalogue should be provided by the manufacturer/Vendor
Warranty	Equipment Warranty Time (Month)	12 month
	Operating hours during warranty period	1000 hour
Certification & Testing Parameters	Conformity to Standard	IS 4573 latest
	Type Test Certifying Agency	ARAI
	Specify type test certifying agency in case of "Other" or put "NA"	NA
	Type Test Certificate Number	In Progress
	Type Test Certificate Date (dd/mm/yyyy)	In Progress
	Compliance to Latest CMVR	Yes
	Load Test Certificate	Manufacturer's load test certificate as per IS 4573 to be provided

#### शुद्धिपत्र | Corrigendum

1. तक बढ़ाया गया | Extended Upto : 2024-12-09 18:00:00

#### ईपीबीजी विवरण | ePBG Detail

सलाहकार बैंक   Advisory Bank :	State Bank of India
ईपीबीजी प्रतिशत (%)   ePBG Percentage(%):	5.00
बोली लगाने वाले को बोली के नियमों और शर्तों के अनुसार लागू ईपीबीजी प्रस्तुत करना होगा   The bidder shall furnish ePBG as applicable as per bid's terms and conditions	

#### नियम और शर्तें | Terms and Conditions

##### 1. General Terms and Conditions-

- 1.1 This contract is governed by the [General Terms and Conditions](#), conditions stipulated to this Product/Service as provided in the Marketplace.
- 1.2 This Contract between the Seller and the Buyer, is for the supply of the Goods and/ or Services, detailed in the schedule above, in accordance with the General Terms and Conditions (GTC) unless otherwise superseded by Goods / Services specific Special Terms and Conditions (STC) and/ or BID/Reverse Auction Additional Terms and Conditions (ATC), as applicable
- 1.3 All GeM Sellers / Service Providers are mandated to ensure compliance with all the applicable laws / acts / rules including but not limited to all Labour Laws such as The Minimum Wages Act, 1948, The Payment of Wages Act, 1936, The Payment of Bonus Act, 1965, The Equal Remuneration Act, 1976, The Payment of Gratuity Act, 1972 etc. Any non-compliance will be treated as breach of contract and Buyer may take suitable actions as per GeM Contract.

##### 2. Buyer Added Bid Specific Terms and Conditions-

###### 2.1 Scope of Supply:

Scope of supply (Bid price to include all cost components) : Supply Installation Testing Commissioning of Goods and Training of operators and providing Statutory Clearances required (if any)

###### 2.2 Forms of EMD and PBG:

Bidders can also submit the EMD with Account Payee Demand Draft in favour of

MAHANADI COALFIELDS LIMITED

payable at  
SAMBALPUR

Bidder has to upload scanned copy / proof of the DD along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date / Bid Opening date.

###### 2.3 Forms of EMD and PBG:

Bidders can also submit the EMD with Fixed Deposit Receipt made out or pledged in the name of A/C

. The bank should certify on it that the deposit can be withdrawn only on the demand or with the sanction of the pledger. For release of EMD, the FDR will be released in the favour of the bidder by the Buyer after making endorsement on the back of the FDR duly signed and stamped along with covering letter. Bidder has to upload scanned copy/ proof of the FDR along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date/ Bid Opening date

###### 2.4 Forms of EMD and PBG:

Bidders can also submit the EMD with Banker's Cheque in favour of

Bidder has to upload scanned copy / proof of the BC along with bid and has to ensure delivery of hardcopy to the Buyer within 5 days of Bid End date / Bid Opening date.

**2.5 Certificates:**

Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the Bid document, ATC and Corrigendum if any.

**2.6 Generic**

Bidders are advised to check applicable GST on their own before quoting. Buyer will not take any responsibility in this regards. GST reimbursement will be as per actuals or as per applicable rates (whichever is lower), subject to the maximum of quoted GST %.

**2.7 Generic**

Buyer Organization specific Integrity Pact shall have to be complied by all bidders. Bidders shall have to upload scanned copy of signed integrity pact as per Buyer organizations policy along with bid. [Click here to view the file](#)

**2.8 Buyer Added Bid Specific ATC:**

Buyer Added text based ATC clauses

**The Bidder is required to provide a complete package of equipment for the supply of Diesel Powered 40T Capacity hydraulic rough terrain Mobile Crane Design, Manufacture, Delivery, Erection, Commissioning and performance testing for coal mining projects of MCL. The bidder is required to specify/agree for the detailed product technical specifications as mentioned below.**

## **Technical Specifications**

### **40T RT Mobile Crane**

#### **Technical Specifications Preface - Instructions to Bidders**

##### **Introduction:**

These Technical Specifications identify the technical requirements of the Goods and Services which are the subject of this tender.

The Technical Specifications are presented in four parts as follows:

- A. Scope of Supply**
- B. Specific Project Requirements**
- C. General Requirements**
  - 1) Geography and Climatic Conditions**
  - 2) Goods (Equipment and Machinery)**
  - 3) Services**
  - 4) Standards**
  - 5) Supplier's Responsibility**
  - 6) Spare Parts Provisions**
  - 7) Availability Provisions**
  - 8) Deemed Breakdown**
  - 9) Composite Warranty / Guarantee**
  - 10) Quality Assurance**
- D. Equipment Specifications**

##### **Technical Response**

Bidders shall provide a Clause by Clause commentary demonstrating compliance with the Purchaser's Technical Specifications, together with full supporting technical literature and data sheets.

Wherever graphical representation of data (e.g. load, power, performance curve) is required, the grid axis and data shall be properly and clearly labeled for ready comprehension.

Additionally, Bidders shall provide the information specifically requested in the Attachment to the Technical Specifications.

Failure to demonstrate compliance in all respects with the requirements of the Technical Specifications may render the bid non-responsive.

Failure to provide any information requested in any part of this specification may deem the bid non-responsive.

## Site Visits

The Bidder prior to making any Bid calculation and as part of the preparation of its Bid, shall be deemed to have visited and inspected the Site(s), made all enquiries and collected all information documentary or otherwise, including climatic conditions, as considered necessary by the Bidder for the proper and accurate preparation of its bid.

A Bidder may visit the Site(s) by prior appointment with the purchaser. The number of Bidder's representatives permitted to make visits to the Site(s) shall be limited to a maximum of two. Bidders wishing to make appointments for Site Visits should do so in writing or by facsimile directly with the subsidiary company and concerned office as detailed in the following schedule. Copies of all such communications should be sent to:

**General Manager (MM) / HOD**

**Mahanadi Coalfields Limited**

**JV, Burla, Sambalpur**

**Odisha 768020**

### **Part: A:**

#### **Scope of Supply**

##### **A.1 Equipment Package**

The Supplier is required to bid as per the equipment package detailed in the Tender Document as per the Technical Specifications provided in Part D.

The supplier is required to supply the equipment along with accessories, consumables, training, installation, commissioning and testing at the coal mining project.

The package also includes Consumable Spares and Consumables for 12 months of warranty period from the date of commissioning of the equipment.

##### **A.2 Supplementary Items**

The equipment shall be provided with a comprehensive tool kit which shall include any special tools required for erection and commissioning of equipment. First fill of all oils, greases and lubricants needed for test, erection and commissioning of equipment.

##### **A.3 Information and Drawings**

At least one month before the scheduled installation date, the Supplier shall provide not less than:

(a) Suitably illustrated copies of Operating, Repair and Maintenance Manuals for each type/model of equipment and accessories, written in English language, substantially bound in book form; Three (3) copies to each project site; and

One (1) copies each along with soft copy to the concerned Project In-charge, Area Manager / Staff officer (Excv), General Manager (Excv.)/HOD, MCL Hqrs. & General Manager (MM)/HOD, MCL Hqrs.

(b) Suitably illustrated copies of detailed Spares Parts Manuals for each type/model of equipment and accessories, written in English language, substantially bound in book form; Three (3) copies to each project site; and

One (1) copies each along with soft copy to the Project In-charge, Area Manager / Staff officer (Excv), General Manager (Excv.)/HOD, MCL Hqrs. and General Manager (MM)/HOD, MCL Hqrs.

In addition to the Equipment drawings, where appropriate the Supplier shall supply detailed drawings (in the same number of copies) illustrating erection/assembly site(s), foundation and accommodation requirements for such items as drive motors, switch installations etc.

##### **A.4 Erection/Assembly, Commissioning and Performance Testing:**

The Supplier shall provide the Services of Specialist Technicians (refer Part - C.3) and required manpower (skilled/semi-skilled/unskilled) to undertake the installation/erection/assembly, commissioning and any performance testing of the plant, Equipment and accessories supplied.

The technicians shall remain at site following commissioning until all necessary personnel are fully conversant with the maintenance and operation of the equipment.

##### **A.5 Training:**

The supplier in consultation with the project in-charge / HOD [Excavation] of the respective site shall make available experienced personnel to conduct training of engineers, supervisors, technicians and operation personnel for specified period as mentioned in table given in 'Schedule of Requirement of Services' from the date of issue of acceptance certificate of the equipment. The training shall cover the following:

Training on simulator module by the bidder at their works/suitable location in India/suitable end user's location is preferable.

Equipment system, safety and risk assessment.

Equipment operation and maintenance.

Trouble shooting, localization of fault and their remedies covering:

Electrical and electronics

Mechanical

Hydraulic system

Lubrication system

Pneumatic system etc.

Comprehensive training manuals with clear illustration shall be provided to each participant in English language. The training courses shall be conducted in both English and Hindi language.

Details of purchaser's estimates of the minimum training programme required for total number of equipment is described in Sec-V.

Note: - The training shall be completed in batches within warranty period from the date of commissioning of first equipment in the respective project.

**Part: B:**

**Specific Site Requirements**

**B.1 Project Specific Requirements**

The equipment shall be suitable for use at the specific site projects under the conditions detailed below.

**B.1.1 Lajkura OCP, Samleshwari OCP, Lingaraj OCP, Ananta OCP, Bharatpur OCP.**

The Consignee Opencast Project/ (Projects) is/ (are) owned by the Mahanadi Coalfields Limited, a wholly owned subsidiary of Coal India Limited (the "Purchaser"). The mines of MCL are located in the different Districts of Odisha.

The PH value of all the above OCPs is nearby 6-8 (approx.).

**Lajkura OCP:** Lajkura OCP is the opencast project of IB Valley Area. The Lajkura OCP is located in IB Coalfield, P.O. Brajrajnagar, District: Jharsuguda, Odisha (768230)

**Power Supply:** The project receives power from 132 KV Jorabaga Sub station.

**Samleshwari OCP:** Samleshwari OCP is the opencast project of IB Valley Area. The Samleshwari OCP is located in IB Coalfield, P.O. Brajrajnagar, District: Jharsuguda, Odisha (768230)

**Power Supply:** The project receives power from 132 KV Jorabaga Sub station.

**Lingaraj OCP:** Lingaraj OCP is the opencast project of Lingaraj Area. The Lingaraj OCP is located in Talcher Coalfields, P.O. Deulbera, District Angul, Odisha. (759100)

**Power Supply:** The project receives power from 132 KV Nandira Substation.

**Ananta OCP:** Ananta OCP is the opencast project of Jagannath Area. The Ananta OCP is located in Talcher Coalfields, P.O. Balanda, District Angul, Odisha. (759116)

**Power Supply:** The project receives power from 132 KV Nandira Substation .

**Bharatpur OCP:** Bharatpur OCP is the opencast project of Bharatpur Area. The Bharatpur OCP is located in Talcher Coalfields, P.O. Balanda, District Angul, Odisha. (759116)

**Power Supply:** The project receives the power from 132 KV Nandira Substation .

**Part: C:**

**General Requirements**

**C.1 Geography and Climatic Conditions**

**Elevation**

The natural surface varies from 100 to 1000m above mean sea level.

**Climate**

The climate is sub-tropical to tropical, dusty, with a hot and humid atmosphere. Monsoon rains occur in the period from June to October.

· **Ambient Conditions**

- o Relative Humidity - Maximum 98%
- o Temperature - Minimum 0° C

Maximum 50° C

- o Rainfall-The mean annual rainfall is 1,000 mm, 90 to 95% of which may fall in rainy season from June to October.

- o Wind April to September -South to South Westerly
- o October to March - North Westerly
- o Speed - 8 km per hr average

Under foot Slushy and highly abrasive.

### C.2 Goods (Equipment and Machinery)

Detailed specifications of the Equipment to be supplied are given in Part D of this section. In general, all items shall be:

1. Designed and constructed to handle without overload and for the working hours stated, the maximum volumes/rates specified;
2. Designed to facilitate ready access, cleaning, inspection, maintenance and repair of component parts;
3. Designed to facilitate rapid changeover of consumable items.

The component parts of all items shall, wherever possible, be selected from the standard ranges of reputable manufacturers.

The Equipment and accessories shall be physically robust and where necessary capable of dismantling for transportation and ready re-assembly using simple tools. All Equipment items provided shall be designed to be compatible within the proposed overall Scope of Supply.

Electrical Equipment shall provide all protection devices, controls and interfaces for the Equipment to operate safely and efficiently.

All workmanship and materials shall be of first class quality in every respect.

All parts and surfaces, which are exposed to corrosive environment, shall be suitably protected to prevent any effects of corrosion or erosion.

### C.3 Services

The supplier shall be responsible for the erection and commissioning of the equipment at site. The supplier shall depute qualified and competent Engineer(s) and specialist technicians to supervise the entire assembly, erection and commissioning of equipment free of cost.

### C.4 Standards

The design, supply, erection, testing and commissioning of all Equipment under this Contract shall in all respects comply with the requirement of this specification and with the appropriate current Indian standards and codes, or relevant Standards issued by the Bureau of Indian Standard or International Standards Organization or any other equivalent international standards, which corresponds to specific ISO/Indian standards indicated in the technical specification. Such equivalent international standards are to be supported by documentary evidence certifying that offered standards are identical to the corresponding ISO/Indian standards.

The equipment shall comply with requirements of the statutory government authorities, including Director General of Mines Safety (DGMS) having jurisdiction over the equipment and its use.

The system of units for all measurements shall be the System of International Unites (S.I.)

### C.5 Suppliers Responsibility

The Purchaser requires that the Supplier shall accept responsibility for the provision of complete operable and compatible Equipment and systems within the Scope of Supply. This document identifies only the major items required for the installation and the Supplier shall ensure that the total supply includes all necessary Equipment for it to function effectively, safely and efficiently. Any additional items the Supplier considers necessary to ensure compliance with such a requirement shall be identified and included.

If the Supplier observes that this Specification document contains any anomalies, ambiguities, flaws, errors or omissions, the Supplier shall immediately bring these to the attention of the Purchaser but not later than 15 days prior to the due date of opening.

The Supplier shall be responsible for the testing and commissioning of the Equipment and ensure that it meets the requirements as specified. The commissioning and setting to work of the whole Equipment Supply package shall be carried out under the supervision of the Supplier in conjunction with the Purchaser's nominated personnel.

### C.6 Spare Parts Provisions

#### C.6.1.a. Availability of Spare Parts

All items and Equipment proposed shall be of current design and manufacture. The Supplier shall warrant that sufficient spares and servicing facilities will be available to maintain the Equipment in use throughout its life.

#### C.6.1.b Bought-out assemblies and sub-assemblies

The supplier is required to furnish the details of all Major bought-out items as indicated in the technical specification against "Information to be provided by the bidder".

#### C.6.2 Provision of Spare Parts

C.6.2.1 Within the Contract Price, the Purchaser shall agree to purchase all Operational, maintenance and standby/contingency spare parts, consumable items, wear materials, maintenance tools and special tools (hereinafter collectively referred to as "Spare Parts", unless the context requires otherwise) in accordance with the Supplier's recommendations for 12 (Twelve) months from the date of issue of the Commissioning Certificate. Similarly, within the Contract Price, the Purchaser shall also agree to purchase consumable items (hereinafter referred to as "Consumables") in accordance with the Supplier's recommendations for 12 (Twelve) months from the date of issue of the Commissioning Certificate. The schedule of supply of spares and consumables shall as indicated in Schedule of Requirement, Section-V. In addition, the Supplier shall provide Spare Parts and Consumables for Commissioning.

Consumables shall include items such as oils, lubricants and fluids also except fuel & tyres. This shall also include any item that might be required by the supplier to keep the equipment working and maintain its availability as per provision of contract.

The supplier shall submit schedules showing spare parts and consumables proposed to be supplied by them in 12 (twelve) months period from the date of commissioning of equipment in order to comply with the provisions herein contained.

**C.6.2.2** In the event that the spare parts and consumables, as recommended by the Supplier, in any way fall short of actual requirements during the period for which they are said to be adequate, the supplier shall provide such additional spare parts and consumables as are necessary at the final destination. Such additional spare parts and consumables shall be provided by the Supplier to the Purchaser free of all cost and shall be transported to Site by air freight internationally and by air, rail or fast road transport within India.

**C.6.2.3** In the event that the spare parts, Insurance items and consumables, as recommended by the Supplier, are in excess of actual requirements. The Purchaser may at its option.

a) Retain such excess spare parts and consumables as, in its discretion it may elect to do so

b) Require the Supplier to repossess or repatriate or otherwise dispose of such excess spare parts and consumables in exchange for payment to the Purchaser of the Contract Price of the spare parts and Consumables concerned.

The Purchaser shall notify the Supplier, in writing, of its requirements under this Clause within thirty (30) days of completion of the period referred to in Clause C.6.2.1 hereof.

**C.6.2.4** In the event that operation of the Plant is inhibited or frustrated as a direct result of lack of spare parts and consumables, pursuant to Clause C.6.2.2 hereof, then the period referred to in Clause C.6.2.1 hereof shall be extended by a period of not less than the period during which operation as aforesaid was inhibited or frustrated.

**C.6.2.5** The supplier shall not be liable for the supply of additional spare parts and consumables, nor to extend the period referred to in Clause C.6.2.1 hereof, if and to the extent that, additional Spare Parts and Consumables are required by reason of unforeseen accidents, negligence or misuse on the part of the Purchaser.

**C.6.2.6** The assessment of the Supplier of the spare parts requirements shall be based upon the expected working hours per year as defined in the TPS clause Performance Guarantee

### **C.6.3. Emergency Spare Parts**

**C.6.3.1** Emergency spare parts required by the Purchaser to repair breakdowns shall be dispatched to the site by the Supplier by the fastest, practicable means as directed from time to time by the Purchaser.

**C.6.3.2** For the purpose of Clause C.6.2.6, "Emergency Spare Parts" shall mean those spare parts or components required by the Purchaser to repair any item of Plant supplied pursuant to the Contract in the event of a breakdown not attributable to a failure covered by guarantee or a failure of the Supplier to provide adequate Spare Parts or Consumables.

**C.6.3.3** Payment in respect of the supply and delivery of such Emergency Spare Parts shall be made promptly, respectively, by the Purchaser, in a manner consistent with the terms of payment described in the contract.

### **C.6.3.4 Lifetime Spare Parts**

The Supplier undertakes and guarantees to produce and maintain stocks, to be available for purchase by the Purchaser under separate agreement, of all Spare Parts and Consumables as may be required for maintenance and repair of the Plant throughout its working life. In the event that the Supplier wishes to terminate production of such Spare Parts, the Supplier shall:

(a) give not less than six months' notice in writing of its intention to terminate production in order to permit the Purchaser reasonable time in which to procure needed requirements; and

(b) immediately following termination, provide to the Purchaser at no cost, manufacturing drawings, material specifications and all necessary permissions to facilitate manufacture of the Spare Parts elsewhere.

