

OIL INDIA LIMITED
(A Govt. of India Enterprise)
P.O. Duliajan – 786602, Assam

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Tender No. & Date : SDG8941P16/09

Tender Fee : INR 4,500.00 OR USD 100.00

Bid Security Amount : Applicable

Bidding Type : SINGLE STAGE TWO BID SYSTEM

Bid Closing on : 16.12.2015 (at 11.00 Hrs. IST)

Bid Opening on : 16.12.2015 (at 14.00 Hrs. IST)

Performance Guarantee : Applicable

OIL INDIA LIMITED invites Global Tenders for items detailed below:

Item No. /Mat. Code	Material Description	QTY.	UOM
10	FABRICATION, PACKAGING, SUPPLY AND COMMISSIONING OF INDIRECT WATER BATH HEATER PACKAGE FOR PROCESSING NATURAL GAS PRODUCED FROM HIGH-PRESSURE GAS WELLS AS DETAILED IN THE FOLLOWING ANNEXURES – A) DETAILED SPECIFICATION – ANNEXURE - I. B) BID REJECTION CRITERIA (BRC) AND BID EVALUATION CRITERIA – ANNEXURE - II. C) TECHNICAL & COMMERCIAL CHECK LIST VIDE ANNEXURE - III	10	Nos.

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 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 “General Terms & Conditions”. However, Indian bidders will not be issued Recommendatory Letter.

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 **13:00 Hrs (IST)** on the Bid Closing Date mentioned in the Tender.

- a) **Original Bid Security along with two sets of photocopy.**
- b) **Details Catalogue and any other document which have been specified to be submitted in original.**

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

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 Attachment, 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 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.

8.0 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. 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. **If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway.**

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

- 1. SHRI RAGHAW SHARAN PANDEY, IAS(Retd.),**
Former Secretary MOP&NG
e-Mail ID : rspandey_99@yahoo.com
- 2. SHRI RAJIV MATHUR, IPS(Retd.),**
Former Director (IB) Govt. of India
e-Mail ID : rajivmathur23@gmail.com

SCOPE OF SUPPLY :

FABRICATION, PACKAGING, SUPPLY AND COMMISSIONING OF INDIRECT WATER BATH HEATER PACKAGE FOR PROCESSING NATURAL GAS PRODUCED FROM HIGH-PRESSURE GAS WELLS.

QUANTITY :10 Nos.

TECHNICAL SPECIFICATION

1.0 The Indirect Water Bath Heater shall be used for production of non-associated gas by preheating and expansion process. Natural gas will be heated in preheat coil and then expanded using a choke outside the bath. After reduction of pressure, the gas stream will be again heated in the expansion coil for further expansion.

2.0 SCOPE OF WORKS: Double Coiled Bath Type Indirect Heater of heating capacity 2.5 Million BTU/Hr. (0.7325 X10⁶ Watt) generally as per the general drawing attached along with the tender for reference.

However, supplier must obtain approval of all the drawings having all the engineering information including any alteration/ modification to OIL's drawings, if any, prior to manufacturing of the ordered items. The detailed drawings are to be submitted within thirty (30) days of receipt of detailed Purchase order for OIL's approval.

THE DETAIL SCOPE OF WORKS:

2.1 Scope of works includes fabrication, packaging, testing, supply, commissioning of the indirect water bath heater package complete with accessories and mountings for heating and expansion/pressure reduction of well stream. Details of the same are as under:

2.1.1 The bath type indirect heater suitably fabricated as per API Spec 12K. The heater should be complete with the following:

Reference General Drawing: OIL/PDNG/GD-GAD

2.1.2 Shell :

a) 1670 mm dia. (minimum) X 7500 mm long (minimum)

The shell must have adequate nozzles for inlet, outlet of coils, fire tube and mounting, various equipment & instrument for burner, level gauge/switch, drain valves etc.

Reference General Drawing: OIL / PDNG /GD -Shell

2.1.3 Coils (Seamless):

i) No. of Coil : 2 (two) sets of 3" (80 mm) NB coils, each set comprising of one no. preheat coil and one no. expansion coil

ii) No. of Pass: 8 (Eight) passes for preheat coil and 2 (Two) passes for the expansion coil

- iii) M.O.C. of Coil : API 5L Grade B, Wall Thickness (XXS) = 0.6 Inches (15.24mm) seamless / ASTM A106 Grade B, Wall Thickness (XXS) = 0.6 Inches (15.24mm)
 - iv) Coil Operating Pressure: Max: 281.6 kg/cm² (4000 psig)
 - v) Radiography of weld joints of Coil bundle: 100 %
 - vi) Coil Hydraulic Test Pressure: 1.5 times the maximum working pressure i.e. 422 kg/cm² (6000psig)
- Reference General Drawing: OIL/PDNG/GD-Coils

2.1.4 **Coil End Connection:**

Flanged, 65 mm (2.5") NB x 2500 class RTJ, conforming to ANSI B16.5, with bevel ended companion flanges, ring joint gasket as per ANSI latest specifications and required Nos. of high tensile studs-nuts as per ASTM A193 Gr. B-7, ASTM A194 Gr. 2H respectively.

2.1.5 **Fuel Scrubber:**

a) Scrubber with high efficiency wire mesh type mist extractor of adequate size to cater Fuel & Servo Gas Flow requirement shall be used for supplying liquid free fuel to the burner and servo gas to the pneumatic instruments.

- b) The scrubber shall be equipped with
 - i. Pressure indicator with isolating valve.
 - ii. Drain connection with isolation valve
 - iii. Sight glass/level gauges with gauge cocks
 - iv. Safety Relief valve- 2 Nos. (set at 33 kg/cm²)

c) Operating pressure of 30 kg/sq cm

d) Hydraulic Test Pressure: 1.5 times the maximum working pressure i.e. 45 kg/cm² (640 psig)

3.0 **Accessories**

3.1 **Positive Choke:**

Positive choke, with suitable choke housing for holding 25.4 mm dia. choke. Housing should have provision for easy installation and removal of Honest John bean with hammer union/bean wrench similar to bean housing installed at well head X-mass tree manufactured as per API spec. 6A. End connection, flanged, welded, 65 mm (2.5") NB, ANSI2500 class to be installed between preheat outlet and expansion coil inlet. Suitable 12.7 mm NB NPT tapping should be provided up and down stream of the bean housing to measure inlet and outlet gas pressures. One each of beans ranging from 7 mm, 8 mm, 9 mm, 10 mm, 11 mm, 12 mm, 13 mm and 14 mm should be provided along with 1 No. of suitable bean wrench for installation and removal of the beans. Materials for bean body ASTM A105, for bean housing and bean similar to API-6A X-mass tree bean. Operating temperature range (-)10 Deg C to 150 Deg C.

