Oil India Limited
(A Govt. of India Enterprise)
P.O. Duliajan – 786602, Assam

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Tender No. : **SDG2891P14/09**

Tender Fee : INR 4,500.00 OR USD 100.00
Bid Security : Applicable

Bidding Type : **SINGLE STAGE TWO BID SYSTEM**

Bid Closing on : As mentioned in the Basic Data of the tender in OIL's e-portal.
Bid Opening on : As mentioned in the Basic Data of the tender in OIL's e-portal.

Performance Guarantee : Applicable

OIL INDIA LIMITED invites Global Tenders for items detailed below:

Item No. / Mat. Code	Material Description	QTY.	UOM
10	DESIGN, ENGINEERING, FABRICATION, SUPPLY AND INSTALLATION & COMMISSIONING OF NON-LUMINOUS ENCLOSED GROUND FLARE SYSTEM AND AS PER THE FOLLOWING ANNEXURE: a) Detailed specification – Annexure - I. b) Bid Rejection Criteria (BRC) and Bid Evaluation Criteria – Annexure - II. c) Technical & Commercial Check list vide Annexure - III	1	No.

Special Notes :

1.0 The tender will be governed by "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders) including Amendments & Addendum to "General Terms & Conditions" for e-Procurement.

2.0 Technical Check list and Commercial Check list are furnished vide Annexure – III. Please ensure that both the check lists are properly filled up and uploaded along with "Techno-commercial Unpriced Bid".

3.0 The item qualifies for Nil duty / Deemed Export benefits. For Deemed Export benefits, please refer Addendum to the General terms and conditions for Global tender.

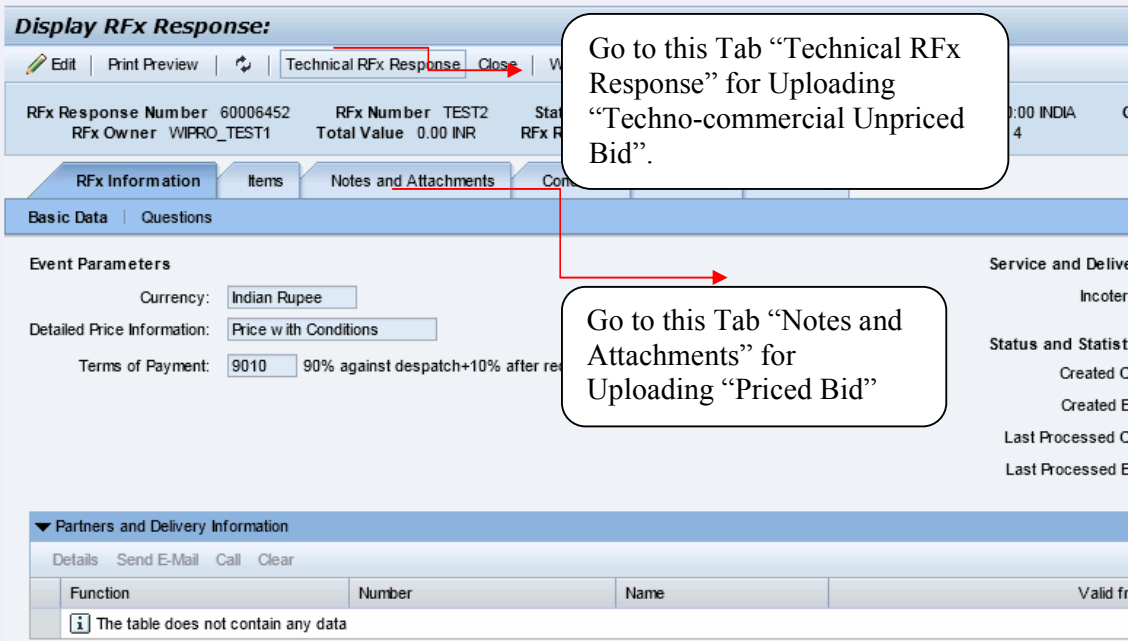
4.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with tender no. and due date to The **Head Materials, Materials Department, Oil India Limited, Duliajan- 786602, Assam** on or before the Bid Closing Date and Time mentioned in the Tender.

a) **Original Bid Security.**
b) **Details Catalogue and any other document which have been specified to be submitted in original.**

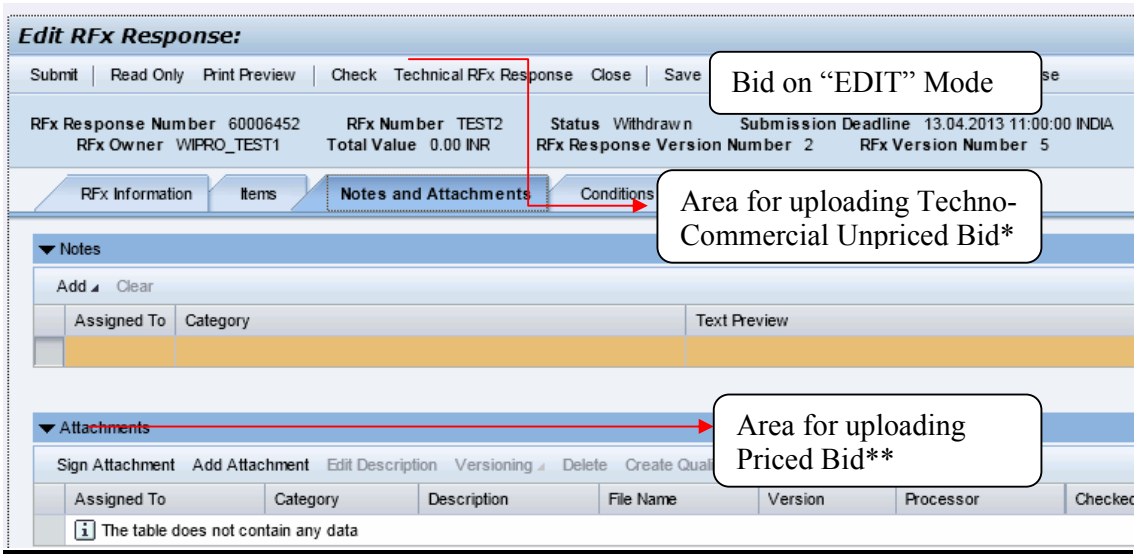
5.0 In case of SINGLE STAGE-TWO BID SYSTEM, bidders shall prepare the "Techno-commercial Unpriced Bid" and "Priced Bid" separately and shall upload through electronic form in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender. The "Techno-commercial Unpriced Bid" shall contain all technical and commercial details except the prices which shall be kept blank. Details of prices as per Bid format / Commercial bid to be uploaded as attachment in the Attachment Tab "Notes and Attachments".

A screen shot in this regard is given below.

Any offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in the tender.



On "EDIT" Mode- The following screen will appear. Bidders are advised to Upload "Techno-Commercial Unpriced Bid" and "Priced Bid" in the places as indicated above:



Note :

* The "Techno-Commercial Unpriced Bid" shall contain all techno-commercial details **except the prices**.

** The "Price bid" must contain the price schedule and the bidder's commercial terms and conditions. For uploading Price Bid, first click on Sign Attachment, a browser window will open, select the file from the PC and click on Sign to sign the Sign. On Signing a new file with extension .SSIG will be created. Close that window. Next click on Add Atachment, a browser window will open, select the .SSIG signed file from the PC and name the file under Description, Assigned to General Data and clock on OK to save the File.

6.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the bid or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in the rejection of its offer without seeking any clarifications.

7.0 The Integrity Pact is applicable against this tender. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure XII of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid.

OIL's Independent External Monitors at present are as under:

(I) SHRI N. GOPALASWAMI,I.A.S (Retd) ,
Former Chief Election Commissioner of India
E-mail Id : gopalaswamin@gmail.com

(II) SHRI RAMESH CHANDRA AGARWAL , IPS(Retd)
Former Director General of Police
E-mail Id : rcagarwal@rediffmail.com

TECHNICAL SPECIFICATION FOR
DESIGN, ENGINEERING, FABRICATION, SUPPLY AND INSTALLATION &
COMMISSIONING OF NON-LUMINOUS ENCLOSED GROUND FLARE SYSTEM FOR
OIL INDIA LIMITED

OIL INDIA LIMITED (OIL), a Navaratna Company engaged in exploration and production of oil & gas invites tender for Turn Key Implementation of Design, Engineering, Fabrication, Supply and Installation & Commissioning of Non-luminous enclosed ground flare system in one of its new Oil Collecting Station located in Duliajan, Assam, India.

