

FN-15/1/2020-IFD Section-MOWR
Government of India
Ministry of Jal Shakti
Department of Water Resources, River Development & Ganga Rejuvenation

Shram Shakti Bhawan, Rafi Marg,
New Delhi, dated 23rd November, 2022

OFFICE MEMORANDUM

The undersigned is directed to enclose a copy of OM No. F.4/1/2022-PPD dated 10.11.2022 received from the Department of Expenditure, conveying grant of relaxation of two years i.e upto 31.12.2024 for :-

- a. Issuance of GTE with the approval of Secretary concerned, for procurement of certain items for safe operations of plant and machinery and planned capacity building in Oil and Gas Public Sector Undertakings (PSUs).
- b. Issuance of GTE with the approval of Secretary, Ministry of Petroleum & Natural Gas (MoPNG) for procurement of licensor mandated items from foreign vendors required for Oil and Gas installations for safe operations of oil and gas PSUs.

2. All the Wings/SMDs are requested to bring the contents of this OM to the notice of the organisations under their control for compliance.

Encls: As above

Signed by Anil Kumar

Singh

Date: 23-11-2022 15:16:42

Reason: Approved

(Anil Kumar Singh)
Under Secretary (Finance-II)
Tel. No. 011-23719302

To

All Wing Heads/Divisional Heads/Organizations under DoWR

Copy to:

- (i) Sr. PPS to JS&FA
- (ii) PA to DS (Finance)



No.F.4/1/2022-PPD
Government of India
Ministry of Finance
Department of Expenditure
Procurement Policy Division

513, Lok Nayak Bhavan, Khan Market,
New Delhi, 10th November, 2022

OFFICE MEMORANDUM

Subject: - Relaxation for procurement of certain items through Global Tender Enquiry (GTE) -reg.

The undersigned is directed to refer this Department OM No. F.20/43/2020-PPD dated 21.12.2020 vide which relaxation was granted for two years for issuance of GTE with the approval of Secretary concerned, for procurement of certain items (listed in Annexure of DoE OM dated 21.12.2020) for safe operations of plant and machinery and planned capacity building in Oil and Gas Public Sector Undertakings (PSUs). The undersigned is further directed to refer this Department OM no F.20/44/2020-PPD dated 24.12.2020 vide which relaxation was also granted for two years for issuance of GTE with the approval of Secretary, Ministry of Petroleum & Natural Gas (MoPNG) for procurement of licensor mandated items from foreign vendors required for Oil and Gas installations for safe operations of oil and gas PSUs.

2. In this context, a request has been received from MoPNG vide DO No. FP-20013/15/2020-FP-PNG-Part(I) (E-35249) dated 19.10.2022 to extend these relaxations for further two years and MoPNG has also revised list of the items as enclosed in Annexure.

3. The request of MoPNG has been examined and based on justification provided; it is decided to extend these relaxations with the revised list as enclosed for further two years i.e upto 31.12.2024.

4. This issues with the approval of Finance Secretary.

Encls: As above.

Usha Rani
10/11/2022

(Usha Rani)
Under Secretary(Procurement Policy)
Tel.24621304
email: usha.rani64@gov.in

To,
All the Secretaries and Financial Advisors to Government of India.

Copy to:
Secretary (Coordination), Cabinet Secretariat, Rashtrapati Bhawan, New Delhi.

[Signature]
15/11/2022

Is (M)

DS (Finance)

copy: IS & FA

ASabu
15/11

US (IFD)

Along to circulate to all concerned

[Signature]
17/11/22
So (IFD)

