General Manager (INDEG)

INDEG Department

Oil India Limited
Duliajan-786602, Assam
(Email ID : indeg@oilindia.in)

Ref: INDEG/OIL/EOI/07/572/Phase I-XVII - 2024-25 dated 23.04.2024

Honourable Prime Minister has said, "Aatmanirbhar Bharat is not about being self-contained or being closed to the world, it is about being self -sustaining and self-generating.

In order to propagate above views of Honourable Prime Minister, “Aatmanirbhar Bharat Abhiyyan” has been launched. Oil India Limited (OIL) is committed to take forward vision given in “Aatmanirbhar Bharat Abhiyyan” for Import substitution of items required by Oil India Limited (OIL).

Interested companies are requested to send their Expression of Interest with all documentary evidence for the items listed herewith as per format attached to INDEG Department of OIL at Email ID: indeg@oilindia.in.

Development orders will be placed for the items, if found suitable as per OIL’s Development order policy as uploaded in our website: www: oil-india.com >>Flagship program.

Vendors may send their Expression of Interest by 30.06.2024.

(Please type on your Letter Head)

Ref. No……. Date :

To
Chief General Manager (INDEG)
INDEG Department
Oil India Limited
Duliajan-786602
Assam
(Email ID : indeg@oilindia.in)

Expression of Interest

1. Company Details

1	Company Name	
	Whether manufacturer. If not, whether dealer, distributor etc.	
2	Location	
3	Address	
4	Contact Person	
5	E-mail ID	
6	Mobile/Cell Phone No	
7	Product/Service Proposed for Development	
8	Quantity Offered for Field Trial (Based on field requirement, actual quantity to be decided)	
9	Delivery Schedule	
10	Estimated Price of the Product / Unit/service	
11	Have you supplied this item to Indian Oil & Gas Companies (names of companies)	

2. Details with copies of relevant documents

1	Details of infrastructure available
2	Manpower details
3	Equipment, Machineries & testing details available
4	Existing product/service details including the offered items/services
5	Copy of last two years Audited Balance Sheet of the Company
6	Copy of company Incorporation Certificate along with Memorandum of Association (MOA) / Articles of Association (AOA) OR Copy of partners hip deed in case of partnership company
7	Copy of GST Registration Certificate
8	Copy of PAN Card
9	Copy of MSME Certificate, if any
10	Copy of NSIC Certificate, if any

