



BEML LIMITED
(A Govt. of India Mini Ratna Company under Ministry of Defence)
BEML LIMITED, BELAVADI POST Mysore-570018

Expression Of Interest

EOI is invited from the Reputed Firms for Supply of Engine package for BH240E Electrical Drive Dump Truck

Sl. No.	Description	Last date and Time for submission of EOI (Through e mail only)
01	Supply of Engine package for BH240E Electrical Drive Dump Truck.	Last date : 20 th April 2021 Time : 17 : 00 Hrs E mail id : bemleoi@beml.co.in

2. Guide Lines for submitting the EOI

2.1 The EOI consists of Technical Bid **through e-mode only. (e mail)**

2.2 As a part of Qualification process, Interested Firms needs to submit the Technical Bid along with required documents through e mail (**bemleoi@beml.co.in**) before closing date and time of the EOI.

. **All the documents to be uploaded in PDF format.**

2.3 Documents to be uploaded along with the EOI

1.0 Back ground:

BEML Limited is a leading multi-technology and multi-location company under the Ministry of Defence. BEML is operating its business in three verticals viz., Defence & Aerospace, Mining & Construction and Rail & Metro. It offers high-quality products for diverse sectors of economy, such as coal, mining, steel, limestone, power, irrigation, construction, road building, aviation, defence, metro and railways. It has emerged as the forerunner of heavy engineering industry with a track record of growth and revenues for over five decades.

The company has state-of-the-art manufacturing facilities at Kolar Gold Fields, Mysuru, Bengaluru and Palakkad, all possessing ISO 9001-2015 and ISO 14001 (HSC) certifications. BEML has its own world-class composite R&D establishment for Design & Development of products.

The Company has a nationwide Marketing Network and an International Business Division for Exports activity.

Details of BEML Ltd are available at www.bemlindia.in

2.0 Overview of BEML Capabilities:

BEML Limited, a Central Public Sector Enterprise coming under the Ministry of Defence was incorporated in 1964. Subsequently it became a listed company and is engaged in the design, development and manufacturing in the areas of Mining & Construction, Defence & Aerospace and Rail & Metro equipments.

2.1 Mining & Construction:

BEML Ltd is engaged in the business of Hydraulic Excavators, Bulldozers, Wheel Loaders, Wheel Dozers, Dump Trucks, Motor Graders, Pipe Layers, Tyre Handlers, Water Sprinklers and Backhoe Loaders to customers in the Mining and Construction segments.

BEML has also developed Mining Dump trucks of 150 Ton and 200 Ton class and Excavators of both Hydraulic and Electrical of 180 Ton capacity.

2.2 Defence & Aerospace:

BEML Ltd is engaged in the business of High Mobility vehicle for all terrain operations, Heavy Recovery Vehicle, Pontoon Mainstream Bridge Systems, Crash Fire Tenders, Mobile Mast Vehicle, Engineering Mine Ploughs, Tank Transportation Trailers, Weapon Loading equipment, Armoured Recovery Vehicle, Milrail Coaches and Wagons, ground support vehicles and other products to the Indian and other Armed Forces.

2.3 Rail & Metro:

BEML Ltd is engaged in the business of Integral Rail Coaches, Overhead Inspection Cars, AC/DC Electrical Multiple Units, Stainless steel EMUs, Utility vehicles, Track Laying Equipment, Broad-gauge Rail bus, Treasury Vans, Spoil disposal Units to the Indian and other Railways.

BEML Ltd has also successfully diversified into manufacturing state-of-the-art technology stainless steel Metro Cars for various urban Metro Corporations and enjoys a dominant market share in this segment

3.0 Research & Development:

BEML Ltd has R&D establishment for Design & Development of high tech engineering products for its three verticals. It employs over 300 professionals with high experience and skills spanning a wide range of technology areas.