Scope of Work:

1.0 OIL is having 22 (twenty two) nos. of Oil Collecting Stations (OCS) in Assam where crude oil produced from various wells are being conditioned and separated from associated natural gas and water. After separations crude oil is pumped to the refineries and gases are sent to the gas gathering stations to despatch to the end users. In this process some quantity of natural gas which cannot be used are required to be flared in the OCS by using open pit flare system.
To obviate this open pit flaring OIL intends to deploy new flare system that ensures proper burning of gases and reduces emission of CO and NOx. The flare shall be such that it is not visible form outside and reduces noise & radiation level to comply with environmental norms.
The flare system shall be designed for an overall working life cycle of at least 25 years.

2.0 Basic Design of the Ground Flare system:

A. Flare system to be designed for: (Process Data)

1. Total Burning capacity of gas : 281,000 SCMD (0.3 Million Standard Cubic Meter Gas Per Day)

2. Gas properties
   Gas Pressure :10 PSI, 30 PSI and 250 PSI (Some time)
   Gas Temperature: LP (Low Pressure) 37 DegC – HP (High Pressure) 26 Deg.C
   Gas Composition :C1-C3: 96% , C4: 0.7% , C5-C6: 0.2%, N: 0.5%, CO2: 1.6%
   Molecular wt. : 18-19 Gm/mol
   Calorific value : 9,562 to 10,569 KCAL/SCUM

3. Local climatic/environmental conditions are as under:
   - Maximum Ambient Temperature 42 DegC
   - Minimum Ambient Temperature 4 DegC
   - Relative Humidity
     At 21 DegC : 100 %

At 32 DegC : 95%
At 41 Deg C: 70%

- Elevation Above Mean Sea Level : 170 metres
- Seismic Zone: V
- Yearly Average Rainfall : 300 cm

The enclosed flare system will be designed, fabricated and installed to accommodate the above climatic conditions.

B. The design of burners shall be such that: -

a. Flame shall be smokeless
b. Flame shall be non-luminous
c. Low sound effect shall be as per OMR/ OISD regulations (maximum 45 db within one meter from the flare wall).
d. Flame shall be eco-friendly (low NOx, CO emission)
e. Burners efficiency shall not be less than 98%
f. Radiation level will be less than 2 KW/m^2

C. The ignition system shall comprise of pilot burners, pilot igniters, pilot monitor and flame stabilizer. Sufficient pilots are provided to ensure proper ignition, including automatic restart on flame out, alarm and status signals to the plant DCS.

D. Flame shall be hidden behind refractory lined CS shell. The refractory lining material (ceramic fibre blanket/ ceramic fibre module) should be suitable for minimum hot face temperature of 1200 deg C.

E. Height of stack shall be such that the maximum GLC of pollutants including NOX never exceeds the prescribed ambient air quality limit as per latest National Environmental Act. Wind fence shall be provided to diffuse any wind from impinging directly on the burner windows, and to assist in distributing air around the unit.

F. Staging control shall be provided for better smokeless flaring. The flare burners shall be manifolded in grouped stages. Staging valves shall be actuated by Staging Control System.

3.0 Scope of supply:

The scope of supply should be minimum as follows:

a. Refractory lined steel enclosure for combustion.
b. Burners as per the flare system design requirement with associated instruments.
c. Package shall include a PLC based Staging Control System for smokeless combustion and better turndown control.
d. Ignition system shall comprise of pilot burners, pilot igniters, pilot monitor and flame stabilizer.
e. Local electric/control panel including local shut-down, remote shut- down signals (process and emergency shut-down) and indication of equipment status.(All wiring to be terminated at junction box).

f. Flare ignition panel, with all necessary instrumentation, piping valves and temperature detection system.
g. All items necessary for the safe and satisfactory operation and maintenance of the system Compensating cables & junction boxes & Flare tip thermocouples.
h. Auxiliary equipment provided inside Package Unit battery limits (B.L.) as, controllers, control valves, self actuated valves, shutdown valves (SDV's), instrument both local and board mounted, manual valves, piping, fittings etc.
i. Bidder should provide Knock out Drum with necessary instruments
j. Bidder should provide flash back protection system
k. The vendor shall supply the complete Ground Flare Package with all the accessories as required to meet functional requirements.
l. The ignition system comprises of suitable no. of pilot burners required for each stage, pilot monitor, flame stabilizer etc. Each pilot shall be fitted with its dedicated flame detector to monitor the flame presence. The flame detector shall be of guaranteed robust design and have a quick response time.
m. Ground flare system shall be designed for allowable radiation levels as given and maintenance free requirement over its operating life.

4.0 Flare Ignition Panel

a. The ignition system shall be electrical spark igniter type, designed to ignite the pilot burners at the design wind conditions. Separate ignition lines shall be provided for each pilot.
b. The ignition panel shall be equipped and installed, as a minimum, with the following:

- Propane/LPG inlet manifold shall be provided to guarantee the fuel to the pilots during the start-up and in case of any possible fuel gas system failure.
- Bidder shall provide a flare ignition package P&ID.

5.0 Instrumentation and control requirement:

The control system for the Ground Flare should be a Programmable logic controller (PLC) based which monitors and controls various functions like:

- Opening and closing of pilot solenoid valves
- Ignition command to Ignition Transformers
- Ignition timing
- Establishing of pilot flame and pilot flame monitoring
- Monitoring of Water seal drum level & fuel gas pressure
- Establishing of Main flame by opening Main flame solenoid valves
- Shutting down of main flame in case of failure of pilot flame
- To decide the number of pilot & main flames to be established as per the quantity of gas to be flared
- To send important burner parameters like status of pilot flames, Water seal drum level, fuel gas pressure etc to main control system.

6.0 Design and Engineering:

a. Bidder shall design the flare system for the full range of process conditions as specified in the process data in Para 2.0 (A) and execute the installation & commissioning work at OIL's installation.

b. Bidder shall include any additional equipment necessary to guarantee the performances of the flare Package Unit as specified.
c. All required instrumentation, valves, control valves, pressure safety valves, piping and fittings required for the proper operation and preservation of the Package Unit shall be included.
d. Nozzles shall be provided to allow easy drainage in case of prolonged shut-down periods.
f. Bidder is required to provide purging connections and any device required for easy maintenance of the equipment

7.0 Drawings and Documents:

Bidder shall provide design details and diagrams of the flare system along with the technical-commercial bid for OIL's approval. Offer without design details and diagram will be rejected and will not be considered for price bid.

It should be noted that approval by OIL is for quality assurance purpose only, assuming that Bidder is technically responsible for all technical aspects of design checking. The Bidder is responsible for checking of compliance with the relevant documents like specification, applicable codes and COMPANY standards.
Bidder shall provide all the technical and maintenance manuals of the equipments.

8.0 Time schedule:
The project completion time shall be 12 months from the date of issue of LOA. Bidder shall provide list of all the activities, execution plan and bar charts along with the bid.

9.0 General Note:
a. Bidders shall categorically confirm that installation and commissioning of the flare system package with all accessories shall be carried out by their competent personnel at OIL's installations near Duliajan, Assam (India).

b. The bidder shall warrant that in the event of an order, all product(s) supplied shall be new and free from all defects and fault in material, workmanship, & manufacture and shall be in full conformity with the applicable API specification. The clause shall be valid for 12 months from the date of successfully commissioning of the unit.

c. OIL reserves the right to inspect, test and if necessary reject any part / parts after delivery at site (including incomplete manuals, catalogue etc.) in case of any fault on the part of the supplier.

d. The bidder shall have single point responsibility for designing, engineering, packaging, supply, installation and commissioning of the complete package.

e. Bidders must confirm that Goods, materials or plant(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a period of ***twelve months*** from the date of successful commissioning of the flare system. Against any defects arising from faulty materials, workmanship or design. Defective goods/materials or parts rejected by OIL shall be replaced immediately by the Bidder at the Bidder's expenses at no extra cost to OIL.

f. The governing language of the Contract shall be English language. All notices, correspondence, information, literature, data, manuals and other documents required under the Contract shall be in the English language. Technical units, quantities, etc. shall be expressed, used and abbreviated according to the SI system except for the pipe sizes, which shall be imperial units.