Name :……..…….. Signature …… Designation……

Import Substitution Items List

Sl. no.	ITEM DESCRIPTION
1	CROME CASING PIPES
2	CHROME TUBING PIPES
3	DRILL PIPES
4	HEAVY WEIGHT DRILL PIPE
5	DRILL COLLARS AND LIFTING PLUG
6	DRILLING STABILIZERS
7	DRILLING/ WORKOVER HANDLING TOOLS --- ELEVATORS, TONGS, SLIPS etc.
8	POTASSIUM FORMATE
9	SOLID CONTROL EQUIPMENT --- MUD CLEANER/ DEGASSER/ CENTRIFUGE/ LINEAR MOTION SHALE SHAKER
10	SUCKER ROD PUMP (SRP) AND ITS ACCESSORIES
11	SRP INSERT PUMP
12	ETHYL MERCAPTAN
13	LOW SHEAR VELOCITY FLUIDS/POLYMERS
14	EMD CHEMICAL DOSING PUMP, RECIPROCATING PUMP
15	HSP 20/40, ISP 20/40, ISP 30/50 MESH
16	PIG TRACKER/TRANSMITTER
17	PIPELINE LOCATOR
18	LOGGING CABLES
19	TRI CONE ROLLER DRILLING BITS OF VARIOUS SIZES
20	11"OD STANDARD REVERSE CIRCULATING JUNK BASKET & 7.7/8" OD REVERSE CIRCULATING JUNK BASKET
21	PDC DRILL BITS OF VARIOUS SIZES
22	FISHING TOOL; 6.5/8 INCHES OD JUNK SUB FOR OPERATION INSIDE 8.1/2 INCHES HOLE
23	IMPRESSION BLOCK FOR 4.5 INCH OD , 5.0 INCH OD, 9.625 INCH OD & 13.375 INCH OD CASING
24	PNEUMATIC SPINNER
25	5.1/ 2" PREMIUM THREADED CASING (GRADE: N80 & GRADE P110)
26	CASED HOLE LOGGING UNITS WITH TOOLS AND ACCESSORIES ALONG WITH INSTALLATION, COMMISSIONING AND TRAINING
27	WIRELINE MAST UNIT, INCLUDING TRAINING AND INSTALLATION& COMMISSIONING
28	OIL WELL EXPLOSIVES : (I) 2-1/8 INCH TUBING CUTTER ALONG WITH DETONATOR AND HARDWARE ACCESSORIES (II) 1-9/16 INCH TUBING PUNCHER/ CIRCULATION CHARGE & HARDWARE ACCESSORIES
29	OIL WELL EXPLOSIVES : EXPLOSIVES FOR BAKER PRESSURE SETTING TOOLS : POWER CHARGE, PRIMARY IGNITOR & SECONDARY IGNITOR
30	PROCUREMENT OF OIL WELL EXPLOSIVES USED IN EXPLORATION AND PRODUCTION OF HYDROCARBON (I) DEEP PENETRATION CHARGES (II) RESISTORIESS DETONATOR ASSY, (III) DETO CORD 80 HMX NYLON LS 1.4S (IV) 54 MM STRIP CARRIER, 6SPF, 12 FT/3 M LONG (V) DETOCORD /CHARGE CLIPS (VI) TANDEM CONNECTOR ,2.1/8" STRI P CARRIES (VII) SPLICE BOOT FOR LEAD WIRE (VIII) DETONATOR CORD RETAINER (IX) 53.975 MM (2.1/8") OD FIRING HEAD ASSY (X) NUT & BOLT FOR CONNECTING STRIP (XI) NUT & BOLT FOR CONNECT TANDEM(XII) DETO CORD END SEAL (100

	NOS./PKT) (XIII) 2.1/8" CHARGE TIGHTENING WRENCH
31	27.1/2" (698.50 MM) ROTARY TABLE
32	7.1/16" X 10 M DOUBLE RAM BOP WITH ACCESSORIES
33	13.5/8" X 10 M SINGLE RAM BOP WITH ACCESSORIES
34	3.1/16" X 10 M FLEXIBLE STEEL HOSES FOR CHOKE MANIFOLD 3.1/8" X 5 M FLEXIBLE STEEL HOSES FOR CHOKE MANIFOLD
35	2.1/16" X 5M - SS FLEXIBLE STEEL HOSE 3.1/16" X 10M - SS FLEXIBLE STEEL HOSE 3.1/8" X 5M FLEXIBLE STEEL HOSES
36	THERMAL WELLHEADS FOR 7" AND 9.5/8" CASING COMPLETION WITH INSTALLATION & COMMISSIONING
37	HOSE VIBRATOR
38	ROTARY HOSE, DRILLING IN ASSORTED LENGTH
39	2.34 MM (0.092") PIANO WIRELINE (WELL MEASURING LINE)
40	STATIC GEL STRENGTH ANALYZER
41	ELECTRONIC RESERVOIR PRESSURE AND TEMPERATURE MEASURING GAUGE.
42	AUTOMATIC DISTILLATION APPARATUS
43	FT – IR SPECTROPHOTOMETER
44	RHEOMETER
45	350 SHORT TON DRILLING HOOK & ELEVATOR LINKS (250 SHORT TON, 350 SHORT TON AND 500 SHORT TON)
46	DIGITAL ACOUSTIC LIQUID LEVEL MEASURING CUM DYNAMOMETER EQUIPMENT (ECHOMETER)
47	CROSS OVER, PREMIUM BOX X API EUE & PUP-JOINT, 2.7/8", PREMIUM IN ASSORTED LENGTH
48	GEOLOGICAL THIN SECTION PREPARATION UNIT COMPRISING OF CUTTING, VACUUM IMPREGNATION, GRINDING AND POLISHING EQUIPMENT AND CONSUMABLES.
49	POLARISED MICROSCOPE
50	PONY DRILL COLLAR
51	PREMIUM TUBING
52	37.1/2” ROTARY TABLE
53	AIR GAS PERMEAMETER
54	DOUBLE BLOCK AND BLEED ISOLATION PLUG
55	GAS CHROMATOGRAPH
56	LOW TO MODERATE TEMPERATURE CEMENT RETARDER
57	HIGH TEMPERATURE FLUID LOSS CONTROL CEMENT ADDITIVE
58	XCD-POLYMER
59	XC-POLYMER (PREMIUM)
60	POLY ANIONIC CELLULOSE-REGULAR
61	POLY ANIONIC CELLULOSE-SUPER LO
62	JUNK SUB 5.1/2 INCH & 7 INCH
63	13.5/8-INCH X 10000 PSI ANNULAR BOP
64	13.5/8-INCH X 10000 PSI Double RAM BOP.
65	CT REELS
66	SUPER FISHING JAR
67	DRILLING JAR