(c) any change in part number or superseded part number should be informed to the HOD of Excavation department / MM department of MCL hqrs. and the project site wherever the equipment is operating.

In any event, the Supplier shall not seek to terminate manufacture of spare parts for period of not less than (15) years from taking over or the life time of the equipment whichever is later.

### **C.6.4 Oils, Lubricants and Fluids**

The Supplier shall provide to the Purchaser a detailed schedule of all necessary oils, lubricants, fluids for the operation and maintenance of Equipment. The schedule shall indicate estimated annual consumption and specify the appropriate international standard number or the name and reference number of an equivalent available in India considered to be acceptable by the Supplier.

### **C.6.5 General**

**C.6.5.1** Nothing in this Clause C.6 shall relieve the Supplier of any Guarantee, Availability, Performance or other obligations or liabilities under this Contract.

### **C.7 Guaranteed Availability**

Minimum Annual Guaranteed Percentage Availability is for 12 months (annually) from the date of commissioning.

#### **C.7.1 Introduction**

**C.7.1.1** The Supplier shall guarantee that the Equipment supplied pursuant to this Contract shall be available for use by the Purchaser and shall meet the performance criteria specifications at the level and in accordance with the terms and conditions of the Availability Guarantee herein contained.

**C.7.1.2** Where Equipment supplied under the Contract fails to meet the criteria of the Availability Guarantee, the Supplier shall, at its own cost, provide suitably qualified and experienced personnel at Site to demonstrate to the Purchaser's satisfaction that the required level of availability can be achieved and maintained.

**C.7.1.3** The Supplier shall provide the Services of such personnel at Site within seven (7) days of notification by the Purchaser that the availability criteria have not been met in any one (1) month.

#### **C.7.2 Guarantee**

**C.7.2.1** The Supplier shall guarantee that the Equipment supplied pursuant to the Contract shall be available to the Purchaser at the level hereinafter defined to perform to criteria of not less than that defined in the Technical

Specifications incorporated in the Contract.

C.7.2.2 The Supplier shall guarantee that the Equipment shall be available to perform its duty to minimum criteria and to the minimum availability percentage level as defined in the individual Equipment specifications included in the Technical Specifications.

The method of assessment applied shall be as follows:

**Method of Assessment:**

The following calculation shall determine the availability of the Equipment:

$$\% \text{Availability} = \frac{(\text{Scheduled Available Time} - \text{Downtime}) \times 100}{\text{Scheduled Available Time}}$$

Scheduled Available Time shall equate to 24 hours daily

**Downtime:-**

Downtime shall mean all hours of work lost due to mechanical, electrical or other failure, including:

- a) routine servicing and maintenance in accordance with the manufacturer's published recommendations, including changing oils, oil filters and air filters; lubrication; changing identified consumable or wear parts.
- b) planned preventative maintenance programs; It shall not however include:
  - I. damage due to abusive use or incorrect operation methods by the purchaser;
  - II. accidents;
  - III. strikes or stoppage of work by the Purchaser's personnel;
  - IV. natural disaster;
  - V. lack of Spare Parts not attributable to a failure of the Supplier, its Agents or Representatives.

Downtime shall also specifically include all hours lost due to failures determined to be guarantee failures.

The Supplier shall provide a schedule of maintenance required to carry out (a) and (b) above for the 01 year (12 months) period of operation and shall state the number of hours required to carry out each maintenance task. The time stated shall, with the agreement of the Purchaser, form the basis of the assessment of the availability.

This schedule of tasks and time will be reviewed periodically by the Purchaser and the Supplier, jointly, to monitor the practicality of the schedule.

The Purchaser will assist the Supplier, without relieving the Supplier of any other obligations under the Contract, to achieve the guaranteed availability by:

1. Providing normal and proper maintenance, including preventative maintenance in accordance with the Supplier's standard/published recommendations, and making all necessary repairs using only spare parts provided by the Supplier in accordance with the requirements specified in part C6.
2. Providing co-operation to all Suppliers' authorized representatives, complying with all reasonable procedural suggestions to improve efficiency of machine operation or reduce downtime.
3. Where appropriate, providing and maintaining such conditions as:
  - Proper Electrical Supply
  - Terrain Area
  - Bench Preparation
  - Reasonable Floor Conditions
4. Providing all Suppliers' authorized representatives access at all reasonable times to the machine service and repair facilities.

Maintaining a logbook for each shift wherein the working hours, breakdown hours, maintenance hours, idle hours, etc. shall be recorded. This record will be available for examination and signature by the Supplier's representative.

**C.7.3 Effect and Duration of Guarantee**

C.7.3.1 This Guarantee shall become effective on the day on which the Equipment is commissioned at the Site. Commissioning shall be evidenced by the issue of the Purchaser's Acceptance Certificate.

C.7.3.2. This guarantee shall remain effective for 12 months warranty period from the date of commissioning irrespective of the hours operated by the Equipment during the period of the guarantee.

**C.7.3.3.1 Compensation for not achieving Guaranteed Availability**

In the event that Equipment fails to achieve the Availability herein provided in Performance Guarantee clause of TPS, measured over each twelve (12) month period, the Supplier shall be liable for and pay to the Purchaser, as liquidated damages, a sum equal to as indicated here under for each equipment against the PBG submitted by the bidder as per clause-2 of SCC

- a. 1% of the delivered landed price of the equipment including the price of spares and Consumables for every percentage reduction from the Guaranteed Availability for the first 5%.
- b. 10% of the delivered landed price of the equipment including the price of spares and Consumables for reduction beyond 5% from the Guaranteed Availability.

**C.8 Deemed Breakdown**

When the supplier is unable to supply the replacement of a failed part during the contract period, and if the machine is commissioned by using the spares from the stock of the project, the period after 21 days till the supplier replaces the part shall be treated as 'deemed breakdown' (the credit for keeping machine available shall not be given to the supplier.)

The supplier shall not in any way be allowed to take out spare parts from other equipment, which are under breakdown and covered within the scope of this contract. However, MCL, in the interest of work, reserves the right to advise the supplier to commission the breakdown equipment covered under this contract by taking out spare parts from other breakdown equipment. Nevertheless, during this period also, the equipment shall be treated as 'deemed breakdown' till the supplier replaces the spare parts.

#### **C.9 Composite-warranty/guarantee**

The supplier shall warrant that the equipment supplied under this contract is:

- a) In accordance with the contract specifications.
- b) The equipment shall have no defects arising out of design, material or workmanship & the complete equipment shall be warranted for 12 months from the date of commissioning. Any defect arising observed on this account will have to be attended immediately.
- c) The supplier must ensure that there is no major breakdown due to manufacturing / design defects during the warranty period. In case such breakdown occurs, the purchaser reserves the right to extend the warranty period suitably.

The warranty shall cover for total equipment so that comprehensive responsibility lies only with the equipment supplier although components may be supplied by different suppliers to the bidder.

#### **C.10 Quality Assurance**

**C.10.1** The Supplier should furnish in detail its quality assurance plan for various stages of manufacture. The Quality Assurance plan shall comply with an internationally recognized quality assurance standard such as ISO 9000 or its equivalent.

**C.10.2** The Supplier shall provide facilities to Purchaser or their authorized representatives for progress inspection during manufacture at his works and furnish all test data available in this regard for quality control, both for bought-out items and his own manufactured items.

**C.10.3** The Purchaser or his agent, when so required by him, shall also be provided with samples of "bought-out" materials for the purposes of undertaking independent tests, which independent tests shall be at the expense of the Purchaser.

### **PART D:- EQUIPMENT SPECIFICATIONS**

#### **EQUIPMENT SPECIFICATION OF 40 TONNE CAPACITY ROUGH TERRAIN MOBILE CRANE**

##### **1. Scope of specification**

This specification is intended to cover the technical requirements for the design, manufacture, testing, delivery, on-site erection and commissioning of a diesel powered, 40 Tonne capacity hydraulic rough terrain Mobile Crane.

##### **2. References**

The following International Standards are referred to in, and form part of, the Specification:

ISO 4305: Mobile cranes - Determination of stability

ISO 7363: Cranes and lifting appliances - Technical characteristics and acceptance documents

ISO 7752-1: Lifting appliances - Controls - Layout and characteristics (Part1) General principles

ISO 7752-2: Lifting appliances- Controls- Layout & characteristics (Part-2) Basic arrangement and requirements for Mobile Cranes

ISO 16625: Cranes - Selection of wire ropes, drums and sheaves

IS 4573-2020: (with latest applicable revisions): / Specification for power Drive Mobile Cranes/ plus Any other ISO specifications, as applicable

##### **3. Design Criteria**

The Crane shall be designed for heavy duty application in the extreme mining conditions at Opencast Mines and be capable of operating for protracted periods on a system of 3 shifts each of 8 hours duration per day throughout the year.

The Crane should have a lifting capacity, with outriggers, of not less than 40 tonne at a radius of 3 m, 360 degree Slew, and a basic boom length of not less than 9 m. The fully extended boom length should be not less than 30 m.

The lifting capacity shall be in accordance with American Standard CS 90-58 and should not exceed 85% of the tipping load in accordance with ISO 4305.

The Crane shall have a gradeability of not less than 40% and should be capable of 360-degree rotation with rated loads.

The crane should be capable of lowering the rated loads a minimum of 4m below ground level and should have adequate pick up and carry capacity of not less than 8 MT at 6m radius over the front.

Ground clearance shall be sufficient for smooth operation both in mines and workshop premises.

##### **4. Technical requirements**

###### **4.1 Engine**

The Crane shall be powered by a direct injection 4-stroke, diesel Engine of suitable HP. The Engine shall be provided with 12V/24V electric starting, dry type 2-stage air-cleaner with automatic dust evacuator and dust level indicator and 2-stage fuel filter with water separator.

The Engine shall have a water jacket cooling system, thermostatically controlled, using an engine driven wa

ter pump, with the cooling water re-circulated through a heavy-duty Radiator. The system shall be capable of providing sufficient cooling to allow the crane to continuously operate at the full rated output at the maximum ambient temperature. The moving parts of the Engine shall be lubricated by an Engine driven oil pump, with full flow oil filtration and cooling. The Engine shall be equipped with an over-speed governor or a suitable system for governing the speed.

The engine is to be environmentally certified for minimum CEV Stage IV and complying applicable notifications of Govt. of India at the time of tendering/ supply.

The Engine electronic control module should be capable to monitor operator's and sensor inputs for optimum engine performance and reduced emission level.

All engine vital parameter data shall be integrated with On Board Display (OBD) system of operator's cabin.

*Note: - The Engine shall meet the latest emission norms as recommended by CMVR or any other regulation issued by central/state (Odisha) Government. Self-certificate of the Engine Manufacturer to be submitted at the time of pre-dispatch inspection/ supply.*

#### 4.2 Transmission

The Crane shall be provided with an off-highway power shift hydraulic/ hydrodynamic full power shift torque converter- Transmission having a sufficient number of speeds to enable it to travel in rugged mining conditions.

Suitable protection of the Transmission pan from external damage should be provided. The pan guard should be provided which should be designed to minimize accumulation of dirt and debris.

#### 4.3 Differential & Final Drives:

4X4 wheel drive steer with differential and planetary reduction hubs shall be provided. It will be centrally pivoted, lateral oscillating with hydraulically locking device.

#### 4.4 Steering

Full hydraulic/ hydrostatic power steering shall be provided, which should have the capability of normalizing steering control when the machine is slewed to the rear of the chassis.

#### 4.5 Hoses

All hoses shall be grouped as far as possible and suitably clipped to reduce damage from scuffing. Fire/Heat resistant hoses are to be provided in hot zone areas.

#### 4.6 Tyres

Suitable Tubeless, rock duty, cut-resistant tyres shall be provided to meet the requirement of operating parameters given in the design criteria.

#### 4.7 Brakes

Suitable reliable fail safe service and parking brakes shall be provided.

##### 4.7.1 Service Brakes

Service Brake should be suitable disc brake for both Front and Rear. The service brakes shall be air and/or oil actuated multiple disc type and should operate automatically in the event of low air/oil pressure.

They should preferably be fully enclosed to prevent entry of dust and water and designed for low maintenance.

##### 4.7.2 Parking Brakes

The parking brakes should be of caliper/disc type Brakes.

#### 4.8 Frame

The frame should be rugged durable construction of high strength steel and free from any stress concentration. The design must take care of all forces encountered during the operation of the Crane.

#### 4.9 Outriggers

An adequate number of hydraulically operated outriggers with horizontal beams and vertical jacks, fitted with integral check- valves/ holding valves on each extension cylinder. The operation of outriggers/ jacks shall be controlled from the operator's cab and suitable Level Indicator should be provided inside the operator's Cab, within the easy reach of the operator.

#### 4.10 Boom

The boom shall be provided with multi-section, full power hydraulic/ power-pinned telescoping sections. Basic length should be not less than 9 meter and extending up to not less than 30 meter.

Dual boom hoist cylinder shall be provided for safe boom elevation to entire range

#### **4.11 Lifting Block**

A hook block suitable for the maximum designed lifting capacity of the Crane shall be provided .

#### **4.12 Hoist System**

A suitable single/ multiple speed hoist system shall be provided with a counter-balance valve for controlled load lowering. Limit switches for over-hoist, indicator for over-lowering and fail-safe braking system of adequate capacity, shall be provided.

#### **4.13 Safe Load Indicator**

The crane shall be fitted with an electronic safe load indicator to indicate the hook load and provide audio-visual warning for overload and over hoist.

Digital indication of net/ gross load, maximum permissible load, boom inclination, boom length, radius, shall also be provided.

#### **4.14 Derricking and Slewing**

High-speed derricking and slewing motions with sensitive fail-safe controls / brakes shall be provided.

Machine should be capable for Full 360 degree continuous rotations.

#### **4.15 Drums and Sheaves**

The drums and sheaves used for hoisting shall be in accordance with ISO 16625

#### **4.16 Fuel Tank**

The fuel tank shall be of sufficient capacity and be provided with a level indicator and a lockable hinged filler cap. The construction of the tank should be such that it provided for easy accumulation and drainage of water with minimum loss of fuel and arrangement of man hole for cleaning the tank from inside.

#### **4.17 Operator's Cab**

A fully insulated, sound suppressed, air-conditioned operator's cab with tinted safety glass having adequate window area to provide full vision in all directions. A rear-view mirror, windshield wipers and washers, a fully adjustable operator's seat, floor mat and a cooling fan shall be provided.

All operating controls, gauges (with colour indication for safe and unsafe working), monitoring and working signals shall be conveniently located within easy reach of the operator and comply with ISO 7752-1 and ISO 7752-2.

Steps and handrails shall be provided for access to the operator's cab.

FOPS shall be provided as per IS4573:2020 or equivalent ISO as per requirement of DGMS.

#### **4.18 Gauges and Indicators**

The following shall be provided:

- a) Water temperature
- b) Engine oil pressure
- c) Transmission oil / Converter oil pressure (if applicable)
- d) Transmission oil / Converter oil temperature
- e) Fuel Capacity
- f) Engine tachometer
- g) Engine hour-meter
- h) Air pressure (if applicable)

In case any of these Gauges/Indicators are not provided, then it must be adequately explained how job of the same would be accomplished.

#### **4.19 Warning Alarms**

The following audio/visual warning alarms shall be provided:

- a) Low Engine oil pressure
- b) High Coolant Temperature
- c) Reversing. It must be audio & visual both. Audio-visual alarm while reversing the equipment should have a flasher/blinker at the rear end of the Crane.
- d) High torque converter oil temperature
- e) Low air pressure (if applicable)

#### **4.20 Electrical Equipment**

The Crane shall be provided with the following:

- a) 12V/24VDC electrical system with suitably rated alternator of reputable Make.
- b) Electric start
- c) Reputable make high-capacity batteries
- d) Battery isolation switch

e) Electric wires are to be passed through flexible conduit to avoid damage of insulation of the wire due to friction that may cause short circuit. All electrical circuits shall be protected by adequately rated fuses/circuit breakers which shall be easily accessible for maintenance.

#### **4.21 Lighting**

Adequate lighting shall be provided for safe nightshift operation. The lighting system should include the following:

- a) Front and Rear lights
- b) Stop and tail lights
- c) Instrument panel and cab light
- d) Fog Lamps
- e) Socket with switch for pendant light with minimum 5 Meter cable
- f) Front and rear turn indicators

#### **4.22 Guards and Shields**

Adequate guards and shields, shall be provided throughout the Crane.

#### **4.23 Fire Extinguishers**

An adequate number (not less than 02 nos.) fire extinguisher shall be provided on the Crane, suitably mounted in heavy-duty bracket for ease of removal. The extinguisher shall be dry powder (cartridge type) with a minimum capacity of 5 kg and shall comply with Indian Standard IS: 15683 with latest amendment.

Bidder shall submit a Certificate as an undertaking that, a valid Test Certificate (valid as on the date of commissioning of the equipment at site) shall be submitted at the time of supply of equipment along with other documents, for fire extinguisher including Materials and Chemicals to be used in fire extinguisher from any Government or Government approved Laboratory in compliance with relevant Indian Standards as per DGMS Circular No. DGMS(Approval)CircularNo.02 dtd. 08thJuly2013.

#### **4.24 Automatic Fire Detection and Suppression System**

A suitable automatic fire detection and suppression system of reputed manufacturer (indigenous or imported), shall be provided on the equipment complying Clause-5 of DGMS (Tech) Circular No. 06 of 2020 dated 27.02.2020.

- Automatic fire detection and suppression system suitable for fire class A, B & C shall be provided in the fire prone zone of the crane.
- Bidder requires submitting a schematic drawing indicating Plan of the system with relative position of items to be protected from fire.
- Fire detection and suppression of fire may be either total gas flooding or dry chemical powder base spray through nozzle strategically through an actuation cartridge, located to the targets, or combination of the two.
- Fire suppression agent used in neighborhood of electrical appliances shall be clean and shall not damage electrical / electronic component.
- Fire suppression system shall be non-hazardous & safe for human and environment friendly. It should have quick cleanup and environmental sustainability.
- The sensor shall send the signal to the control unit integrated with a LED and/or alarm indicator to show the status of the detector.
- The system shall operate to supply adequate quantity of fire suppressing agent for effective fire fighting and to avoid re-ignition and suitably designed to extinguish the fire as per class of fire (A, B & C) of that location. The System shall operate only in active fire area.
- The system shall be actuated automatically by detection of fire and control unit to be installed within the Operator's cabin for automatic system operation.
- The system shall also have provision of actuating manually.
- The system shall provide facility for self-checking /testing/inspection without operating.
- The system should be capable for efficient operation in the extreme mining conditions with dust, dirt, water & vibrations.

The high pressure storage vessels and hoses, if used with fire-fighting and fire suppression systems, shall conform to the requirements stipulated in the relevant Indian standards.

Bidder shall submit a Certificate as an undertaking that, a valid Test Certificate (valid as on the date of commissioning of the equipment at site) shall be submitted at the time of supply of equipment along with other documents, for AFDSS including materials and chemicals used in fire suppression system from any Government or Government approved Laboratory in compliance with relevant Indian Standards as per DGMS (Approval) Circular No. 02 dated 08th July 2013.

#### **4.25 Auxiliary equipment and other requirement**

The following shall also be provided on/ along with each Crane

- i. Front and rear tow hooks and two lifting loops

ii. Horn.

iii. General Tool kit for repair and maintenance with list and quantity.

iv. Tyre inflation kit.

v. Rear View Mirror

vi. Operator seat belt

vii. Any other item specifically not mentioned above, if considered necessary & essential for satisfactory & safe working of Crane, should be included in the offer.