AnnexureList of items related to Downstream and Midstream sectorGoods

1. Refinery & Petrochemical Catalysts:

CRU / CCRU Reformer, Platforming and NHT catalyst, Hydro treating catalysts, Hydrocracking- HCU /OHCU catalysts, Claus Catalyst, Merox catalyst, ISOM - Bensat/ Penex catalyst, PRU COS Hydrolizer catalysts, Butamar / SARU catalyst, SRU catalyst, HGU PDS Catalyst (Si absorber+ 1st hydrogenerator) catalyst, Fluidized Catalytic Cracking catalyst, Hydrodewaxing catalysts, isodewaxing catalysts, Hydrofinishing catalysts, Reformer Catalyst, Support balls, Refractory Balls, Benzene hydrogenation Catalyst, Liquid oxidation Catalyst, Petrochemical catalysts, Petrochemical Co Catalysts, HDPE Catalyst, Isomerization Catalyst, Shift-Reactors Catalyst, Ziegler natta catalyst, Non-Aromatic catalyst, Poly Propylene Catalyst, PRU Arisenic Bed Catalyst, CCR Net gas chlorite treater catalyst, HGU PSA Catalysts, catalyst guard bed, Hydrogen Methanator catalyst, TGTU catalyst, PX NHT, Chloride Guard, Tatoray catalyst and Reforming catalyst, PTA Hydrogenation catalyst, Hot Oil (Therminol 66), LAB PACOL catalyst and Molex adsorbent, LC 2253 and Axsorb 541 Butene-1 catalyst, AT / CT / Tri Ethyl Aluminium (TEAL) catalyst, CAB Catalyst, CAB2 Catalyst, CD (DEAC) co-catalyst.

2. Refinery and Petrochemical Specialty Chemicals and additives:

Adsorbents (HGU PSA Adsorbent), Desiccants (Specific high purity silica gel used in SWING unit, Ethylene drying and CO2 removal bed, Propylene drying and CO2 removal bed, Zeolite-5A, PRU drier molecular sieve, PPU drier molecular sieve, Molecular sieve Type IA), Selective Control Agent (DONOR-C - Cyclo-Hexyl Methyl Methoxysilane, Donor - D - Di-Cyclo-Pentyl-Di-Methoxy-Silane), Cyasorb 531/UV-12-Hydroxy-4-n-octoxybenzophenone, Optical brightener, Molecular sieves, Stereo Regulating Agents, Slip additives Cracking Agents, Deactivating agents, catalyst protecting agent, Solvents and Nucleating agents, ATF Merox filter clay, Peroxide-101, Ethyl mercaptan, Additives (Bottom Cracking Additive, CO Promoter, ZSM-5, Anti-Static Additive, Paraffinic Grease), Antioxidants (AO 1330, AO 1010, AO 1076, AO8, Irganox 1010, Irgafos 168, AO9, AO 1076, AO 168, AO06), AK stabilizer / A08 / Stabilization additive (Irganox 1010FF, Songnox 1010FF, Alkanox 20 Gr), AK stabilizer / A09 / Stabilization additive (Irgafos 168FF, Songnox 1680FF, Alkanox 240 Gr), AF stabilizer / A06/ Stabilization additive (Irganox 1076 FD, Songnox 1076 SB, Anox PP 18, Gr), Stabilization Additives Irganox B225FF, B215FF/Songnox 11B FF, 21 B FF, Antiblock, Tale (ABT-2501)/ Optiblock 8/ Optiblock 10, Chimasorb 944/UV 944, UV stabilizer 622, PD /2,4 Pentandione, Luperox 101/peroxide, GMS- 90 (Glycerol Mono-stearate),

- Polymer processing additive(PPA), PG/ Pelargonic acid/ C8-C10 fatty acid, Slip Agent (Erucamide, Armoslip EL, Crodamide ER, Finawax ER), DHT 4A/Hycite, DSTDP, Phosphite 168, Alkylamine, Silane, Pep Q), Di-methyl Di-Sulphide (DMDS), Neutralizing Amine, ISOM Make up gas drier adsorbents, ISOM-sulphur guard, Antistatic Additive for ATF (for conductivity improvement), Preblend stabilizer, PPU-Talc, RSH and COS guard bed for propylene, Licowax PED 191 HDPE additive, NA 21 & HPN20E and NX 8000 Poly Propylene additives, Nucleating Agent (HPNA), Grease (Vaseline) and Mineral Oil (White Oil V-70), PD (2,4 Pentanedione) Deactivator, Mono-2-ethyl hexyl amine, Heat Transfer Fluid (DTA), Hexene-1, Extruder Hot Oil, DE-AC (13% diluted in Hydrobrite 380 White Mineral Oil), AJ stabilizer / A03, TnHAL (50%, diluted in Hydrobrite 380 White Mineral Oil), PG (Pelargonic acid) deactivator, UV Stabilizer (Inuvin 622 FF/Tinuvin 326FL/Cyanox 2888, Cyasorb THT 4801-Pastilles).

