Expression of Interest (EOI)

Mahanadi Coalfields Limited (MCL), a subsidiary of Coal India Limited (CIL) intends to invite Expression of Interest (EOI) for the following work through e-procurement portal of CIL (https://coalindiatenders.nic.in) details as under:

<table>
<thead>
<tr>
<th>DESCRIPTION OF WORK</th>
<th>AREA</th>
</tr>
</thead>
<tbody>
<tr>
<td>INVITATION OF EXPRESSION OF INTEREST (EOI) FOR “HIRING OF 10 NOS. MIST BLOWER (FOG</td>
<td>JAGANNATH, LINGARAJ, BHARATPUR,</td>
</tr>
<tr>
<td>CANNON) CUM ROAD FOGGER MOUNTED ON TRUCK CHASSIS FOR DUST SUPPRESSION IN COAL MINE</td>
<td>HINGULA, TALCHER, IB VALLEY,</td>
</tr>
<tr>
<td>AREAS”</td>
<td>LAKHANPUR, BASUNDHARA AND ORIENT</td>
</tr>
<tr>
<td></td>
<td>AREA</td>
</tr>
</tbody>
</table>

The brief details are available on the e-Procurement portal of CIL (https://coalindiatenders.nic.in) with effect from 14/11/2017(07:00 PM)

The information shall also be available on Central Public Procurement Portal (https://eprocure.gov.in).

MCL intends to invite feedback/ suggestions from the prospective bidders on the subject work.

The dates indicated for different activities like document download, Bid submission start/ End date, bid opening dates are only indicative to fulfil the tender portal requirements and not for bidding. However, the prospective bidders can upload their feedback/ suggestions online with their DSC on the e-Procurement portal of CIL (https://coalindiatenders.nic.in) after getting themselves registered/ enrolled on the portal from 15/11/2017(10.00 AM) to 27/11/2017(5.00 PM). Further the bidders may also email their feedback/ suggestions to gm-enm.mcl@coalindia.in or submit their feedback/ suggestions in writing during the meeting.

A meeting is scheduled to be held on 27/11/2017(11.30 AM) in the D.T”s Conference Hall of MCL HQ, Jagruti Vihar, Bulrla, Sambalpur, Odisha PIN-768020. Prospective bidders are requested to depute their authorised representatives (who are competent to discuss on the NIT, technical specification and other terms & conditions) on the scheduled date & time.

Note:-
Submission of feedback/ suggestions or attending the meeting is not mandatory for participation in the bidding process. However, this is to facilitate the deliberations for the preparation of tender document.

Sd/-
General Manager (E&M/HOD)
MCL HQ
INVITATION OF EXPRESSION OF INTEREST (EOI) FOR “HIRING OF 10 NOS. MIST BLOWER (FOG CANNON) CUM ROAD FOGGER MOUNTED ON TRUCK CHASSIS FOR DUST SUPPRESSION IN COAL MINE AREAS”.

1. OBJECTIVE

- Airborne dust of micro size from fugitive sources cause serious problem in coal mining industries leading to health hazards.
- The objective of EOI is to interact with the prospective Bidders/ OEMs/ Operators who have the appropriate technical knowhow, financial strength and experience in undertaking dust suppression measures through MIST BLOWER (FOG CANNON) in mining industry.
- The interaction would cover a wide range of issues like technical specification, techno-commercial & operational feasibility of the hiring mode of contract, price range per unit quantity to be tendered, payment criteria etc.

2. GENERAL INFORMATION OF MCL MINES:

The location of various operating open cast and underground mines district wise are given below where the machines are proposed to be deployed.