**5. Special Guarantee - Warranty Clause**

The following guarantee will apply for the different components: -

a) Complete Engine system- 36 months or 6000 hours from the date of commissioning (whichever is earlier)

b) Transmission Assy. -36 months or 6000hrs. from the date commissioning (whichever is earlier).

c) Frame, Chassis, Differential & Final Drive- -48 months or 8000 hrs. from the date of commissioning (whichever is earlier)

d) Hydraulic Pumps & Control valves -36 months or 6000 hours from the date of commissioning (whichever is earlier)

In case of any guarantee failure intimated reasonably in time to the bidder, the replacement or repair job (as per guarantee settlement) must be completed within 21 days at site by the bidder at no cost to the purchaser.

**6. Performance Guarantee**

In accordance with the provisions of clause C 6.2.6 of the technical specifications the expected working hours per annum are 1500 hours. The expected working hours per annum as indicated are only approximate hours and may vary +/- 500 hours.

The supplier shall guarantee that the availability of the equipment shall not be less than 85% (Eighty- Five Percent) for a period of 12 months from the date of commissioning.

**7. Information to be Provided by the Supplier**

The Supplier shall furnish the following information. All technical information shall be in SI units

**7.1 General**

a) Number of offered model commissioned during the last five years from the date of opening of tender.

The information shall be given in the following format.

Company-Mine Name-Mine Location-Mine Type-No of machine-Model-Comm. Date

b) Details of nearest Depot/Warehouse and Service Facility available for the present offer, to be furnished in the following format.

Major Depot/Warehouse---Service Facility ---Location, Contact Nos, Inventory Value-----Location, Type of Facility, No of Engineers.

c) Details of tools to be provided with the equipment.

d) Details of erection programmes for the bid.

e) Details of maintenance schedule

**7.2 Technical Details**

a) Latest engine performance curves showing net power, net torque and specific fuel consumption of the installed engine,

b) Maximum travel speed

c) Turning diameter

d) Detailed technical descriptions of the Crane.

e) Layout drawings and detailed descriptions of all hydraulic systems and components

f) Details of Comprehensive commercial literature specifications.

g) Detailed list of instrumentation, monitoring and alarm systems.

h) Details of major bought-out assemblies and sub-assemblies including manufacturer, type, etc.

i) Lifting capacity range diagrams and tables.

j) Details of safe load indicator.

k) Details of fire detection and suppression system

**7.3 Dimensions, Weights and Performance Details ( All in SI unit wherever applicable)**

**7.3.1 Dimensions (in Retracted condition)**

a) Maximum overall length

- b) Maximum overall width**
- c) Maximum height**
- d) Tail radius**
- e) Wheel base**
- f) Ground clearance**

#### **7.3.2 Weights**

- a) Operating weight - front wheels**
- b) Operating weight - rear wheels**
- c) Total operating weight**

#### **7.3.3 Engine**

- a) Manufacturer and model**
- b) Number of cylinders**
- c) Bore**
- d) Stroke**
- e) Displacement**
- f) ISO net power at.....r/min**
- g) Maximum torque**

#### **7.3.4 Final Drive**

- a) Type and make**
- b) Differential ratio**
- c) Planetary ratio**

#### **7.3.5 Steering**

- a) Type and make**
- b) Turning circle:**
  - (i) All wheel steer**
  - (ii) Front wheel steer**
- c) Clearance circle:**
  - (i) All wheel steer**
  - (ii) Front wheel steer**

#### **7.3.6 Brakes**

##### **7.3.6.1 Service brakes**

###### **7.3.6.1.1 Front**

- a) Type**
- b) Actuating system**

###### **7.3.6.1 .2 Rear**

- a) Type**
- b) Actuating system**

###### **7.3.6.2 Parking brake**

- a) Type**
- b) Actuating system**

#### **7.3.7 Tyres**

- a) Make**
- b) Size and type**
- c) Tread**
- d) Ply rating**

e) Rim size

#### **7.3.8 Hydraulic System**

- a) Number, flow rates, operating pressures and Make & type of pumps
- b) Number, piston diameters, stroke lengths and make & model of cylinders
- c) Relief valve operating pressures

#### **7.3.9 Electrical System**

- a) Starter make and model
- b) Starter control make and model
- c) Alternator make and model
- d) Batteries - numbers and rating
- e) Lighting details

#### **7.3.10 Transmission**

- a) Make and model
- b) Type
- c) Number of gear speeds - forward and reverse
- d) Travel speeds - forward and reverse

#### **7.3.11 Derricking System**

- a) Derricking System- Working details
- b) Min. to max. radius in secs.

#### **7.3.12 Slew System**

- a) Slew System - type & Working details
- b) Slew Braking System
- c) Slewing Speed (RPM)

#### **7.3.13 Hoist System**

- a) Hoist System - type, Number of Speeds & Working details
- b) Brake System - type & Working details
- c) Speed Ranges of Hoist System

#### **7.3.14 Outriggers**

- a) No of Outriggers
- b) Horizontal stroke
- c) Vertical stroke

#### **7.3.15 Boom**

- a) Fully retracted length
- c) Intermediate position length
- d) Fully extended length

#### **7.3.16 Boom Telescoping**

- a) Speed

#### **7.3.17 With Derrick down**

- a) Overall length
- b) Overall height
- c) Overall width

#### **7.3.18 Dimensions**

- a) Tail radius (m)

- b) Wheel base (m)
- c) Ground clearance (mm)
- d) Angle of approach

#### 7.3.19 Rope

- a) Make
- b) Dimension
- c) Specification

#### 7.3.20 Lifting capacity

- a) Max Lifting capacity (for 360 degree slew) at 3 m radius
  - (i) at clear out-reach 0 m
  - (ii) at clear outreach 1 m
  - (iii) at clear outreach 1.5 m
- b) Max Lifting capacity (for 360 degree slew) at 4 m radius

- c) On wheels (Stationary) :
  - at 3 m radius
  - at 4 m radius
  - at 5 m radius

- d) On wheels ( Stationary) :
  - with clear outreach 0 m
  - with clear outreach 1 m
  - with clear outreach 1.5 m

- e) Pick and carry capacity (at 4 km/h) :
  - at 3 m radius
  - at 4 m radius
  - at 5 m radius

- f) Lift of rated load at minimum radius in meters:
  - (i) Below ground level
  - (ii) Above ground level

- g) Gradient unladen

- h) Max. travel speed

#### 7.3.21 Operating speeds

- a) Hoist
- b) Slewing RPM
- c) Derricking
- d) Travelling

*Note: "If any bidder will quote in this BID, it shall be assumed that the bidder does agree with all the terms and conditions and technical parameters sheets as uploaded in the BID".*

&

*"The BID shall be governed by the terms and conditions of GEM and as per the clauses of CIL Purchase Manual 2 020".*

**Government of India**  
**Ministry of Labour & Employment**  
**Directorate General of Mines Safety**

No. DGMS (Tech) Circular No.06 of 2020 Dhanbad dated 27.02.2020

To

The Owner/Agent/Manager of Coal and Metalliferous Mines & OEM

Subject: Minimum Design requirements for various Safety Features to be incorporated for use in Heavy Earth Moving Machinery (HEMM) & Heavy/Light vehicles in Open Cast Mines.

1. With increasing dependence on opencast mines for all the production demands in the Coal and Metalliferous sector, there has been a steep rise in the population of HEMMs and heavy/light vehicles in mines, distributed between both departmental and contractual components. The recent statistics on alarming rise in cases of incidences/accidents in opencast mines singularly point to the basic cause as intricately connected to such deployment in mines. Though, several statutory provisions have already been made under the Coal Mines Regulations, 2017 and the Metalliferous Mines Regulations, 1961, and various statutory permissions issued thereunder apart from DGMS Circulars having been issued from time to time, the issue of their safe operations with particular reference to provisioning and satisfactory operation of various safety features, continues to be a major cause of concern to all.
2. Inspections by officers of this Directorate in the recent past have revealed highly unacceptable levels of compliance in mines, with mere provisioning of such safety features gaining the upper hand rather than effective and sustained functionality. Even on provisioning, it has been observed that there are wide variations on design aspects, with availability of multiple but unverified types/models, mostly without adherence to any acceptable Indian/International standards wherever are available already. In nut shell, the very purpose of provisioning and effective functioning of such safety features with HEMMs deployed in opencast mines, appears to be largely defeated as could be appreciated by the alarming rising trends of connected incidences/accidents.
3. Therefore, with a view to harmonizing the entire gamut of safety features to be provided with any HEMM and heavy/light vehicles for deployment in an opencast mine, in respect of the minimum required design/functionality, a one day technical workshop was organized at DGMS(HQ) on the occasion of the 119<sup>th</sup> Foundation Day Celebrations on the 7<sup>th</sup> of January, 2020 in which, a total of 260 senior level representatives from coal mines, metalliferous mines, manufacturers and educational/other institutions respectively, participated, including officers from this Directorate.
4. Arising out of wide, extensive and successful deliberations, a broad consensus was arrived at amongst all stake holders into maintaining the minimum design requirements of such safety features as per the Guidelines enclosed with this Circular. It may please be borne in mind that the enclosed guidelines are only the minimum recommended levels and may be altered from time to time as per evolving needs and that there is no bar on adherence to any higher/superior levels of design and functionality in the interest of safety. It also further be appreciated that adherence to this circular will go a long way in drastically minimizing hazards due to operation of both HEMM and light/heavy vehicles in opencast mines, thus commensurately enhancing safety in mines.
5. Accordingly, the owner/agent/manager of every opencast mine in operation and the Original Equipment Manufacturers (OEM) are requested to ensure compliance with this circulars

(R. Subramanian)

Director General of Mines Safety (Off.)

Encl: As above.

Enclosure to DGMS (Tech) Circular No.06 of 2020

**GUIDELINES IN RESPECT OF PROVISIONING OF SAFETY FEATURES OF HEMMs &  
HEAVY/LIGHT VEHICLES FOR SAFE DEPLOYMENT IN OPENCAST MINES.**

\*\*\*\*\*

1 .0. Rear Vision Camera:

A system that consists of a Monitor (component that provides visual image of Blind Area), Camera (component that transmits the images detected by it to the monitor) and other components capable of detecting objects including people within the Blind area unambiguously with an uninterrupted sequence of signal or information appropriate to detection Zone / Field of View (Blind Area).

Applicability: All Heavy Earth Moving Machinery

1.1. The Rear vision camera shall meet the following minimum requirements and standards:

- 1.1.1. The system shall boot automatically along with starting of Engine / Power source of Machine, shall perform an initial system check and shall give readiness indication. The system

shall shutdown along with shutting down of Engine / Power source. The system shall have system readiness, standby and system malfunction indication to indicate its status.

1.1.2. The system shall remain in stand-by mode (operation mode whereby the system is active, but no information is transmitted by the camera or monitor) and shall wake up automatically upon selection/engagement of appropriate control(s) (such as reverse gear, etc) by Machine Operator for negotiating Blind Area (Killing Zone) to provide uninterrupted vision of Blind Area(s) to the operator. The system shall return to Stand-by mode upon release the appropriate controls by the operator.

1.1.3. The monitor shall be so positioned that it can easily be seen by the Operator sitting in his/her seat in either Day light or Darkness without strain. Appropriate shielding shall be used to reduce the effect of direct sunlight onto the Monitor.

1.1.4. The system shall be provided with auto mode tail light with adequate illumination for better visibility during darkness. The system shall be capable of operating in dark and shall automatically switch to infrared / any other suitable technique /mode when the brightness of field of view is too low or in case of failure of the tail light.

1.1.5. Components of the system shall in no way restrict any function or operation of the machine. The components shall be so designed and mounted to the machine in such a way to limit exposure to, or amplification of, dynamic loads, temperature, shock or vibration and dust that could prematurely damage the device and to deter unauthorized disablement or their removal. Components of system shall be adequately protected from external damage.

1.1.6. The system shall have field of vision in accordance with ISO 16001 (Earth-moving machinery-Object detection systems and visibility aids-Performance requirements and tests) (or equivalent Indian standard when formed), shall satisfy test requirements of ISO 16001 and shall have Ingress Protection of IP 69K in accordance with IEC 60529 (Degrees of Protection Provided by Enclosures (IP Code)) and test Certificates to these effects shall be obtained from any Government / NABL Accredited institutions/Test Houses having adequate test facilities.

1.1.7. The System may be provided with provisions for recording the images captured with time stamp to enable easy retrieval and analysis of the immediate past 24 deployment operating hours.

## 2.0. Warning System for Operator Fatigue:

A system capable of analyzing various symptoms associated with Operator fatigue to detect drowsiness of Operator from regular driving / operating behaviour and sound loud audio and visual warnings immediately upon detection of drowsiness to alert the Operator and others in the vicinity by incorporating one or more technique(s).

**Applicability:** All Heavy Earth Moving Machinery

2.1. The Warning System for Operator Fatigue shall meet the following minimum requirements and standards:

2.1.1. The system shall boot automatically along with starting of Engine / Power source of Machine, shall perform an initial system check and shall give readiness indication. The system shall shutdown along with shutting down of Engine / Power source. The system shall be provided with system "ON", initialization, tracking and system malfunction indication to indicate its status.

2.2. The system shall detect state of drowsiness of Operator from regular driving behavior and shall provide loud verbal warnings to him / her and simultaneously flash externally mounted warning light easily visible to others for alerting the Operator and others in the vicinity to pay attention. It shall also be capable of detecting the drowsiness even when spectacle is worn by the Operator.

2.2.3. The system shall have following four stages:

(a) **Initialization** - Every time the system is started, it needs to be set up and optimized for current user (Operator) and conditions. The initialization process shall be a quick one,

(b) **Tracking** - continuous monitoring of the Operator within a dynamically specified tracking area in real-time,

(c) **Drowsiness Detection** and

(d) **Warning** - Once it has been determined that the driver/operator appears to be in an abnormal driving state, the system shall alert the driver of potential dangers that can arise. Combination of audio and visual alerts is used to attract the Operator's attention and raise their alertness level. Alerting shall be implemented in such a way as not to cause the opposite effect of intended and startle the driver / operator into causing an accident.

2.2.4. Components of the system shall in no way obstruct Operator's line of sight hindering his / her visibility and restrict any function or operation of the machine. The components shall be so designed and mounted to the machine in such a way to limit exposure to, or amplification of, dynamic loads, temperature, shock or vibration and dust that could prematurely damage the device and to deter unauthorized disablement or their removal.

2.2.5. The System may be provided with provisions for recording the warning generated with time stamp to enable easy retrieval and analysis of the immediate past 96 deployment operating hours.

2.2.6. For determining type, duration and sound level of audio warning and intensity of external Visual warning, DGMS Circulars, Indian and International standards issued in this regard may be referred to.

## 3.0. Auto Dipping System:

**Applicability:** Dumpers /Tippers / Light and Heavy Vehicles plying in the Mine.

A System comprising sensor(s) and a Control Unit capable of automatically switching high beam lamp to low beam as soon as it senses a vehicle approaching from the opposite direction at a distance of about 150 meters and switches it back to high beam when the vehicles pass each other to avoid glare and blinding of Operator so as to relieve the operator from frequent switching between high and low beam of head light.

3.1. The Auto Dipping System shall meet the following minimum requirements and standards:

3.1.1. The system shall boot automatically along with switching "ON" of head light of the vehicle/machine, shall perform an initial system check and shall give readiness indication. The system shall shutdown along with switching "OFF" of the head light. The system shall be provided with system "ON" and system malfunction indication to indicate its status.

3.1.2. System sensor shall be capable of detecting high beam light of incoming vehicle approaching from opposite direction at a distance of about 150 meters or at much closer proximity in case of vehicles approaching from branch roads and send signal to Control unit. Suitable filters shall be incorporated in the system to avoid nuisance/false reaction to Pole lights, spot lights and haul road general lightings. The sensor shall send appropriate signal immediately to control unit upon cessation of high beam light falling on it.

3.1.3. System control unit shall automatically activate Low beam or high beam upon receipt of appropriate signal from the sensor without the intervention of the Operator.

3.1.4. Components of the system shall in no way obstruct Operator's line of sight hindering his / her visibility. The system shall be equipped with Operator Override to comply with authorized override to meet eventualities.

3.1.5. Test Certificates to these effects shall be obtained from any Government / NABL Accredited institutions/Test Houses having adequate test facilities.

## 4.0. Mechanical Device to avoid Head to Tail Collision of Dumpers:

A mechanical system / device(s) adequately designed to protect operator of Dumper in the event of Head to Tail collision even in mixed capacity dumpers operating environment. The device(s) / system shall be of standalone mechanical structure or combination of mechanical structures wherein maximum impact energy generated by collision is absorbed by the device / system or diverted away from the operator to protect the operator when the operator is adequately constrained in his / her seat by seat belt.,

**Applicability:** Dumpers

4.1. The Mechanical Device to avoid Head to Tail Collision of Dumpers shall meet the following minimum requirements and standards:

The system / device(s) shall be of standalone Mechanical structure or combination of Mechanical structures, viz, combination of Operator cabin protective structure and protection arrangement at Tail end of the Dumper or bumper extension or any other suitable arrangements. Hydraulic system or any other suitable system may be included as add-on. As far as possible, in new Dumpers, the Device(s) / System shall be part of original design of the Dumpers to avoid retro fitting difficulties.

4.1.1. The system / device(s) shall protect the Dumper Operator during head to tail collision when the operator is constrained by operator seat belt even in mixed capacity dumper operating environment.

4.1.2. Components of the system / device(s) shall not affect visibility of Operator, stability of the Dumper and intended use for which the Dumper is designed.

4.1.3. The system / device(s) shall absorb most of impact energy generated by collision or divert most of the impact energy away from the Operator so as to ensure protection from direct hit or crushing of Operator.

4.1.4. Components of the system / device(s) shall not hinder with loading operation or foul with components of Loader / Shovel / Excavators.

#### 5. 0. Automatic Fire Detection and Suppression System (AFDSS) for HEMM:

An automatic system to detect and suppress fire in hot zones of machine and is capable of sensing, activating and delivering the fire suppression agent(s) without human intervention in the event of fire with additional provision for manual actuation and appropriate indication and warning to Operator by incorporating one or more kinds of heat sensing system and suitable fire suppressant agents.

Applicability: All Heavy Earth Moving Machinery

5.1. The Automatic Fire Detection and Suppression System (AFDSS) shall meet the following minimum requirements and standards:

5.1.1. The system shall meet requirements of DGMS (Approval) Circular No. 2 dated 08.07.2013. In addition, it shall meet following additional requirements:

5.1.2. The system shall have system healthy and system malfunction indication to indicate its status. The system shall be provided with Manual actuation control(s) inside Operator cabin and outside of operator cabin preferably away from hot zones. Components of the system shall in no way obstruct Operator's line of sight hindering his / her visibility.

5.1.3. The system shall cover all fire susceptible areas including engine, diesel tank, battery box, transmission, exhaust pipe and other hot zones having potential to cause fire.

5.1.4. The system shall be fully automatic, robust and shall not be damaged / made inoperative during routine maintenance activities. Components of system, in particular, sensing elements, shall be adequately protected from external damage. Nuisance heat sensing shall be avoided by the system.

5.1.5. The system, as far as practical, shall be designed in such a way to supply adequate quantity of fire suppressing agent to the zone where the fire is detected and to be suppressed on need basis for effective fire fighting and to avoid re-ignition of fire instead of blind discharge through all discharge nozzles.