68	OVERSHOTS
69	SLAMMER LOGGING CABLES
70	3” LEFT HAND KELLY
71	MULTI ELEMENT ANALYZER
72	HIGH PERFORMANCE EP LUBE
73	MERCURY FREE PVT SYSTEM
74	SURFACE MEMORY GAUGE
75	ACCESSORIES OF LOGGING CABLE
76	DOWNHOLE PRESSURE TEMPERATURE GAUGE
77	REAL TIME KINEMATIC DIFFERENTIAL GLOBAL POSITIONING SYSTEM
78	FLOW ASSURANCE SOFTWARE
79	SEISMIC SURVEY DESIGNING AND MODELLING SOFTWARE
80	LOW TO MODERATE TEMPERATURE FLUID LOSS CONTROL CEMENT ADDITIVE
81	HIGH TEMPERATURE CEMENT RETRADER
82	CEMENT FRICTION REDUCER
83	ISOTOPE RATIO MASS SPECTROMETER
84	FISHING TOOL – 6.75” OD , AXIAL VIBRATIONAL ,SHOCK ABSORBING TOOL 8” OD , AXIAL VIBRATIONAL ,SHOCK ABSORBING TOOL
85	TUBING STRIPPER
86	NANO-GRAPHENE BASED LUBRICANT
87	TUBING RETRIEVABLE, SURFACE CONTROLLED, SUB-SURFACE SAFETY VALVE (TR-SCSSSV) WITH ACCESSORIES
88	6 1/2" FISHING BUMPER SUB
89	CORE DRESSER
90	CORE PLUG DRILLING EQUIPMENT
91	CIRCULATING OVERSHOT (FISHING TOOL)
92	REVERSE CIRCULATING JUNK BASKET - (FISHING TOOL)
93	METAL MUCHER JUNK MILL - (FISHING TOOL)
94	CORE FLOODING SYSTEM
95	3.1/2 INCH OD DOWN HOLE MUD MOTOR
96	JAR INTENSIFIER (FISHING TOOL)
97	3. 3/8 - 3/5” TAG PERFORATION CHARGES AND ACCESSORIES - EXPLOSIVES
98	2 1/8” UNIPHASE THROUGH TUBING PERFORATION CHARGE AND ACCESSORIES - EXPLOSIVES
99	2.7/8" MUD MOTOR
100	DOUBLE PLUG CEMENTING HEAD
101	ROTARY TAPER TAP (FISHING TOOL)
102	CEMENTING UNIT
103	HOT TAPPING UNIT
104	DRILLING SIMULATOR
105	WELLHEAD SAMPLING KIT
106	SPEAR (FISHING TOOL)
107	ECHOMETER