3. Imported Lubes & Grease

Hydraulic Fluid Special Chemolube, Mechanical Seal Oil, Lubricating Oil Cp-4601-46, Make: Cpi Eng, Compressor Lube Oil Kobe 202-K3, Hot Oil (Therminol 66), Grease Special P/N: 10550-027, Nycolube 7040, H.F.S Chemo Lube 5s, Kluber Summit Lube Oil PGI 150, Kluber Summit Lube Oil PGI 46, CP-1507-68, Duraclear DS 4609-7-F, Protomec 320, Ethylene Glycol, Gas Compressor Oil (CP-1516-100, CP-1508-22), Mobil NV 28, 3913-GI (M/s Syn USA), Anderol 786 (M/s Tenneco Chemicals Inc, USA), Aerzen Lube-06, Marlotherm SH, Marlotherm SH, BAFCO Hydraulic Oil, BAFCO SPEC: 946, CPI 4600-10 / CPI 4600-68, KLUBER Summit 30, HITEC - 5708, HITEC 566, IRGALUBE 349, IRGALUBE 353, IRGALUBE ML 3010 A, IRGAMET 39, LZ - 5172, LZ - 859, LZ - 889 D, LZ 5941, MAK OILAD (122B10, 124D05, 125E13, 125E20, 125E24, 125E25, 133C14, 142B14, 142B16, 143C29, 145E26, 153C08, 153C09, 154D00, 154D01, 173C08, 174D00, 174D01, 212B01, 212B05, 213C11, 214D01, 215E03, 218H01, 225E01, 227G03, 245E01, 263C02, 264D01, 265E01, 265E06, 267G01, 312B04, 312B05, 315E01, 315E02, 315E03, 315E04, 315E06, 315E08, 315E10, 315E11, 315E12, 319I03, 322B02, 322B03, 322B04, 322B05, 322B06, 322B08, 325E03, 325E04, 332B01, 332B02, 332B04, 332B08, 332B09, 332B10, 332B11, 333C02, 334D01, 334D02, 335E02, 335E03, 335E06, 335E09, 411A01, 418H03, 421A01, 421A02, 426F01, 428H01, 428H03, 428H04, 448H11, 449I12, 451A00, 472B02, 479H01, 535E01, 536F00, 545E01, 546F00, 559I02, 559I04, 572B01, 591A01, 592B01, 592B02, 595E01, 596F01, 712B03, 731A01, 746F01, 799I08, 799I15, 799I16), RC 4801, VISCOPLEX 8-100, VISCOPLEX 8-450.

4. Base Oils

Phosphate ester (Durad 110), Alkyl aryl phosphate ester (Durad 220), Alkyl aryl phosphate ester (Roscan 623), TXP (trixylenyl phosphate), Polyalphaolefin 4 cst

synthetic base fluid (PAO 4), Polyalphaolefin 2 cst synthetic base fluid (PAO 2), Polyalphaolefin 6 cst synthetic base fluid (PAO 6), Polyalphaolefin 8 cst synthetic base fluid (PAO 8), Polyalphaolefin 10 cst synthetic base fluid (PAO 10), Polyalphaolefin 40 cst synthetic base fluid (PAO 40), Polyalphaolefin 100cst synthetic base fluid (PAO 100), Aromatic base fluid (Hydrogenated Terphenyls), Polyglycol synthetic base fluid (Tecnosynt DC 46, DC 100), Synthetic ester base fluid (Hatcol 2901), Polyol Ester Synthetic base fluid (Polyol Ester Synthetic base fluid), Complex ester, BIPHENYL (BP).

5. Fuel Additives

Vanlube 829, 1,2,3,4 Tetra Hydro Naphthalene, Organo Clay Gellant, Tac Oil C, Foamban 155, PC 2544, Yubase, Speciality Grease - Mixture of higher paraffin hydrocarbon, ST65692 (Biphenyl), Hydrogenated Terphenyl (ST58606), Additive for Gasoline Fuel (Speed Additive).