#### 6. 0. Dump Body raised position indicator with warning:

A system or a device capable of sensing non-return of dump body to completely retracted & transportation mode, restricting transmission of Dumpers / Tipper trucks, when engaged, up to first gear while the dump body is not completely lowered and simultaneously triggering an audible and/or visual warning till such time the dump body is completely lowered.

Applicability: Dumpers / Tipper trucks

6.1. The Dump Body raised position indicator with warning shall meet the following minimum requirements and standards:

6.1.1. The system shall trigger visual warning sooner Dump body is raised from its retracted cum transport mode. The warning shall remain "ON" till such time the Dump body is not completely retracted/lowered. The system may have additional mechanical indicator to show that the dump body is not in fully retracted position. The visual warning shall be so located as to be readily visible and recognizable in the daylight and distinguishable from other alerts at night time by the Operator when seated in Operator Seat. As far as possible, the warning indicator shall be integral part of Operator console / Display Panel.

6.1.2. The system shall sound Audio warning in addition to Visual Warning when Dumper / Truck is attempted to move from its stationary position with dump body not in completely retracted position. The system shall not allow engagement of transmission system beyond first gear when the dump body is in raised position.

6.1.3. Sensors of the system shall have Ingress Protection of IP 68 in accordance with IEC 60529 and test Certificates to this effect shall be obtained from any Government / NABL Accredited institutions/Test Houses having adequate test facilities.

#### 7. 0. Exhaust Brake:

Applicability: Dumpers / Tipper trucks / Heavy Vehicles.

7.1. The Exhaust Brake shall meet the following minimum requirements and standards:

7.1.1. The brake shall be an Auxiliary Braking System and shall be complimentary but not a replacement to service Brake.

7.1.2. Control forces of the braking system controls and other brake testing requirement shall be in accordance with IS 16479 (*Performance requirements and test procedures of braking systems for wheeled high-speed rubber-tracked Earth Moving Machines and construction equipment vehicles*) stipulated for Retarder. For Heavy vehicles, it shall be in accordance with relevant Automotive Industry Standards (AIS).

7.1.3. The Brake control shall be provided in the Operator's cabin within the Zone of Reach and distinctly marked.

#### 8. 0. Load Indicators:

An automatic Load sensing, measuring and data logging system to monitor load, to sound warning when loaded beyond its designed safe carrying load and to record the payload during machine operation. The system shall have signaling provision on both sides of the Dumpers / Tipper trucks to indicate the loading status along with indication to the Operator.

Applicability: Dumpers / Tipper trucks

8.1. The Load Indicators for Dumpers and Tippers shall meet the following minimum requirements and standards:

8.1.1. The system shall comprise of onboard automatically load sensing/measuring device, indicating arrangement and warning system.

8.1.2. The system shall have exterior load indicating device(s) (in the form of different light indicators) so that the loader Operator is aware of under load, safe load and Over Loading of the Dumpers / Tippers. The indication shall also be extended to Dumper / Tipper Operator and the indication shall be suitably placed in Operator cabin as easily seen by the Operator without strain and without affecting his outside visibility. The Exterior load indicator shall be provided on both sides of Dumper / Tipper.

8.1.3. The system shall sound Audio warning when safe carrying capacity of Dumper / Tipper is reached. The Warning shall be continuous when the Dumper/truck is overloaded. The system shall not have manual override.

8.1.4. The system shall have Ingress Protection of IP 68 in accordance with IEC 60529 and test Certificates to this effect shall be obtained any Government / NABL Accredited institutions /Test Houses having adequate test facilities.

8.1.5. Light intensity of the Indicator shall be as per the requirements of AVA stipulated by DGMS. Intensity of Audio Warning shall be as per the requirements of AVA stipulated by DGMS.

8.1.6. The System may be provided with provisions for recording the warning generated with time stamp to enable easy retrieval and analysis of the immediate past 96 deployment operating hours.

### 9. 0. Dump Body Stabilizers for Tippers:

The Dump Body Stabilizers for Tippers shall meet the following minimum requirements and standards:

Adequate and suitable mechanical arrangement(s) in the form of stabiliser to prevent toppling of Tipper / separation of dump body of the Tipper from lift cylinder(s) during dumping o

operation of the Tipper shall be provided in all Tippers. As far as possible, the dump body shall be designed during design phase of Tippers.

#### 10.0. Seat belt and Seat Belt Reminder:

**Applicability:** Dumpers / Tipper trucks / Light and Heavy Vehicles.

### 10.1. The Seat belt and Seat Belt Reminder shall meet the following minimum requirements and standards:

#### 10.1.1. Seat Belt

- (a) Seat Belt shall be an arrangement of strap(s), 3 point contact type with a securing buckle with quick release, adjusting devices and attachments which are capable of being anchored in Operator's cabin of HEMM.
- (b) Seat Belt shall be designed to minimize the risk of injury to its wearer (Operator), in the event of collision or of abrupt deceleration of the vehicle, by limiting the mobility of the wearer's body. It shall be capable of returning to normal operating position sooner the condition(s) causing the risk is/are diminished and shall not hinder normal operations of the Operator.
- (c) A cutting arrangement shall be provided in Operator cabin at a place which is easily approachable by the operator/person for cutting the strap in case of jamming of securing buckle during escape / rescue operations in case of any eventualities.

#### 10.1.2. Seat Belt Reminder system

- (a) The system shall detect an unfastened safety-belt and initiate two stages of both Visual and Audible alerts, namely, First Level Warning and Second Level Warning.
- (b) The visual warning shall be so located as to be readily visible and recognizable in the daylight and distinguishable from other alerts at night time by the Operator when seated in Operator Seat. As far as possible, the warning indicator shall be integral part of Operator console / Display Panel. The Visual Warning shall be flashing tell-tale.

Note 1: "First Level Warning" means a visual warning activated when the ignition switch is engaged (engine running or not) and the Operator's safety-belt is not fastened. An audible warning can be added as an option.

Note 2: "Second Level Warning" means a visual and audible warning activated when a Operator operates a vehicle without fastening of Operator safety-belt.

Note 3: Reference for Test requirements: AIS 145 (for appropriate N type vehicle) or any other acceptable international automotive standards

#### 11.0. No Bump Circuit for Drills:

The No Bump Circuit shall meet the following minimum requirements and standards:

A system capable of automatically bringing down and maintaining speed of vertical travel and rotary motion of rotary mechanism automatically to predetermined safe level(s) during drill rod connection between rotary and drill rod and between drill rods irrespective of speed selection by Operator of Drill machine. The No Bump Circuit shall provide for such speed(s) during the above

#### 12.0. Breakout Wrench for Drills:

The Breakout Wrench shall meet the following minimum requirements and standards:

12.1. The wrench shall be of adequate design and construction and shall be capable of breaking out tightly threaded Drill Rod Connections safely and operated from Operator cabin of the Drill. Break out wrench shall be mounted in the machine and is in addition to normal arrangement provided to break out threaded drill rod connections. For smaller diameter Drill pipes and machines intended for drilling holes for secondary blasting, a portable Break out wrench arrangement may be used.

12.2. The wrench shall have provision to automatically adjust its jaws to diameter of Drill rod to compensate for any drill pipe wear and shall be provided with mechanical locking arrangement to secure the wrench at its resting position. The wrench shall be so installed as not to affect Operator's visibility to Drill Rods / Drill Platform.

12.3. Adequate safeguard shall be provided to prevent accidental / inadvertent actuation of controls in Operator's Cabin.

### 13. Propel joystick-spring loaded type to return to neutral (Dead-man safety) for Drills:

The Propel joystick-spring loaded type to return to neutral (Dead man safety) shall meet the following minimum requirements and standards:

It shall be capable of returning to deactivated (Neutral) position automatically upon release of lever by Operator and shall immediately bring propel / tramping operation of the Machine to Halt and safe state.

#### 14.0. Proximity Warning Device:

A system designed for early detection of static and moving objects, vehicles, human beings encountered within virtual target area during movement of Dumper / Tipper and for triggering warning the operator to prevent collision or run over. The system shall comprise sensors which may employ one or more or combination of technology / methodology (for detection of objects, vehicles, and human beings), control unit(s) (for receiving input from sensor(s), processing it and forwarding necessary input to Warning Unit) and warning unit to trigger Audio or visual warning to the operator. The system shall have variable target area during forward movement depending upon speed of the Dumper / Tipper and predetermined target area during rearward movement.

**Applicability:** Dumpers / Tipper trucks

14.1. The Proximity Warning Device shall meet the following minimum requirements and standards:

14.1.1. Proximity warning device / system shall be provided for detecting static and moving objects including human beings on its own during the vehicle movement for a specified range, and warn the operator in the operator's station.

14.1.2. At least one object detection sensor, accessible and not interfering with the Dumper's / Truck's operation shall be provided both in the front and at rear of the Dumper / Truck at suitable

locations. The system shall be ergonomically designed and mounted for operator and maintenance personnel.

14.1.3. The system shall be reliable and be able to provide an adjustable audio visual warning when it detects static and moving objects including human beings, least height light motor vehicle used in the mine, etc., within the virtual target area of respective Dumper/Truck.

14.1.4. The sensor shall detect static and moving objects in a virtual target area as defined below. The manufacturer shall ensure maximum possible detection coverage in the virtual target area depending on the available fitment area and proximity detection technology defined as below:

#### 14.1.5. Virtual Target Area in Front of Dumper/Truck:

(a) Width of the virtual target area shall be equal to the width of the Dumper/Truck plus 0.5m on both sides.

(b) The inner edges (base line) that represent the width of the virtual target area shall pass through the inner edge of bumper of Dumper/Truck. The centerline of the virtual target area and the Dumper/Truck centerline shall coincide.

(c) Length of the virtual target area shall conform to maximum stopping distance as mentioned in the IS: 16479 (*Performance requirements and test procedures of braking systems for wheeled high-speed rubber-tracked Earth Moving Machines and construction equipment vehicles*) and the length of virtual target area shall be calculated by the Control Unit of the system dynamically and automatically with relation to vehicle's speed at any given point of time while covering the blind spot distance observed within the width of virtual target area when the Dumper / Tipper was in static pre-start (ignition - on) condition. While calculating stopping distance in accordance with IS 16479, the test slope percentage may be taken as 6.25 % (i.e. 1 in 16, which is maximum permissible slope of haul road under normal operating conditions). Further, Brake response time and operator response time shall also be considered while calculating the stopping distance.

#### 14.1.6. Virtual Target Area in Rear of Dumper/Truck:

(a) Width of the virtual target area shall be equal to the width of the Dumper/Truck plus 0.5 m on both sides.

(b) Length of the virtual target area shall be more than or equal to the length of the Dumper/Truck.

(c) The inner edges (base line) that represent the width of the virtual target area shall pass through the centerline of the rear axle of the Dumper/Truck.

(d) The centerline of the virtual target area and the Dumper's/Truck's centerline shall coincide.

14.1.7. The system shall not detect any obstacles beyond the width of the virtual target area and its detection area shall be restricted along the vehicle's pathway for minimizing false alarm. The system shall have intelligent alert generating mechanisms like indication of obstacle in the vehicle's pathway, whether left, right or center and triggering audio alerts after detection of obstacles of auto-cut off type, to avoid operator inconvenience/distraction. The System shall be provided with provisions for recording of details of warning generated with time stamp with location details (if feasible) to enable easy retrieval and analysis of the immediate past 96 deployment operating hours.

14.1.8. The system shall be tested at any Government approved laboratories or Test houses accredited by NABL subject to confirmation of its ability to conduct such tests conforming to following Standards (or its revised versions) and the test house shall not be part of Manufacturer's testing facility.

(a) IEC 61000-4-5:2014 - Electromagnetic compatibility (EMC): Testing and measurement techniques - Surge immunity test.

(b) IEC 61000-4-6: 2013 - Electromagnetic compatibility (EMC): Testing and measurement techniques - Immunity to conducted disturbances, induced by radio frequency fields.

(c) JSS 55555:2000(Rev-2) - Sinusoidal Vibration Test, Frequency: 8 to 500 Hz, Acceleration:  $40\text{m/s}^2$ , Duration 2 hrs in each axis.

(d) IS-9000: Part-V/Sec 1 - 1981 Reaffirmed 2007 - Damp Heat Test (at  $40^\circ\text{C}$  & 95% RH for 16 Hrs).

(e) IS-9000: Part-II/Sec 3 - 1977 reaffirmed 2004 - Cold Test ( $-10^\circ\text{C}$ ).

(f) IS-9000: Part-III/Sec 3 - 1977 reaffirmed 2004 - Dry Heat Test ( $+70^\circ\text{C}$ ).

(g) IS-9000: Part-XIV/Sec 2 - 1998- Rapid Temperature Cycle Test.

(h) Ingress Protection Test, IP-66 required;

14.1.9. Rules/guide lines framed by Ministry of Communications and Information Technology (Wireless Planning and Co-ordination Wing), wherever applicable, shall be complied. The technology / technologies of the system shall also comply with other applicable statutory guidelines framed under various Rules /Regulations / Acts by Government of India.

(R. Subramanian)

Director General of Mines Safety (Off.)

## ANNEXURE I(1)

THE GAZETTE OF INDIA: EXTRAORDINARY

[PART II-SEC. 3(i)]

### NOTIFICATION

Dhanbad, the 1st October, 2018

G.S.R. 987(E).-In exercise of the powers conferred on me under sub- regulation (2) of Regulation 216 of the Coal Mines Regulations 2017, I, Prasanta Kumar Sarkar, Chief Inspector of Mines, also designated as the Director General of Mines Safety, hereby, specify the Safety features and devices to be provided in Heavy Earth Moving Machinery (HEMM) including trucks and tippers used in a coal mine, as follows:

Safety features and devices to be provided in Heavy Earth Moving Machinery (HEMM) including trucks and tippers

(See Regulation 216(2) of Coal Mines Regulations 2017)

#### 1.0 General Requirements:

The following Safety features and devices shall be provided in all Heavy Earth Moving Machinery (HEMM):

#### A. Access:

- (i) Safe access to the Operator Station and to routine maintenance points of HEMM shall be provided. Proper placement of components of the access system shall permit and encourage a person to use three-point support while ascending, descending or moving about the access system, when more than 1m above the ground. Two-point support is acceptable for stairs, stairways, ramps, walkways and platforms. Three-point support should be used for all ladder systems. Track shoe and track pad surfaces are accepted as access steps if three-point support is provided when the HEMM is in 'OFF' condition.

- (ii) On machines with articulated frames and in the fully articulated steering position, a minimum clearance of 150 mm shall be provided between firm structures and components with relative movement in the path of the access systems to the operator's station.
- (iii) An alternative exit path shall be provided on a different location of the machine than the 'primary access path from the operator platform. If the alternative exit path is not obvious, it shall be identified. The alternative exit path is intended for emergency situations (e.g. machine tip-over) and therefore does not need to meet the primary access requirements.

#### B. Operator's Station (Cabin):

- (i) The cabin shall protect the operator against foreseeable adverse climatic conditions, heat, dust, noise etc. Air-conditioning system shall be provided in the Operator's Station. A ventilation system, an adjustable heating system and a system for defrosting windows shall be provided wherever required.
- (ii) Alternative opening (Emergency Exit): An alternative opening shall be provided on a side other than that of the primary opening. A window panel or another door is acceptable if they are easy to open or remove without the use of keys or tools. Latches may be used if they can be opened from the inside

without the use of keys or tools. The breaking of a suitable size of glass pane is considered to represent a suitable alternative opening, provided that the necessary pane hammer, immediately accessible to the operator, is provided and stored in the cab. When the window panel is used as an emergency exit, it shall bear an appropriate marking.

- (iii) Doors and Windows: Doors, Windows and flaps shall be securely held in their intended operating positions. Doors shall be retained at their intended operating positions by a positive engagement device. The front window shall be fitted with motorized windscreen wipers and washers. The tank of the window washers shall be easily accessible.
- (iv) Pipes and hoses that contain fluids at pressures exceeding 5 MPa or temperatures above 60°C located inside the cab shall be suitably guarded.

#### C. Operator's protective Structures:

- (i) All HEMM with a seated operator shall be equipped with a roll-over protective structure (ROPS). The ROPS shall comply with ISO 3471. Further, it shall also be fitted with FOPS, when they are intended for applications where there is a risk of falling objects. The fitted FOPS shall be in accordance with ISO 3449.

#### D. Seats:

- (i) The Operator's Station shall be fitted with an ergonomically designed adjustable seat that supports the operator in a position that allows the operator to control the machine under the intended operating conditions. The seat and its suspension shall be so designed to reduce vibration transmitted to the operator to the lowest level that can be reasonably achieved.
- (ii) If an additional seat for a trainer is installed in the Operator's Station, it shall be padded and shall provide adequate space for the trainer. The trainer shall also have available a conveniently placed handhold.
- (iii) Seat Belt for Operator with reminder shall be provided.

#### E. Operator's Controls and Indicators:

- (i) The controls shall be of suitable design and construction and arranged so that they are able to be operated with ease from the operator's seat and within the operator's force limits. Controls shall be laid out and designed to allow easy and safe operation based on the principle that a given direction of movement of any control produces a consistent and expected effect. The surfaces of frequently used pedals shall be fitted with skid resistant type materials.
- (ii) Controls that can cause a hazard due to inadvertent activation shall be so arranged, deactivated or guarded as to minimize the risk - particularly while the operator is getting into or out of the operator's station. The deactivation device shall either be self-acting or shall act by compulsory actuation of the relevant device.
- (iii) A device/system shall be provided to release the residual pressure in each hydraulic and pneumatic circuit which can cause a risk.

#### F. Starting and Stopping System:

- (i) All HEMM shall be equipped with a starting and stopping device (e.g. key). The starting system shall have a provision for protection against unauthorized use.
- (ii) The starting and Stopping system shall be designed such that movement of the machine, working equipment and attachment, shall not be possible, while starting or stopping the engine, without activating the controls. (E.g. Transmission Neutral-Engine Start safety arrangement).
- (iii) In case of Remote control operated equipment, the Starting and Stopping system shall conform to any National/Internationally accepted standard.

#### **G. Steering System:**

- (i) The steering system shall be such that the movement of the steering control corresponds to the intended direction of steering.
- (ii) Hydraulic Steering circuits shall, if used, incorporate the following features:
  - (a) Pressure control devices as required to avoid excessive pressures in the hydraulic circuit;
  - (b) Hydraulic hoses, fittings and tubing with test burst pressures at least four times the working circuit pressure control device(s) for normal and emergency steering systems;
  - (c) Plumbing arrangements which avoid excessively tight hose bends, torsion in the installed hoses, or scrubbing and chafing of hoses.
- (iii) An emergency steering system shall be provided which also function with reverse machine movement if the maximum rated speed in reverse exceeds 20 km/h.
- (iv) A warning device indicating a normal steering power source shall be provided. This warning device shall be audible or visual, and shall be activated by failure of the normal steering power source.
- (v) Articulation safety lock shall be provided in articulated steering equipment. All articulated equipment shall be equipped with a safety bar or a device, which can readily be fitted without special tools, to prevent movement of the articulation joint during maintenance work in the vicinity of this joint

#### **H. Brake System:**

All HEMM shall be equipped with the following brake systems and all these systems shall be effective under all conditions of service, load, speed, terrain and slope, according to the intended use of the machine:

- (i) Service brake to be used as the primary braking system during normal operation of the equipment.
- (ii) Emergency brake - to be applied by the operator in the event of a failure of the service brake.
- (iii) Parking brake - used to prevent movement of stationary equipment.