Reference General Drawing: OIL/PDNG/GD-Choke

Reference General Drawing: OIL/PDNG/GD-Bean Adapter

Reference General Drawing: OIL/PDNG/GD-Bean

Make : Masterflo / WKM / BHEL / JVS / Parveen / Cameron

3.2 **Fire Tube (Seamless):**

- i) M.O.C. of Fire Tube: API 5L, Gr. B (Seamless) / ASTM A 106, Gr. B

- ii) Type: U Type
 - iii) Diameter : 610 mm (24" NB) OD (minimum)
 - iv) Length : 6920 mm X 2 Nos.(minimum)
 - v) Radiography of weld joints at 'U' Bend: 100 %
 - vi) Half cover plate feature. Suitable roller arrangement for fire tube and coil bundle to be provided to facilitate easy removal while dismantling.
 - vii) Hydraulic Test Pressure: 5 kg / Sq cm
- Reference General Drawing: OIL/PDNG/GD-FireTube

3.3 Flame Arrested Burner & Accessories:

- a) Flame Arrested Burner: Natural Draft Burner of heat capacity (minimum) 2.5 Million BTU/Hr. (0.7325×10^6 Watt)
- Burner Make: Maxon / Eclipse / John Zink / ACL / G.I.E. S.r.l.
 The data sheet for above to be forwarded along with the offer. (Net Calorific value of Natural Gas for fuel is 8,500 Kcal / SCM).
 Heat capacity of Natural Draft Burner 2.5 Million BTU/Hr is a minimum value.

- b) Flame Arrester Make: Zirco / Flameco / Cameron (Natco) / Wenco / Grit Industries/ ACL

Flame Arrester must comprise of following components:

- i) 'O' / Box Type (Aluminum housing)
- ii) Flame Cell (Minimum Cell Dia: 42 Inch, Cell Thickness: 4 Inch)
- iii) Adaptor Spool

Flame Arrester must be Suitable for Burner of Heat Duty: minimum 2.5 Million BTU/Hr. (0.7325×10^6 Watt) with Natural Gas as Fuel.

4.0 INSTRUMENTATION & CONTROL SYSTEM:

Reference General Drawing: OIL/PDNG/GD-P&ID

4.1 Instruments to be mounted on Shell

- a) Liquid Level Switch:

Water bath should be equipped with low water level shut down device with the following specification:

- i) Type : Pneumatic
- ii) Action : ON/OFF
- iii) Output : 15 psig
- iv) Supply : 20 psig
- v) Make : Kimray / Fisher / Norriseal

- b) Temperature Indicators:

- i) Temperature Range : 0 to 150 Deg C
- ii) Thermowell Connection : 1 Inch NPT
- iii) Insertion Length : 300 mm (12 Inch)
- iv) Type : Bimetallic/ Mercury Filled
- v) Sensing Element Connection : 1/2" NPT
- vi) Material of Construction : All Stainless Steel
- vii) Accuracy : +- 0.5 Deg C
- viii) Make : Wika/ Odin / Warea / Ashcroft/ Icon

- c) Level Gauge: The Level gauge shall be of the following specifications:

- i) Type : Reflex Type
- ii) Connection Size : 1/2"

- iii) Isolation Valves : Required (Needle/Ball Valves)
- iv) Max. working Pressure: 2 Kg/Sq.cm
- v) Test Pressure: 10 Kg/Sq.cm
- vi) Max. working Temperature: 100 Deg C
- iv) Make :Pratolina/ Levcon/ Daniel/Chemtrol/ /Norriseal / V Automat

d) Water Filling Float Valve, 25 mm (1") NB:

Water inlet nozzle on the must be provided with a float operated industrial valve to avoid water over flow.

4.2 Instruments to be mounted on Coil Inlet & Outlet:

a) Temperature Indicator: Inlet and Outlet temperature indicators in each of the preheat and expansion coils with suitable thermowells.

- i) Temperature Range : 0 to 110 Deg C (6 nos.) & (-)20 Deg C to 100 Deg C (2 nos.)
- ii) Thermowell connection: 1" NPT
- iii) Type : Bimetallic/ Mercury Filled
- iv) Sensing Element Connection: 1/2"NPT
- v) Material of construction: All Stainless Steel
- vi) Accuracy : +- 0.5 Deg C
- vii) Make :Wika / Odin / Waree / Ashcroft/ Icon

b) Pressure Indicators: Inlet and Outlet pressure indicators shall be provided in each of the preheat and expansion coils as under :

- i) Dial Size : 150 mm (6") Minimum
- ii) Range : 0 to 425 Kg/Sq. cm (2 nos.)
: 0 to 210 Kg/Sq. cm (2 nos.)
- iii) Pressure Element: SS Bourdon tube
- iv) Material of construction: All SS
- v) Accuracy : +- 1% of reading
- vi) End Connection : 1/2" NPT
- vii) Isolation Valves : Required (Needle Valve)
- viii) Make :Wika / Odin / Waree / Ashcroft/ Icon

4.3 PNEUMATIC BURNER CONTROL SYSTEM:

4.3.1 CONTROL PHILOSOPHY:

The Indirect Heaters shall be equipped with the pneumatic control system to carry out the following functions:

- a) Remote Ignition of Pilot Burner (all the systems for the remote ignition shall be in Flame-proof enclosure, which shall be installed 20 meters away from the Heaters through suitable cables and connectors)
- b) Pilot Flame sensing through pneumatic pilot guard.
- c) Main flame shall be shut down in case of
 - i) Pilot flame failure through pneumatic pilot guard
 - ii) Low Liquid Level through Liquid Level Switch
 - iii) High water temperature through Temperature Indicating Controller (TIC) and Temperature Control Valve (TCV).
- d) Temperature Control of the water bath shall be through Indicating type temperature controller (TIC) and Temperature Control valve (TCV) as shown in the Reference General Drawing: OIL/PDNG/GD-P&ID.

e) A provision must be kept to ignite the pilot burner through a Hand-held High Energy Igniter remotely; in the event of a failure of the high energy battery operated remote igniter. Provision shall be made for connecting this handheld device at a distance of 20 meters from the pilot burner and the device must generate sufficient output for establishing flame in pilot burner from the specified distance of 20 meters.

4.3.2 **BILL OF MATERIAL FOR BURNER CONTROL SYSTEM**

A) HIGH ENERGY BATTERY OPERATED REMOTE IGNITER:

The purpose of the remote Igniter is to ignite pilot flame of burner assembly. The system shall consist of the following items.