6. Marine Additives:

MAR 489 S- USD 22998, MAR 501 S-- USD 14034, MAR 730P - USD 22543, MAR 363 P- USD 12189, DISOPAC - USD 14598, A 127070- USD 18488, MAR 918 U- USD 12682.

7. Technical Grade Urea (this is an imported raw material, required for production of Diesel Exhaust Fluid)

8. Specialty Laboratory and R&D Equipment

Reference fuels for Quality Control equipment (T fuel, U fuel, Iso Octane, n heptane etc), High Performance Liquid Chromatograph (HPLC), Heated Centrifuge Machine for testing of Crude, Auto- Penetrometer, Auto Softening Point Apparatus, UV-Vis Spectrophotometer, Auto Oxidation Stability Apparatus for MS & HSD, Auto Salt in crude analyser, Gas Chromatograph (testing of Refinery Gas and Propylene samples, Benzene Purity, Methyl tert-butyl ether (MTBE) analysis, DHA, SCD etc), Biological oxygen demand (BOD) analyser & Chemical oxygen demand (COD) analyser, Inductively Coupled Plasma Apparatus for Metal Analysis, Karl Fisher Coulometer, Portable fuel Analyzer (IROX), Microwave ashing furnace, Micro Carbon Residue Tester, Portable Auto Dew Point Analyser, Color View spectrophotometer, Stabinger Viscometer (Automatic), Auto Vacuum distillation, Automated Freezing Point Analyzer, Benzene analyser, Particle Counter Analyzer for Aviation turbine fuel (ATF), Conductivity Meter for ATF, Total Chlorine, Nitrogen and Sulphur Analyser, Fully automated Ball-On-Cylinder Lubricity Evaluator (BOCLE), Metrological Tube Rater, Trace Nitrogen Sulphur analyser, Jet Fuel Thermal Oxidation Tester (JFTOT), Ion Chromatograph, Metrological Tube Rater (JFTOT) - ITR/ ETR, Automated High Frequency Reciprocating Rig Lubricity Evaluator (HFRR) lubricity apparatus, Autotitrators for potentiometric and Coulometric analysis, Energy Dispersive X-Ray Fluorescence (EDXRF) Analyzer, Gas Chromatograph for analysis for Quality Control, Auto Smoke

point Apparatus to test Smoke Point of ATF (Aviation Turbine fuel), ATF Conductivity Meter, Auto colorimeter, Auto freezing point, Auto Pour & Cloud Point Apparatus, Gas chromatograph, Total Sulphur Analyser, Auto density Meter, CFR Engine), RTFOT, Portable Particle Counter, Wavelength Dispersive XRF, Shear stability tester, TEOST (Thermo OxiEng oil simulation test), Drop Shape Analyser, TurbiscanTLAB Expert, TAN/TBN apparatus for quality control, Karl Fisher Coulometer for water and moisture content, Refractometer for testing of DEF/ Adblue, Tensiometer, ED XRF Analyzer (R&D Equipment), Micrometer Range Electrode Coating Machine for Battery Current Collectors, Micron Range Battery Electrode Roll Pressing machine, Programmable Multi-electrolyte (Flammable) Filling Machine for Rechargeable Batteries, Rechargeable Battery Anode -Cathode body Crimping & Grooving, Programmable Slitting machine for Micrometer Thickness Battery Current Collectors & Electrodes, Winding Machine for Battery Anode-Cathode-Separators with Inter-layer Resistance, Programmable Battery Electrode Slurry Machine, Microbubbles Free Electrode Planetary Slurry Premixer, Electrode Slurry Mini-coater, Fuel Cell Testing Machine, Fuel Cell and Accessories, Accelerated Rate Calorimetry (ARC), Battery Cycler, Molecular Size Ball Milling machine, HP Catalyst Screening Unit, Auto Distillation Unit, Auto Abel Flash Point Apparatus, Auto PMCC Flash Point Apparatus, Auto COC Flash Point apparatus, CFR RON Engine, UVF Sulphur Analyzer, Inductively Coupled Plasma (ICP), Stabinger Viscometer, Smart Quenchometer, Automatic PMCC and Abel flash point test apparatus, Auto density meter, Indiana State Oxidation Tester (ISOT), Flash Point (COC Test apparatus), Mini flash point test apparatus as per D6450/D7094, Glassware Corrosion Test Equipment, Cold cranking simulator equipment, Glassware Corrosion Test Apparatus, Stability analyser for residual fuel, Fuel Cell Test Station, Hydrogen Dispenser, Combustion Ion Chromatograph (CIC), Inductively Coupled Plasma-Optical Emission Spectrometer (ICP-OES), Colour (Saybolt), Conductivity Meter (for ATF), Aromatics & Olefins Apparatus (FIA), Online Conductivity Meter for ATF, Online Distillation Analyser, Micro distillation, Automatic asphaltene content apparatus, Viscometer cleaning apparatus, carbon and sulphur analyser, Automatic CFPP apparatus, Trace chloride analyser, bitumen ductility apparatus, automatic freezing point apparatus, GC Reformulyzer, GC for benzene in Hexane, GC for phenols, GC for MTBE and Benzene purity, PIONA analyser, DHA GC, Methanizer GC, Refinery Gas analyser GC, SIMDIST GC, Thiophene GC, Sulphur speciation GC, Micro Carbon tester, Multiparameter tester for water, Auto pour point, Auto RVP apparatus, Auto penetrometer, auto softening point, Colorimeter, WSIM for ATF, Continuous ring-layer Mixer, Knife mill, 3-stage roller mill, continuous paddle dryer, Mass flow controllers, Thermic fluid of heating and refrigerated units, DPC mass flow controller, GFC mass flow controller, GFC mass flow controller, Rotameters, DFC digital mass flow controller, Online Gas analysers, X-Ray photoelectron Spectrophotometer, X-ray Absorption Near Edge Spectrophotometer, Computed Tomography Equipment, Gamma emission Tomography, Neutron Tomography, Field Emission Scanning Electron Microscope,

