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TECHNICAL SERVICES SECTION

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**EXPRESSION OF INTEREST (EOI) NO. EOI/DTS/DOC/01/2023-24**

**DATED 08.12.2023**

**FOR**

**SUPPLY AND RETROFIT DIESEL OXIDATION CATALYST IN EXISTING  
CATERPILLAR ENGINES OF OIL'S DRILLING RIG**

**1.0 PREAMBLE:**

**1.1 OIL INDIA LIMITED (OIL)**, a Government of India Enterprise under the Ministry of Petroleum and Natural Gas, is a premier upstream Maharatna E&P Company engaged in the business of Exploration, Production & Transportation of Crude Oil & Natural Gas as well as production of LPG. It's Field Headquarters (FHQ) is at Duliajan, Dibrugarh, Assam (INDIA) and corporate office is in Noida, UP (INDIA). OIL's operations are largely based in the North-Eastern parts of India particularly in Assam, Arunachal Pradesh, Nagaland, Mizoram and Tripura. Additionally, OIL operates in Rajasthan, Andhra Pradesh, Andaman and Kerala-Kankan and also has overseas presence.

**1.2 OIL** has set for itself an ambitious target of transforming itself to a 'Net-Zero' emission company by 2040 through a range of initiatives, including adopting cleaner energy sources, investing in renewable energy projects, and implementing advanced technologies to minimize greenhouse gas emissions.

**2.0 OBJECTIVE:**

**2.1** Pursuant to **OIL's** net zero goal by the year 2040, adoption of new technologies is being planned at Drilling Installations for reducing greenhouse gases emitted from engine exhausts. In this regard, implementation of exhaust aftertreatment technology known as **Diesel Oxidation Catalyst (DOC)** has been identified for the said intent.

Diesel Oxidation Catalysts (DOC) are designed specifically for diesel engines and equipment to reduce toxic components from exhaust gas. The DOC is a flow through of a honeycomb substrate coated with precious metal like platinum, packaged in a stainless-steel container which is

installed at the exhaust of the engine. As exhaust gas from the engine passes through the catalyst, a chemical reaction takes place, oxidizing carbon monoxide (CO), hydrocarbon (HC) and soluble organic fraction (SOF) of particulate matters to CO<sub>2</sub> and water.

### **3.0 BROAD SCOPE OF WORK:**

- 3.1** Supply of 04 (Four) Nos. of Diesel Oxidation Catalysts (DOC), retrofit and commissioning in the Exhaust system of existing Caterpillar Engines at Drilling Rig premises. Engine details are given in **Point 4.0**.
- 3.2** All the consumables, tools including manpower required for retrofitting of the DOC shall be arranged by the suppliers.

### **4.0 ENGINE DETAILS:**

MAKE: CATERPILLAR  
MODEL: 3512B – 1000 RPM  
RATED POWER: 933 KW AT 1000 RPM  
TURBOCHARGED, AFTERCOOLED  
APPLICATION: POWER GENERATION IN DRILLING RIG  
FUEL USED: HSD-BS VI  
**MAXIMUM ALLOWABLE SYSTEM BACK PRESSURE: 6.7 KPA**

Note:

The present exhaust stack height of caterpillar engine is 9.31 meter from Ground Level which includes Exhaust Muffler with spark arrestor and scaffoldings for vertical placement (kindly refer attached photographs as **Annexure-I** for better clarity about the exhaust of the above engine).

Outer Diameter of the Exhaust pipe: 355.6 MM

Thickness of the exhaust pipe: 3 MM

The exhaust muffler is placed on the frame (just above the top of the roof of the canopy) made from Channel ISMC 127 MM and Scaffolding is fixed on the frame.

Frame is fixed on the skid of the power pack with the help of Channel ISMC 127 MM from both side of the skid.