The R&D establishment has CAD Centre, Fluid-power, Powerline, Structural Engineering & Material Science laboratories and is continuously engaged in New Product Development and upgradation of existing products to meet customer requirements. More than 65% of Company's Sales Turnover is through in-house developed R&D products. The R&D expenditure is around 2 ~ 3% of its turnover.

4.0 International Business Division:

BEML has a sizeable market share in export markets with exports to 68 countries across the globe. Over the years this division has exported over 1200 machines covering all the three verticals.

5.0 Requirements:

BEML has charted out a program to develop 240Ton AC drive Dump truck for mining application. BEML is in the process of design and development of 240Ton electrical dump truck and Engine system is required as a single kit for BH240E electrical drive Dump Truck.

BEML is seeking Engine as complete package for 240Ton electrical drive dump truck from reputed Engine manufactures who are having manufacturing technology and supplied to various Mining and Construction mobile equipment and having their after sales service network in India.

At present the Engine requirement is 1 number for proto dump truck & then estimated supply of 10-12 number per year depending upon market demand.

The supplier should furnish the Information on qualification criteria as per the enclosed **Format A**.

Detailed information sought for Qualification:

FORMAT : A

Sl, No.	Terms of reference	Response (Yes/No)	Details (May use attachments if required)	Remarks
01	Should have been a supplier of Electronic Engine system to global mining OEM's for Dump trucks of 200Ton to 400Ton capacity.			Supplier should indicate YES or NO
02	Willingness to offer Latest Emission norms diesel engine with flywheel, flywheel housing, PTO, sump, AC Compressor drive with suitable mounting provision for compressor, etc., suitable for engineering on BEML equipment. In case the offered engine with flywheel, flywheel housing, PTO, sump etc, is not suitable in as is condition, development of any additional components and scope of supply of additional items will be decided mutually to meet BEML requirement. The final acceptance of additional components and the extent of modification required are solely at the discretion of BEML.			
03	Should have experience in working with Mining machinery OEM's in design, development and Manufacture of Engine for mining Dump trucks.			
04	The supplied Engine systems should have worked on 200Ton Dump trucks and above capacity on a global basis satisfactorily for more than Five years as on the Date of EOI.			Documentary evidence to be provided
05	To have capability to develop and supply of Engine system comprising Mechanical & Electronic systems compatible with OEM Dump Trucks & Drive system for better performance, ease of assembly, serviceability in line to global standards.			
06	The Engine system is fully integrated electronically controlled monitoring system & real time self diagnostic features with built in protections & capable to monitor operators and sensors input for optimum engine performance. A suitable electronic tool (Laptop) loaded with compatible software and all related accessories shall be provided.			
07	Engine system package shall be liquid cooled, direct injection 4 stroke diesel engine not less than 1700Kw net power at 1900rpm according to ISO9249 with latest technology and tools to suit mining environmental conditions. The complete Engine system is required as a single kit which consists of			

	<ul style="list-style-type: none"> • Drive arrangement (Flex plate/Flywheel housing) to suit global AC drive system Alternator • Air intake, Exhaust, Cooling system /CAC, Fuel system, Fan drive & Lube system for better overall performance • Latest integrated Electronic engine control & monitoring system for better performance, control & protection function for critical parameters of the Dump Trucks • Electrical system having starter, charging alternator & Wire Harness/connector for complete system & communication with external system • Facility to mount Hyd. pump drive, Air condition compressor & Hot water outlet • PRP Kit items consist of heavy duty Air cleaner & piping's, Cooling system including Fan, heavy duty Radiator with Hyd. cooler & piping's, 2 stage Fuel filters/water separator & fire retardant hoses, adopter, NRV, Fuel cooler & throttle pedal and other items 			
08	The supplier shall share all necessary technical documents including 2D drawings and 3D models.			
09	Supply of spares & consumables necessary for operation of the equipment for a minimum period of 15 years from the date of last supply shall be ensured.			
10	The supplier shall provide training to BEML engineers/ Customer service personnel for trouble shooting & maintenance of the engine			
11	Should have supplied Engine system meeting the relevant international and DGMS (<i>Directorate General of Mines Safety</i> - the Indian Government Regulatory agency for safety in mines) safety standards.			
12	Engine system should provide superior truck performance for continues operation with higher top speeds, better grade ability with less parasitic losses. The Engine control system should provide optimal operational stability and performance. Should have better fuel system for better performance at less Specific fuel consumption, Have better Torque & speed / performance curve in order to Dump Trucks to work at rigorous mining conditions & higher altitudes/temperature.			

