

**M/s. BEML LIMITED,
BEML SOUDHA,
SAMPANGIRAMNAGAR,
BENGALURU - 560002**

**Invitation for Expression of Interest (Eoi)
For
Joint Venture or Teaming Agreement
with BEML for Overhauling & Manufacturing of V46-6 Engine**

Reference No:	GMBD(Def)/Engine ARV/EOI/2022/02 dt 20.07.2022
Due closing date:	22.08.2022 (22nd August 2022), Time : 17 :00 Hrs
Eoi response mail ID:	bemleoi@beml.co.in
Contact for	Mr. N. Ramesh
Clarifications:	General Manager – Business Development (Defence) gmbd@beml.co.in +91 7760999807

Issued by
M/s. BEML, Limited
(Under Ministry of Defence)

1.0 INTRODUCTION:

BEML Limited is a leading multi-technology and multi-location company under the Ministry of Defence 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 Defence, aviation, coal, mining, steel, limestone, power, irrigation, construction, road building, metro & railways. It has emerged as the forerunner of heavy engineering industry with a track record of growth and revenues for over five decades. For further details please visit our website www.bemlindia.in

BEML, Engine Division manufactures heavy duty Diesel Engines for application on a wide variety of Earth Moving, Mining and Construction Machinery and Defence Equipment. Apart from these, the engines are also offered for other industrial applications as well as diesel generator sets. BEML Engines are used on Bull Dozers, Dump Trucks, Motor Graders, Wheel Loaders, Pipe Layers, Hydraulic Excavators, Loading Shovels, C Crane, Aircraft Towing Tractors, Backhoe Loaders, Water Sprinklers and Heavy-Duty Trucks. These Engines are capable of operations over a wide terrain right from sea level conditions to high altitude (19,000ft) as well as under sub-zero conditions.

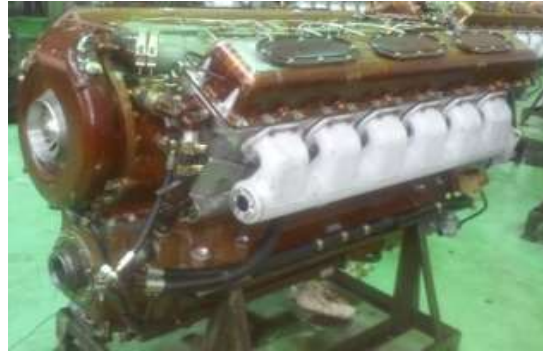
2.0 V46-6 ENGINE SPECIFICATION

- Type : 12 Cylinder, 4-Stroke, V-60, Supercharged, Water cooled, DI Diesel
- Designation : V46-6
- Gross HP : 780 hp @ 2000 rpm
- Torque : 3090 Nm @1300 to 1400 rpm
- Bore x Stroke : 150 x 180 mm
- Starting System : Compressed Air
- L x W x H : 1480 x 896 x 902 mm
- Dry Weight : 980 kg

3.0 BRIEF DESCRIPTIONS:

- This V46-6 Engine is used on Armoured Recovery Vehicle ARV WZT-3. In this Engine Supercharger is used for the intake air booster. This Engine is not having flywheel assembly and starter motor and directly engaged with transmission coupling. The Engine is having dry oil sump, separate oil tank setup is provided in the equipment and the oil is cooled by separate coolers.
- The Engine is need to start by air starter, separate Air reservoir tank is available in the vehicle and the pressurized air is passing to combustion chamber thru distributor

- Lubricating filters is not mounted on the Engine, separate arrangement to be made in the vehicle to support oil filters and required piping



4.0 PROPOSED SCOPE:

BEML invites global EoI from engine manufactures for of V46-6 engines either through a joint venture or through teaming agreement with BEML. the following support from the bidder would be required in case of a JV or teaming agreement:

4.1 The bidder should be in possession of all the technical documents for the following

- a) Sub-assembly drawing
- b) Engine component drawing
- c) Overall engine general assembly drawing
- d) Bom of v46-6
- e) Engine shop manual
- f) Engine parts book
- g) Engine performance curves

4.2 Technical Standards:

- Engine testing standards
- Material standards (for all the parts)
- Equivalent Indian standards

4.3 Quality Engineering documents/Standards:

4.4 Jigs & Fixtures

4.5 Engine test cell facilities

4.6 Training

Training for the disassembly and assembly procedure / demonstration for BEML personnel's

5.0 QUALIFYING CRITERIA

Question	Response	Remarks
Party shall be an established Engine manufacturer with the capability to manufacture V46-6 engines in the range specified.		<i>Mandatory</i>
TECHNICAL SUPPORT: Party shall indicate willingness to manufacturing, and overhauling of V46-6 engine unit either enter into joint venture (JV) or a Teaming Agreement for compete	Yes/No	
Participant Profile: The party shall be a reputed Engine manufacturer and shall have an experience of supplying for not less than 10 years. Party shall have manufactured / overhauled and supplied not less than 200 no's of V46-6 engine that is being offered till date. Engines may have been supplied to countries in other regions globally.		<i>Mandatory</i>
Willingness to take system integration, interface engineering and overall performance responsibility for Engines after Overhauled /manufactured in BEML.	Yes/no	

6.0 GENERAL GUIDELINES:

The following details should be submitted along with EOI

- a) Company profile, giving details of current activities and management / personnel structure including evidence of incorporation.
- b) Highlight the infrastructure available / modalities to take up the project.
- c) Any other relevant information considered necessary for successful implementation of the proposed scope of work.

7.0 EMERGING OPPORTUNITIES

- BEML have already supplied around 350 Nos of ARV to Indian Army, engines fitted in ARV are due for OH
- Requirement of New engines around 300 Nos exists to be manufactured and supplied along with ARVS

8.0 BENEFITS OF PARTNERING WITH BEML

BEML Ltd has an extensive marketing network and service centers. BEML has good manufacturing, testing and strong engine R&D presently working on upgradation, technology observation, emission, certification, indigenisation of water and air-cooled engines for Mining & Construction equipment and High Mobility Vehicles for defence application.

9.0 SUBMISSION OF THE EOI

The EOI response to be submitted online through BEML E-mail: bemleoi@beml.co.in, stating compliance to each point, along with the enclosures to be forwarded by interested reputed firms, in e mail subject "Expression of Interest for Joint Venture or Teaming Agreement with BEML for Overhauling & Manufacturing of V46-6 Engine"

For any Technical Clarifications, Contact

Mr. N. Ramesh

General Manager – Business Development (Defence)

gmbd@beml.co.in

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