Liquid Chromatography with Mass Spectrophotometric detector, Microwave-digestion system, VUV-GC System, GC-SCD system, Gas Chromatography with Mass Spectrophotometric detector, Refinery Gas analyser, High pressure gas fittings and regulators.

9. Pilot plants:

Ebullated bed hydroprocessing pilot plant, Slurry hydroprocessing pilot plant, Hydroformylation pilot plant, Polymerization Kneader Reactor, Continuous Belt Dryer, Multistage Roller Mill, Glacial Acrylic Acid Purification Unit, High Speed Mixer-Coater, Agitator/Paddle Dryer, Hopper Dryer, FCC pilot plant and FCC catalyst testing unit (ACE), Solid oxide and PEM based Fuel cells, High throughput reactor.

10. Plant Equipment and materials:

Process gas compressors (Tail Gas Compressor, CO₂ Recycle Compressor, Vent Recovery Compressor, Cycle Gas Compressor and Turbine, Double diaphragm Hydrogen Compressor), Expander compressors for cryogenic process, Automatic Bottom & Top un-heading device, Coke Cutting System for delayed Coker Unit, High Pumps (Submersible Pumps for LPG and Water Service for caverns, Head Low Flow Centrifugal Pump, Slurry Feed Pump, Propylene Charge Pump & Recovered Propylene Pump, In-tank retractable pumps for Refrigerated LPG Storage), Slide Valves, Hydrogen Reformer Tubes, AS and SS Heater Tubes of higher sizes and length, Heavy Duty Turbines for Critical Rotary Equipment, Burners for Process Heaters, Air Grid Nozzles for regenerator, Furnace Monitoring System, Motors above 4 MW rating, high temperature special service refractory materials, Tank roof drain hoses for floating roof tanks, Slurry (CLO) Automatic backwash Filter Package for FCC Unit. Rotary Mixer package for new catalyst plant Project (Panipat), Automatic-Drum Filling Machine suitable for hazardous area classification Zone IIA/IIB (for Acrylic/Oxo-Alcohol Project, Gujarat), Reactor Internals (of proprietary profile wire and baffle with MOC – SS 347 for PX-PTA Expansion Project, Panipat), Agitator (high pressure, high velocity with duplex SS tie rods and special metallurgy components for PX-PTA Expansion Project, Panipat), Valve Interlocks (for process safety), High specific volume Steam turbine (condensing type) above 6 MW, Screw conveyors (Nitrogen sealed and thermally insulated by steam type screw conveyor), Check valves (exotic metallurgy, dual plate, swing type, duplex), Angle control valves, On -Off Butterfly valves, control valves, Actuated Valves on safety-critical trip duties, ball valves of Duplex, Alloy 276 (nickel-molybdenum-chromium superalloy with an addition of tungsten for extreme corrosion resistance) and titanium for PX-PTA Expansion Project, Panipat. PTA Mother Liquor Cooler (spiral option) for PX-PTA Expansion Project, Exotic metallurgy piping and fittings for PX-PTA Expansion Project, Panipat, Marine Loading Arms, Expansion Bellows in Cracking Units, Fire safe shutdown valves, Plant Lifts (Hazardous area and flameproof), Critical shutdown valves for Petro FCC Unit, Alloy Steel and Exotic Metallurgy Pipes, Rotary tight shut off valve, large size butterfly and goggle valves in Petro FCCU, Radiant Outlet cross over assembly, Regeneration Nitrogen Heater (Electric Heater), Resin Additive Handling System.