<table>
<thead>
<tr>
<th>District</th>
<th>Areas of MCL</th>
<th>Operating mining projects of MCL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angul</td>
<td>Hingula</td>
<td>Balaram OCP, Hingula OCP</td>
</tr>
<tr>
<td></td>
<td>Bharatpur</td>
<td>Bharatpur OCP, Ananta OCP</td>
</tr>
<tr>
<td></td>
<td>Jagannath</td>
<td>Jagannath OCP, Bhubaneswari OCP</td>
</tr>
<tr>
<td></td>
<td>Lingaraj</td>
<td>Lingaraj OCP</td>
</tr>
<tr>
<td></td>
<td>Talcher</td>
<td>Talcher Colliery and Nandira UG mine</td>
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<tr>
<td>Jharsuguda</td>
<td>IB Valley</td>
<td>Samaleswari OCP, Lajkura OCP</td>
</tr>
<tr>
<td></td>
<td>Lakhanpur</td>
<td>Lakhanpur OCP, Belpahar OCP and Lilari OCP</td>
</tr>
<tr>
<td></td>
<td>Orient</td>
<td>Orient UG mine no. 1 &amp; 2, Orient UG mine no. 3, Orient mine no. 4 and Hirakhand Bundia Mine</td>
</tr>
<tr>
<td>Sundargarh</td>
<td>Basundhara</td>
<td>Basundhara(West) OCP &amp; Kulda OCP</td>
</tr>
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</table>

3. SCOPE OF WORK:-

The scope of work shall include primarily the following:

- The Dust Suppression System (DSS) comprising of Fog cannon with blower & pumps, water tank, DG set etc. mounted on truck chassis will operate inside mine areas like drilling site, coal face, haul road, railway siding, stock yard, CHPs, Overburden dump/ backfilling sites, Coal Transportation road, Conveyor belt, Colonies etc.
- The subject work will be tendered for Hiring for 3 years period.
- **The machine will operate in all the three shifts in a day at least 5 hours/shift** as directed by the Engineer-in-Charge.
- The machine will move from various places of one project to another as per the requirement to be decided by the Engineer-in-Charge.
- The work covers filling of water in the on-board tank from the sources as directed, travel to different locations, run the fog-cannon / road fogger to create fog for suppression of dust at the required places as directed.
- Suitable arrangement of using water for the DSS shall be done by the service provider, while MCL will facilitate in identifying the water source.
- One Composite System (DSS + vehicle) will be provided at each of the above mentioned areas.
• The cost of hiring will be inclusive of:
  ▪ Owning a new DSS and suitable new vehicle including registration, fitness, PUC, road tax clearance, 1st party insurance and other statutory requirement
  ▪ Operation and maintenance of the composite machine,
  ▪ Required manpower:
    o At least one skilled driver with valid license and one semi skilled helper per shift,
    o A team of suitably trained technical personnel each at Talcher and IB Valley Coalfields for prompt maintenance of the Composite System.
  ▪ Fuel (Diesel), lubricant, spare parts/consumables etc. all complete.
  ▪ Health and safety issues of the man and machinery deployed
• Required training for the deployed personnel in the VTC and undergoing through PME are mandatory.

• **Statutory obligations:** To comply all the statutory obligations under various Acts, Rules, Regulations and other laws applicable to mines.
• In case of any accident of the composite system or to the employed personnel including driver(s)/helper(s), MCL will not be held responsible or liable for any payment of compensation to the contractor or to his employed personnel including driver(s)/helper(s).
• All sort of security coverage against theft/ external damages to the composite system will be responsibility of the contractor.
• MCL undertakes no liability if the vehicle/ composite system is damaged, set on fire etc. by any mob or by any person or by accident during the engagement period.
• Contractor should ensure 90% availability of the composite system.

4. **Payment Criteria:**
• Monthly Payment shall be made on hours run of the DSS to be jointly recorded in a logbook.
• Efficient Running of DSS shall be measured from the pressure gauge, flow meter & hour meter attached to the system.