- a) Function: To ignite the pilot flame in Natural Gas fired burners
- b) Features: Flameproof and Battery operated
- c) Battery: 12V/24V, Rechargeable type with compatible Solar Battery Charger Kit*
- d) Output Voltage: Sufficient for establishing flame in pilot burner at a distance of more than 20 mtrs.
- e) The Ignitor should be housed in a flameproof box.
- f) High Voltage Connector to provide connection between the High Voltage cable and the Ignition Electrode.& High Voltage cable and the Remote Ignition FLP Enclosure with IP 65 (minimum).

Make of Remote Igniter: Chentronics (sureSPARK, Model: BD-5) / GIE / GBA Flare Systems / Meggitt / Combustex-Canalta Controls / ACL / Sigma Controls Systems/ Smitsvonk/ G.I.E. S.r.l.

*Note: Solar Battery Charger Kit of reputed make complete with Solar Battery Charger Panels, Solar Charge Controllers for overcharging protection and mounting brackets for mounting panel that can be adjusted for a range of angle.

B) High Voltage Remote Ignition Cable:

- i) Length: 20 meters
- ii) Insulation Voltage: 11 KV (min)
- iii) Conductor: Fireproof, multistrand copper conductor
- iv) Insulation: PTFE insulated with mica tapping & fibre glass top
- v) Heat resistant upto 400 Deg C

C) PILOT BURNER ASSEMBLY with Ignition Electrode:

(Make: Maxon / Eclipse / Natco (Cameron)/ ACL/ Zeeco / Combustex-Canalta Controls / Sigma Controls/ Smitsvonk / G.I.E. S.r.l.)

Pilot Burner assembly complete with ignition electrode of above make shall consist of following with mounting arrangement for Pilot guard Sensor Lead/Element.

- a) Mixer
 - i) Connection: 1/2 or 1/4 inch Female connector
 - ii) Function: To maintain air-fuel ratio to the pilot burner
- b). Orifice
 - i) Suitable for Gas Mixer
 - ii) Function: To maintain air-fuel ratio for the pilot burner.

iii) Material of construction: Brass or SS

c). Pilot Burner Nozzle

i) Function: To provide pilot flame in the Natural Gas fired heater vessel

ii) Material of construction: SS 310 or suitable for high temperature applications

d) Ignition Electrode

i) Function: The ignition electrode is to be mounted on the body of the pilot burner to keep a fixed gap between the electrode tip and the pilot burner nozzle for proper ignition.

ii) Provision for clamping & length adjustment of the electrode.

iii) Holder Strap: To hold the Ignitor Rod Assembly with Pilot line.

iv) Insulation: It should have necessary CERAMIC insulation.

D) Hand-Held High Energy Igniter:

i) Battery: 12 V DC, Rechargeable including charger

ii) Output Power: min 1.5 Joules, 5 SPS

iii) Igniter Tips: 3 feet

iv) Weight: 3 kg Approx.

Make: Chentronics, Model: Motivator or Sigma Control Systems/ Smitsvonk / G.I.E. S.r.l.orEquivalent

E) Pilot Guard :

i) Function: Shut-off Gas Supply to the Pilot and Main Burner in the event of Pilot Flame out

ii) Temperature Sensing : Thermocouple

ii) Supply Inlet: 10 to 20 psig

iii) Thermocouple leads/Cable : 3 meter (10 feet) minimum

Make : FMC Invalco,CM7 / ACL-2000/ Kimray

F) Fuel Shut-off Valve

i) End Connection : 1" NPT (F) / Flanged

ii) Type : ON/OFF

iii) Actuator : Diaphragm

iv) Operating Signal : 3 to 15 psig

vi) Gas Flow Rate: 40-130 SCM/Hr

vii) Inlet Pressure: 1.0 - 3.5 Kg/Sq.cm

viii) Design Pressure: 10 Kg/Sq.cm

ix) Test Pressure: 15 Kg/Sq.cm

Make :Invalco/Samson/ Fisher/ Forbes Marshall /Combustex/ Murphy/ Kimray / Norriseal / OMC s.r.l.- Italy

G) Temperature Control Valve:

i) End Connection : 1" NPT / Flanged

ii) Type : Proportional

iii) Actuator : Pneumatic Diaphragm Operated

iv) Operating signal : 3 to 15 psig

Make :Invalco/ Fisher /Samson/Forbes Marshall/ Combustex / Kimray / Norriseal / OMC s.r.l.- Italy

H) Pilot Gas Regulator:

i) Input Supply : 1 – 3.5 Kg/cm²

ii) Output : 0 to 15 psig adjustable

iii) Connection : 1/4" NPT

Make :Invalco /Samson/ Fisher/ Kimray / Norriseal / OMC s.r.l.- Italy

I) Main Fuel Gas Regulator:

i) Input Supply : 30 Kg/Sq.cm

ii) Output : 0 to 3.5 Kg/Sq. cm adjustable

iii) Connection : 1" NPT / Flanged

iv) Flow rate of Natural Gas: 40 to 130 SCM/Hr.

v) Type: Spring Loaded

Make :Invalco / Samson/ Fisher/ Kimray / Norriseal / OMC s.r.l.- Italy

J) Pressure Indicators (2 nos.) in main fuel line before and after Regulator

i) Range : 0 to 40 Kg/Sq.cm (before Regulator), 0 to 3.5 Kg/Sq.cm (after Regulator)

ii) Dial Size : 100 mm (4")

iii) Connection Size: 1/2"

iv) Material of Construction: All Stainless Steel

Make :Wika/ Odin / Waree / Ashcroft

K) Pressure Indicators in pilot line after the regulator:

i) Range : 0 to 3.5 Kg/Sq.cm

ii) Dial Size : 100 mm (4")

iii) Connection Size : 1/4"

iv) Material of Construction: All Stainless Steel

Make :Wika/ Odin / Waree/ Ashcroft

L) Indicating Type Temperature Controller:

i) Type : Pneumatic Indicating PID Controller

ii) Range : 0 to 150 Deg C

iii) Sensor : Mercury Filled

iv) Sensor Connection : 1/2" NPT

v) Thermowell : Required

vi) Thermowell Connection: 1" NPT

vii) Insertion Length: 300 mm (12")

viii) Input Supply: 20-30 psig

ix) Output Signal: 3 to 15 psig

Make & Model: Fisher 4196B or Fisher 4196C or Samson or ABB 440 R Series or OMC s.r.l.- Italy

M) Strainer:

i) Sp. Gravity of Natural Gas: 0.6

ii) Flow rate of gas: 130 SCM/Hr.

iii) Mesh: 80 Mesh SS 304

iv) End Connection: 1" NPT

v) Working Pressure: 15 Kg/Sq.cm

vi) Test Pressure: 25 Kg/Sq.cm

Make: Zoloto/Leader/Sant or equivalent

N) Tubes & Fittings:

OEM for tubes and fittings shall be Swagelok, Parker or Hylok.