10.0 Site assembly, Erection/Installation & Commissioning:

1. The bidder shall provide services of their commissioning team for assembly, erection and commissioning which includes civil works, placement of the equipment at site. OIL will provide backfilling, levelling, boundary wall, approach road, control room etc.
2. All other arrangement for installation and commissioning the flare system shall be done by the bidder. Timeline for erection/Installation & Commissioning shall be 4 (four) months from the date of intimation from OIL. After installation /commissioning the bidder shall run (continuous run) the system for 15 (Fifteen) days satisfactorily prior to handing over to OIL for regular operation. Installation and commissioning price including accommodation, local transport, manpower etc. for the same shall be borne by the bidder and to be quoted separately in commercial bid.
3. All piping jobs are under the scope of the bidder.

Detail specifications for Enclosed Ground Flare System:

1.0 General Requirements: Party shall be responsible for the following:

1. Process design : This includes, sizing and design of the combustion chamber, Selection of Burners and pilots; Sizing and design of all piping and valves, Specification of instrumentation and control requirements; Specification of refractory material and anchoring system; Specification of flame arrestors (to prevent back firing), water seal and knock out drum. Flare system will be designed based on API 521 or API 537.

2. Structural design: This includes determination of material thicknesses and sizing of all Structural members for the combustion chamber including outer covering (SS Sheet or any other) etc. Design of all piping from the central manifold to the burners; Design of vent pipe including diameter, height, material of construction etc. Design of the support structure for the central manifold and the staging piping. Determination of foundation loads and anchoring requirements; Design of anchor bolts and nuts.

3. Design of Instrumentation and controls: This includes: Design of pilot status and ignition Panels; Design of staging control sequence; Preparation of instrument data sheets for Procurement of all valves and instruments; Design of instrumentation to detect flame out Conditions; Design of automatic gas and fire detector system; Design of monitoring system for measuring the combustion chamber temperature, gas pressure and chamber temperature remotely.

4. Back firing, flash back & over firing protection: This includes, design of suitable refractory lining and fixing the refractory to withstand the temperatures expected at full combustion, provision for a closing stage by purging of nitrogen gas and providing of water seal & knock out drum.

2.0 Detailed specifications of the sub systems:

(i) **The combustion chamber**: The chamber shall be sized for a specific residence time allowing to reach elevated levels of combustion efficiency under any atmospheric conditions. Ensure that flame is completely contained inside the combustion chamber.
Design of combustion chamber shall be with following features:
a) Size:OD: As per the design
b) Height: As per the design
c) Material of construction: Heavy duty Carbon steel
d) SS reinforcement rings outside: As per the design.
e) Suitable nozzle connections for installation of the thermo couples;
f) All necessary support brackets for piping and conduit.
g) Surface treatment of the carbon steel shell (with sand blasting).
h) Paint the system with two coats of Zinc rich primer, Air Sprayed.
i) Heavy duty bottom supporting platform / stand shall be provided for the chamber
j) Suitable outer insulation layers at the combustion region shall be provided to maintain the skin temperature not exceeding 25 to 30 deg.C above ambient temperature.
k) Provision for air, nitrogen and gas inlets & outlets
l) Provision for monitoring chamber inside temperature, view port for visualizing flame / pilot flame status.
m) Provision for monitoring the flue gas quality shall be provided with suitable measuring devices of reputed make as per statutory requirements of pollution control board

(ii) **The refractory lining:**

a) In the combustion chamber, refractory lining: capable of resistant against a temperature of 1250 °C.
b) The total refractory thickness shall be as per the design (Specify clearly in the offer).
c) Ceramic fiber density designed for the flare system
Additional lining: Provide a lining inside of the steel shell with a bitumen (equivalent paint) layer, inorder to increase resistance against corrosion.
d) Type and sheath material of the thermo couples envisaged in the system has to be clearly mentioned in the offer.

(iii) **The burners/ staging**: Its design shall allow for high destruction efficiency and low emissions. The NOX and CO emission rates meet the requirements of most regulatory agencies. Suitable burners as per the design which are to be connected to the flare gas staging piping.
_ Burner size: As per the design.
_ Total number of burner: As per the design
_ Number of pilot burners: As per the design
_ Material of construction: CS and SS combination
Note: Type, material of construction, life time and maintenance procedure of the burner have to be provided clearly in the offer. Separate maintenance procedure to be provided.

(iv) **The pilot burner and the ignition system**:
The proposed ignition system shall utilize electronic spark ignition. When the Flame detector senses a pilot outage, the system shall immediately actuate a hooter. The local ignition and control panel shall be suitable for outdoor installation in a safe area.
Each pilot burner shall have the following features:
_ One Flame detector
_ The pilot burner shall be capable of burning the pilot gas
_ Required gas pressure: As per design
_ Pilot burner length: As per the design
_ Pilot burner material: AISI 310/316
_ Standard ignition cable, with a protection hose, from the pilot burner plug connection, to the local ignition panel

(v) **The electronic ignition /control panel**
The electronic ignition shall be as per the following
_ Shall be located at safe area
_ Shall be suitable to Ingress protection
_ Provision for the status report of the valves and manual over ride of the valve control.

a. **Features required for the High Voltage Ignitor**:
High alloy, stainless steel pilot which combines a high voltage electronic Excitor and a high energy spark rod to provide rapid, reliable ignition. More importantly, the pilot provides instantaneous re-ignition if the pilot should ever lose its flame. System shall have following features:
• Rapid re-ignition / response time
• Low fuel consumption
• Ease of installation and/or retro-fit applications
• Durability due to high alloy, stainless steel construction
• Reliability: ignition and re-ignition
• Flame stability: as per design
• Robust spark rod assembly

b. **Control panel:**
At the front of the control panel, the following elements shall be incorporated:
(a) For re-ignition
_ Main switch with adequate capacity to put "ON and OFF" of the system.
_ Selector switch for auto/manual selection
_ Suitable lamps as per the standard color coding to indicate "voltage on", "pilot on", "pilot out" and "ignition failure"
_ Push buttons "for igniting pilots"
_ Reset button
_ Sequence of operations shall be possible in both automatic and manual modes
_ Inter locks shall be provided properly for restricting the passage of the gas in to the combustion chamber, when pilot is "OFF".
(b) Necessary relays timers and contacts etc. for proper functioning of the system shall be provided in the control panel.

(v) Knock out drum: Party shall supply & erect a knock-out tank between the waste gas source and the flare unit to remove liquids from the fluid stream. Piping should slope downwards from the source to the knock out drum and upwards to the flare

unit. Water seal shall be provided between a knock-out drum and flare pipe to prevent back firing from the flare pipe.
Water seal and knock out drum have to be designed, fabricated and erected for the system as per the design requirements. ***Suitable pump shall be provided to purge out liquid from Knock out Drum.***
For Knock out drum, the following features have to be included:
_ Standard design codes as per ASME have to be followed for the design of the knock out drum.
_ All the lines connected to the knock out drum have to be of flanged type with suitable valves of standard make.
_ Party has to erect necessary pipeline interconnections from the knock out drum to the flare system.
_ Pipe line material should be of Carbon steel, galvanized and 300 class rating
_ Material of construction, design details of the knockout drum such as design pressure, design temperature, volume of the drum have to be mentioned clearly in the offer with a schematic diagram.
Pressure drop associated with the knock out drum has to be specified, if any. KOD should be complete with instruments as required for safe operation and automatic control.

(vi). Water seal
For water seal, the following features have to be included:
_ Standard design codes as per ASME have to be followed for the design of the water seal.
_ All the lines connected to the water seal have to be of flanged type.
_ Party has to erect necessary pipeline inter-connections from the water seal to the flare system.
_ Pipe line material should be of Carbon steel, galvanized and 300 class rating.
Material of construction, design details of the water seal such as design pressure, design temperature, volume of the drum have to be mentioned clearly in the offer with a schematic diagram.
_ Pressure drop associated with the water seal shall be minimum as possible to take care minimum & maximum pressure of the gas during flaring.
_Water seal should be complete with instruments as required for safe operation and automatic control.