5. **Required Technical Specification of the Composite System:**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Technical Specification Parameters</th>
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<tbody>
<tr>
<td></td>
<td><strong>MIST BLOWER (FOG CANNON) CUM ROAD FOGGER, A FUGITIVE DUST SUPPRESSION SYSTEM WITH MIST BLOWER (AIR BLOWING TYPE HIGH PRESSURE ATOMIZED MIST SPRAY SYSTEM WITH RADIAL THROW 40 MTRS IN THE DIRECTION OF WIND WITH MINIMUM 7.5 KW BLOWER MOTOR, HIGH PRESSURE PUMP 100LPM OR MORE AND PRESSURE OF MINIMUM 12 BAR WITH ELECTRONIC STARTER) WITH ROAD FOGGING DOWNWARD MIST SPRAY ATTACHMENT AND FIRE FIGHTING WATER GUN ATTACHMENT ALONG WITH 12 KL WATER TANK, 25 KVA DIESEL GENERATOR WITH MOUNTING PLATFORM, PIPING, MECHANICAL/ ELECTRICAL/ ELECTRONIC CIRCUIT COMPLETE IN ALL RESPECTS.</strong></td>
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<tr>
<td></td>
<td><strong>(A) DUST SUPPRESSION SYSTEM (DSS):</strong></td>
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<tr>
<td></td>
<td>THE DUST SUPPRESSION MACHINE SHOULD BE AIR BLOWER &amp; MIST SPRAY TYPE TO BE MOUNTED ON TRUCK CHASSIS</td>
</tr>
<tr>
<td>1</td>
<td>THROW RANGE OF THE HIGH PRESSURE ATOMISED MISTING MACHINE SHOULD BE MINIMUM 40 METERS IN THE DIRECTION OF WIND (WITH MINIMUM 7.5 KW BLOWER MOTOR).</td>
</tr>
<tr>
<td>2</td>
<td>THE HIGH PRESSURE PUMP WITH STAINLESS STEEL IMPELLERS &amp; SHAFT SHOULD BE 100 LPM OR MORE WITH PRESSURE OF 12 BAR OR MORE WITH POWER RATING OF 7.5 KW OR MORE WITH PROVISION OF FLOWMETER ON THE INPUT SIDE.</td>
</tr>
</tbody>
</table>
THE MACHINE SHOULD HAVE PROVISION FOR AUTOMATIC PROGRAMMABLE / SETTABLE HORIZONTAL SWING ON MACHINE UPTO 340 DEGREES AND VERTICAL SWING OF 0-50 DEGREES.

DSS MACHINE SHOULD HAVE ELECTRONIC STARTER FOR BLOWER MOTOR & PUMP FOR CONTROLLED STARTING CURRENT OF THE GENERATOR (MINIMUM 25 KVA –WATER COOLED).

STAINLESS STEEL WASHABLE, CLEANABLE & REUSABLE FILTER/ STRAINER OF PROPER MESH SHOULD BE PROVIDED IN THE SYSTEM ON THE INLET OF THE PUMP.

PROVISION FOR ADJUSTABLE/CONTROLLED FLOW SHOULD BE PROVIDED IN MACHINE FOR BLOWER SIDE AS WELL AS FOR ROAD FOGGING.

THE MIST BLOWER SHOULD HAVE MINIMUM 11 NUMBERS OF SUITABLE MISTING NOZZLES FOR ULTRA FINE DROPLETS. THE INDIVIDUAL NOZZLE SHOULD BE OPENABLE, CLEANABLE & NON-CLOGGING TYPE OF STAINLESS STEEL MATERIAL.

DOWNWARD MIST SPRAY ROAD FOGGING SYSTEM OF STAINLESS STEEL WITH MINIMUM 5 NUMBERS OF MISTING NOZZLES TO COVER 7.5 MTR OF ROAD WIDTH IN ONE PASS & FLOW CONTROL CONNECTED TO THE PUMP DESCRIBED IN POINT 3 ABOVE FOR SIMULTANEOUS OPERATIONS OF THE MIST BLOWER & ROAD FOGGING.

FIXED TYPE FIRE FIGHTING ATTACHMENT (CANNON & HOSE WITH DIRECTION CONTROL) WITH MINIMUM 30 METERS THROW SHOULD BE PROVIDED IN THE DSS SYSTEM WHICH CAN BE USED FOR FACE WETTING, MUCK DOUSING & FIRE EMERGENCIES.