11. Instrumentation and Automation:

Reactor/Regenerator Bed Multipoint Thermocouples, Vibration Monitoring System, Nucleonic Level measurements system, Moisture Analysers, Anti surge controllers, Control system (licensor, OEM supplied Mandatory), Water cut analysers in desalters, Control / safety Shutdown / Pressure relief valves having seat leakage class VI. Valves with exotic metallurgy trims and internal, H₂S Analyser in sulphur recovery unit, Tail gas analyser in sulphur recovery unit, Feed gas Analyser in sulphur recovery unit, H₂ / COS analyser in sulphur recovery, Analyser in Stack & ambient air quality measurement for Sox/NOx/CO/Ozone/VOC/PM 2.5/PM 10/Opacity, Water quality analysers like COD, BOD, Turbidity, TOC, Slide Valve in RFCC units, Product Sulphur analyser, NDIR analysers used in auto blending applications, Flash point analyser, Oxygen Analyser, Hydrogen purity, Temperature sensor for Main combustion chamber in Sulphur Recovery Unit.

12. Material for Crude and Product Pipeline:

PIG Valves, submarine cables.

13. Petrochemical specific specialized Equipment & components:

Extruder and pelletizer Package, Cutter Blades of Extruder, Bagging and Palletising Plant, automatic storage and retrieval system for petrochemical warehouse, bulk loading dispenser system, Radiant Coil for SRT-III and SRT-VI heaters.

14. Fire-fighting and Safety Equipment:

Hydraulic platform for rescue and firefighting, fire proximity suit, Blast resistance modules.

15. Single Point Mooring components:

Floating hoses, subsea hoses, SPM end shackles, SPM speciality valves (8" and above butterfly valves, 24 inch Subsea valve), SPM Mooring Hawser, Anti chafe chains, Support Buoys, Weld Plus End Couplings, Marine Breakaway Couplings, Umbilicals, Camlock Couplings, Load Pin Assembly, Expansion Joints, special Butterfly Valves (procured once with Hoses), MIC testing kit, PLIDCO Flange Repair Ring, Sealant for Offshore Clamps, Hydraulic Power Units Spares for Offshore, Crude Oil Blending unit, Auto Samplers, Electric Resistance Probes (ER Probes).

16. LPG, LNG and other Hydrocarbons to meet domestic supply shortfall (where supply is not enough to meet the domestic demand of the particular hydrocarbon)