(vii) Blower system (If the flare design has the requirement of Blower system)
For ensuring 100% combustion, additional driving force i.e air shall be provided into the system using a blower. Party has to design suitable blower system and the following have to provided clearly in the offer.
_ Type of the blower: With Flame proof motor, rugged and heavy duty model.
_ Amount of driving force i.e. air driven into the system.
_ Premix ratio of gas i.e. fuel and air.
_ Principle of mixing of gas i.e. fuel and air.
_ Power requirement for operation of blower.
_ One air blower
_ Forced draft air blower fan shall be provided along with impeller (directly on motor shaft), electric motor (flame proof suitable for hazardous area gas group IIA/IIB temp. class
T3), common base frame for fan& motor & foundation /mounting bolts.

(Viii) General requirements:

(a) Noise limits
_ The noise production at full capacity and at 1 meter outside the wind fence shall be: less than 45 db
(b) Smoke Production
_ 100% combustion (Smokeless)
(c) The battery limits of the system has to be
_ The local ignition /control panel shall be located near the enclosed Flare.
_ The inlet flange of the main waste gas manifold.
_ The local junction boxes near the enclosed Flare.

3.0 Special terms & conditions:

a. All electrical/instrumentation equipment's shall be suitable for outdoor installation (IP 55)
b. All the electrical/instrumentation equipment's provided at the hazardous area shall be flame proof.
c. All the piping shall meet the ANSI standard; flanges shall be ASA 150 # RF WN; the main wastegas piping wall thickness shall be of schedule 40;
d. The structural design of the Enclosed Ground Flare system should be as per the relevant structural standard.
e. Surface of the flare system shall be sand blasted and two quotes of zinc rich primer and epoxy coating.
f. Conduits, cable trays etc. shall be of standard make with surface protection (galvanized).
g. Utilities required have to be supplied by the party.
h. Civil requirements for erection of the system have to be done by the party.
i. Welding: Welded joints should be highest quality meeting all the approved standard and leak proof. Ensure that all the joints are 100% leak proof as any leakage of gas to atmosphere is hazardous. Sufficient thickness shall be provided for all the welded parts for taking care the weld efficiency and strength.
j. Temperature sensors & indicators: Suitable provision shall be made for monitoring thetemperature of the inside chamber.
k. Use only reputed make temperature & pressure indicators and transmitters for the system. Allnecessary cabling from the TT to the control panel shall be provided by the party.

4.0 Certificates & Approvals:
1. Test Certificates: The firm shall produce manufacturer's test certificates and guarantee certificates in original in respect of all the items supplied at the time of testing and trials.
2. Inspection Tests & Trials. The equipment shall be inspected as per OIL's following approved procedure:

Factory Acceptance Testing (FAT):
Vendor shall arrange following Factory Acceptance Test in presence of OIL's representative:
Complete testing of the flare ignition & control panel operation, operation sequence, safety logic, valve staging logic, and safety instrumentation system etc. to ensure the full functionality of the complete flare system as per tender specifications.

Functionality checking of all field instruments, transmitters, flow meters, UV scanners, valves etc. & review of datasheets.
System Redundancy checks including correct change-over of the back-up units in case of main unit failure. This shall be carried out for processors, power supplies, communication bus and any other redundancy as specified in tender document.
100% welding joints of pressure vessel and piping shall be radiographed and reports will be reviewed by OIL.
OIL shall witness 100% of the following manufacturing activities of pressure vessel and piping besides other inspection as per applicable codes:
Final Visual and dimensional inspection
Air testing of nozzle pads
Hydro testing etc.
Site Acceptance Test:
The complete non luminous flare system along with all its associated subsystems, auxiliaries and instruments and control system needs to be installed and commissioned and uninterrupted trouble-free operation for 15 days before the system can be declared as successfully commissioned.
3. Codes and Standards
Design, Materials and manufacturing of the complete unit shall incorporate up-to-date technology /ISO/ IS specifications.
4. The material used for this product should be suitable to with stand the corrosive environment.
5. Assurance for product support: The firm supplying the product has to give an undertaking assuring its product support for next 5 years.
6. Drawings and Documentation: Two copies each of the following documents shall be providedalong with the plant.
_ General arrangement drawing
_ Electrical circuit diagram
_ Instruments Data Sheet& P&ID
_PLC system configuration drawing
_ Instruction manual consisting of part identification list, comprehensive part list.
_ Operation and maintenance manual with fault diagnosis chart, remedial measures etc.
_ Maintenance manual shall include dis-assembly and assembly of various components andallowable wear and clearances after repairs.
7. The detailed design, drawings along with technical specification of the control system, gas and fire detectors, panel, High Energy Ignition system, Burner details, P&ID etc shall be submitted by the party for approval from OIL before commencement of fabrication.
8. Guarantee/Warranty. The party shall offer 12 months comprehensive warranty for the item supply from the date of commissioning. In case of defects during the guarantee period the supplier shall repair / replace the defective parts without any additional cost.
9. Party has to visit our site before commencement of the fabrication. All arrangements for site visit have to be made by the party.
10. The Control panel system shall be of compact type, designed according to space available at site. Party may visit our site and inspect the location, if required, before sending the quotation.
11. Electrical power and civil requirement: Party shall clearly mention in their offer the total power requirement and civil requirement for erecting the plant with all above accessory units at our site.
12. The wiring diagram and general arrangement diagram of the new control panel shall be provided for approval from OIL before fabrication.

13. All the specifications for the electrical and instrumentation systems (Sensors, cables, junction boxes etc.) have to be submitted to OIL for approval.
14. The system is said to be commissioned only when the performance of the entire system is demonstrated successfully as per the satisfaction of the OIL.
15. Quote separately for supply of the items with all the above specifications at our site along with erection installation & commission the same. Clear break-up shall be provided in the offer.

5.0 PLC requirements:

The PLC control system shall ensure reliable and safe operation of the plant with particular attention to the following:

a. The use of common hardware and software platforms for all major system components.
b. The functionality of the control system shall be implemented using an industry standard open system architecture utilizing standard operating system, network protocols, user interfaces and software development tools.
c. Control system components shall have demonstrated reliability in their particular field of application. Customization beyond the user level shall be minimized.
d. Any element or component of the system, such as operator station, processor etc. shall be replaceable, expandable and up-gradable by simple change out or "plug-in" without affecting the rest of the system or requiring any software modification.
e. The control system shall be designed for fail-safe operation. On loss of signal, equipment shall fail to a safe status.
f. Reliability and uptime availability of these systems shall be of utmost importance.
g. The system will be designed with the appropriate level of redundancy to provide a reliable system and minimize downtime. This will be accomplished by use of redundant processors, software configuration and redundant data high way communication links. Software and hardware security features shall be included to ensure that only authorized users can access the system, its data, and its functions.

6.0 Drawings & Documentation requirement:

After placement of PO, Bidder shall submit certified drawings and spec sheet for each item & its accessories which shall include the following as a minimum for OIL INDIA approval within 2 (two) months from date of issue of LOA.

a) System Architecture diagram
b) Detailed dimensional drawings of internal component Power consumption in volt amperes
c) GA drawings of system, marshalling, relay cabinets & PDBs cabinets Rack layout including physical I/O modules locations
d) I/O assignments of PLC system Power supply distribution drawings
e) Load calculation sheets of communications network and controller
f) Power load calculation of AC & DC power supply
g) Total Heat load & Heat dissipation figures for each components
h) Functional design specification FAT/SAT procedure
i) Wiring drawings for system cabinets & marshalling racks I/O mapping with plant DCS including MODBUS address

7.0 Hazardous Area system requirements:

- All instruments, junction boxes and cable glands and Local Control panels shall be certified for use in hazardous area as per area classification drawing of the installation where the flare system will be installed. The instrumentation shall be certified intrinsically safe in general, as per IEC-79.
- However, field switches and Solenoid Valves shall be certified flame proof for use in classified area as applicable (IS-2148 / IEC-79).
- Purging of Local Control Panel and other enclosures shall not be allowed. Moreover, all field instruments shall also be Weather proof to IP 65 as per IS 2147 / IEC 529. All junction boxes, cable glands and local panels etc. shall also be weather proof to IP 65 as aminimum. Junction boxes, cable glands and accessories shall be weather proof only when connected to intrinsically safe circuit and shall be weather proof and explosion proof / flame proof to IP 65 and NEMA-7 or equivalent IS standard, when connected to explosion proof instruments / circuits. The certification for inhazardous areas shall be as follows and shall be accordingly provided by theContractor.

a) All Instruments/systems/electrical equipment like motors, transformers, light fittings, switches, starters, junction box, Push button station, cables etc. to be used in Hazardous area Zone I and II, Gas groups IIA and IIB of Oil Mines shall be certified by DGMS (Director General of Mines and Safety) India and CIMFR (Central Institute of Mining & Fuel Research).
b) All motors and lighting circuits to be protected by suitably rated ELCB/ELRs as per Central Electricity Authority Rule No. 42.
c) Intrinsically safe (within Zone-1 Hazardous area) Remote Control Circuits to be provided for all electrical equipments/system and the supply voltage shall not exceed 30 Volt as per Central Electricity Authority Rule Nos. 102 (iv) & 110 (4) (i).
d) All Electrical Equipments & luminaries must conform to IS –2148 and area classification IS 5572
e) Approvals other than above shall neither be offered nor will these be acceptable.
f) DGMS approval of the Instruments is a statutory requirement and is required over & above certification by ATEX / FM/UL /CSA /CENELEC/ BASEFA / PTB.