(B) GENERATOR:
SUPPLY OF REPUTED MAKE (KIRLOSKAR / CUMMINS OR EQUIVALENT) POWER PACK GENERATOR OF SUITABLE RATING FOR THE ABOVE MACHINE (MIN 25KVA, WATER COOLED)

(C) WATER TANK AND CIRCUIT:
1. SUPPLY OF ROBUST MILD STEEL MINIMUM 12 CUBIC METERS CAPACITY WATER TANK WITH WALL THICKNESS MINIMUM 4 MM, WITH MINIMUM TWO BAFFLES AND THREE FILLING POINTS ON TOP, TO BE MOUNTED ON THE TRUCK CHASSIS.

2. COMPLETE ROBUST WATER CIRCUIT PIPELINES OF MINIMUM 1.5 INCH. DIA NON RUSTING STAINLESS STEEL MATERIAL. ONE VALVE FOR TANK AND THREE SEPARATE VALVES FOR MIST BLOWER, ROAD FOGGER AND FIRE FIGHTING ARRANGEMENT. ALL VALVES TO BE OF BALL TYPE. HOSES FOR THE FIRE FIGHTING ARRANGEMENT.

3. PROVISION OF PRESSURE GAUGE ON OUTPUT SIDE TO SHOW WATER PRESSURE

4. HOUR METER FOR READING ACTUAL HOURS OF RUNNING

5. COMPLETE ELECTRICAL / ELECTRONIC CIRCUITRY FOR THE TOTAL SYSTEM.

6. FULL FUNCTIONAL REMOTE CONTROL

(D) TRUCK CHASSIS:
TRUCK CHASSIS SHOULD BE OF REPUTED MAKE LIKE EICHER, TATA, BHARAT BENZ, ASHOK LEYLAND, MAHINDRA ETC, BRAND NEW (SHOULD NOT BE OLD/ REFURBISHED/ REPAIRED) WITH OEM-APPROVED A/C CABIN AND ALL STANDARD TECHNICAL SPECIFICATION, 10 WHEELED WITH MINIMUM WHEEL BASE 4.88 METERS SUITABLE TO CARRY WEIGHT OF COMPLETE DSS SYSTEM AS PER NIT & ALSO MEETING ALL RTO NORMS (CARRYING CAPACITY 16 TE, GROSS WEIGHT 25 TE) REQUIRED FOR REGISTRATION PURPOSE.

(E) SAFETY DEVICES:
1. MINIMUM STANDARD SAFETY DEVICES LIKE AUDIO-VISUAL ALARM, REAR VIEW CAMERA, FIRE EXTINGUISHER IN THE CABIN, PARKING BRAKES, ETC. MUST BE AVAILABLE.

2. FULL FUNCTION WIRELESS REMOTE CONTROL WITH EMERGENCY STOP SWITCH (HAND HELD-MIN 50 MTR)

3. ELCB (EARTH LEAKAGE CIRCUIT BREAKER) SHOULD BE PROVIDED

(A tentative line diagram of the Composite System is enclosed herewith for reference)
6. REQUIREMENT FROM BIDDER:

(i) Work experience details (work order/ completion certificate etc, date of commencement & completion) of executing the work on hiring mode
(ii) Supply experience details (Supply order/ completion certificate etc.) of fixed DSS and/ or vehicle mounted DSS
(iii) Technical brochure / specification that comply with our requirement as mentioned.
(iv) Offered price / hour (inclusive of all) of operation for undertaking the work on hiring mode.
   a. Detailed Break up of offered price including owning, operating and maintenance cost of each material component, required manpower, fuel & lubricant, spares/ consumables.
   b. Components of manpower (skilled and unskilled category) and fuel for provisioning in escalation
(v) Any other suggestions
LINE DIAGRAM OF DUST SUPPRESSION SYSTEM (NOT TO SCALE)

- Truck Chassis
- Water Filling Points
- Water Tank
- Baffles
- Mist Blower
- Fire Fighting Nozzle
- Blower Fan
- Strainer
- Pump
- Control Panel
- Road Fogging Arrangement
- Nozzles

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→ Water Line
→ Valves (Ball Type)

MOUNTING PLATFORM