4.4 Notes :

- a)** All the pneumatic instruments shall be suitable for operating in compressed natural gas as servo supply.
- b)** Servo Gas Pressure Regulators of Fisher Model 67 CFR / Norgren / Maxitrol / Norriseal / OMC s.r.l.- Italy shall be provided for all pneumatic instruments requiring 20 psig supply pressure.
- c)** The Temperature Control Valve and the Fuel Shut-off Valve shall have isolation and bypass Valves as per Ball Valve Spec sheet attached. MOC of all the Needle valves for the package shall be SS suitable for intended application and design as per ASME B16.34.
- d)** Operation and Maintenance manuals of all the instruments shall be provided along with the supply of materials.
- e)** Three additional thermowells of 1" NPT of 300 mm length shall be fixed on the shell for provision of insertion other instruments.
- f)** Step by step operating procedure of remote ignition and no flame shutdown system shall be separately inscribed in a non-eraseable placard in the area where its operation would be carried out.

5.0 Earthing Provision:

Two (2) nos. of 3/4" studs with nuts (1 each at one of the legs and the vessel) to be welded for electrical earthing.

6.0 General Notes:

- i) All valves shall be Fire safe design as per API 607
- ii) The fuel gas line and controller etc should be suitably anchored / supported to the outside shell wall.
- iii) The fuel gas shall have preheating arrangement through the bath heater. Fuel gas preheating piping/coil shall be seamless, 3000 psig rating.
- iv) The Indirect Heater shall have suitable lifting lugs attached for lifting and placing the same at site.
- v) Materials whenever not mentioned will conform to API spec 12K standard for the vessel.
- vi) The following documents of bidders shall be forwarded with the bid:
 - a) Process and Instrumentation diagrams
 - b) General Arrangement Diagram (GAD) of the unit.
 - c) Sectional drawing showing the internals of the indirect heater.
 - d) Sectional drawing showing the internals of the Fuel Scrubber.
 - e) Drawings showing details of Remote Ignition System of Pilot Burner and Flame Failure shutdown system.
 - f) Circuit Diagram of Remote Ignition System with details of electronic components and Battery.
 - g) Drawing showing Bean housing and Bean Holder.
 - h) Instrument data sheets along with make and model.
 - i) Make/ Models of all the bought-out items along with technical literature, GAD etc.
 - j) Calculation/ datasheet from OEM for selection of Main Burner sizing for heat duty of 2.5 MMBTU/Hr considering the various parameters viz. Fuel Gas Calorific Value, Fuel Gas Pressure to Burner Inlet, Chimney Height, Fire Tube Dia& Length etc.
 - k) Calculation/ datasheet sheet from OEM for selection of Flame Arrester sizing with required air flow rate for Main Burner heat duty of 2.5 MMBTU/Hr considering Burner efficiency.

vii) The scope of the bidder also includes proper selection of the Main Burner Inspirator and Nozzle size and Flame Arrester Assembly size to ensure that the indirect water bath package meets the minimum heat duty requirement of 2.5 MM BTU/Hr taking into account all the parameters viz. Chimney height, fire tube diameter & length, air flow through the flame arrester, natural gas calorific value, burner efficiency etc.

viii) Welding shall be done as per ASME Section IX.

ix) OIL's purchase Order no. and date shall be inscribed along with Manufacturer's name, pressure rating, capacity, code of manufacture, unit serial no. on the vessels along with other details as per Reference General Drawing: OIL/PDNG/GD-NamePlate

7.0 Painting and Insulation:

Surface cleaning of Bath heater, external surface by sand blasting to Sa2 -1/2 grade conforming to Swedish Standard SIS – 05 5900 – 1967 followed by 2 coats of heat resistant primer. Insulation/protection as required shall be provided.

Inner surface will be cleaned by wire brushing and will be provided with 2 coats of heat resistant primer. Each coat will have min DFT of 35 micron.

The heater body and piping shall be thermally insulated by rock wool (Density 120) and aluminum sheet (20 gauges) covered with tight sealing, to prevent heat loss and external insertion of water and foreign elements.

8.0 Inspection & Testing:

A) Third Party inspection: The materials shall be offered for third party inspection for the following scope:

- a) Inspection of certificates in respect of raw materials, bought-out items, radiography etc.
- b) To review qualification of the welder and welding procedure specifications (WPS) as per ASME code.
- c) Verification of physical and chemical properties of raw materials.
- d) To witness fabrication works to ensure that the bidder has complied with respect to OIL's approved drawing for fabrication of the package.
- e) To review the stage wise inspection of subassemblies viz Nozzles, Shell, Fire Tube, Chimney, Bean Housing assembly, Companion Flanges etc. before final assembly.
- f) To review and certify the radio-graphed film of weld joints as per ASME code and heat treatment chart and certifying
- g) Inspection & witnessing of the hydraulic tests of Fire tube, Pressure Coils, Fuel Scrubber, Fuel Pre-heat Coil and Fuel Gas piping works will be separately tested. The testing will be as such (except testing of Shell), First to test the items/ piping assembly at 1.5 times the Design pressure / Maximum Working Pressure for 30 minutes and reduced to design pressure/ Maximum Operating Pressure. At the design pressure, testing will be for 24 hrs. The hydraulic test certificates report and recorder charts are to be sent to OIL.

- h) Water fill test of the Shell
- i) Inspection of all the bought out items as per Purchase Order and approved datasheet. Also to review purchase documents and quality certificates of bought out items.
- j) To witness final dimensional inspection and ensure proper workmanship.
- k) To document and issue inspection certificate.
- l) To review Operating & Maintenance Manuals for the package.
- m) The above inspection is for general guide line only. If third party desire to carry out any additional inspection as per ASME code / API specification and the same should be included under intimation to Oil India Limited.

B) Third party inspection charges shall be quoted separately.

C) The Third Party inspection agency must be OIL's authorized / recognized inspecting agencies i.e. M/s Lloyds or M/s Bureau Veritas or RITES or M/s IRS or M/s DNV or M/s. Tuboscope Vetco.