Provided that at least one of the brakes shall be "fail safe", i.e. the spring applied- hydraulically released (SAHR) or any other means.

All HEMM shall have a brake system -in accordance with ISO 3450 except for crawler machines with a travel speed less than 20 km/h, which shall have a brake system in accordance with ISO 10265.

#### **I. Visibility:**

- (i) All HEMM shall be designed so that the operator has sufficient visibility from the operator's station in relation to the travel and work areas of the machine necessary for its intended use. The performance criteria shall be in accordance with ISO 5006.
- (ii) Rear Vision Camera shall be provided in all HEMM.
- (iii) Blind Spot Mirrors / Camera apart from rear side view mirror to enable operator to have clear visibility of blind spot shall be provided in all HEMM.

#### **J. Stability:**

- (i) All HEMM with attachments, including optional equipment, shall be designed and constructed so that stability is provided under all intended operating conditions including maintenance, assembling, dismantling, and transportation, as specified by the manufacturer in the operation manual.
- (ii) Devices (e.g. outriggers, oscillating axle locking) intended to increase the stability of HEMM in working mode shall be fitted with interlocking devices or check valves which keep them in position in case of hose failure or in case of oil leakage.

#### **K. Noise:**

The operator and persons near to the HEMM shall not be exposed to noise level that exceeds an eight hour equivalent continuous sound pressure level of 85 dB(A) and wherever it exceeds 85 dB (A), Personnel Protection Equipment (PPE) of adequate strength shall be used by the operators and the persons.

#### **L. Warning devices and safety signs:**

- (i) All the HEMM shall be equipped with an audible warning device (horn) controlled from the operator's station
- (ii) Warning system for Operator's fatigue shall be provided in all HEMM.
- (iii) Audio Visual Alarm (A V A) system for reversing shall be provided in all HEMM.
- (iv) Safety signs and hazard pictorials shall be displayed at conspicuous places.
- (v) Retro- Reflective Reflectors shall be provided on 'all sides of the HEMM at suitable positions.

#### **M. Protective measures and devices:**

- (i) All dangerously exposed moving parts of the equipment shall be provided with suitable guards of substantial construction to prevent injury to person(s).
- (ii) Guards or shields shall be provided in the vicinity of exhaust and turbocharger to prevent fuel or oil spraying on hot surfaces.

#### **N. Electrical and Electronic Systems:**

- (i) Electrical components and conductors shall be installed in such a way as to avoid damage from exposure

e to environmental conditions (corresponding to the intended use of the machine) that can cause deterioration. Electrical component insulation shall have flame-retardant properties. ,

**(ii) Degree of protection:**

Depending on the location/installation of electrical and electronic components, the following degrees of protection are required:

- (a)** All components installed exterior to the machine or directly exposed to the environment shall have a minimum degree of protection corresponding to according IEC 60529, IP 55;
- (b)** All components installed in the operator's cab or protected against the environment, the protection shall be designed and executed to safeguard a correct function under expected and intended conditions.
- (iii)** Electronic controls, connectors in control circuits, multi-pin connectors and control switches external to the cab, shall have a minimum protection of IP 55.
- (iv)** All HEMM powered by electrical power source shall be provided with tripping device in Operator's Cabin to cut off Electric supply at Principal Switch Gear (PSG) end.

**O. Fire Protection,**

- (i)** All HEMM shall be equipped with suitable portable Fire Extinguisher(s) in addition to automatically operated Fire Detection and Suppression device or System.
- (ii)** Hydraulic hoses, Electric Wires, sleeves and conduits (where cable/wire is passed) of fire resistant quality shall be provided in all HEMM

**2.0** In addition to General requirement mentioned above, the following safety devices / features specific to machines shall be provided:

**2.1 Dumper:**

a) Mechanical steering locking to prevent untoward movement of steering wheel and tyre during work persons working below the cabin while engine is running.

- (b)** Mechanical type device to protect operator in case of head to tail collision of Dumpers.
- (c)** Limiting speed device to limit the speed as per working conditions.
- (d)** Propeller shaft guard.
- (e)** Proximity warning device:
- (f)** Dump body raised position indicator with Warning.
- (g)** Retarder System in addition to Service, Parking and Dump Brakes.
- (h)** Rock ejectors for tandem tyres.
- (i)** Body raised position mechanical locking arrangement
- (j)** Engine cut off arrangement / Battery Cut-off switch on front lower portion of the Dumper.
- (k)** Cabin Guard Extension / Canopy fully covering operator's cabin.

(1) Load Indicator.

(m) Auto dipping System.

**2.2 Tippers/Trucks:**

- (a)** Cabin Guard Extension / Canopy fully covering operator's cabin.
- (b)** Exhaust/Retard Brake.
- (c)** Propeller shaft guard
- (d)** Tail gate protection
- (e)** Limiting speed device
- (f)** Dump Body lifted position locking arrangement.
- (g)** Dump Body raised position indicator with Warning.
- (h)** Dump body stabilisers.
- (i)** Proximity warning device
- (j)** Auto dipping System
- (k)** Load Indicator.

**2.3 Excavator:**

**2.3.1 Hydraulic Excavators:**

- (a)** All functions cut off switch
- (b)** Swing Motor Brake and Swing lock
- (c)** Parking Brake.
- (d)** Vent valve on top of hydraulic tank (should be able to be removed without any tool).
- (e)** Provision for Limiting of hydraulic cylinders-Stoppers.
- (f)** Battery cut off switch outside cabin
- (g)** Two way communication system other than mobile phone in Operator's Cabin.

**2.3.2 Rope Shovels & Draglines**

- (a)** All functions, such as Crowd, Hoist, Swing, Propel and Drag shall be provided with 'ON' type brake so as to automatically apply the brake in case of Electrical power failure.
- (b)** Travel limit switches for crowd, hoist and Drag functions as applicable.



age, it is found that it has quoted directly to any organisation in India excepting the situations mentioned above, it shall be liable for penal action as per provision of this Manual, if the justification provided by the bidder has not been considered adequate and satisfactory by the procuring entity. **Tender specific authorization as per Annexure-B.**

**Note:**

**i.** In a tender, either the authorized Selling Agent / Dealer / Distributor on behalf of the Principal OEM or Principal OEM itself can bid but both cannot bid simultaneously for the same item/product in the same tender.

**ii.** One manufacturer can authorize only one selling agent / Dealer / Distributor against the same item in one tender.

**iii.** If an authorized Selling Agent / Dealer / Distributor submits bid on behalf of the Principal OEM, the same agent shall not submit a bid on behalf of another Principal/OEM in the same tender for the same item/product. **iv.** In a tender, either manufacturer can quote or its authorised Indian Agent can quote but both are not allowed to participate/ quote in the same tender.

**iv.** The business entity of the Indian Agent should be in existence for 3 years on the date of tender opening, irrespective of date of appointment as Indian Agent.

**v.** The term 'Agent' broadly includes Distributor, Dealer, Channel Partner etc.

**vi.** Indian Office of a Foreign Manufacturer or Indian Subsidiary of a Foreign / Indian Manufacturer: Indian Office of a Foreign Manufacturer or Indian Subsidiary of a Foreign/ Indian Manufacturer are also eligible to quote on behalf of the Manufacturer.

**vii.** Indian Manufacturing entity of foreign manufacturer: Indian manufacturing entity of the foreign manufacturer is eligible to bid as Indigenous Manufacturer if the Foreign Manufacturer manufactures equipment of the same or similar capacity as the tendered equipment; and the Indian Manufacturing entity has sufficient facility for manufacturing, supply and After Sales Service Support in India for equipment of same or similar capacity as the tendered equipment.

In such case the bidder shall be required to submit self-attested copy of valid Legal Agreement/ Collaboration Agreement/ License Agreement/MOU with foreign (principal) manufacturer for the equipment being offered to prove their status as Indian Manufacturing entity of foreign manufacturer. Such bidders shall be required to submit tender specific declaration by the Principal Manufacturer. Both the Indian manufacturing entity and its principal manufacturer should confirm to ensure supply of spares, consumables and service support for smooth running of the equipment during its life time.

**"The bidder will have After Sales Service Support facilities in India like Depot / Warehouse for supply of spare parts, Workshop facilities for servicing and repair assemblies, sub-assemblies and equipment, availability of trained technical manpower etc., training facilities for providing training to MCL's personnel. In case the bidder does not have the above After Sales Service Support facilities in India, it will have to submit an undertaking along with its offer that in the event of placement of order on them, they will establish the above facilities in India within the completion period of warranty of the first equipment commissioned. In such case, the bidder shall have to provide PBG for 30% of the contract value, which will be released after establishment of After Sales Service Support facilities in India and against submission of normal PBG for 10% of the contract value.**

#### **Collaboration and License Agreements**

- i.** Collaboration Agreement: In case of Collaboration Agreement or Memorandum of Understanding (MoU) with the principal manufacturer, the collaboration agreement / MoU should be valid on date of tender opening and should also remain valid at least up to supply and commissioning of the last equipment covered in the contract. However, the principal manufacturer has to confirm that supply of spares & consumables and service support will be ensured for smooth running of the equipment during its lifetime. The agreement / MoU evincing collaboration of the Indian Firm / Company with the Principal Manufacturer must be a document registered in India under the provision of Indian Registration Act, 1908, irrespective of likelihood that the same may not be compulsorily registered under the provision of Section-17 of the said Act.

In the event of termination of collaboration agreement / MoU, the principal manufacturer will be responsible for the fulfillment of contractual obligations either by itself or through alternate collaborations / arrangements.

- ii.** License Agreement: In case Indigenous manufacturer, who has manufactured, supplied and serviced the same or similar equipment (to the equipment being offered), is participating under License agreement with the company having valid Intellectual Property Rights (IPR) for the equipment being offered, the License agreement should be valid on date of tender opening and should also remain valid at least up to supply and commissioning of the last equipment covered in the contract.

The bidder and licensor having IPR for the equipment being offered should confirm to ensure supply of spares & consumables and service support for smooth running of the equipment during its lifetime. The agreements evincing License agreement of the bidder and licensor must be a document registered in India under the provisions of the Indian Registration Act, 1908, irrespective of the likelihood that the same may not be compulsorily registered under the provision of Section-17 of the said Act.

#### **1.2 Provenness Criteria: Procurement shall be made only for proven product.**

The equipment offered by the tenderer shall be considered proven provided minimum 1 Number of quoted model or similar equipment, as defined below, must have been supplied by the bidder in India to mining industry and/or to the other Industries (Private or Government/ Public Sector Undertaking) and performed satisfactorily for a minimum period of one year from the date of commissioning. The performance of only that equipment would be considered for assessing provenness which has been commissioned 01 year prior to the date of opening of tender but not prior to 05 years from the date of opening of tender.

**Note:** In case of Trial Orders placed by CIL and Subsidiaries, the Trial Order quantities will be considered for provenness. OR

In case the quoted model or similar equipment has not been supplied by the bidder in India or if supplied and commissioned in India but the same has not completed required years of performance for provenness as mentioned above, the offered equipment will be considered proven if the minimum worldwide population is of 01 no. of offered or similar equipment or combination thereof which have been commissioned 01 year prior to

the date of opening of tender but not prior to 05 years from the date of opening of tender and all of them performed satisfactorily for a minimum period of 01 year from the date of commissioning. The worldwide population of the bidder will be considered for provenness only when the bidder gives an undertaking that it has not supplied the quoted model or similar equipment in India or if supplied and commissioned in India, the same has not completed required years of performance for provenness as mentioned above. OR

In case the indigenous manufacturer is quoting the same type & model of the equipment as supplied by their foreign collaborator worldwide in the past and the quoted model of indigenous manufacturer has either not been supplied in India or if supplied and commissioned in India, but the same has not completed the required years of performance for provenness as mentioned above, the quoted model will be considered proven if the minimum worldwide population is of 01 no. of quoted model or similar equipment or combination thereof which have been commissioned 1 year prior to the date of opening of tender but not prior to 05 years from the date of opening of tender and all of them performed satisfactorily for a minimum period of one year from the date of commissioning. However, for worldwide population, foreign collaborator's experience of supplying the offered or similar equipment worldwide shall be considered only if the indigenous manufacturer submits notarized copy of their collaboration agreement with the foreign collaborator which should be valid as on the date of opening of the tender and should also remain valid at least up to supply and commissioning of the last equipment covered in the contract. However, the principal manufacturer will confirm to ensure supply of spares & consumables and service support for smooth running of the equipment throughout its life. Further, if any indigenous content is added by the indigenous manufacturer in the quoted model of the equipment, the foreign collaborator will give an undertaking for successful performance of the equipment with the indigenization carried out by the indigenous manufacturer during lifetime of the equipment. OR

In case the indigenous manufacturer is quoting the same / similar type & model of the equipment as supplied by their licensor having valid IPR for the same type & model of equipment being offered worldwide in the past and the quoted model of indigenous manufacturer has either not been supplied in India or if supplied and commissioned in India, but the same has not completed the required years of performance for provenness as mentioned above, the quoted model will be considered proven if the minimum worldwide population is of 01 no. of quoted model or similar equipment or combination thereof which have been commissioned 01 year prior to the date of opening of tender but not prior to 05 years from the date of opening of tender and all of them performed satisfactorily for a minimum period of one year from the date of commissioning. However, for worldwide population, the bidder's and licensor's experience of supplying the offered or similar equipment worldwide shall be considered only if the indigenous manufacturer submits self attested copy of their License Agreement with the company having valid IPR for the equipment being offered, which should be valid as on the date of opening of the tender and should also remain valid at least upto supply and commissioning of the last equipment covered in the contract. The bidder and licensor for the equipment being offered will also confirm to ensure supply of spares & consumables and service support for smooth running of the equipment throughout its life. Further, if any indigenous content is added by the indigenous manufacturer in the quoted model of the equipment, the foreign collaborator will give an undertaking for successful performance of the equipment with the indigenization carried out by the indigenous manufacturer during lifetime of the equipment. OR

Indian Manufacturing entity of foreign manufacturer and bidding as Indigenous manufacturer: In case the Indian manufacturing entity of foreign manufacturer who has sufficient facility for manufacturing, supply and after sales service of same or similar equipment as supplied by their foreign (principal) manufacturer worldwide in the past and the quoted model of Indian manufacturing entity has either not been supplied in India or if supplied and commissioned in India, the same has not completed the required years of performance for provenness as mentioned above, the quoted model will be considered proven if the minimum worldwide population is of 01 no. of offered model or similar equipment thereof which have been commissioned 1 year prior to the date of opening of tender but not prior to 05 year from the date of opening of tender and all of them have performed satisfactorily for a minimum period of one year from the date of commissioning. However, for worldwide equipment population, the bidder's and principal manufacturer's experience of supplying the quoted or similar equipment worldwide shall be considered only if the Indian manufacturing entity submits notarized copy of valid Legal Agreement/ Collaboration Agreement/ License Agreement/ MOU with foreign (principal) manufacturer for the equipment being offered and a declaration from the Foreign Manufacturer that all related required Intellectual Property of quoted equipment are accessible by the Indian manufacturing entity. Further, the foreign manufacturer will give an undertaking for successful performance of the equipment to be manufactured by the Indian manufacturing entity during lifetime of the equipment. The bidder and foreign principal manufacturer for the equipment being offered will also confirm to ensure supply of spares & consumables and service support for smooth running of the equipment throughout its life.

### **1.3 Bench Mark for Consistent Satisfactory Performance:**

**a)** Equipments, being considered for provenness, must have consistently achieved the guaranteed availability as stipulated in the supply order (based on which provenness is being claimed by the bidder) for a minimum period of One (01) year for each of the Equipment from the date of commissioning.

OR

**b)** In case no guaranteed availability has been stipulated in the supply order (based on which provenness is being claimed by the bidder, the guaranteed availability stipulated in the GeM Bid shall be considered as the minimum guaranteed availability for satisfactory performance, for a minimum period of One (01) year for each of the Equipment from the date of commissioning.

The bidder will submit satisfactory performance report as per (a) or (b) above issued by end users. In case, the Performance Report(s) of the End-User(s) is not available, the bidder shall submit self-certification claiming satisfactory performance of the equipment supplied along with proof of payment against the Purchase Order(s) / Rate Contracts.

### **1.4 "Similar Equipment" shall be such equipment, which fulfills the following:**

**a)** Performs almost identical operations as the quoted model.

**b)** Should be equal to or higher than the tendered capacity.

**c)** Uses sub-components, sub-systems and major assemblies of substantially similar design & construction to the model quoted - only ratings/ specifications may differ (Lower or Higher).

### **1.5 Acceptance Criteria for Similar Equipment:**

- I.** If the bidder claims provenness of the quoted model based on similar equipment as described above in sub-clause 1.4 then the similar equipment should have performed satisfactorily for a minimum period of one (01) year from the date of commissioning along with satisfactory performance of quoted model for a minimum period of six (06) months from the date of commissioning within the

window period of 05 years.

**II. If the bidder claims provenness of the quoted model based on similar equipment as per sub clause -1.4 above and the similar equipment has performed satisfactorily for a minimum period of one (01) year from the date of commissioning but quoted model has not worked for a minimum period of six (06) months from the date of commissioning within the window period of 05 years, then the offer may be accepted subject to following conditions:**

- a. The quoted model should have been designed, manufactured and supplied to the end-user but has not been commissioned or if commissioned, has not completed one year of operation after the commissioning. Documentary evidence for past supply of the quoted model is to be provided along with the offer.

or

The quoted model is an upgraded version of the existing model with improved and the latest drive line / system etc. and has not been manufactured and/or supplied earlier. In such case, the basic model should remain the same. Documentary evidence of past supply of the existing model whose upgraded version has been offered, is to be provided along with the offer.

- b. (i) The successful bidder will be allowed to supply the quantity of first lot as indicated in Schedule of Requirement.  
(ii) The firm shall be required to furnish additional Performance Bank Guarantee of 100% of the total landed value of equipment along with spares & consumables for warranty period for the quantity of first lot.
- c. On satisfactory performance of all the equipment of first lot for one year from the date of commissioning [to be certified by the General Manager (Excavation)/ HOD of the subsidiary company], clearance shall be obtained from the order issuing authority for supply of the remaining quantity, if any, as per Schedule of Requirement.
- d. The additional 100% Performance Bank Guarantee shall be returned only after satisfactory performance of all the equipment supplied in first lot for one year from the date of commissioning.
- e. The original 10% PBG for the total contract value will be retained for entire contract period as per PBG clause of NIT.

**Note:**

In case of unsuccessful performance of the first lot of equipment supplied by the firms who qualifies as per above sub clause 1.5,II, the following shall be applicable:

- i) The 100% Additional Performance Bank Guarantee for the first lot of equipment shall be encashed by CIL. Consequent upon the encashment of the 100% Bank Guarantee due to non-achievement of stipulated minimum availability percentage, the Supplier shall take back the equipment at no cost to the Purchaser and the contract for the balance quantity shall be cancelled.
- ii) The original 10% performance bank guarantee shall be returned to the supplier after recovery of penalty for non-achievement of guaranteed availability in respect of first lot of equipment.
- iii) The performance of any individual equipment under this clause shall not be considered for provenness in future tenders of CIL & subsidiaries for any capacity of this type of equipment.
- iv) In case of equipment imported under Project Concessional Duty (PCD), the amount of Customs Duty Concession i.e. the differential amount of Normal Customs Duty (NCD) and PCD availed during import shall be recovered from the supplier with interest for refund to the Customs Authorities. The supplier shall deposit such amount to the purchaser on demand else the same shall be recovered from the Security Deposit Bank Guarantee / Performance Bank Guarantee of the supplier.