108	4" REVERSE CIRCULATING JUNK BASKET- FISHING TOOL
109	2” AND 2 5/8” DRILL COLLAR SEVERING TOOL (DCST) EXPLOSIVES
110	WELL SERVICING PUMP PACKAGE FOR WORKOVER OPERATION
111	DIE COLLAR - FISHING TOOL
112	PACKER MILLING & RETRIEVABLE TOOL - FISHING TOOL
113	DRILL PIPE SPINNER
114	DRILL COLLAR ELEVATOR
115	TORQUE MASTER
116	LT-OSD - specialized multicomponent chemical formulation that is highly crude specific and is to be designed to effectively separate water from the crude oil emulsion when the curing temperature inside the Emulsion Treater (ET) vessels is 45° C and below. LT-OSD is categorised as LT-OSD: Type I and LT - OSD:Type – II depending on their performance on different type of emulsion characteristics in various oilfields of upper Assam.
117	**Enzyme** used for wellbore clean up, perforation zone clean up and stuck pipe removal jobs by removing filter cake in water base mud / well completion fluid. **Bio-surfactant** used along with Enzyme for wellbore clean up, perforation zone clean up and stuck pipe removal jobs in water base mud / well completion fluid.
118	Casing Clamp for 5.1/2” , 7” & 9.5/8” casings.
119	CMC-Low Viscous Grade (LVG)
120	Pregelatinized Starch (PGS)
121	Magcoasphasol (MGP)
122	2 Inch OD Through Tubing Scallop Hollow Carrier Spiral Perforating Gun System & Accessories (Explosives and Hardware)
123	13.5/8" x 5000PSI W.P. Double studded Double Pack off Adapter Flange as per API SPEC 6A
124	11" x 10000 PSI W.P. Double studded Double Pack off Adapter Flange as per API SPEC 6A
125	POTASSIUM SULPHATE
126	ANTI-SETTLING CEMENT ADDITIVE
127	GAS BLOCK CEMENT ADDITIVE
128	POLYAMINE
129	SODIUM FORMATE
130	LEFT HAND DRILL PIPE
131	BLADED JUNK MILL
132	ROTARY WASH OVER SHOE, WASH OVER PIPES AND DRIVE SUB
133	FLAT BOTTOM MILL
134	TAPER MILL
135	7.1/16" X 10 M ANNULAR BOP
136	7.1/16" X 5 M ANNULAR BOP
137	SHORT PIN TAPES (LEFT HAND):

138	90 T TUBING SWIVEL
139	7.1/16" X 5 M DOUBLE RAM BOP WITH ACCESSORIES
140	7.1/16" X 5 M SINGLE RAM BOP WITH ACCESSORIES
141	FULL OPENING SAFETY VALVE (FOSV)
142	CUP TYPE TESTER
143	TEST PLUG
144	JAR TESTER
145	MUD PUMP PRESSURE SYSTEM
146	X RAY DEFRACTOMETER
147	SHOCK SUBS
148	TONG LINE PULL AND LOAD CELL ASSEMBLY
149	INTERNAL CASING CUTTER
150	BATTERY OPERATED DIGITAL PUMP STROKE COUNTER SYSTEM
151	0.108" SLICKLINE
152	PREMIUM CONNECTION VACUUM INSULATED TUBING & CROSSOVER (VIT)
153	OSD Type-I: General Description of the item: Oil Soluble Demulsifier (OSD: Type - I) is a crude specific formulation which is used for breaking water- in- crude oil emulsion. **PHYSICAL PARAMETERS** I. **Appearance:** The product should be completely homogeneous, free flowing liquid between temperatures 5 Degree C and 45 Degree C. It should be free of any insoluble matter, and the product should smell typically like a petroleum distillate and should not have any other obnoxious smell. Moreover, the bidder has to use the same solvent which has been used in the approved Advance Sample, for manufacturing the bulk supply. II. **Solubility**: Should be soluble in dry crude oil, and in water-in-crude emulsions containing between 5 % to 60 % (+/- 2 %) water. III. **Compatibility:** The product should be non-corrosive; it must have pH between 6 & 8, and must be compatible with all materials of construction, including alloys. IV. **Thermal Stability**: The product should be stable and effective even if the fluid treated with this product is exposed to a temperature of 70°C for up to 3 hours. V. **Shelf Life**: 12 months (Minimum) from the date of bid closing (for Advance Sample) / from the date of dispatch (for bulk supplies against any order) VI. **Flash Point:** 50 Degree C minimum (PMCC Method).
154	CONTINUOUS CONTROL LINE ALONG WITH ACCESSORIES FOR DOWNHOLE CHEMICAL INJECTION SYSTEM