D) Inspection by OIL:

OIL will carry out inspection of the units during fabrication, assembly and testing. OIL representative must be provided all reasonable opportunities to inspect the unit(s) and material at their convenient. It prefers to inspect the unit and materials at the works during the following stages:

1st stage inspection: After completion of fabrication of Shell and internals including Pressure Coil, Fire Tube, Chimney, Nozzles etc. after Third Party Inspection but before final assembly. The supplier has to intimate OIL at least 15 to 20 days prior to offering the inspection date.

2nd stage inspection: Final inspection will be carried out by OIL when the IWBH Packages are completed (prior to painting of the unit) and mounted on the skid and the pipe works are almost ready. The supplier has to intimate OIL at least 15 to 20 days prior to offering the inspection date. OIL Engineer will inspect/witness the following:

- a) To review the hydraulic test records & pressure recorder charts of Fire tube, Pressure Coils, Fuel Scrubber, Fuel Pre-heat Coil, Shell and Fuel Gas piping works etc..
- b) To inspect the radiographic plates and reports. All these documents are to be sent to OIL along with the packages.
- c) To inspect the post weld heat treatment/stress relieving report and chart which are to sent to OIL later on along with the packages.
- d) To witness the functioning of all pneumatic control gears and control valves, for which the supplier is to supply instrument air during inspection.
- e) Relevant test records and documents- in respect of various equipment/ accessories shall be offered for verification.
- f) To check all the bought out items as per Purchase Order and approved datasheet. Also to inspect purchase documents and quality certificates of bought out items.

- g) Inspection of remote ignition system with solar high energy battery operated remote igniter & Hand-held High Energy Igniter as per Purchase Order and approved datasheet.
- h) Any modifications of general arrangement, if required after inspection shall be carried out by the vendor.

E) QUALITY ASSURANCE PLAN

- a) Quality Control(QC) shall mean all the tests, measurement, checks and calibration which are to be carried out in Bidder's shop in order to compare the actual characteristics of the equipment/unit/system with the specified ones, along with furnishing of the relevant documentation (certificates/records) containing the data or result of these activities. The bidders are required to furnish a detailed & comprehensive list of the inspection facilities available at their shop along with the bids.
- b) As a minimum the following points shall be included in the Quality Control Plan to supplement QAP Sample provided in the Tender.:
 - i) Review of material certificates and verification of the materials of construction for conformity with requisition requirements
 - ii) Review of material certificates and verification for heat marks for pipes and flanges for conformity to the specification
 - iii) Verification for the Vendors welding procedure and procedure qualification for the equipment in accordance with the design code
 - iv) Dimensional check in accordance with approved "final" drawings
 - v) Painting and lining requirement as detailed in this specification shall be inspected
 - vi) Final release

9.0 Installation and Commissioning:

- a) Commissioning of the indirect heater unit shall be in the supplier's scope. The supplier will give a tentative period for commissioning the unit. OIL will intimate the supplier concerned before 7 days of commissioning. The supplier will arrange for commissioning the unit within quoted time.
- b) It is the supplier's responsibility to inspect the supply at OIL's work site along with OIL's representative(s). Accordingly, the materials will be inspected in presence of supplier's representative at OIL's work site after delivery, but before commissioning to ensure immediate replacement of any short supply/transit damage.
- c) OIL will provide illumination/water at site during commissioning
- d) The supplier will have to arrange for transportation, boarding & lodging and security of the supplier's personnel(s) during their stay at Duliajan/site for commissioning the unit(s).
- e) Commissioning charges should be quoted separately.

Note: OIL will allow the supplier to start the installation & commissioning of the complete package within 60 days from the date of delivery of complete package. If any component of any package is short supplied or damaged during transit, the same shall not be considered as delivery of complete package. Each lot/batch of supplied materials will be inspected in presence of supplier's representative at OIL's work site to check the delivery of each package in all respects before installation & commissioning to ensure immediate replacement of any short supply/transit damage.

10.0 Warranty: The equipment/materials will be guaranteed for a period of 12 (twelve) months from the date of commissioning. The supplier shall repair or replace any item or equipment found defective in materials or workmanship or performance within the above period free of charge. The warranty is applicable to bought out items also.

11.0 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.

12.0 Payment : Payment shall be released as follows:

- i) 80 % of the supply value shall be released on supply of the goods against proof of despatch/shipment of the goods.
- ii) Remaining 20 % of the supply value along with installation, commissioning charges shall be paid after successful commissioning, testing and acceptance at site.

OIL may consider making 100 % payment of the Unit value towards supply of the Unit against proof of dispatch/shipment provided bidders agree to pay interest @ 1% above prevailing Bank Rate (CC rate) of State Bank of India for 20 % of the Unit value and also submit Bank Guarantee for the equivalent amount plus interest valid till successful commissioning of Units 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.

List of Original Equipment Manufacturer (OEM) for Bought-out Items

SI No	Description	Make
1	Flame Arrested Burner	Maxon / Eclipse / John Zink /ACL / G.I.E. S.r.l.
2	Flame Arrester	Zirco / Flameco / Cameron (Natco) / Wenco / Grit Industries / ACL
3	PILOT BURNER ASSEMBLY with Ignition Electrode	Make : Maxon / Eclipse / Natco (Cameron)/ACL/ Zeeco / Combustex-Canalta Controls /Sigma Controls / G.I.E. S.r.l.
4	High Energy Battery Operated Remote Igniter	Chentronics (sureSPARK, Model: BD-5) / GIE / GBA Flare Systems / Meggitt / Combustex-Canalta Controls /Sigma Controls Systems / Smitsvonk/ G.I.E. S.r.l.
5	Hand-Held High Energy Igniter:	Chentronics ,Model : Motivator or Sigma Control Systems or ACL or Combustex-Canalta Controls / Smitsvonk/ G.I.E. S.r.l. or Equivalent
6	Indicating Type Temperature Controller	Fisher 4196B or Fisher 4196C or Samson Type 3430 or ABB 440 R Series / OMC s.r.l.- Italy
7	Fuel Shut-off valve	Invalco/Samson/ Fisher/ Forbes Marshall /Combustex/ Murphy/ Kimray / Norriseal / OMC s.r.l.- Italy
8	Temperature Control Valve	Invalco/ Fisher /Samson/Forbes Marshall/Combustex / Kimray / Norriseal / OMC s.r.l.- Italy
9	Pilotguard	FMC Invalco , CM7 / ACL-2000 / Kimary
10	Liquid Level Switch	Kimray / Fisher / Norriseal
11	MainFuel Gas Regulatory	Invalco/Samson/ Fisher/Invalco / Norriseal / OMC s.r.l.- Italy
12	PilotGas Regulator	Invalco/Samson/Fisher/Invalco / Norriseal / OMC s.r.l.- Italy
13	Servo Gas Pressure Regulators	Fisher Model 67 CFR/ Norgren / Maxitrol / Norriseal / OMC s.r.l.- Italy
14	Temperature Indicators	Wika/ Odin / Waree / Ashcroft
15	Pressure Indicators	Wika / Odin / Waree / Ashcroft
16	Positive Choke Housing, Bean Adapter & Bean	Masterflo / WKM /BHEL / JVS / PARVEEN
17	Level Gauge	Pratolina/ Levcon/ Daniel/Chemtrol/ V Automat / Norriseal
18	Strainer	Zoloto/Leader/Sant or equivalent
19	Instrumentation Tubes & Fittings i) MOC ii) Make:	SS Swagelok, Parker or Hylok.