**1.6 "Relaxation of Norms for Start-ups and Micro & Small Enterprises/Startups (MSEs in Public Procurement regarding prior Experience-Prior Turnover criteria.)**

The relaxation of norms regarding prior experience – prior turnover in Public Procurement has been extended to startups/ Micro & Small Enterprises subject to meeting of quality and technical specifications i.e. must have the technical capability to deliver the goods and services as per prescribed technical and quality specifications; as per following Govt of India directives:

**1. Govt of India Policy Circular no. 1(2)(1)/2016-MA dated 10.03.2016,**

**2. O.M. No.F-20/2/2014-PPD(Pt) dated 25th July 2016 of Under Secretary to GOI, Ministry of Finance, Department of Expenditure, Procurement Policy Division, New Delhi**

**3. D.M. No. F-20/2/2014-PPD(Pt) dated 20.09.2016 of Under Secretary (PPD), Ministry of Finance, Department of Expenditure, procurement Policy Division, New Delhi. Micro and Small Enterprises (MSEs) for tendered items are eligible for claiming relaxation of norms regarding prior experience – prior turnover in Public Procurement on submission of self attested copy of valid document in support of MSE status like DIC, NSIC etc ."**

"Accordingly the prior experience – prior turnover criteria is not applicable for startups and MSEs in this tender in respect of either of the following situations and no further documents regarding provenness will be required to be submitted by these bidders:

- a) If bidders have submitted documents to prove the Startup/MSE status for the tendered item and submitted the attested copy of the certificate towards quality assurance and capability from some authority like MSM E, NSIC, etc.

**b)** However, If bidders have submitted documents to prove the startup/MSE status for the tendered item but without certificate towards quality assurance and capability from some authority like MSME, NSIC, etc., the TIA, if needed, may assess the techno-commercial capability of these bidders to manufacture and deliver goods as per the prescribed quality and technical specification before awarding contract to them. For this purpose, a 'Proforma for Equipment and Quality Control' (as per Annexure-A) has been enclosed in the tender documents and such MSEs should submit the details of plant & machinery, quality control arrangements, etc., in the above Proforma along with their bids for verification of their technical capability. After opening of bids, the verification of technical capability may be done by the concerned Technical Department so that it is available for consideration at the time of evaluation/ processing of offers.

**c)** If required, a techno-commercial team of MCL may visit the manufacturing unit of the bidder for quick finalization of tenders.

**d)** If favorable technical capability reports obtained earlier on such firms for supply of the item in question as per the required specification is available, these may be considered for granting relaxation to the criteria of prior experience and prior turnover, provided date of such reports are not more than one year from the date of opening of bids. "

**e)** In case there is deficiency in technical capability of the firm, the same is to be communicated to them by TIA for improvement in the quality of their product for future tenders and clearly indicate that their offer cannot be considered for relaxation against the tender in question in order to avoid any future complications. The issues relating to Technical capability may be decided by the Head of the Technical Department.

**f)** If bidders have submitted documents to prove the Startup/MSE status for the tendered item and their products are ISI marked/DGMS approved/Proven in CIL or its Subsidiary companies/Proven product of the ancillary unit of a Subsidiary Company of CIL, they will be required to submit the following applicable related documents, duly notarized, for relaxation from the criteria of prior experience and prior turnover.

- Valid BIS Marking License for the quoted items. OR
- Rate contract issued by CIL/its Subsidiary Companies for the quoted items. OR
- Valid DGMS Approval certificate for the quoted items. OR
- Proven Ancillary certificate issued by the Subsidiary Companies for the quoted items.

The document(s)/certificate(s) furnished by the bidders for ISI markings or DGMS approval for any relaxation should be valid on the date of tender opening and a copy of such document(s)/certificate(s) valid on the date of supply, duly notarized, must accompany their bill(s).

*Note: The BID shall be governed by the terms and conditions of GEM and as per the clauses of CIL Purchase Manual 2020.*

## 2. Confirmatory Documents: All the confirmatory documents as enlisted below are to be uploaded by the bidder while submitting their bid.

### 2.1 Basic Eligibility Criteria: *The following specified documents depending on the category of bidders.*

Sl No.	Category of Bidder	Scanned copy of documents to be uploaded by the bidder in support of Basic Eligibility Criteria .(Self certified)
a	Equipment manufacturer [Indian] quoting directly against the tender.	<p>a) Documentary evidence to establish the fact that they are equipment manufacturer for the offered capacity and type of Equipment. Such documentary evidence can be ISO-9001 Certificate/Manufacturing License/ Certificate / Registration issued by the appropriate authorities of the manufacturer's country/ Certificate from Chamber of Commerce and Industry of the manufacturer's country etc.</p> <p>b) Details in respect of its organization along with the documents like Certificate of Incorporation/ Registration etc.</p> <p>c) Details of After Sales Service Support facilities in India like Depot/ Warehouse for supply of spare parts, Workshop facilities for servicing and repair of assemblies, subassemblies and equipment, availability of trained technical manpower etc., training facilities for providing training to MCL's personnel.</p> <p>d) In case the bidder does not have the After Sales Service Support facilities in India, it will have to submit an undertaking along with its offer that in the event of placement of order on them, they will establish the above facilities in India within the completion period of warranty of the first equipment commissioned. In such case, the bidder shall have to provide additional PBG for 30% of the contract value, which will be released after establishment of After Sales Service Support facilities in India and against submission of normal PBG for 10% of the contract value.</p>
b	Indian Selling Agent/Dealer /Distributor/Indian office or Indian subsidiary quoting against the tender	<p>a) Tender Specific authorization from their principal manufacturer to quote against this tender indicating the tender reference and date and validity of such authorization.(As per Annexure-B)</p> <p>b) Bidder has to upload Documentary evidence to establish that their principal</p>

	<p>on behalf of Equipment Manufacturer [Indian]</p>	<p>al/Parent/Holding company is the Equipment manufacturer (as indicated in (a) above). <i>(Self-Certified)</i></p> <p>c) The authorized Indian Agent is to upload scanned copies of details in respect of its organization along with the copies of document like certificate of incorporation / registration etc. along with the offer. The firm (Indian Agent) should be in existence for 03 years on the date of tender opening, irrespective of date of appointment as Indian Agent.</p> <p>c) Audited Profit &amp; Loss Accounts / Abridged Profit &amp; Loss Accounts for the last three financial years from the date of tender opening.</p> <p>d) Details of After Sales Service Support facilities in India like</p>
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		<p>Depot/ Warehouse for supply of spare parts, Workshop facilities for servicing and repair of assemblies, subassemblies and equipment, availability of trained technical manpower etc., training facilities for providing training to MCL's personnel. <i>(self certified)</i></p> <p>e) In case the bidder does not have the After Sales Service Support facilities in India, it will have to submit an undertaking along with its offer that in the event of placement of order on them, they will establish the above facilities in India within the completion period of warranty of the first equipment commissioned. In such case, the bidder shall have to provide additional PBG for 30% of the contract value, which will be released after establishment of After Sales Service Support facilities in India and against submission of normal PBG for 10% of the contract value.<i>(self-certified)</i>.</p>
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NOTE: The certificate in respect of Micro Small Enterprises Registration, NSIC Registration, SSIRegistration, DGS&D Registration, ISO, BIS License and DGMS approval etc. must be valid on the date of opening of Bid.

## 2.2 Provenness Criteria: All the following specified documents:

Sl. No.	Provenness Criteria	Scanned copy of documents to be uploaded by the bidder in support of Provenness Criteria
1	Scanned copy of documents to be uploaded by the bidder in support of Provenness Criteria	<p>1. The bidders should upload scanned copies of supply orders, signed and stamped by the Original Equipment Manufacturer and duly self-certified, for the offered Type &amp; model of equipment/Similar Equipment (*) received by them from various customers as defined in above Provenness Criteria, covering at least for the number of machines against which the bidder has claimed provenness of the Equipment, within the eligibility period as indicated in the GeM Bid.</p> <p>2. The bidder is required to upload scanned copies of the Performance Report (s) of the End-User(s), commissioning certificates for same machine(s) commissioned against supply order(s) indicated as above Provenness Criteria, issued by the respective end users, duly signed and self-certified for the total numbers of machines against which the bidder has claimed provenness of the Equipment as per the provenness Clause of the GeM Bid. In case, the commissioning certificates of the end user(s) are not available, the bidder shall upload a certificate of Original Equipment Manufacturer (OEM), duly signed and stamped, confirming the date of commissioning indicating supply order reference no. &amp; date, model, machine sl. no., date of commissioning (date/month/year) and place of commissioning with complete postal address, fax no., e-mail address and contact no. etc. of the buyer of Equipment.</p> <p>3. In case, the Performance Report(s) of the End-User(s) is not available, the bidder shall upload a self-certification, duly signed and stamped, confirming that the quoted Type &amp; model of Equipment have performed satisfactorily for a minimum period of 01(One) year from the date of commissioning of the equipment and the desired parameters of the performance of the equipment stipulated in the supply orders received and executed have been met and no warranty / guarantee claim is pending against the supply orders received along with proof of payment against the purchase order should be enclosed by them with their offer to</p>

		<p>establish their Provenness for the quoted Type &amp; Model of Equipment.</p> <p>4. In case Authorized Agent is submitting the offer on behalf of the Original Equipment Manufacturer, self-certification duly signed and stamped by the principal (i.e. Original Equipment Manufacturer) is to be uploaded regarding performance as mentioned above.</p> <p>5. In case bidders are not in a position to submit the past supply order copies due to confidentiality laws of particular country, a copy of such laws should be uploaded along with the offer for claiming exemption from submitting the supply order/contract copies and in such cases the bidder should upload a Customers List for the quoted Type &amp; Model of Equipment duly signed and stamped by the Original Equipment Manufacturer and duly self-certified, clearly indicating the Customer Name &amp;</p>
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Address, Contract No.& Date, Date of supply and erection & commissioning, guaranteed annual availability as per the performance guarantee clause of the supply order/contract/GeM Bid [if the same is not given in the supply order] and actual achieved annual availability for minimum 01(One) year from the date of commissioning, for each equipment supplied.

6. In case a bidder has a foreign collaboration, the bidder must upload the documents/ certificates, duly self-certified, relating to collaboration with principals, clearly indicating -

a) that the collaboration agreement is valid on date of tender opening and shall also remain valid at least up to supply and commissioning of equipment.

b) that the principal manufacturer will ensure supply of spares & consumables and service support for smooth running of the equipment during its lifetime.

c) The agreements / MOUs evincing collaboration of the Indian Firm/Company with a foreign partner must be a document registered in India under the provision of the Indian Registration Act 1908, irrespective of the likelihood that the same may not be compulsorily register-able under the provision of Section-17 of the said Act.

d) Further, if any indigenous contents are added by the indigenous manufacturer in the quoted Type & Model of the equipment, the foreign collaborator will give an undertaking on their letter head for successful performance of the equipment with the indigenization carried out by the indigenous manufacturer during lifetime of the equipment. This undertaking shall be tender specific.

7. Bidder should upload a self-certified certificate to the effect that the bidder has satisfactorily fulfilled its contractual obligations including warranty obligations for the total equipment supplied by it to the respective customers/end users during last 5 years from the date of tender opening.

8. If the bidder is claiming Provenness against provenness of Similar Equipment, they shall upload document for verification of the use of sub-components, sub-systems and major assemblies of substantially similar design & construction to the model quoted - only ratings/ specifications may differ (Lower or Higher).

**3.1 Relaxation for Micro & Small Enterprises:** *The following specified documents depending on the category of bidders:*

Sl. No.	Relaxation for Micro & Small Enterprises/Startups	Scanned copy of documents to be uploaded by the bidder in support of Relaxation for Micro & Small Enterprises
1	If the bidder is a Startup or Micro & Small Enterprise (MSEs) for the tendered items to be offered by them	<p>Certificate issued by DIPP (Department of Industrial Policy &amp; Promotion) for being "startup" or certificate issued by Authorities for being "MSE" .</p> <p style="text-align: center;">AND</p> <p>The bidders have to submit documents to prove the MSE status for the tendered item and their products are ISI marked/DGMS approved/Proven in CIL or its Subsidiary companies/Proven product of the ancillary unit of a Subsidiary Company of CIL, they will be required to submit the following applicable related documents, duly notarized, for relaxation from the criteria of prior experience and prior turnover.</p> <ul style="list-style-type: none"> <li>• Valid BIS Marking License for the quoted items. OR</li> <li>• Rate contract issued by CIL/its Subsidiary Companies for the quoted items.</li> </ul> <p style="text-align: center;">OR</p> <ul style="list-style-type: none"> <li>• Valid DGMS Approval certificate for the quoted items. OR</li> <li>• Proven Ancillary certificate issued by the Subsidiary Companies for the quoted items.</li> </ul> <p>The document(s)/certificate(s) furnished by the bidders for ISI markings or DGMS approval for any relaxation should be valid on the date of tender opening and a copy of such document(s)/certificate(s) valid on the date of supply, duly notarized, must accompany their bill(s).</p> <p style="text-align: center;">OR</p> <p>Filled up 'Proforma for Equipment and Quality Control' (as per Annexure-A) for verification of your technical capability by concerned technical department.</p>

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**3.2** Technical Specification Parameters Documents/ Special Terms and Conditions of the BID [Ref. [TPS/S T & C] uploaded along with this GeM Bid]: *All the following specified document:*

Sl No	Technical Specification Parameter	Scanned copy of documents (self certified) to be uploaded by the bidder in support of Technical Specification Parameters.
01	Refer TPS uploaded along with this GeM Bid.	1. Information to be provided by the bidder as per special terms and conditions and Technical parameter Sheet (TPS). 2. Technical Brochure of the offered model. 3. Any other document not specified above, but indicated in the GeM Bid elsewhere

END

ANNEXURE-A

PROFORMA FOR EQUIPMENT AND QUALITY CONTROL

Reference : CL/Subsidiary Co.\_\_\_\_ GeM Bid No.\_\_\_\_ Date\_\_\_\_ for supply of \_\_\_\_\_

1. Name and Address of the Firm
2. (a) Telephone No. office/factory/works  
(b) E-mail ID
3. Location of manufacturing works/factories owned by the firm (documentary evidence of ownership must be produced).
4. Brief description of the factory (i.e. area covered accommodation, Department into which it is divided, laboratory etc.)
5. Details of plant and machinery erected and functioning in each department (monographs and description pamphlets) be supplied if available.
6. Whether the process of manufacture in the factory is carried out with the aid of power or without it.
7. Process flow charts for the whole manufacturing process of the tendered item.
8. Details and stocks of raw materials held.
9. Production capacity of items quoted for with the existing plants and machinery
  - (a) Normal
  - (b) Maximum
10. Details of Quality Assurance Plan and Quality Control infrastructure such as laboratories etc.
- 11.(a) Details of technical supervisory staff in-charge of production and quality control.
  - (b) Skilled labour employed.
  - (c) Unskilled labour employed
  - (d) Maximum number of workers (skilled and unskilled) employed on any day during 18 months preceding the date of application.
12. Whether stores were tested to any standard specification, if so, copies of original test certificate should be submitted in duplicate.

(Signature of Tenderer)

NB: Details against Sl. Nos. 5 to 12 inclusive need be restricted to the extent they pertain to the items under

M/s. MCL,

Address

Authorization & Undertaking Certificate by OEM/OES/OPM  
(On Letter Head of the Principal / Manufacturer)

ANNEXURE-B

Dear Sir

Sub: GeM Bid No.:

WHEREAS we, M/s \_\_\_\_\_ [name of manufacturer] who are established and reputable manufacturers of tendered/offered items having factories at \_\_\_\_\_ [address(es) of factory(ies)].

Do hereby authorize M/s \_\_\_\_\_ [Name & Address] our Agent to submit a bid and execute the resultant Contract with you on our behalf against the above Tender.

We, M/s \_\_\_\_\_ [name of manufacturer] also undertake the following:

- i) That, as a matter of our corporate policy, we don't directly quote / market our products and if, subsequently, at any stage, it is found that we have quoted directly to any organization, we shall be liable for penal action as per provisions. Further, if at any stage, it is found that agency commission has been paid by us without declaring the agent, the commission will be recovered with interest.
- ii) That we will accept the responsibility for the satisfactory execution of orders placed on our authorized agent including warranty/ guarantee obligations.
- iii) That, wherever necessary, we will provide requisite inspection and testing facilities at our works in respect of orders placed on our authorized agent.
- iv) Our authorized agent's price will not exceed that which we would have quoted.
- v) Letter submitted by our Agent for inspection of goods would be accompanied by a certificate from us that the goods offered for inspection as indicated in the letter have been manufactured by us.
- vi) We hereby accept to extend our full support and commitment for all the terms and conditions including guarantee and warranty as per the Conditions of Contract, Technical Specifications for the Goods and Services offered for supply by the above bidder on our behalf against this tender for the entire contract period as well as ensure supply of spares & consumables even beyond contract period as stipulated in the relevant clauses of the tender document.
- vii) In the event of failure on the part of our authorized agent in fulfillment of contractual obligations for any unforeseen reason, we shall take the responsibility to make alternate arrangements to support MCL as well as execute the remaining period of the contract ourselves or through another competent Indian Agent/entity fulfilling the eligibility criteria stipulated in the tender document for Indian Agent, as per NIT.
- viii) We also confirm that we are not banned or delisted or debarred or put on holiday by any Government or Quasi-Government Agency or any Public Sector Undertaking in India.

OR

We were banned by the organization named "-----" for a period of \_\_\_\_\_ - year(s) effective from \_\_\_\_\_ to \_\_\_\_\_ for \_\_\_\_\_ (the reasons to be mentioned).

(Signature) (Name) (Designation) (Seal)

Signed for and on behalf of [Name of manufacturers].

**ANNEXURE-C**

Undertaking by the Indian selling agents/dealers/distributors authorized by OEM/OPM

(On Letter Head of the Bidder)

GeM Bid No.:

We M/s..... undertake the following:

- i) That we will be responsible for all the contractual obligations including quality aspects, replacement of part/items and warranty/ guarantee obligations
- ii) That we will be responsible for providing the required after sale service
- iii) That our Business Entity is in existence for more than 3 years as on the date of this Tender opening

(Signature)

(Name) (Designation) (Seal)

Signed for and on behalf of [Name of Indian selling agents/dealers/distributors authorized by Indian manufacturer].

### **Additional Terms and Conditions**

Procurement of 05 No of Diesel Powered 40T Capacity hydraulic rough terrain Mobile Crane for Lajkura OCP (01No), Samaleshwari OCP (01No), Ananta OCP (01No), Lingaraj OCP (01No) and Bharatpur OCP (01No) respectively.

1. The Supplier is required to provide a complete package of equipment for the supply of Diesel Powered 40T Capacity hydraulic rough terrain Mobile Crane Design, Manufacture, Delivery, Erection, Commissioning and performance testing for coal mining projects of MCL.