8.0 Instrumentation installation standards:

The design and installation of instruments shall be generally in accordance with ISA / API recommended practices and other applicable standards like ASI, IBR etc. Material specifications and practices shall, in general, conform to appropriate ASTM, NACE (wherever applicable) or equivalent standards. All standards, code of practice shall be of the latest edition.

- All instruments and equipments shall be suitable for use in hot, humid and tropical industrial climate in which corrosive gases and / or chemicals may be present. As a minimum, all instruments and enclosures in field shall be dust proof, weather proof to IP65 and secure against the ingress of fumes, damages, insects and vermin. All external surfaces shall be suitably treated to provide anticorrosion protection against plant atmosphere.

- Location of process connections shall be either from the side or from the top ofthe process equipment but not from the bottom. This requirement is applicable to both pipes and vessels. The location of lower side connection shall be high enough to prevent plugging due to any suspended solids. In additions, the connections shall be short, vertical or horizontal and without any pockets.
- Materials of construction of instruments shall be consistent with temperature, pressure, corrosion conditions and other process requirements. In case wheresuitable material procurement is not feasible/available, diaphragm seal shall beprovided.
- The complete instrument system shall be designed for safe operation, by usingnormally closed contacts which open on fault conditions.
- Mounting of Instrument / JB on the stanchion or instrument support shall be at the height of 1.3 meter from the finished grade / floor level.
- Contractor to note that the atmosphere external to the items is classified ashazardous to Area NEC Class-I, Division-1, Group C, D.
- The offered Sensors along with the Transmitter shall be certified suitable for the specified Electrical Area Classification, and bidder shall furnish the certificate from body like FM/UL/BASEEFA/PTB/ any reputed government approved test house (national or international) along with the offer. However, if the same Sensors along with the Transmitters are required to be mounted/installed in Hazardous area (Zone I and II, Gas groups IIA and IIB of Oil Mines) as per the bidder system design philosophy then the bidder will have to provide the valid **DGMS approval certificate/DGMS field trail permission certificate along with the supply** of the items. Bidder will have to confirm in writing about fulfilling the same during bid submission.

- The offered Sensors shall be Weather proof to IP 65 and Explosion Proof toNEMA 7 certified for the specified area classification.
- Cable entry for the Sensor shall be as per Manufacturer's Standard. However, flying leads are not acceptable. Cable glands (explosion proof certified toNEMA 7) shall be in Contractor’s scope of Supply.

9.0 STANDARDS AND SPECIFICATIONS

Latest editions of the codes enlisted below shall be followed in addition to the Codes & Standards mentioned in specifications mentioned in the bid:

American Gas Association (AGA)

AGA Report No. 3 Orifice Metering of Natural Gas

AGA Report No. 8 Compressibility and Super-compressibility for Natural Gas and other Hydrocarbons.

AGA Report No. 9 Measurement of Gas by Multi-path Ultrasonic Meters

American National Standards Institute (ANSI)

ANSI B 2.1 Pipe Threads

ANSI B 16.5 Steel Pipe Flanges, Flanged Valves and Fittings

B 16.10 Face to Face and End to End Dimensions of Ferrous Valves

B 16.34 Hydrostatic body and leak testing of isolation valves.

B 16.37 Hydrostatic Testing of Control Valves

B 16.104 Control Valve Leakages

FCI 70.2 Leak Testing of Control Valves

ANSI B 1.20.1 Pipe Threads, General Purpose

MC 96.1 Temperature Measurement Thermocouples

American Petroleum Institute (API)

API 5.3 Liquid flow metering by turbine meters

API 6D Specification for pipeline valves

API 6FA Fire Test for Valves

API RP 500 Classification of Locations for Electrical Installations at Petroleum Facilities Classified as Class 1, Division 1 and Division 2
API 501 Pressure measurement and instrumentation

API RP 520 Sizing, Selection and Installation of Pressure Relieving Devices in Refineries, Part I and Part II

API RP 521 Guide for Pressure Relief and Depressing Systems

API RP 526 Flanged Steel Safety Relief Valves

API RP 527 Commercial Seat Tightness of Safety Relief valves with Metal to Metal Seats

API RP 550 Manual on Installation of Refinery Instruments and Control Systems

API RP 551 Process Measurement Instrumentation

API RP 552 Transmission Systems

API RP 554 Process Instruments and Control

API RP 555 Process Analyzers

API 598 Valve Inspection and Testing

API Standard 2000 Venting Atmospheric and Low Pressure Storage Tanks:

Non-refrigerated and Refrigerated.

API 1101 Measurement of Petroleum Liquid Hydrocarbons by Positive Displacement Meter
API RP 2001 Fire Protection in Refineries

API S2534/2534 Measurement of Liquid Hydrocarbons by Turbine Meter Systems
API S620 Vibration, Axial position and bearing temperature monitoring

API Manual of Petroleum Measurement Standards –

API chapter 5.6 Measurement of Crude Oil by Coriolis Meter

American society of Mechanical Engineers (ASME)

ASME PTC 19.3 Performance Test Code Temperature Measurement

American Society for Testing and Materials (ASTM)

ASTM A269 Stainless Steel Tube

ASTM A276.316L Stainless Steel Fittings

ASTM 370 Standard Test methods and definitions for Mechanical Testing of steel products

ASTM 450 General Requirements for Carbon, Ferritic Alloy, and Austenitic Alloy Steel Tubes
ASTMP 2863 Test method for measuring the minimum oxygen concertration to support candle like combustion of plastic (oxygen index)

British Standards

BS 1904 Specification for industrial platinum resistance thermometersensors

BS 4937 International Thermocouple Reference Tables

BS 5501 Electrical Apparatus for Potentially Explosive Atmospheres

BS EN 60529 Specification for degrees of protection provided byenclosures (IP) codes

Indian standards for Hydrocarbons and Mines.

CMRI - Central Mining Research Institute.
DGMS - Director General of Mines safety.
OISD - Oil Industrial Safety Directorate.
OISD RP 149 design aspects for safety in electrical system
OISD GDN 180 Lighting protection
OISD STD 113 classification of area for electrical installation at hydrocarbon processing and handling unit.
OMR - Oil Mines Regulation. (Latest edition)
PESO – Petroleum & Explosive Safety Organisation.

International Electro-technical Commission (IEC)

IEC STD 801 Part 3 – EMI and RFI Immunity
IEC 60079 Electrical Apparatus for Explosive Gas atmosphere
IEC 60092-373 Shipboard flexible coaxial cables
IEC 60092-359 Specification for insulation and sheath of electric cables
IEC 60227 Polyvinyl chloride insulated cables of rated voltages up to and including 440/750 V
IEC 60331 Fire resisting characteristics of electric cables
IEC 60332-1 Tests on electric cables under fire conditions Part I: Tests on single vertical insulated wire or cable
IEC 60332-3 Tests on electric cables under fire conditions Part II: Tests on single small vertical insulated copper wire or cable
IEC 61508-1-7 Functional safety on electrical / electronic / programmable electronic safety-related systems
IEC 61000-4-2 Electromagnetic Compatibility (EMC) – Part 4: Testing and Measurement Techniques – Section 2: Electrostatic Discharge Immunity Test
IEC 61000-4-3 Electromagnetic Compatibility (EMC) – Part 4: Testing and Measurement Techniques – Section 3: Radiated, Radio-Frequency, Electromagnetic Field Immunity Test
IEC 61131-3 1993 Programmable Controllers – Part 3: Programming languages
IEC 61158-2 Field bus Standard for use in Industrial Control Systems