13	Should have suitable Cylinder/bore & arrangement for better compression ratio & power generation at better balanced with vibration damper for less torsional vibrations & less noise			
14	Should have Engine system to meet Latest Emission norms meeting the relevant international and DGMS (<i>Directorate General of Mines Safety</i> - the Indian Government Regulatory agency for safety in mines)			
15	Should have other feature like compatible to GSM/GPRS, Cold start, Prelube system, Auto idling setting system & other advance features			
16	The supplier should not have been debarred / blacklisted by Government of India / any State Government in India / Central or State Government undertaking and shall submit an undertaking signed by authorized signatory of the supplier.			Undertaking to be provided in their letterhead
17	The firm should be possessing certified quality systems such as ISO 9001, ISO 14000 or any other relevant system and shall submit the Quality Certificates for the same.			Documentary evidence to be provided
18	Whether supplier supplied diesel Engines for use on Mining equipment.			If YES, Indicate number of engines manufactured and supplied in details column and documentary evidence to be provided
19	Engine manufacturer has to extend full support and co-operation during design, at all stages of Dump Trucks build up, in-house testing & field trials along with Training, Documentation support etc.			
20	Technology should be proven in nature and the oldest machines should have clocked more than 50,000 operating hours.			
21	Willingness to work jointly with Design team from BEML for Design, Development and optimization of Electric Dump Trucks at customer site			

6. Contact person details at BEML Ltd., with respect to the Eoi:

For technical clarification, kindly contact following official:

Shri. Sudarshan K S
General Manager, (R & D)
BEML Ltd, Belavadi post
Mysuru – 570 018
Karnataka State,
INDIA Phone: +91 821-2402 344

Email: sudhiks.gw@beml.co.in (for technical clarifications only)

Interested suppliers shall e mail their interest by providing the details of their organization with credentials by providing the time line to following address through email only (**bemleoi@beml.co.in**) on or before 20-04-2021, Time: 5 PM.

Shri. SUNIL KHARAD
General Manager, Corporate Materials
BEML Ltd, BEML Soudha
No 23/1, Sampangiram Nagar
Bengaluru – 560 027
Karnataka State,
INDIA Phone: +91 80 22963 253

7. General Instructions /Terms and Conditions:

1. This is only an invitation for Expression of Interest. No payment will be made to the bidder / responder for any expenses incurred by bidder for responding to offer.
2. The bidders are requested to seek clarifications if any from the above designated contacts.
3. Upon receipt of EOI from the interested companies, any clarification sought by BEML must be submitted within the stipulated period.
4. Companies who have been debarred / black listed by Government of India or any State Government in India **on the Closing date of EOI** need not submit this EOI.
5. BEML Limited reserves the right to accept or reject any EOI or the whole process without assigning any reason what so ever to the bidders.
6. Prospective supplier may also be required to enter into a long-term Supply Agreement for Drive system spares and meet the expected delivery requirements and other Terms & Conditions of RFP / Tender to be issued by BEML on cost basis.

7. Prospective supplier shall provide firm and irrevocable commitment to provide product support in terms of materials, spares, maintenance etc. for a minimum period of 15 years from the date of last supply to BEML.

8. The suppliers who are shortlisted based on the Eol submitted will be contacted for selection of suitable Engine system. Upon suitability and technical qualification separate tender will be floated for supply of Engine system.

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