**Bidders should read the following terms and conditions and accept while participating in tender/bid for respective items (those are applicable to them):**

**The Supplier is required to provide a complete package of equipment for the supply of 05 nos Diesel Powered 40T Capacity hydraulic rough terrain Mobile Crane Design, Manufacture, Delivery, Erection, Commissioning and performance testing for coal mining projects of MCL to open cast coal mining projects of MCL:**

**The supplier is required to bid for the Equipment Package Including Design, Manufacture, Testing, Delivery, on Site Erection and Commissioning at the coal-mining project.**

**1. Documents related to Eligibility Criteria should be submitted by the bidders, along with offer**

**Only the Local Suppliers i.e. Class - I Local supplier (a supplier or service provider, whose goods, services or works offered for procurement has local content equal to or more than 50%) and Class - II Local Supplier (a supplier or service provider, whose goods, services or works offered for procurement has local content more than 20% but less than 50%) are only eligible to Quote.**

**The Local suppliers (Class I / Class II) shall have to submit the certificate regarding the quantum (Percentage) of the local content and shall also give details of the location(s) at which the local value addition is made as per the **Annexure-A****

**Non-Local Suppliers are not eligible to participate in this Domestic Tenders which meant only for Indigenous Manufacturers / Local Suppliers.**

**Local content means the amount of value added in India, which is the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all custom duties) as a proportion of the total value, in percent.**

**For definitions of 'Local Supplier', 'Local Content and 'Margin of Purchase Preference' refer following clauses:**

The definitions of 'Local Supplier', 'Local Content and 'Margin of Purchase Preference' are as follows:

- (i) 'Class - I Local Supplier' means a supplier or service provider whose Goods, Services or Works offered for procurement, has Local content equal to or more than 50% as defined under this Order.
- (ii) 'Class - II Local Supplier' means a supplier or service provider whose Goods, Services or Works offered for procurement, has Local content more than 20% but less than 50%, as defined under this order.
- (iii) Non - Local Supplier means a supplier or service provider whose Goods, Services or Works offered for procurement, has Local content less than or equal to 20%, as defined under this order.
- (iv) 'Local Content' means the amount of value added in India which shall, unless otherwise prescribed by the nodal Ministry, be the total value of the item procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value, in percent.
- (v) 'Margin of Purchase Preference' means the maximum extent to which the price quoted by a local supplier may be above the L1 for the purpose of purchase preference. The margin of purchase preference is 20%.

**Verification of local content:**

(i) The 'Class - I Local Supplier' / 'Class - II Local Supplier' at the time of tender, bidding or solicitation shall be required to indicate percentage of local content and provide self-certification that the item offered meets the minimum local content requirement for 'Class - I Local Supplier' / 'Class - II Local Supplier' as the case may be. They shall also give details of the location(s) at which the local value addition is made.

(ii) In cases of procurement for a value in excess of Rs. 10 crores, the 'Class - I Local Supplier' / 'Class - II Local Supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a

practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. Local content certificate must bear UDIN registration number without which offer is liable for rejection.

(iii) CIL/ Subsidiary Companies may constitute committees with internal and external experts for independent verification of auditor's/ complaints.

(iv) False declarations will attract banning of business of the bidder or its successor(s) as per provisions of CIL Purchase Manual 2020 along with such other actions as may be permissible under law.

(v) A local supplier who has been debarred by any procuring entity for violation of above order shall not be eligible for preference under this Order for procurement by any other procuring entity for the duration of debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities.

**Note:** Indigenous / Indian Manufacturer, if referred anywhere in the NIT, means a local supplier

b) Indian Agent of Local Supplier: (Broadly includes Distributor, Dealer, Channel Partner etc.) Procurement should generally be made from manufacturers only.

However, if the manufacturer does not quote directly to any organisation in India as a matter of its corporate policy (except in situations like supplies to OEM /OES/ OPM, supplies of spares and consumables bundled with supply of equipment, supplies to customers not covered by dealer network due to geographical/ logistics constraints), the procurement shall be made from its authorised Indian Agent based on the tender specific authorisation issued by the manufacturer mentioning tender reference number and date and validity of such authorisation.

The list of documents to be submitted by the bidder:

i) Local Suppliers (Class-I Local Supplier and Class - II Local Supplier): In case the bidder is a Local supplier (Class-I Local Supplier and Class - II Local Supplier), they have to submit scanned self attested copy of the valid registration with NSIC / SSI/ DIC / UDYAM / Registrar of Companies / any other document issued by statutory bodies etc, to establish themselves that they are the manufacturer of the offered items along with certificate regarding the quantum (Percentage) of the local content and details of the location(s) at which the local value addition is made as per the **Annexure-A**

ii) In case of Indian Agent of Local Supplier (Class-I Local Supplier and Class - II Local Supplier):

1. Self attested copies of the Manufacturing credentials of the Local Supplier viz valid registration with NSIC / SSI/ DIC / UDYAM / Registrar of Companies / any other document issued by statutory bodies etc to establish that their Principal is the manufacturer of the offered items along with certificate (to be issued by Local supplier) regarding the quantum (Percentage) of the local content and details of the location(s) at which the local value addition is made as per the **Annexure-A**.

2. A tender specific authorization issued by the manufacturer mentioning tender reference number and date and validity of such authorization (Format as per **Annexure -B & C**). Authorization should be pre-dated (from the tender opening) and should be properly signed and its validity should correspond to the delivery period stipulated in the Tender Enquiry.

3. Undertaking from the manufacturer that, as a matter of its corporate policy, it does not quote directly to any organization in India (except in situations like supplies to OEM / OES/OPM, supplies of spares and consumables bundled with supply of equipment, supplies to customers not covered by dealer network due to geographical / logistics constraints). If, subsequently, at any stage, it is found that it has quoted directly to any organization in India excepting the situations mentioned above, it shall be liable for penal action as per provisions of the NIT and the CIL Purchase Manual 2020, if the justification provided by the bidder has not been considered adequate and satisfactory by the procuring entity. Further, if at any stage, it is found that agency commission has been paid by the manufacturer/ principal without declaring the agent, the commission will be recovered with interest.

4. Undertaking from the manufacturer that it will accept the responsibility for the satisfactory execution of orders placed on the authorized agents including warranty/ guarantee obligations.

5. Undertaking from the manufacturer that, wherever necessary, it will provide requisite inspection and testing facilities at its works in respect of orders placed on authorized agent.

6. Undertaking from the manufacturer that the authorized agent's price will not exceed that which the manufacturer would have quoted.

7. Undertaking from the manufacturer that in the event of placement of order on their authorized dealer, the goods supplied / goods offered for inspection would be accompanied by a certificate stating that the goods have been manufactured by them.

8. Undertaking from the manufacturer that No agent / Middle man / Liaisoning agent or any entity in any name other than the disclosed authorized Indian Agent is involved in the process of procurement of goods and services.

(if subsequently at any stage, it is found that it has given a false certificate, it shall be liable for penal action as per the provisions of CIL Purchase Manual 2020).

9. Undertaking from the bidder ( authorized dealer ) that he will be responsible for all the contractual obligations including quality aspects, replacement of part/items and warranty/ guarantee obligations, and also will be responsible for providing the required after sale service.

10. The business entity of the Indian Agent should be in existence for 3 years on the date of tender opening, irrespective of date of appointment as Indian Agent. The relevant self attested document in this regard is to be submitted along with the offer.

**Note:**

1. If both the Local Supplier (Class - I Local Supplier and Class - II Local Supplier) and the Indian Agent participates in this tender, then the offer of the Indian Agent will be rejected.

2. One manufacturer can authorize only one Indian agent.

3. If Indian Agents submits bid on behalf of a manufacturer, the same agent shall not submit a bid on behalf of another manufacturer in the same tender for the same item / product.

In case of procurement of commercially off-the-shelf available products (if specifically declared in the NIT), general authorization / dealership / distributorship certificate shall be considered in place of tender specific authorization.

**2. RELAXATION OF NORMS FOR STARTUPS & MSEs in Public procurement regarding prior experience -Prior turnover criteria. :**

As per Department of Expenditure, Ministry of Finance OM No. F.20/2/2014/PPD-(Pt) dated 25.07.2016 circulated vide note F. No. 24/2/2013/Fin-I dated 02.08.2016, relaxation of the condition of prior turnover and prior experience in public procurement has been extended to all Micro and Small Enterprises and Startups (whether MSE or not) subject to meeting of quality and technical specifications, i.e. must have the technical capability to deliver the goods and services as per prescribed technical and quality specifications.

Micro and Small Enterprises (MSEs) registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro Small and Medium Enterprises (MoMSME) and MSEs registered under the UDYAM are eligible for claiming relaxation, on submission of self attested copy of valid document in support of their MSE status.

Startups means an entity, incorporated or registered in India not prior to ten years, with annual turnover not exceeding Rs. 100 crores in any preceding financial year, working towards innovation, development or improvement of products or processes or services, or if it is a scalable business model with a high potential of employment generation or wealth creation. Provided that such entity is not formed by splitting up, or reconstruction of a business already in existence. Provided also that an entity shall cease to be a startup if its turnover for the previous financial years has exceeded Rs. 100 crores or it has completed 10 years from the date of incorporation/ registration. In order to avail benefits provided to Startups, the entity is to be recognized by DPIIT [GSR No. 127(E) dated 19.02.2019 of Gazette of India]. Self attested copy of the valid Registration with DPIIT shall be submitted along with the offer.

Accordingly the Prior experience and turn over criteria is not applicable for startups & MSEs in this tender in respect of either of the following situations and no further documents regarding provenness will be required to be submitted by these bidders.

a) If bidders have submitted documents to prove the Startup / MSE status for the tendered item and submitted the self attested copy of the certificate towards quality assurance and capability from some authority like MSME, NSIC etc.

b) However, If bidders have submitted documents to prove their Startup / MSE status for the tendered item but without certificate towards quality assurance and capability from some authority like MSME, NSIC etc., the tender inviting authority, if needed, may assess the techno commercial capability of these vendors to manufacture and deliver goods as per the prescribed quality and technical specification before awarding contract to them. For this purpose, a 'Proforma for Equipment and Quality Control' (as per **Annexure- D** has been enclosed in the tender documents and such MSMEs/ Startups should submit the details of plant & machinery, quality control arrangements, etc., in the above proforma along with their bids for verification of their technical capability. After opening of bids, the verification of technical capability may be done by the concerned Technical Department.

If required, a techno-commercial team of the organization may visit the manufacturing unit of the vendor for quick finalization of tenders.

In case there is deficiency in technical capability of the firm, the same shall be communicated to them by TIA for improvement in the quality of their product for future tenders and clearly indicate that their offer cannot be considered for relaxation against the tender in question in order to avoid any future complications. The issues relating to Technical capability shall be decided by the Head of the Technical Department.

c) If favourable technical capability reports obtained earlier on such firms for supply of the item in question as per the required specification is available, these may be considered for granting relaxation to the criteria of prior experience and prior turnover provided date of such reports are not more than one year from the date of opening of bids.

d) If bidders have submitted documents to prove the Startup/MSE status for the tendered item and their products are ISI marked/DGMS approved/Proven in CIL or its Subsidiary companies /Proven product of the ancillary unit of a Subsidiary Company of CIL, they will be required to submit the following applicable related documents, self certified, for relaxation from the criteria of prior experience and prior turnover:

- a valid BIS Marking License for the quoted items or
- Rate contract issued by CIL/its Subsidiary Companies for the quoted items or
- a valid DGMS Approval certificate for the quoted items or

- Proven Ancillary certificate issued by the Subsidiary Companies for the quoted items.

The document(s)/certificate(s) furnished by the bidders for ISI markings or DGMS approval for any relaxation should be valid on the date of tender opening and a copy of such document(s) / certificate (s) valid on the date of supply, duly notarized, must accompany their bill(s).

### 3. BANNED OR DELISTED OR DEBARRED OR PUT ON HOLIDAY SUPPLIERS

The manufacturer as well as the bidder (if bidder is not the manufacturer) will give a declaration that they have not been banned or de-listed or debarred or 'Put on Holiday' by any Government or quasi-Government agencies or PSUs. If a bidder and/or manufacturer has been banned or delisted or debarred or 'Put on Holiday' by any Government or quasi Government agencies or PSU, this fact must be clearly stated and it may not necessarily be a cause for disqualifying them.

However, If the manufacturer/bidder is banned or delisted or debarred or 'Put on Holiday' by DoE/MoC/MCL / CIL, the offer shall be not be considered for further evaluation.

In case of Indian Agents of the Local Suppliers quoting against the Tender, both the Indian Agent and their Principals should submit the above declaration as per format given at **Annexure -G**.

### 4. Clarification of Bids/ Shortfall/ Confirmatory Documents:

After evaluation of the uploaded documents, shortfall documents, if required, shall be sought from the bidder. For this purpose, maximum 01 chance of 07 days duration shall be given to the bidder to upload the Shortfall Documents. The time period for the clarification will be 7x24 hrs given to the bidders to upload these clarifications / shortfall documents.

The bidder will upload the requested documents within the specified period and no additional time will be allowed in this regard for on-line submission of documents after the maximum 01 chance, of 7x24 hours duration. If the bidder does not comply or respond by the specified date & time, his tender will be liable to be rejected.

The bidder may seek clarification online in the GeM Portal i.e., through the GeM representation window only. Bidders may also note that queries which are not received through GeM portal will not be entertained. Queries/clarifications submitted through offline mode/e-mail will not be entertained.

The shortfall information/documents shall be sought only in case of historical documents as per GeM provision/rules.

### 5. Payment terms:

- 80% value of the equipment and 100% taxes and duties and other charges excluding erection & commissioning charges shall be made within 21 days after receipt and acceptance of materials at site at the consignee's end and submission of Performance Bank Guarantee valid till 3 months after the completion of 1 year warranty period from the date of commissioning of all the equipment covered in the contract.
- Balance 20% payment including erection & commissioning charges shall be made after successful completion of erection, testing, commissioning and final acceptance of the equipment (along with the accessories) upon presentation of successful commissioning certificate, signed by the concerned officials of the Project and counter-signed by the Area General Manager and HOD of Excavation Deptt MCL HQ and confirmation of receipt of DRR by the paying authority.
- Paying Authority: General Manager (Fin), MCL-HQT, Burla

### 6. Submission of Bills: The supplier will submit the following documents along with bills to the paying authority :

- Four copies of the Supplier's invoice, Pre-Receipted and Stamped showing Contract Number, Goods description, quantity, unit price, total amount and GST No. of Ultimate Consignee.
- Receipted Challan/ Consignment Note of all the consignments.
- Manufacturer's Test / Inspection Certificate.
- Manufacturer's Warranty /Guarantee Certificate.
- Any other document(s) required as per contract / Technical specifications of the bid / contract.

### 7. Security Deposit:

- The successful tenderers will have to submit Security Deposit for the 3% value of the total landed value of the contract including all taxes, duties and other costs and charges, without considering Input Tax Credit form of e-PBG mentioned in the BID. The bidder needs to submit the Security deposit @5% and PBG @10%. Security Deposit may be converted into Performance Bank Guarantee (PBG) wherever PBG is required at the option of the supplier. At the time of conversion of security money into PBG, it should be ensured that the amount of PBG should not be less than 10% of landed value of order.
- The SDBG shall remain valid up to 3 months after completion of supplies and acceptance of materials by the consignee in case of supply contracts /rate/running contracts and in case of contracts for equipment involving installation and commissioning, 3 months after the supply and commissioning of all the equipment covered in the contract.
- All Central/State Government organization/PSUs shall be exempted from submission of Security Deposit.

### 8. Performance Bank Guarantee:- Applicable,

a. The successful bidder shall be required to furnish a Performance Guarantee equivalent to 10% value of the total landed value of the contract (including all taxes, duties and other costs and charges).

b. The Performance Guarantee shall be in the form of a Bank Guarantee issued by a RBI scheduled bank in India in the prescribed format on a non-judicial stamp paper

c. *The PBG (s) shall remain valid till 3 months after the completion of 12 months of Warranty/Guarantee period from the date of Commissioning.*

d. The PBG shall be submitted sufficiently in advance (say 3-4 weeks) to enable its verification from the issuing bank, before submission of the invoice for 80% payment of the particular goods/ equipment's.

e. The release of the Performance Bank guarantee(s) after above indicated period, shall be subject to satisfactory performance of the equipment/ items during the warranty period and fulfillment of contractual obligations failing which, action for further extension or encashment of PBG, as deemed suitable shall be taken. The Performance Bank Guarantee shall be released after expiry of warranty period if no claim is pending, with the approval of the concerned HOD (MM)/Area GM.

f. The PBG will be submitted through Structured Financial Management System (SFMS).

g. In cases where the supplier does not submit the PBG in time or as per the prescribed format in line with the contract stipulations, the PBG amount may be deducted from the first bill or in case of insufficient amount, from subsequent bill(s) of the supplier till the full PBG amount is deducted. This amount shall be refunded to the supplier upon acceptance of PBG submitted by them.

h. GST shall be applicable on Performance Guarantee forfeiture and will be extra and recovered from suppliers/bidders.

i. PBG is to be submitted as per the **Annexure-H** along with SFMS confirmation.

j. Procedure for submitting Bank Guarantee through SFMS:

i. The bank guarantees issued by the issuing bank on behalf of contractor, supplier, customer in favour of Mahanadi Coalfields Limited shall be in paper form as well as Structured Financial Messaging System (SFMS).

ii. MCL has chosen State Bank of India and ICICI Bank to act advising/beneficiary bank of MCL. The bank issuing the guarantee can choose either of these banks to send confirmation through SFMS.

iii. The details of beneficiary (i.e. MCL) for issue of bank guarantee in SFMS platform is as furnished as below.

**a) State Bank of India as advising bank of MCL**

1.	Name and details of the Beneficiary	i.	Name	Mahanadi Coalfields Limited
		ii.	Area	MCL HQ Sambalpur
		iii.	Name of Bank	State Bank of India
		iv.	Bank Account No.	010659453016
		v.	Department	MM Department, MCL HQ
2.	Beneficiary's Advising Bank, Branch and Address for Confirmation of BGs through SFMS	i.	Name of Bank	State Bank of India
		ii.	Bank Branch Name	MCL Complex Burla
		iii.	Branch Code	07749
		iv.	Beneficiary Bank Branch IFSC	SBIN0007749
		v.	Beneficiary Bank Address	MCL Complex, Jagriti Vihar, Burla, Sambalpur-768020

**b) ICICI Bank as advising bank of MCL**

1.	Name and details of the Beneficiary	i.	Name	Mahanadi Coalfields Limited
		ii.	Area	MCL HQ Sambalpur
		iii.	Name of Bank	ICICI Bank
		iv.	Bank Account No.	019405003862
		v.	Department	MM, HQ
2.	Beneficiary's Advising Bank, Branch and	i.	Name of Bank	ICICI Bank
		ii.	Bank Branch Name	Sambalpur
		iii.	Branch Code	0194

Address or Confirmation of BGs through SFMS	iv.	Beneficiary Bank Branch IFSC	ICIC0000194
	v.	Beneficiary Bank Address	Paradise Chamber, Infront of Jagannath Temple, Budharaja, Sambalpur -768004
The applicant's bank transmitting the Bank Guarantee through SFMS needs to mention the following details for Beneficiary Bank.			
SFMS Field No.		Details	
7035		IFSC Code: ICIC0000194	
7036		ICICI BANK LIMITED, PARADISE CHAMBER, IN FRONT OF JAGANNATH TEMPLE, BUDHARAJA, SAMBALPUR, ORISSA-768004 A/C No.019405003862	
7037		MCL224951	
BG Applicant is to specifically ask BG issuing bank to mention the code 'MCL224951' in field no 7037 of IFN760COV/IFN767COV so as to enable the email IDs tagged with the account to receive advised BG over emails.			

iv. The Supplier / Contractor/ Customers are required to take note of it that above particulars are to be incorporated by the issuing bank properly while issuing the Bank Guarantee under SFMS mode to avoid any future problem in accepting the BGs.

v. The Guarantor (BG issuing bank) shall send information about issuance of this Guarantee through SFMS gateway to the State Bank of India, MCL Complex Burla (IFSC-SBIN0007749) or ICICI Bank, Ainthapalli, Sambalpur (IFSC-ICIC0000194), as the case may be, to aid in the process of confirmation of Bank Guarantee.

vi. The beneficiary's bank/advising bank shall send a copy of advice received under SFMS mode to Finance HQ through e-mail (i.e. email ids [gm-fin.mcl@coalindia.in](mailto:gm-fin.mcl@coalindia.in) & [user3-fin-cash.mcl@nic.in](mailto:user3-fin-cash.mcl@nic.in)) and provide print out of the said message from advising bank with seal and signature, to the Finance Dept. of HQ.

vii. The Original Bank Guarantee issued by the outstation bank shall be sent by the Issuing Bank to the Concerned Department of Head Quarters of Mahanadi Coalfields Limited at Sambalpur by Speed Post /Registered Post (AD).