Institute of Electrical and Electronic Engineers (IEEE)

IEEE STD.472 Surge Withstand Capabilities
IEEE C37.90.1 Standard Surge Withstand Capability (SWC) Tests for Protective Relays and Relay Systems
IEEE 730 Standard for Software Quality Assurance Plans Revision of IEEE Std 730-84 and Re-designation of IEEE 730.1-89;
IEEE Computer Society Document
IEEE 828 Standard for Software Configuration of Management Plans
IEEE 1042 Guide to Software Configuration management IEEE Computer Society Document

Instrumentation Systems and Automation Society (ISA)

ISA S-5.1 Instrumentation Symbols and Identification
S-5.2 Binary Logic Diagrams for Process operations
S-5.4 Instrument Loop Diagram
S 7.0.01 Quality Standard for Instrument Air
S-20 Specification Forms for Instruments
S-50.2 Field bus Standard
ISA/ANSI-S 84.01 Application of Safety Instrumented Systems for the Process Industry
ISA 912.13 Part I: Performance Requirements, Combustible Gas Detectors
Part II: Installation, Operation and Maintenance of Combustible Gas Detectors
ISA S 71.01 Environmental Conditions for Process Measurement and Control Systems: Temperature and Humidity
ISA S 71.04 Environmental Conditions for Process Measurement and Control Systems: Airborne contaminants
ISA S 75.01.01 Flow equations for sizing control valves
ISA S 75.01.03 Face to Face Dimensions for Flanged Globe Style Control valves

International Organization for Standardization (ISO)

ISO 5167 Measurement of Fluid Flow by means of Orifice Plates
ISO 9000-3 Quality Management and Quality Assurance Standards-Part- 3: Guidelines for the Application of ISO 9001 to the Development, Supply and maintenance of Software First Edition
ISO 9001 Quality Systems: Model for Quality Assurance in Design, Development, Production, Installation and Servicing Second Edition
ISO 9004-1 Quality Management and Quality System Elements-Part 1: Guidelines First Edition

National Association of Corrosion Engineers (NACE)
NACE MR 0175 Sulfide Stress Cracking resistant metallic materials for oilfield equipment

National Electrical Manufacturers Association (NEMA)
NEMA 250 Enclosures for electrical Equipment (1000 Volts maximum)

National Electric Code (NEC)

National Fire Protection Association (NFPA)

NFPA 70 National Electrical Code
NFPA 1 Fire Protection Code
NFPA 72 E Automatic Fire Detectors
NFPA 496 Standard for Purged and Pressurized Enclosures for Electrical Equipment

Other Bodies
Report EE170E.98 ER & E Version 1.0, Alarm Management Guidelines
Engineering Equipment Materials Users Association (EEMUA) publication No. 191, Alarm Systems – a Guide to Design Management and Procurement
All goods and services supplied shall meet all applicable local and international regulations on health, safety and environmental issues.

10.0 Specific Codes and Standards for Instrumentation:

The design, manufacture, inspection, testing and installation of all equipment and system covered under this section shall conform to the latest editions of codes and standards at the time of procurement.

IEC 801.4	-	Electromagnetic compatibility for industrial process measurement & control equipment.
IEC 529	-	Classification of degree of protection provided by enclosures.
NEC	-	National Electrical code.
NFPA-496	-	Purged and pressurized enclosures for electrical equipment.
ISA-S51.1	-	Process Instrumentation Terminology
ISA-S5.2	-	Binary Logic diagrams for process operations.
ISA-S5.3	-	Graphic symbols for Distributed control/Shared display instrumentation/Logic and computer system.

ISA-S5.4	-	Instrument Loop Diagrams.
ISA-S18.1	-	Annunciator Sequences and Specifications
ISA-RP55.1	-	Recommended practice-Hardware testing of digital process computers.
ISA-S71.01	-	Environmental conditions for process measurement & control systems-Temperature & Humidity.
ISA-S71.04	-	Environmental conditions for process measurement & control systems –Airborne Contaminants.
ICS-6	-	Enclosures for Industrial control and systems

EN500014/IEC-79/API-500- Explosive Area Classification

IEC-61508	-	Safety Integrity Level
IEC-61131/ISA S 5.2 -		Logic
IEC-801.4	-	Electromagnetic compatibility for industrial process measurement & control equipment.
NFPA 70	-	National Electrical code
IEC-61511	-	Functional Safety-Safety Instrumented system for the process industry sector.

Special Notes for the item:

1.0 For Electrical / Electronic Instruments & Items:

1.1 Electrical/electronic equipment shall be CIMFR (or equivalent) certified and DGMS approved. The CIMFR certificate No. and DGMS approval No. shall be affixed or embossed on each piece of equipment.

1.2 In case DGMS approved electrical / electronic equipment is not available, the same shall be supplied with DGMS field trial permission certificate. Details of obtaining DGMS field trial permission are available at the web site of DGMS. The field trial may be carried in any E&P Company operating in India or during the commissioning of the project for it is procured.

1.3 A system will be considered as successfully commissioned only after obtaining valid DGMS approval for all the constituent equipment/instruments of the system.

1.4 The price of each electronic /electrical equipment shall be quoted separately.

General Notes for Bidders :-

(Bidders should confirm each & every point clearly. Deviations, if any, should be highlighted in the quotation.)

1.0 The bidder shall have single point responsibility for the complete system and all the items shall be procured from the same source.

1.1 Delivery being the essence of the tender, bidder should indicate their best delivery schedule.

1.2 The bidders must submit a written undertaking that they would be able to supply all the requisite spares and consumables (including bought out items) for a minimum period of 10 (ten) years from the certified date of completion / successful field commissioning of the Package. Original Equipment Manufacturer's undertaking must be forwarded for the items not manufactured by the bidder.

1.3 The bidder should provide a list of recommended spares for two (2) years trouble free operation and maintenance of the equipment & other accessories indicating item description, part number, quantity and price in the Price Bid and a copy of the same (without price) be provided in Techno-Commercial Un-priced Bid. The Prices of such spares should not change for next 2 years from the Bid opening date. However, the cost of these spares will not be considered for bid evaluation purpose.

2.0 Bidders are advised to submit details of previous supply record in tabular format as shown below:

SL NO	Client / Customer Name and Address with contact e-mail id	Order No / Contract No.	Date of order	Non-Luminous Enclosed Ground Flare System specification (Make, Model) & Quantity supplied	Completion date	Reference of supporting document enclosed

3.0 Installation & Commissioning :

3.1 The successful bidder will be required to install and commission the Non-Luminous Enclosed Ground Flare System by their competent service engineer.

After installation /commissioning the bidder shall run (continuous run) the system for 15 (Fifteen) days satisfactorily prior to handing over to OIL for regular operation.

3.2 Installation/ Commissioning charges must be quoted separately (and should not be clubbed together with main equipment) on lumpsum basis which shall be considered for evaluation of the offers. Total Nos. of days required for commissioning shall also be clearly indicated by the bidders.

3.3 While quoting Installation/Commissioning charges above, bidder should take into account all charges including to and fro fares, boarding/lodging, local transport at Duliajan, Assam and other expenses of supplier's personnel during their stay at Duliajan. OIL may provide accommodation on Chargeable basis subject to availability. Bidder should confirm about providing all these services in their Bid. However, OIL reserves the right to avail such services at its own discretion.

3.4 Bidder should agree to carry out installation and commissioning of the Online Gas Detection System at sites within 4 months (maximum) from the date of intimation from OIL.

4.0 **Tax & Duties:**

(i) All taxes, stamp duties and other levies imposed outside India shall be the responsibility of the Bidder/Seller and charges thereof shall be included in the offered rates.

(ii) All Taxes & levies imposed in India, for the services including installation & commissioning, shall be to the Bidder/Seller's account.

(iii) Income Tax on the value of the Services rendered by the Bidder /Seller in connection with installation/ commissioning etc. shall be deducted at source from the invoices at the appropriate rate under the I.T. Act & Rules from time to time.