Services

1. **Engaging Process Licensors:** Supply of License, basic design and engineering package and assistive services for new Refinery & Petrochemical Units, Bio Refineries and revamp projects (Licensor tenders for a) IOCL Bhadrak Textile Park Project including PMC services, b) Needle Coke Calcination Unit at Paradip, c) LuPech Project at Gujarat Refinery)
2. **Specialized Consultancy services:** Refineries / Bio Refineries, CNG, due diligence and evaluation of overseas acquisition – legal, financial, taxation, technical etc.
3. Database subscriptions, Market Intelligence Tools, specialized services related to upstream services of E&P including Training from foreign firms.
4. Specialized Technical Services and Training Subscriptions
5. Specialized Software Services and their AMC (including for upstream E&P Industries like G&G services, Reservoir Simulation, Estimation, Modelling, software for R&D purpose, Asset Integrity Management, Process Simulation)
6. Benchmarking Study (for Risk and Refinery benchmarking)
7. Umpiring / Assaying services for chemicals and catalysts (Agency for platinum/palladium umpire analysis, silver analysis, Loss on Ignition (%) and Platinum content (%) testing).
8. ASTM Proficiency Testing for Labs
9. Scale up study for FCC Stripper Packing, HiY FCC additive, Zeolite 13X adsorbent,
10. Pipeline Intrusion detection warning system (PIDWS)
11. SPM Services: (Repair and Maintenance of Hydraulic Unit, Telemetry Unit, Maintenance Work)
12. Consultancy for Offshore Pipeline
13. Refurbishment of PLIDCO Flange Repair Ring
14. Overhauling of siemens make 501 KB5 & 501 KC 5 Gas Generators
15. Integrity assessment of non-piggable pipelines through contactless magneto metric technologies
16. **Chartering of ships**(There are Indian Shipping lines available, but these are insufficient to meet the domestic demand. However in any case Indian vendor has the option to match foreign LI)
 1. Voyage Charter, Contract of Affreightment (COA) and Time Charter of vessels for import/ coastal transportation of (a) Crude oil, (b)LPG & (c) LNG
 2. Voyage Charter, Contract of Affreightment (COA) and Time Charter of vessels for import/ coastal transportation of petroleum Products

List of items related to Upstream sector

Materials/ Equipments

1. **Tubulars:** All Type Of Casing With Premium Thread & Crossovers Including 13 Chrome & CRA Casing (Except 7", P-110 Grade and 9 5/8", L-80/P-110), Heavy Weight Drill Pipe, All Type of Tubing With Premium Joint & Crossovers
2. **Cementing Equipment / Chemical:** Cement Additives, Cement Retainers For HPHT Operations (All Sizes), Cement Support Tool (All Sizes), Cementing Unit, Special Oil Well Cement For HPHT Well (Dykerhoff Cement), Expandable Liner Hangers (All Sizes), External Casing Packers (All Sizes), Hydraulic Stage Collar (Cementing) of High Grade For Above 300F, Microfine Cement, Subsea Cementing Plugs (All Sizes) with Cementing Head For Floater Rigs Cement Test Equipment viz., HTHP-Curing Chamber, HTHP-Consistometer, Waring Blender-Constant Speed Mixer, Static Gel Strength Analyzer and Wettability Tester.
3. **Drilling/Rig Equipment & Tools:** Advanced Drilling Instrumentation System ,Control Panel For Power Pack - Offshore, Core Barrel, Dead Line Anchor, Diaphragm Operated Shutoff Control Valve, Draw Works Eddy Current Break, Drilling Handling Tools, High Pressure Well Control Equipment - 15m, Hole Opener & Hole Reamer, Hydraulic & Pneumatic Spinner, Mud Handling Equipment ,Pipe Racking System, PDC / Premium Bits , Rig Communication System, SDMM Mud Motor /Down Hole Motor, Top Drive System / Drill Hook, Kinetic Energy Management System, Fishing Tools.
4. **Geophysical Equipment:** Field Processing Unit, Global Navigation Satellite System, Specialised Geological Lab Equipment, Seismic Data Acquisition System, Seismic Data Processing / Imaging Software, Tape Drive Unit, VSP Data Acquisition System, VSP Processing Software.
5. **Plant Material/EQMT:** Process Gas Compressors-Screw, Expander Compressors for Cryogenic Process, Ethyl Mercaptan, Specialised Lab Equipment for Hydrocarbon / Chemical Testing & Analyser.
6. **Instruments & Guages:** Borescope Unit - TG/PGC, Weight Indicator, EMR Gauges, Thermocouple for Downhole Temperature, Cold Finger Apparatus, Ageing Cell, Automatic Imbibometer.
7. **Mud Chemicals/ Items:** Potassium Formate, Hollow Glass Sphere (Gr-IV& HGS4K28), Rheometer/ Viscometer.
8. **Offshore Equipment:** Anchor Mooring Chains and Hardware, Sub-Sea Bop Control Hose Bundle, Buoyancy Module Risers, Life Buoy With Life Buoy Light & Life Line, Marine Riser System & Handling Tools, Personnel Transfer Net/ Basket, Reverse Osmosis Water Maker for Offshore Use, Subsurface Safety Valves and Control Lines along with Accessories, Unit Coolers for Offshore, Ultra Centrifuge with High Speed, Gas Turbines.