BID REJECTION CRITERIA (BRC) / BID EVALUATION CRITERIA (BEC)

I. BID REJECTION CRITERIA (BRC)

The bids shall conform generally to the specifications, terms and conditions given in the tender. Bids shall be rejected in case the items offered do not confirm 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 & conditions, the following requirements will have to be particularly met by the bids, without which the offer will be considered as non-responsive and rejected.

(A) TECHNICAL

1.0 BIDDERS' EXPERIENCE

1.1 a) The bidder must be in the business of Manufacturing/Fabrication, Assembling & Supply of Indirect-Fired type Water Bath Heater (IWBH) along with ancillaries items like Flame Arrested Burner, Fuel Control, Bath Temperature Control System etc. for oil & natural Gas applications for minimum 5 years prior to the original bid closing date of the tender. Bidder to submit list of past customers along with copy of purchase order with the bid.

1.1 b) The bidder must have successfully executed minimum one order of IWBH having minimum coil working pressure of 210 kg/cm² (3000 psig) / Coil Pressure Rating of Schedule No. 160 within the last 5 (five) years prior to the original bid closing date of the tender.

Documents in support of successful execution of past supply shall be in the form of copy of Purchase Order and performance bank guarantee release document / commissioning report from client / performance report from client of the corresponding executed supply along with one of the following documents:

- a) Commercial invoice or
- b) Bill of lading or
- c) Final inspection release note from TPI

Also, it is the bidder's responsibility to attach a relevant valid document of corresponding executed supply along with the bid, which categorically specifies the requisite criteria mentioned under 1.1 a) & 1.1 b).

1.2 The Bidder who does not meet the experience criteria as set forth in Para 1.1 a) & b) above, but has at least 2 (Two) years work experience of manufacturing/fabrication and supply of fired/non fired pressure vessels and have successfully executed minimum 1 (one) order of fired or non-fired pressure vessels may also apply on the strength of a collaborator or joint venture partner to cover the shortfall in experience mentioned in Para 1.1 a) & b) above.

Documents in support of successful execution of past supply of fired or non-fired pressure vessels shall be in the form of copy of Purchase Order and performance

bank guarantee release document / commissioning report from client / performance report from client of the corresponding executed supply along with one of the following documents:

- a) Commercial invoice or
- b) Bill of lading or
- c) Final inspection release note from TPI

Also, it is the bidder's responsibility to attach a relevant valid document of corresponding executed supply along with the bid, which categorically specifies the requisite criteria mentioned under 1.1 a), 1.1 b) & 1.2.

- 1.3 (a) Collaboration to cover the shortfall in experience mentioned in Para 1.1 a) & b) above shall be through a pre-tender bi-partite Agreement or Memorandum of Understanding (MOU) between the primary bidder and the collaborator. The pre tender bi-partite agreement or MOU has to be valid until the commissioning of the unit. More than one collaborator in such Agreement/ MOU shall not be admissible.
- (b) The pre-tender bi-partite Agreement or MOU between the primary bidder & its collaborator for Indirect-Fired Water Bath Heater must be submitted along with the bid. **Such MOU inter-alia must include the following role & responsibility of the collaborator.**
 - i) To provide complete services for Manufacturing or fabrication Assembly, Supply as well as Installation, Testing & Commissioning of the Indirect-Fired Water Bath Heater.
 - ii) To undertake process & equipment guarantee for the IWBH, which shall be endorsed on back-to-back basis to the primary bidder & OIL.
- 1.4 Collaboration / Joint Venture Partnership with a firm that also submits offer as an independent Bidder against this tender shall not be accepted. In such cases, offer of both, Bidder as well as Collaborator / Joint Venture Partner, shall be rejected.
- 1.5 At the time of technical evaluation of the offers, past performance of similar equipment supplied by any Bidder or Collaborator / Joint Venture Partner in respect of delay in supply of ordered item, incomplete supply, non-performance of supplied items at site, non-commissioning of the supplied items at site will be considered. If the same are found to be not satisfactory as already communicated to the party, the offer may be considered as unacceptable and rejected.
- 2.0 The technical specifications in general must conform to the requirements as mentioned in Annexure - I and relevant national /international code of practice / standards.
- 3.0 Bids and all related documents shall be in English language. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in English, in which case for purpose of interpretation of the bid, the translation in English shall prevail.

(B) COMMERCIAL :

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 Technical (i.e. 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 rejected.

2.0 Bid security of US \$ 20,800.00 or Rs. 13,60,000.00 shall be furnished as a part of the TECHNICAL BID (refer Clause Nos.9.0 & 12.0 (Section A) of “General Terms & Conditions” for e-Procurement as per Booklet No. MM/GLOBAL/E-01/2005 for E-procurement (ICB Tenders)). Any bid not accompanied by a proper bid security in ORIGINAL will be rejected without any further consideration. A bid shall be rejected straightway if Original Bid Security is not received within the stipulated date & time mentioned in the Tender and/or if the Bid Security validity is shorter than the validity indicated in Tender and/or if the Bid Security amount is lesser than the amount indicated in the Tender.

2.1 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).

2.2 The Bid Security shall be valid for one year from the date of tender opening i.e, valid upto **15.12.2016**.

3.0 Validity of the bid shall be minimum 180 days from Bid closing date. Bids with lesser validity will be straightway rejected.

4.0 The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.

5.0 Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

6.0 Bidders shall quote directly and not through Agents in India. Offers made by Indian Agents on behalf of their foreign principals will be rejected. Similarly offers from unsolicited bidders will be rejected.

7.0 Bids containing incorrect statement will be rejected.

8.0 No offers should be sent by E-mail or Fax. Such offers will not be accepted.

9.0 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 12(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 and no extra cost to OIL.

10.0 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. Bidder must confirm the same in their Technical Bid. Offers not complying with this clause will be rejected.