5.0 Payment : Payment shall be released as follows:

a) Goods supplied with valid DGMS Approval:

i) 70 % of the supply (Non-Luminous Enclosed Ground Flare System, called as the system) value shall be released on supply of the System against proof of despatch/shipment of the goods and submission of valid DGMS certificate.

ii) Remaining 30 % of the supply the System value along with installation & commissioning charges shall be paid after successful commissioning and acceptance of the System by OIL at site.

b) Goods supplied without DGMS approval, but with Field Trial Permissions only:

i) 50 % of the supply (Non-Luminous Enclosed Ground Flare System, called as the system) value shall be released on supply of the System against proof of despatch/shipment of the goods and submission of valid DGMS field trial permission certificate.

ii) 20% of the System value shall be released on receipt of valid DGMS certificate.

iii) Remaining 30 % of the System value along with installation & commissioning charges shall be paid after successful commissioning and acceptance of the System by OIL at site.

The system will be considered as successfully commissioned only after obtaining valid DGMS approval for all the constituent equipment/instruments of the system.

OIL may consider making 100 % payment of the System value towards supply of the System against proof of dispatch/shipment and submission of necessary DGMS certificate provided bidders agree to pay interest @ 1% above prevailing Bank Rate (CC rate) of State Bank of India for 30 % of the System value and also submit Bank Guarantee for the equivalent amount plus interest valid till successful commissioning of the System at site. This is in addition to the 10 % of the order value towards Performance Security as per the NIT requirement.

Any offer not complying with the above shall be loaded at one percent above the prevailing Bank Rate (CC rate) of State Bank of India for the duration of commissioning time indicated in the tender plus transit time (3 months) for evaluation purpose.

6.0 Oil India Purchase Order No. must be engraved on the body of the item. Bidder must confirm the same categorically in their quotation.

6.1 The items covered by this enquiry shall be used by Oil India Limited in the PEL/ML areas which are issued/renewed after 01/04/99 and hence Nil Customs Duty during import will be applicable. Indigenous bidder shall be eligible for Deemed Export Benefit against this purchase. Details of Deemed Export are furnished vide Addendum to MM/GLOBAL/E-01/2005 attached.

6.2 Other terms and conditions of the tender shall be as per "General Terms & Conditions" for e- Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders) and its amendments. However, if any of the Clauses of the Bid Rejection Criteria (BRC) / Bid Evaluation Criteria (BEC) mentioned here contradict the Clauses in the "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders) of the tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.

ANNEXURE II

Bid Rejection Criteria (BRC) & Bid Evaluation Criteria (BEC)

(I) BID REJECTION CRITERIA (BRC)

The bids must conform to the specifications, terms, and conditions given in the NIT. Bids shall be rejected in case the items offered do not conform to the required minimum / maximum parameters stipulated in the technical specifications and to the respective international /national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the following requirements shall have to be particularly met by the bidders, without which the offer will be considered as non-responsive and rejected:

(A) TECHNICAL :

BIDDERS EXPERIENCE:

1.0 The bidder shall have the experience of successful execution of at least 1 (one) no. order of Non-luminous enclosed ground flare system in the last 7 (seven) years preceding the bid closing date of this tender to any Oil and Gas company. The bidder's role in the said order should be in the capacity of Design, Engineering, Manufacturing, Supply, Fabrication, Installation & Commissioning.

Supporting documentary evidence in respect of the above must be submitted along with Techno-Commercial Unpriced Bid in the form of copies of relevant Purchase Orders together with copies of Tax Invoice, Bill of Lading (or Consignment Note) and successful Commissioning report in respect of satisfactory execution of each of those Purchase Orders.

1.1 The bidder shall be solely responsible for executing the project covering all the aspects from Design, Engineering, Manufacturing, Supply and Fabrication to Installation & Commissioning. Bidder must confirm their agreement to this effect in their Technical Bid

2.0 General

2.1 The offered Non-luminous enclosed flare system shall ensure proper burning of gases and reduces emission of CO and NOx. The flare design shall be such that it is not visible from outside and reduces noise & radiation level to comply with environmental norms. Design parameters of the burners shall be complied as per Para B of clause no. 2 (Basic design of the ground flare system) of technical specification.

2.2 Offer shall cover complete package of designing, Engineering, Manufacturing, Supply, Fabrication, Installation & Commissioning of the Non-luminous enclosed ground flare system.

2.3 The flare system shall conform to API 521 or API 537.

Bidder to confirm the all the above in their techno-commercial bid.

(B) COMMERCIAL :

Commercial Bid Rejection Criteria will be as per Section D of General Terms & Conditions of Global Tender (MM/GLOBAL/E-01/2005) with following Special Bid Rejection Criteria.

1.0 Bids are invited under Single Stage Two Bid System. Bidders shall quote accordingly under Single Stage Two Bid System. **Please note that no price details should be furnished in the Techno-Commercial Unpriced Bid.** The "Unpriced Bid" shall contain all techno-commercial details except the prices which shall be kept blank. The "Priced Bid" must contain the price schedule and the bidder's commercial terms and conditions.
Bidder not complying with above submission procedure will be summarily rejected.

2.0 Bid security of **US $ 10,790.00 or ₹ 4,85,500.00** shall be furnished as a part of the **Techno-Commercial Unpriced Bid**. **Any bid not accompanied by a proper bid security in ORIGINAL will be rejected without any further consideration.** For exemption for submission of Bid Security, please refer Clause No. 9.8 (Section A) of "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders). Bank Guarantee towards Bid Security shall remain valid till **31st May 2015**.

3.0 Validity of the bid shall be minimum 6 months (180 days) from the bid closing date. Bids with lesser validity will be rejected.

4.0 Bidders must confirm that Goods, materials or plant(s) to be supplied shall be new of recent make and of the best quality and workmanship and shall be guaranteed for a period of twelve months from the date of successful commissioning against any defects arising from faulty materials, workmanship or design. Defective goods/materials or parts rejected by OIL shall be replaced immediately by the supplier at the supplier's expenses at no extra cost to OIL.

5.0 Successful bidder will be required to furnish a Performance Bank Guarantee @10% of the order value. The Performance Bank Guarantee must be valid for one year from the date of successful commissioning of the equipment. Bidder must confirm the same in their Techno-Commercial Unpriced Bid. Offers not complying with this clause will be rejected.

6.0 **Bidders are required to submit the summary of the prices in their priced bids as per bid format (Summary), given below :**

(i) Priced Bid Format (SUMMARY) for Foreign Bidders :

(A) Total material Value excluding commissioning spares
(B) Total value of commissioning spares, if any
(C) Grand total materials value
(D) Packing & FOB Charges
(E) Total FOB Port of Shipment value
(F) Ocean Freight Charges upto Kolkata, India
(G) Insurance Charges

(H) Total CIF Kolkata value, (E + F + G) above
(I) Installation & Commissioning charges
(J) Grand Total Value, (H + I) above
(K) Grand Total value in words :
(L) Gross Weight :
(M) Gross Volume

(ii) <u>Priced Bid Format (SUMMARY) for Indigenous Bidders</u> :

(A) Total material Value excluding commissioning spares
(B) Total cost of commissioning spares, if any
(C) Grand Total Material Value including above
(D) Total Packing and Forwarding Charges
(E) Total Ex-works duly packed value
(F) Excise Duty with Education Cess, (Please indicate applicable rate of Duty)
(G) Sales Tax, (Please indicate applicable rate of Tax)
(H) Total FOR Despatching station price (E + F + G) above
(I) Road Transportation charges to Duliajan
(J) Insurance Charges
(K) Assam Entry Tax
(L) Total FOR Duliajan value
(M) Installation & Commissioning
(N) Grand Total Value, (L + M) above
(O) Grand Total value in words :
(P) Gross Weight :
(Q) Gross Volume :

<u>NOTES</u> :
Attention of Bidders is drawn to the followings, which were specified in the Tender document:

1. Cost of the individual items should be shown separately.

2. The Commissioning Spares (if any) should be indicated separately indicating the unit price and quantity quoted.

3. The price of each electronic /electrical equipment shall be quoted separately.

4. Details of the Commissioning Spares indicating the qty, description and unit prices must be shown separately.

5. Banking charges in the country of the foreign bidder shall be borne by the bidder.

6. Installation/Commissioning charges must be quoted separately on lumpsum basis which shall be considered for evaluation of the offers. These charges should include amongst others to and fro fares, boarding/lodging, local transport at Duliajan and other expenses of supplier's commissioning personnel during their stay at Duliajan, Assam(India).
   Bidder should also confirm about providing all these services in the Techno-Commercial Unpriced Bid.

7. All Income, Service, Corporate Taxes etc. towards the services provided under installation / Commissioning and Training shall be borne by the supplier and will be deducted at source at the time of releasing the payment.