155	**<u>Oil Evacuation & Filling Station</u>** The Oil Evacuation & Filling Station is a system comprising of a vacuum pump, circulation pump, a reservoir for oil, and interconnected hoses and valves to control the flow mounted on a portable cart designed to evacuate air out of, and fill oil into a logging tool under vacuum. The Oil Evacuation & Filling Station is a system designed to evacuate air out of, and fill oil into a logging tool under vacuum. It is used so that the logging tool is completely free from air, moisture, impurities when oil is filled into it. The system consists of the following main components: 1. An oil reservoir/tank approx. 20 litres. 2. 0.33 HP Vacuum pump running on 220Vac, 50Hz Supply 3. 0.5 HP Variable speed DC circulation pump controlled by a Motor Controller running on 220Vac, 50Hz Supply 4. A portable cart on which the system is mounted. 5. Transparent Hoses, unions, and valves to control flow as per usage rated for working pressure of 400 PSI or higher. 6. Power supply etc. 7. Inline filters to filter out any impurities in the oil. The system has a fill line connected to the pump, which takes suction from the oil reservoir and fills up the tool through one port, and a return line which flows the oil out of the second port of the tool and into the reservoir. Both lines have inline filters so that the oil entering the tool and the reservoir are free from impurities. The system is designed such that the vacuum is created in the tool before and during the filling so that the oil in the tool is devoid of any air. The system is also able to intake oil into the reservoir for refilling from one of its lines. Another feature of the system is to be able to clean and de-gas the oil present in the reservoir by circulating it in a closed loop through the filters in a vacuum state without the tool being connected to the system. A combination of hoses, unions, tees, tubes, valves, and quick connects in the system controls the flow of oil depending on whether only vacuum, only circulation, a combination of both, or oil cleaning is required.
156	CHEMICAL NAME: **Liquid Flow Improver – Type II (LFI –Type II)** UNIT OF MEASUREMENT: kg (kilogram) **Chemical used for reduction of viscosity and Pour Point of crude oil.** **PHYSICAL PARAMETERS** I. **State:** Homogeneous, clear and free-flowing liquid at a temperature of 22°C and above, free from insoluble (liquid or solid) matter II. **Smell:** The product should smell typically like a petroleum distillate, and should not have any other obnoxious smell III. **Solvent:** Use of only the following solvents is permissible for manufacturing the Advance Sample and the bulk supply: Toluene / Xylene or mixed Xylene / Ethyl Benzene or combination thereof. The solvent should not contain organic compounds like 2-Pinene, 3Carene, D-Limonene or Terpenolene even in trace amount. Moreover, the bidder has to use the same solvent which has been used in the approved Advance Sample, for manufacturing the bulk supply. IV. **Congealing Point: 10°C** (or lower) V. **Melting Point: 20°C** (or lower) VI. **Viscosity** of the product at 20°C when measured at 25 inverse seconds shear rate with Brookfield DV-III cone & plate Rheometer (with CPE-41 cone): **80 cP** (or lower) VII. **Solubility:** Soluble in Toluene and HSD in all proportions at 22°C and above

VIII. **Shelf life:** 18 months (minimum) from the date of dispatch of the Advance Sample / consignments

Test procedure for measuring Congealing & Melting Points

For determination of Congealing and Melting Points of a "LFI – Type II" product, 5 gm sample of that product would be taken in a 10 mL graduated and stoppered borosilicate glass test tube. That tube would be immersed up to 10 mL mark in a refrigerated water bath maintained at 16°C. After 10 minutes, the temperature of the water bath would be set to the next lower even number (i.e. 14°C), and thereafter would be set to decrease in steps of 2°C. There would be a gap of 10 minutes between two successive steps. The physical state (liquid / gel) of the sample would be checked after 10 minutes from the time the water bath is set at that temperature, before reducing the bath temperature further by 2°C. The temperature at which the sample gels completely, would be noted as Congealing Point of that "LFI – Type II" product.