9. **Oil and Gas Industry Pumps:** Pumps for Offshore 60 Hz, Plunger Lift System, Sub Surface Pump API 11AX API 25-150RHAM 16-4-4, API 20-175THM 16-4-4, API 25-225THM16-4-4, Condensate Pump.
10. **Production Equipment:** API Filtration Loss Apparatus/HPHT Fluid Loss Apparatus, Coil Tubing Down Hole, Equipment & Tools & Redress Kit, ERD& PBR Packers, Flame Arrestor and Burner Assembly, Portable Ignitor Assembly, RHSB Burner Pilot Nozzle, Invalco, Sand Bailer (Turbo Bailer), SRP & its Accessories, PCP & its Accessories, Tubing Retrievable Surface Controlled Subsurface Safety Valve(2 7/8", 10000 Psi), Vertical Tension Anode (VTA) - Impressed Current Cathodic Protection (ICCP) System, Sub Surface Safety Valve & Control Unit Along Accessories, Dual Hydraulic Packer, Coil Tubing Reel, Tubing Handling Tools, Telescopic Joint, Wire Line GLV.
11. **Well Head, X-Mas Tree and BOPs:** High Pressure Well Head And X-Mas Trees, Blow Out Preventer (Drilling, Production) - 15m, Choke & Kill Line, High Pressure Hoses & Rotary Hoses, Drilling Hose, Marine Hose, Subsea Hose, IBOPs, FOSV, Upper & Lower Kelly Cock, Kelly All Sizes Subsea Wellhead & X-Mas Tree, Electronic Well Head Manometer Subsea Valves, Wellhead Shutdown Panels - Pneumatic Control, Sub-Sea Valve Control Fluid, Hydraulically Operated Gate Valves / HCR Valves.
12. **Well Stimulation :** Various types of WSS Unit, Packer Swell, Perforated Liner (5"Slotted), Gravel Pack Screen, Echometer Digital Well Analyser, 125 Micron Premium Sand Screen, Premium Sand Control Screen, 7" Casing Thermal Gravel Pack Packer and its related accessories.
13. **Logging Equipment :** Bottom Hole Oil and Gas Samplers, Colour Printer for Well Log Data, Control Line and Accessories, Logging Unit & Tools Associated Software and Accessories, Log Data Processing & Interpretation Software, Logging Cables, Logging Mast & Pressure Control Equipment, Perforation Material Inclusive Explosives & Deep Penetration Charge (Perforation, Tubular Cutters, Side Wall Core) & Hardware, Logging Tubing Conveyed Perforation Material, Well Calipers, Wettability Tester / Equipment, Wireline Reels.

Services/ Specialised Services

1. **Cementing Services:** Cementing Services with additive for Offshore, Expandable Liner Hanger Services for Offshore, External Casing Packer Service for Offshore.
2. **Drilling Services - Specialised:** Casing Drive System & Services, Casing While Drilling Services, Direction Drilling, Services (RSS, MWD,LWD,MPWD,SRDH & GWD), Liner While Drilling Services, Multiple Activation Circulation Bypass Tool & Services, Real Time Data Monitoring & Analytics Services, Turbine with Impregnated Bits & Services, Under Reamer Services Under-Balanced Drilling Services, Well Coring Services, Whipstock Window Milling Services, Managed Pressurized Drilling Services, Hiring of Well Engineering

& Completion Services for Drilling of Exploratory Wells and Completion of Development Wells in Deep Waters.

3. **Logging Services:** Hiring of Services related to Logging While Drilling (LWD).
4. **Mud Chemical Services:** Specialized Loss Circulation Control Services with Materials, Specialized System LCM Services with Materials, LTSOBM Services along with material for Eastern Offshore, HTHP Testing Fluid Services along with Material (Calcium Bromide + Tri Manganese Tetra Oxide), HTHP Testing Fluid Services along with Material (Potassium Formate + Tri Manganese Tetra Oxide).