11.0 Offers should be submitted with Integrity Pact duly signed by the authorized signatory of the bidder. If any bidder refuses to sign Integrity Pact or decline to submit Integrity Pact, their bid shall be rejected straightway.

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

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

- (A) Total material cost for 10 nos. Indirect Water Bath Heater.
- (B) Packing & FOB Charges
- (C) Third Party Inspection Charges
- (D) Total FOB Port of Shipment value, (A+B+C) above
- (E) Ocean Freight Charges upto Kolkata, India
- (F) Insurance Charges
- (G) Total CIF Kolkata value, (D+E+F)
- (H) Pre-despatch inspection charges, if any
- (I) Installation & Commissioning charges for 10Nos. Indirect Water Bath Heater including service tax
- (J) Total Value, (G+H+I) above
- (K) Total value in words :
- (L) Gross Weight :
- (M) Gross Volume

(ii) Commercial Bid Format (SUMMARY) for Indigenous Bidders :

- (A) Total material cost for 10 nos. Indirect Water Bath Heater.
- (B) Packing and Forwarding Charges
- (C) Third Party Inspection Charges
- (D) Total Ex-works value (A+B+C)
- (E) Excise Duty, (Please indicate applicable rate of excise duty)
- (F) Sales Tax, (Please indicate applicable rate of Tax)
- (G) Total FOR Despatching station price, (D+E+F)
- (H) Road Transportation charges to Duliajan
- (I) Insurance Charges
- (J) Total FOR Duliajan value, (G+H+I)
- (K) Pre-despatch inspection charges, if any
- (L) Installation & Commissioning charges for 10 nos. IWBH including service tax
- (M) Total Value, (J+K+L) above
- (N) Total value in words :
- (O) Gross Weight :
- (P) Gross Volume :

NOTE : Cost of individual items must be quoted separately.

13.0 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). All Income, Service, Corporate Taxes etc. towards the services provided under installation / commissioning shall be borne by the supplier and will be deducted at source at the time of releasing the payment. Bidder should also confirm about providing all these services in the Technical Bid.

13.1 Pre-Despatch / Shipment Inspection charges, if any, shall be quoted on lumpsum basis separately which shall be considered for commercial evaluation of the offers. However, all to and fro fares, boarding/lodging and other expenses of OIL's Inspection Engineer(s) shall be borne by OIL.

(II) BID EVALUATION CRITERIA (BEC) :

The bids conforming to the specifications, terms and conditions stipulated in the enquiry and considered to be responsive after subjecting to the Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria given below:

(A) TECHNICAL :

All the items as indicated in the material description of this tender should be offered. If any of the item not quoted by the bidder, the offer will not be considered for evaluation.

(B) COMMERCIAL :

1.0 The evaluation of bids will be done as per the Commercial Bid Format (SUMMARY) detailed vide Para 12.0 of BRC.

2.0 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.

3.0 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.

4.0 To ascertain the inter-se-ranking, the comparison of the responsive bids will be made as under, subject to corrections / adjustments given herein.

4.1 When only foreign bidders are involved :Comparison of bids will be done on the basis of "TOTAL VALUE" which is estimated as under :

- (A) Total material cost for 10 nos. Indirect Water Bath Heater.
- (B) Packing & FOB Charges
- (C) Third Party Inspection Charges
- (D) Total FOB Port of Shipment value, (A+B+C) above
- (E) Ocean Freight Charges upto Kolkata, India
- (F) Insurance Charges @ 1% of Total FOB Value vide (D) above
- (G) Banking Charges @ 0.5% of Total FOB Value vide (D) above in case of payment through Letter of Credit (If confirmed L/C at buyer's account is required, 1.5% of Total FOB Value will be loaded)
- (H) Total CIF Kolkata Value, (D+E+F+G) above
- (I) Pre-despatch inspection charges, if any
- (J) Installation & Commissioning charges for 10 nos. Indirect Water Bath Heater including service tax
- (K) Total Value, (H+I+J) above
- (L) Total value in words :

NOTE : Banking charge in the country of the foreign bidder shall be borne by the bidder.

4.2 When only domestic bidders are involved or when more than one domestic bidders are in contention in case of mixed response :

Comparison of bids will be done on the basis of "TOTAL VALUE" which is estimated as under :

- (A) Total material cost for 10 nos. Indirect Water Bath Heater.
- (B) Packing and Forwarding Charges
- (C) Third Party Inspection Charges
- (D) Total Ex-works value (A+B+C)
- (E) Excise Duty, (Please indicate applicable rate of excise duty)
- (F) Sales Tax, (Please indicate applicable rate of Tax)
- (G) Total FOR Despatching station price, (D+E+F)
- (H) Road Transportation charges to Duliajan
- (I) Insurance Charges @0.5% of Total FOR Despatching Station Value (G) above
- (J) Total FOR Duliajan value, (G+H+I)
- (K) Assam Entry Tax, (Please indicate applicable rate)
- (L) Pre-despatch inspection charges, if any
- (M) Installation & Commissioning charges for 10 nos. IWBH including service tax
- (N) Total Value, (J+K+L+M) above
- (O) Total value in words :

NOTE: Excise Duty in case of the indigenous bidder is EXEMPTED under Deemed Export.

4.3 When both foreign and domestic bidders are involved :

The Total Value of domestic bidder (inclusive of customs duty on imported raw material and components etc. and applicable terminal excise duty on the finished products and Sales Tax) excluding inland transportation to destination, Assam Entry Tax and Insurance charges worked out as per Para 4.2 above and Total Value of the foreign bidder worked out as per Para 4.1 above will be compared. No

price preference will be allowed to indigenous bidders except that for capital goods, the domestic manufacturers would be accorded a price preference to offset CST to the extent of 4 % or actuals, which ever is less subject to 30 % local content norms as stipulated for World Bank Funded project to the satisfaction of OIL. When more than one domestic bidders fall within price preference range, inter-se-ranking will be done on Total Value basis.

Note: If the Government of India revises these evaluation criteria the same as applicable on the bid closing date will be adopted for evaluation of the offers.

5.0 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

THESE CHECK LISTS 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. BIDDER TO INDICATE RELEVANT PAGE NO. OF THEIR BID TO SUPPORT THE REMARKS / COMPLIANCE IN ALL THE CHECK LISTS.