After the Congealing Point of the sample is reached, the temperature of the water bath would be set to increase by 2°C in successive steps at 10-minute intervals, and the physical state of the sample is checked before every stepping-up of temperature. The temperature at which the sample is found to have completely melted, would be noted as Melting Point of that "LFI – Type II" product.

Congealing and Melting Point temperatures would be recorded and reported in even numbers, because of the temperature ramping protocol described above.

PRODUCT PERFORMANCE TEST IN THE LABORATORY

2.a. Test Procedure

2.a.1. Test on crude oil treated at 50°C.

The typical test crude oil will have water content up to one percent and Pour Point normally in the range of 27°C to 36°C. 500 mL of the test crude oil would be heated at 50°C in a water bath for 30 minutes, and then treated with the "LFI – Type II" sample at a dosage not exceeding 1000 ppm (weight / volume). The treated crude oil would again be heated at 50°C for 30 minutes, to complete the crude oil treatment process.

The following two parameters of the treated crude oil shall be evaluated within 48 hours:

i. Viscosity: Apparent viscosity (cP) would be measured at a shear rate of 25 inverse seconds by Brookfield DV-III cone & plate Rheometer (with CPE-41 cone) through a pre-defined software programme at temperatures starting from 30°C down to 15°C (or limited by the viscosity measurement range of the instrument) at 3-degree intervals.

ii. Pour Point: Pour Point (°C) would be measured as per ASTM D-5853.

2.a.2. Test on crude oil treated at its Pour Point temperature.

500 mL of the untreated (raw) test crude oil would be heated up to 50°C in a water bath, then cooled down to its Pour Point temperature (which would normally be in 27°C to 36°C range) with constant stirring with a mechanical stirrer**.** 1000 ppm (weight / volume) of the "LFI – Type II" sample (Advance Sample / consignment sample) would be added to the crude oil at that temperature while stirring the crude oil constantly, and the stirring would continue for another 5 minutes. The Pour Point of that treated crude oil would be measured (without any pre-heating) immediately thereafter.

	2.b. Performance Requirement **2.b.1. Crude oil treated at 50°C.** **i. Viscosity:** Apparent Viscosity (AV) of the test crude oil treated [as per para 2.a.1 above] with any "LFI – Type II" sample (**Advance Sample** / consignment sample) not exceeding 1000 ppm should compare positively (under identical test conditions) with AV of the same test crude oil treated at identical dosage with a **reference sample**. However, even if the test crude oil treated with any "LFI – Type II" sample (Advance Sample / consignment sample) shows a deviation (higher value) up to ten percent in AV compared to the AV of the crude oil treated with the reference sample, that "LFI – Type II" sample (Advance Sample / consignment sample) would be considered to have passed this performance evaluation criterion. The comparison of AV would be done at the viscosity measuring temperature of 15°C. However, in case AV measurement of the crude oil sample treated with reference "LFI – Type II" sample at 15°C is not possible because the AV increases beyond the viscosity measurement range of the Rheometer at 15°C and 25 inverse seconds shear rate, then the comparison would be done at the lowest temperature (18°C or above at 3°C intervals) at which AV of the crude oil sample treated with the reference "LFI – Type II" sample could be measured. **ii. Pour Point:** The Pour Point of the test crude oil treated with any "LFI – Type II" sample (Advance Sample / consignment sample) at a dosage not exceeding 1000 ppm should be equal to or less than the Pour Point of the same test crude oil treated with the reference sample at identical dosage. **2.b.2. Crude oil treated at its Pour Point temperature.** The Pour Point of the test crude oil treated at its Pour Point temperature [following the procedure as described in Point No. 2.a.2 above] with 1000 ppm of a "LFI – Type II" sample (Advance Sample / consignment sample) should be equal to or less than the Pour Point of the same test crude oil treated with the reference sample at 1000 ppm, under identical test conditions.

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