8. The items covered under this enquiry shall be used by OIL in the PEL/ML areas issued/renewed after 01/04/99, applicable Customs Duty for import of goods shall be ZERO. Indigenous bidders must quote Deemed Export prices. Excise Duty under Deemed Export exempted.

7.0 **Offers received without Integrity Pact duly signed by the authorised signatory of the bidder will be rejected.**

(II) BID EVALUATION CRITERIA (BEC) :

Bids conforming to the specifications, terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria mentioned in Section D of "General Terms & Conditions" for e- Procurement as per Booklet No. MM/GLOBAL/E-01/2005.

1.0 If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.

2.0 For conversion of foreign currency into Indian currency, B.C. selling (Market) rate declared by State Bank of India, one day prior to the date of price bid opening shall be considered. However, if the time lag between the opening of the bids and final decision exceed 3(three) months, then B.C. Selling(Market) rate of exchange declared by SBI on the date prior to the date of final decision shall be adopted for conversion and evaluation.

3.0 Offers not complying with the payment terms indicated in the enquiry shall be loaded with one percent above the prevailing Bank rate (CC rate) of State Bank of India for duration of commissioning time indicated in the tender plus transit time (3 months) for evaluation purpose.

4.0 Other terms and conditions of the enquiry shall be as per General Terms and Conditions for Global Tender. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) mentioned here contradict the Clauses in the General Terms & Conditions of Global Tender of the tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.

CHECK LIST

THE CHECK LIST MUST BE COMPLETED AND RETURNED WITH YOUR OFFER. PLEASE ENSURE THAT ALL THESE POINTS ARE COVERED IN YOUR OFFER. THESE WILL ENSURE THAT YOUR OFFER IS PROPERLY EVALUATED. PLEASE TICK MARK 'YES' OR 'NO' TO THE FOLLOWING QUESTIONS, IN THE RIGHT HAND COLUMN.

(A) TECHNICAL CHECK LIST

Sl#	REQUIREMENT	COMPLIANCE
1.	Have you offered all the items as per tender?	Yes / No
2.	Whether the offered Flare system is designed as per tender requirement. Have you highlighted the deviations (if any)?	Yes / No
3.	Whether the offered Flare system conforms the scope of supply as per tender requirement. Have you highlighted the deviations (if any)?	Yes / No
4.	Whether Design details, Drawing, Literature (with illustrated drawings & exploded views) along with dimensional details is enclosed?	Yes / No
5.	Whether the offered Flare system conforms site assembly, erection/installation & commissioning as per tender requirement. Have you highlighted any deviation (if any) ?	Yes / No
6.	Whether the offered Flare system conforms special terms & condition as per tender requirement. Have you highlighted any deviation (if any) ?	Yes / No
7.	Whether the documentary evidence confirming execution of order of identical units?	
8.	Whether DGMS approval letters for electrical & instrumentation components are enclosed?	Yes / No
9.	Whether submission of DGMS approval prior to installation and commissioning (in the event of order) is categorically confirmed?	Yes / No

(Note: Bidder to state the reason(s) in detail where the answer to any of the above is negative)

Offer Ref .....…… Dated .....

(B) COMMERCIAL CHECK LIST

THE CHECK LIST MUST BE COMPLETED AND RETURNED WITH YOUR OFFER. PLEASE ENSURE THAT ALL THESE POINTS ARE COVERED IN YOUR OFFER. THESE WILL ENSURE THAT YOUR OFFER IS PROPERLY EVALUATED. PLEASE SELECT "Yes" OR "No" TO THE FOLLOWING QUESTIONS, IN THE RIGHT HAND COLUMN.

Sl#	REQUIREMENT	COMPLIANCE
1.0	Whether bid submitted under Single Stage Two Bid System?	Yes / No
2.0	Whether quoted as manufacturer?	Yes / No
2.1	Whether quoted as Supply House / Distributor. To Specify-	Yes / No
2.2	If quoted as Supply House / Distributor,	Yes / No
	(a) Whether submitted valid and proper authorization letter from manufacturer confirming that bidder is their authorized Supply House for the product offered?	Yes / No
	(b) Whether manufacturer's back-up Warranty/Guarantee certificate submitted?	Yes / No
3.0	Whether ORIGINAL Bid Bond (not copy of Bid Bond) Sent separately as per the format vide **ANNEXURE – VII (Revised)** mentioned in the "General Terms & Conditions" for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement? If YES, provide details	Yes / No
	(a) Amount :	
	(b) Name of issuing Bank :	
	(c) Validity of Bid Bond :	
3.1	Whether offered firm prices?	Yes / No
3.2	Whether quoted offer validity of Six months from the date of closing of tenders?	Yes / No
3.3	Whether quoted a firm delivery period? Delivery in weeks_____	Yes / No __Weeks
3.4	Whether agreed to the NIT Warranty clause?	Yes / No
3.5	Whether confirmed acceptance of tender Payment Terms.	Yes / No
3.6	Whether confirmed to submit PBG as asked for in NIT?	Yes / No
3.61	Whether agreed to submit PBG within 30 days of placement of order?	Yes / No
3.7	Whether Price submitted as per Price Schedule (refer Para 6.0 of BRC vide Annexure-II)?	Yes / No
3.71	Whether the quoted price is inclusive of Commissioning spares?	Yes / No
3.72	Whether all the items of tender quoted?	Yes / No
6.73	Whether confirmed that all spares & consumables will be supplied for a minimum period of **10 years** ?	Yes / No
3.74	Whether cost of Recommended Spares for 2 years of operations quoted?	Yes / No
3.8	Whether quoted as per NIT (without any deviations)?	Yes / No
3.81	Whether quoted any deviation?	Yes / No
3.82	Whether deviation separately highlighted?	Yes / No
3.9	Whether indicated the country of origin for the items quoted?	Yes / No
3.91	Whether technical literature / catalogue enclosed?	Yes / No
3.92	Whether weight & volume of items offered indicated?	Yes / No
4.0	For Foreign Bidders - Whether offered FOB / FCA port of despatch including sea / air worthy packing & forwarding ?	Yes / No

4.1	For Foreign Bidders – Whether port of shipment indicated. To specify:	Yes / No
4.2	For Foreign Bidders only - Whether indicated ocean freight up to Kolkata port (Excluding marine insurance)?	Yes / No
4.3	Whether Indian Agent applicable?	Yes / No
	If YES, whether following details of Indian Agent provided?	
	(a) Name & address of the agent in India – To indicate	
	(b) Amount of agency commission – To indicate	
	(c) Whether agency commission included in quoted material value?	
5.0	For Indian Bidders – Whether indicated the place from where the goods will be dispatched. To specify :	Yes / No
5.1	For Indian Bidders – Whether road transportation charges up to Duliajan quoted?	Yes / No
5.2	For Indian Bidders only - Whether offered Ex-works price including packing/forwarding charges?	Yes / No
5.3	For Indian Bidders only - Whether indicated import content in the offer?	Yes / No
5.4	For Indian Bidders only - Whether offered Deemed Export prices?	Yes / No
5.5	For Indian Bidders only – Whether all applicable Taxes & Duties have been quoted?	Yes / No
6.0	Whether all BRC/BEC clauses accepted?	Yes / No
7.0	Whether confirmed to offer the equipment for Pre-despatch/shipment Inspection & testing?	Yes / No
7.1	Whether Pre-despatch/shipment inspection & testing charges applicable?	Yes / No
7.2	If Pre-despatch/shipment inspection & testing charges applicable, whether quoted separately on lumpsum basis?	Yes / No
7.3.	Whether confirmed to carry out Installation & Commissioning of the equipment at Duliajan(Assam) ?	Yes / No
7.4	Whether Installation & Commissioning charge applicable?	Yes / No
7.5	If Installation/ Commissioning charges applicable, whether separately quoted on lumpsum basis?	Yes / No
7.6	Whether to & fro air fares, boarding/lodging of the commissioning personnel at Duliajan, Assam(India) included in the quoted charges ?	Yes / No
7.7	Whether confirmed that all Service, Income, Corporate tax etc. applicable under Installation/ Commissioning & Training (as applicable) are included in the prices quoted?	Yes / No
8.0	Whether **Integrity Pact** with digital signature uploaded?	Yes / No
9.0	Whether all the clauses in the Integrity Pact have been accepted?	Yes / No

Offer Ref ..... Dated .....