### **5.0 TECHNICAL NOTES:**

- 5.1** Diesel Oxidation Catalysts (DOC) shall not create back pressure to the exhaust exceeding the allowable limit of the Engine as mentioned in **point 4.0**.
- 5.2** It shall not alter equipment configuration and shall be space effective to install existing muffler and exhaust stack of the engine.
- 5.3** Due to frequent Rig up and Rig down operation of Drilling Rig, DOC shall be easily configurable to the Engine Exhaust.

### **6.0 SUPPORTING DOCUMENTS/ INFORMATION:**

- 6.1** Interested Service Provider / vendor / supplier shall provide documentary evidence of providing similar product and proof of retrofitting in similar types of **Diesel driven Caterpillar Engine**.
- 6.2** Interested Service Provider / vendor / supplier shall provide Stack gas emission reports as per the CPCB standard from an NABL accredited Laboratory for comparison of CO, NOx, PM etc. before & after induction of the DOC.
- 6.3** Service Provider / vendor / supplier shall provide technical literature, brochure, catalogue, and dimensional drawing of the product.

## **7.0 GENERAL NOTES:**

- 7.1** All documents submitted along with the EOI must be self-certified by the Service Provider / vendor / supplier and should be clear & legible.
- 7.2** The EOI shall not be considered in case of submission of any misleading/false representation by the Service Provider.
- 7.3** **OIL INDIA LIMITED** reserves the right to ignore any or all EOIs and to curtail/enhance the scope of work stated above, if required, without assigning any reason thereof.
- 7.4** Based on the EOI(s) received against this invitation, **OIL** intends to invite bid through formal Tendering process specifying detailed Scope of Work & BEC/BRC for award of contract.
- 7.5** **OIL** reserves the right to:
- (a) Accept or reject any/all EOIs submitted by parties.
  - (b) Cancel the EOI(s) process at any time without any liability & assigning any reasons thereof.
- 7.6** **OIL** reserves the right to assess any Service Provider's / vendor's / supplier's capability and capacity using in-house information and by taking into account other aspects to accept or reject any or all EOIs received without assigning any reasons.
- 7.7** During the evaluation, the Parties may be asked to submit clarifications / additional information, if any, including original documents in support of the details provided by them in the EOI.
- 7.8** Incomplete EOI(s) or EOI(s) not supported by requisite documents shall not be considered.
- 7.9** Decision of **OIL** in evaluation of the EOI(s) will be final and binding on all.

## **8.0 SUBMISSION OF EOI:**

- 8.1** Interested Service Provider / vendor / supplier having relevant experience and expertise as above are invited to submit their EOI(s) at e-mail id: [pranjalsarma@oilindia.in](mailto:pranjalsarma@oilindia.in) and [avinandan\\_sandilya@oilindia.in](mailto:avinandan_sandilya@oilindia.in) within 08.01.2024 up to 15:30 Hrs (IST), followed by hard copies of the same in sealed envelopes super-scribing **"EOI FOR SUPPLY AND RETROFIT DIESEL OXIDATION CATALYST IN EXISTING**

**CATERPILLAR ENGINES OF OIL'S DRILLING RIG"** through courier/post to the following address:

**CHIEF GENERAL MANAGER (DRILLING SERVICES)-HoD**

DRILLING SERVICES DEPARTMENT

NEW INDUSTRIAL AREA

OIL INDIA LIMITED

DULIAJAN-786602, ASSAM, INDIA.

Website: [www.oil-india.com](http://www.oil-india.com)

Service Provider(s)/Vendor(s) may also upload their offer in their FTP server/File sharing website (portal) and the link(s) may be provided to us at our e-mail within the above specified period.

**8.2** In case, the above-mentioned date happens to be a non-working day for OIL in Duliajan due to Bandh/holiday or for any other reasons, EOIs shall be received up to the next full working day till 15:30 Hrs. (IST) of 09.01.2024 and opened accordingly. However, OIL shall not be responsible for any consequence arising out of delay in receipt or non-receipt of EOIs.

## Annexure-I