(This is in addition to the Security Deposit to be submitted @5% of order value)

9. **Delivery Schedule** For item sl no 01: To supply 01 machine within 120days next 02 Machines in 150days and remaining 01 machine within 180days respectively from the date of receipt of Supply Order on FOR destination basis. However, early supply shall be appreciated.

10. **AMRCD:** In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs) /Port Trusts inter se and also between CPSEs and Govt. Departments/ Organizations (Excluding disputes concerning Railways, Income Tax, Customs & Excise Departments), such dispute or difference shall be taken up by either party for resolution through Administrative Mechanism for Resolution of CPSEs Disputes (AMRCD) as mentioned in DPE OM No. 4(1)/2013-DPE(GM)/FTS- 1835 Dtd. 22.05.2018.

11. **PRE-CONTRACT INTEGRITY PACT:** (Applicable for tender value of Rs. 02 crore and above- Two IEMs).

The bidders will have to upload along with their offer, duly filled-in, signed and stamped (on each page) Pre-Contract Integrity Pact on the plain paper as per Integrity Pact Format attached along with this GeM Bid, failing which their offer may not be considered. The bidder must sign and stamp all pages of Integrity Pact and put name and designation of the signatory and witnesses at the last page of Integrity Pact.

This integrity pact as uploaded with the tender with the digital signatures of Tender Inviting Authority is deemed to have been accepted by MCL.

In case of any grievance, bidders may approach Independent External Monitor(s) (IEMs). In terms of the Integrity Pact, the contact details of Independent External Monitor(s) (IEMs) are mentioned below:-

Name	Address	Contact Number	Email ID
Sri. Dr K L Dh	House No.324, Se	NA	Dhingra.kld@gmail

ingra Ex- CM D HUDCO	ctor-4, Panchkula -134112 (Haryana )		l.com
Shri. Ashish Bahuguna (IAS Retd)	E-12/7, Vasant Vi har, New Delhi-11 0057	NA	a.bahuguna55@g mail.com

**12. BID VALIDITY:** The validity period of the tenders shall be 120 (one hundred twenty) days from the date of opening of bid.

The bidder shall not, during the said period or within the period extended by mutual consent, revoke or cancel his tender or alter the tender or any terms/conditions thereof without consent in writing of the company. In case the tenderer violates to abide by this, the Company will be entitled to take action as per Purchase Manual Provisions/GEM GTC.

**13. INSPECTION:**

i. **Pre-dispatch Inspection:** Pre-dispatch inspection at any stage before dispatch of Equipment at your premises shall be carried out by Authorized representative of General Manager (Excv)/HOD, MCL. In case the materials are rejected on first inspection, all charges, boarding, lodging, TA, inspection fee etc. for subsequent inspection shall be borne by you.

ii. **Final Inspection:** Final inspection of Equipment/Spares & Consumables shall be carried out at the consignee's end before acceptance of materials by SO (Excv) of the concerned area. MCL shall at its discretion have the right to test the supplied materials in any Government testing laboratory. The sample of materials used for testing shall be on your account. If the test shows that the materials are conforming to the specification, the supplied materials shall be accepted and the testing charges shall be borne by the department. However, if the test shows that the materials are not conforming to the specifications, the supplied materials shall not be accepted and the testing charges shall be borne by you and the materials shall be removed and replaced by you within a reasonable time.

**14. Price Breakup after RAP:** A detailed Price Break up of Equipment including all other taxes & duties are to be submitted after completion of Reverse auction process.

**15. Quoting of Prices in this GeM Bid:** (Landed price of the Equipment Including GST & all other taxes on FOR destination basis).

**16. EMD Exemption:** All Central/State Government organization/PSUs shall be exempted from submission of EMD. For detailed list of EMD exemptions please refer General Terms & Conditions of GeM.

**17. Bidder to submit the following documents along with their offer / bid documents**

- a. Local content certificate (as per Annexure-A)
- b. (In case of Indian Agents of the Local Suppliers quoting against the Tender, their Principals should submit the certificate).
- c. Documents in support of Eligibility (documents as applicable for Manufacturer / Indian Agent including Annexure-B and Annexure-C, as the case may be).
- d. Proforma For Equipment And Quality Control (As per Annexure- D)
- e. Lowest Price Certificate- Annexure-E
- f. Price Fall Clause- Annexure-F
- g. Banned or Delisted or Debarred or Put On holiday suppliers declaration - Annexure-G (In case of Indian Agents of the Local Suppliers quoting against the Tender, **both** the Indian Agent and their Principals should submit the certificate.)
- h. Pre Contract Integrity Pact. (format given in bid document)

Annexure -A

SELF CERTIFICATE TOWARDS LOCAL CONTENT

(to be submitted by the Local supplier choose any one below condition,)

(1) This is to certify that we fall in the category of Class I Local Supplier and the Goods offered by us against this tender has the local content \_\_\_\_\_%. The details of Location(s) at which the Local value addition is made are as under:

**OR**

(2) This is to certify that we fall in the category of Class II Local Supplier and the Goods offered by us against this tender, has the local content of more than 20% but less than 50%. The details of Location(s) at which the Local value addition is made are as under:

Value addition is done at the following location:

Address of Location / Factory \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

Authorized Signatory of Local Supplier

Date:

Seal of the firm

(Note: 1. To choose any one above condition, as applicable)

1. In cases of procurement for a value in excess of Rs. 10 crores, the 'Class - I Local Supplier' / 'Class - II Local Supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content and place of value addition. The certificate must bear UDIN number without which offer shall be liable to be rejected.
2. In case of Indian Agents of the Local Suppliers quoting against the Tender, their Principals should submit the above mentioned certificates. Otherwise offer shall be rejected.

#### ANNEXURE - B

#### FORMAT FOR AUTHORIZATION TO BE SUBMITTED BY THE INDIAN AGENTS

(To be typed on the Principal's letter head and should be pre dated (prior to tender opening date and properly signed))

To

General Manager (MM)

Mahanadi Coalfields Ltd

Dear Sir,

Sub : GeM BID No: \_\_\_\_\_

We, M/s. (..... name of the Principal firm.....) represented by the undersigned, Mr/Ms..... Director/ Partner / Legal Attorney / Proprietor /Employee / Accredited Representative hereby authorize M/s. \_\_\_\_\_ ( Name of the Bidder firm) to participate in the tender and submit the offer and enter into contract / Supply order, on our behalf against this tender. This authorization is valid till the successful execution and completion of contract period against this tender. We further confirm that:

1. As a matter of our corporate policy, we do not quote directly to any organization in India (except in situations like supplies to OEM / OES / OPM, supplies of spares and consumables bundled with supply of equipment, supplies to customers not covered by dealer network due to geographical/ logistics constraints). If, subsequently, at any stage, it is found that we have quoted directly to any organization in India (except in situations like supplies to OEM / OES / OPM, supplies of spares and consumables bundled with supply of equipment, supplies to customers not covered by dealer network due to geographical/ logistics constraints), we shall be liable for penal action as per provisions of the NIT and the CIL Purchase Manual 2020. Further, if at any stage, it is found that agency commission has been paid by us without declaring the agent, the commission may be recovered with interest.

2. We will accept the responsibility for the satisfactory execution of orders placed on the authorized agent including warranty/ guarantee obligations.

3. Wherever necessary, we will provide requisite inspection and testing facilities at our works in respect of orders placed on authorized agent.

4. The price quoted by our authorized agent will not exceed the price which we would have quoted.

a) In the event of placement of order on our authorized dealer, the goods supplied / goods offered for inspection would be accompanied by a certificate stating that the goods have been manufactured by us.

b) We further confirm that No agent / Middle man / Liasoning agent or any entity in any name other than our authorized Indian Agent is involved in the process of procurement of goods and services against this tender. If subsequently at any stage, it is found that false certificate is given, we shall be liable for penal action.

c) We have never been banned or de-listed or debarred or 'Put on Holiday' by any Government or quasi-Government agencies or PSUs.

OR

d) We were banned/de-listed/debarred/'Put on Holiday' by the organization named "-----" for a period of ----- year/s, effective from ----- to -----for ----- (the reasons to be mentioned).

Signature of Authorized signatory of Principal

Date & Seal of the firm

**ANNEXURE - C**

**UNDERTAKING TO BE SUBMITTED BY THE INDIAN AGENTS**

(to be typed on the Indian agent letter head )

To

General Manager (MM)

Mahanadi Coalfields Ltd

Dear Sir.

Against the Tender no: \_\_\_\_\_, we have quoted as the authorized dealer / indian agent of M/s. \_\_\_\_\_ who is the manufacturer of the offered products. We confirm that we will be responsible for all the contractual obligations including the quality aspects, replacement of parts / items , warranty / guarantee obligations and also provide the after sales and services.

We have submitted the following documents.

- 1.Tender specific authorization from the Principal including the specific confirmations as required as per the terms of the NIT.
- 2.Self attested copies of the Manufacturing credentials of the Principal to establish the principal is the manufacturer of the offered items alongwith the certificate for Local content issued by the Local Supplier
- 3.The self attested copy of the documents to prove that our business entity is existence for 3years on the date of tender opening.

Signature of Authorized Dealer / Indian Agent

Date

Seal of the firm

**ANNEXURE- D**

**PROFORMA FOR EQUIPMENT AND QUALITY CONTROL**

(To be submitted by the Start-ups / MSE firms who claim the relaxation of the prior turnover and prior experience criteria)

Reference : Mahanadi Coalfields Ltd, Hqrs

Tender No. \_\_\_\_\_ Date \_\_\_\_\_ for supply of \_\_\_\_\_

1. Name and Address of the Firm
2. (a) Telephone No. office/factory/works (b) Fax No. / E-mail ID
3. Location of manufacturing works/factories owned by the firm (documentary evidence of ownership must be produced).
4. Brief description of the factory (i.e. area covered accommodation, Department into which it is divided, laboratory etc.)
5. Details of plant and machinery erected and functioning in each department (monographs and description pamphlets) be supplied if available.
6. Whether the process of manufacture in the factory is carried out with the aid of power or without it.
7. Process Flow Chart for the whole manufacturing process of the tendered item 8. Details and stocks of raw materials held.
9. Production capacity of items quoted for with the existing plants and machinery (a) Normal (b) Maximum
10. Details of Quality Assurance Plan and Quality Control Infrastructure such as laboratories etc. 11. (a) Details of technical supervisory staff in-charge of production and quality control.
- (b) Skilled labour employed.
- (c) Unskilled labour employed
- (d) Maximum number of workers (skilled and unskilled) employed on any day during 18 months preceding the date of application.
12. Whether stores were tested to any standard specification, if so, copies of original test certificate should be submitted in duplicate. (Signature of Tenderer)

NB: Details against si nos. 5 to 12 inclusive need be restricted to the extent they pertain to the items under reference.

**Annexure- E  
LOWEST PRICE CERTIFICATE**

Format for Lowest Price certificate-to be submitted along with offer & supply.

This is to certify that the prices quoted by us for the offered items are the lowest prices as applicable to any other Organization / Ministry / Department of the Govt, of India or Coal India Ltd. and /or its Subsidiaries or other PSU or any other private organization.

Signature of Bidder

Date:

Seal of the firm

**ANNEXURE - F  
PRICE FALL CERTIFICATE**

(to be submitted by the supplier along with offer and supply)

The Bidder undertakes along with offer as under:

If the contract holder reduces its price or sells or even offers to sell the contracted goods or services following conditions of sale similar to those of the contract, at a price lower than the contract price, to any person or organization during the currency of the contract, the contract price will be automatically reduced with effect from that date for all the subsequent supplies under the contract and the contract be amended accordingly.

The provisions of price fall clause will however not apply to the following:

- i) Export/Deemed Export by the supplier.
- ii) Sale of goods or services as original equipment prices lower than the price charged for normal replacement.
- iii) Sale of goods such as drugs, which have expiry date.
- iv) Sale of goods or services at lower price on or after the date of completion of sale/placement of order of goods or services by the authority concerned, under the existing or previous Rate Contracts as also under any previous contracts entered into with the Central or State Government Departments including new undertakings (excluding joint sector companies and or private parties) and bodies.

Note:

- a. The currency of contract will mean the period till completion of supply.
- b. The bidder will be asked to submit a copy of the last (latest) purchase order for the tendered / similar item(s) received by them from any Organization/ Ministry/ Department of the Govt. of India or Coal India Ltd. and/or its Subsidiaries or other PSU or any other private organization, along with the offer.
- c. It shall be responsibility of the supplier to inform the purchaser of offer to supply / supply of the ordered/similar item(s) at a lower rate to any Organization / Ministry / Department of the Govt. of India or Coal India Ltd. and/or its Subsidiaries or other PSU or any other private organization during the currency of the contract.
- d. The supplier shall submit a certificate along with the bill(s) that it has not offered to supply/ supplied the ordered/ similar item(s) at a lower rate to any organization/Ministry/Department of the Govt. of India or Coal India Ltd' and/or its Subsidiaries or other PSU or any other private organization.
- e. The provisions of fall clause will however not apply for purchase value upto Rs. 2.00 lakh.
- f. Point (b) above is not applicable in the case of renewal of Depot agreement.

**ANNEXURE - G**

**BANNED OR DELISTED OR DEBARRED OR PUT ON HOLIDAY SUPPLIERS DECLARATION**

This is to certify that we have not been banned or de-listed or debarred or 'Put on Holiday' by any Government or quasi-Government agencies or PSUs.

Signature of Bidder

Date:

Seal of the firm

OR

If bidder has been banned / Delisted/Debarred/ Put on Holiday, by any Government or quasi- Government agencies or PSU, then bidder has to indicate the details below:

- (1) Name of the Organisation which has banned the bidder:
- (2) Ban Period :
- (3) Reasons for BANNING OR DELISTING OR DEBARRING OR PUT ON HOLIDAY:

Signature of Bidder

Date

Seal of the firm

Note: In case the bidder is an authorized dealer/distributor, BOTH manufacturer as well as authorized dealer/distributor or has to submit the "Banned or Delisted or Debarred or Put on Holiday" declaration as per format above.

Signature of Bidder

Date:

Seal of the firm

**ANNEXURE-H**

**Performance Bank Guarantee Format**

Re : Bank Guarantee in respect of Agreement / Contract / Purchase Order vide no ..... dated..... between Mahanadi Coalfields Limited and ..... (Name of Supplier Company)

Messers ..... a Company / Firm having its office at No. .... (hereinafter called 'the Contractor') has entered into the Agreement / Contract / Purchase Order vide no ..... dated ..... (hereinafter called 'the said agreement') with Coal India Limited, Kolkata on behalf of Mahanadi Coalfields Limited (Name of the Purchaser Company) hereinafter called ('the Company') to supply..... stores / materials amounting to Rs..... on the terms and conditions contained in the said agreement.

The .....(name of the bank) (hereinafter called 'the bank') having its Office at ..... has at the request of the Contractor agreed to give the guarantee as hereinafter contained.

We ..... (name of the bank) do hereby unconditionally agree with the Company that if the Contractor shall in any way fail to observe or perform the terms and condition of the said agreement or shall commit any breach of its obligations thereunder, the bank shall on demand and without any objection or demur pay to the Company the said sum of Rs..... or any portion thereof without requiring the Company to have recourse to any legal remedy that may be available to it to compel the Bank to pay the same, or calling on the company to compel such payment by the contractor.

Any such demand shall be conclusive as regards the liability of the Contractor to the company and as regards the amount payable by the Bank under this guarantee. The Bank shall not be entitled to withhold, payment on the ground that at the contractor has disputed its liability to pay or has disputed the quantum of the amount or that any arbitration proceeding or legal proceeding is pending between the Company and the contractor regarding the claim.

We, the Bank - further agree that the guarantee shall come into force from the date hereof and shall remain in full force and effect till the period that will be taken for the performance of the said agreement which is likely to be the .... day of .... but if the period of agreement is extended either pursuant to the provisions in the said agreement or by mutual agreement between the contractor and the Company the Bank shall renew the period of the guarantee failing which it shall pay to the Company the said sum of Rs.....or such lesser amount out of the said sum of Rs..... as may be due to the Company and as the Company may demand. This guarantee shall remain in force until the dues of the Company in respect of the said sum of Rs.....and interest are fully satisfied and the company certifies that the agreement regarding re-payment of the said sum of Rs..... has been fully carried out by the contractor and discharges the guarantee.

The Bank further agrees with the Company that the Company shall have the fullest liberty without the consent of the Bank and without affecting in any way the obligations hereunder to vary any of the terms and conditions of the said agreement or to extend the time for performance of the said agreement from time to time or to postpone for any time or from time to time any of the powers exercisable by the Company against the contractor and to forbear to enforce any of the terms and conditions relating to the said agreement and the Bank shall not be relieved from its liability by reason of such failure or extension being granted to the contractor or through any forbearance, act or omission on the part of the Company or any indulgence by the Company to the contractor or any other matter or thing whatsoever which under the law relating to sureties would but for this provisions have the effect of relieving or discharging the Guarantor.

The Bank further agrees that in case this guarantee is required for a longer period and it is not extended by the Bank beyond the period specified above the Bank shall pay to the Company the said sum of Rs..... or such lesser sum as may then be due to the Company and as the Company may require.

Notwithstanding anything herein contained the liability of the Bank under this guarantee is restricted to Rs.....only . The guarantee shall remain in force till the .....day of..... 20.. and unless the guarantee is renewed or a claim is preferred against the Bank within the validity period and / of the claim period from the said date, all rights of the company under this guarantee shall cease and the Bank shall be released and discharged from all liability hereunder except as provided in the preceding clause.

The Bank has under its constitution power to give this guarantee and..... (Name of the person) who has signed it on behalf of the Bank has authority to do so.

Dated this.....Day of.....20...

Place

Signature of the authorized person

For and on behalf of the Bank

2.9 Buyer Added Bid Specific ATC:

Buyer uploaded ATC document [Click here to view the file](#) .

नोट: यह सिस्टम जनरेटेड फाइल है। कोई हस्ताक्षर की आवश्यकता नहीं है। इस दस्तावेज़ का प्रिंट आउट भुगतान/लेनदेन उद्देश्य के लिए मान्य नहीं है।

Note: This is system generated file. No signature is required. Print out of this document is not valid for payment/ transaction purpose.