(A) BEC/BRC Compliance Checklist:

Srl. No.	Clause No. of BEC/BRC	Description	Bidders Remarks Complied/ Not Complied/ Deviation	Bidder to indicate Relevant Page No. of their Bid to support the remarks / compliance
1	1.1 a)	The bidder must be in the business of Manufacturing/ Fabrication, Assembling & Supply of Indirect-Fired type Water Bath Heater (IWBH) along with ancillaries items like Flame Arrested Burner, Fuel Control, Bath Temperature Control System etc. for oil & natural Gas applications for minimum 5 years prior to the original bid closing date of the tender. Bidder to submit list of past customers along with copy of purchase order with the bid.		
2	1.1 b)	The bidder must have successfully executed minimum one order of IWBH having minimum coil working pressure of 210 kg/cm ² (3000 psig) / Coil Pressure Rating of Schedule No. 160 within the last 5 (five) years prior to the original bid closing date of the tender. Documents in support of successful execution of past supply shall be in the form of copy of Purchase Order and performance bank guarantee release document / commissioning report from client / performance report from client of the corresponding executed supply along with one of the following documents: a) Commercial invoice or b) Bill of lading or c) Final inspection release note from TPI Also, it is the bidder's responsibility to attach a relevant valid document of corresponding executed supply along with the bid, which categorically specifies the requisite criteria mentioned under 1.1 a) &		

		1.1 b).		
3	1.2	<p>The Bidder who does not meet the experience criteria as set forth in Para 1.1 a) &b) above, but has at least 2 (Two) years work experience of manufacturing/fabrication and supply of fired/non fired pressure vessels and have successfully executed minimum 1 (one) order of fired or non-fired pressure vessels may also apply on the strength of a collaborator or joint venture partner to cover the shortfall in experience mentioned in Para 1.1 a) & b) above.</p> <p>Documents in support of successful execution of past supply of fired or non-fired pressure vessels shall be in the form of copy of Purchase Order and performance bank guarantee release document / commissioning report from client / performance report from client of the corresponding executed supply along with one of the following documents:</p> <p>a) Commercial invoice or b) Bill of lading or c) Final inspection release note from TPI</p> <p>Also, it is the bidder's responsibility to attach a relevant valid document of corresponding executed supply along with the bid, which categorically specifies the requisite criteria mentioned under 1.1 a), 1.1 b) & 1.2</p>		
4	1.3 a)	<p>Collaboration to cover the shortfall in experience mentioned in Para 1.1 a) &b) above shall be through a pre-tender bi-partite Agreement or Memorandum of Understanding (MOU) between the primary bidder and the collaborator. The pre tender by-partite agreement or MOU has to be valid until the commissioning of the unit. More than one collaborator in such Agreement/ MOU shall not be admissible</p>		
5	1.3 b)	<p>The pre-tender bi-partite Agreement or MOU between the primary bidder & its collaborator for Indirect-Fired Water Bath Heater must be submitted along with the bid. Such MOU inter-alia must include the following role & responsibility of the collaborator.</p> <p>iii) To provide complete services for Manufacturing or fabrication Assembly, Supply as well as Installation, Testing &</p>		

		Commissioning of the Indirect-Fired Water Bath Heater. iv) To undertake process & equipment guarantee for the IWBH, which shall be endorsed on back-to-back basis to the primary bidder & OIL.		
6	1.4	Collaboration / Joint Venture Partnership with a firm that also submits offer as an independent Bidder against this tender shall not be accepted. In such cases, offer of both, Bidder as well as Collaborator / Joint Venture Partner, shall be rejected.		
7	1.5	At the time of technical evaluation of the offers, past performance of similar equipments supplied by any Bidder or Collaborator / Joint Venture Partner in respect of delay in supply of ordered item, incomplete supply, non-performance of supplied items at site, non-commissioning of the supplied items at site will be considered. If the same are not found to be satisfactory as already communicated to the bidder, the offer may be considered as unacceptable and rejected.		
8	2.0	The technical specifications in general must conform to the requirements as mentioned in Annexure – I and relevant national /international code of practice / standards.		
9	3.0	Bids and all related documents shall be in English language. Supporting documents and printed literature furnished by the bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in English, in which case for purpose of interpretation of the bid, the translation in English shall prevail.		

(B) Technical Compliance Check List:

Sl No.	Description	NIT requirement	Yes/No		Bidder to indicate Relevant Page No. of their Bid to support the remarks / compliance
1	IH is manufactured to handle a) Coil inlet pressure b) Gas outlet pressure c) Gas Inlet Temp (min) d) Water Bath Temp e) Heat Duty (minimum)	281.6 kg/cm ² 70 kg/cm ² 15 Deg C 80 Deg C 2.5 Million BTU/Hr	Yes Yes Yes Yes Yes	No No No No No	
2	Shell: a) Design standard b) Size (min) c) Additional Thermowell (3 nos.) d) Nozzles for coil inlet, outlet, fire tube etc e) Test	API Spec 12 K 1670 mm dia. (min.) X 7500 mm long (min.) 1" NPT, 300 mm length each As per Requirement Water Fill Test	Yes Yes Yes Yes Yes	No No No No No	
3	Coils (Seamless): a) Number of set of coils b) Number of passes per coil set c) Coil size d) M.O.C. of Coil e) Wall Thickness f) Radiography g) Coil Hydrotest Pressure h) End Connection	2 (Two) Split, 8 x 2 3 Inch (80 mm) NB API 5L, Gr.B, seamless / ASTM A106 Gr. B 0.6 Inches (15.24mm) 100% 422 kg/cm ² (6000psig) Flanged, 65 mm NB x 2500class RTJ, ANSI B16.5, , with Companion Flanges, BE RTJ, ring joint gasket , high tensile studs-nuts as per ASTM A193 Gr. B-7,ASTM A194 Gr. 2H.	Yes Yes Yes Yes Yes Yes Yes Yes	No No No No No No No No	
4	Coil Accessories: Choke a) Choke with Housing b) Choke Size (OD) c) Housing end connection d) Bean of various sizes e) MOC of bean housing f) Make	Positive Fixed choke 25.4 mm NB Flanged, welded, 65mm (2.1/2") NB, ANSI 2500 Class As per NIT Specification As per API 6A Masterflo/BHEL/JVS/WKM/ Parveen /	Yes Yes Yes Yes Yes Yes	No No No No No No	

		Cameron			
5	Fire Tube : a) M.O.C. of Fire Tube b) Half cover plate feature c) Type d) Diameter e) Length f) Radiography at U Bend g) Hydraulic Test Pressure	API 5L, Gr. B/ ASTM A106, Seamless As per NIT Specification U Type 610 mm OD (Minimum) 6920 mm X 2 Nos 100% 5 kg/cm ²	Yes Yes Yes Yes Yes Yes s	No No No No No No No	
6	Flame Arrested Burner and Accessories: a) Data Sheet from OEM b) Burner capacity/size for c) Make Pilot Burner Assembly with Ignition Electrode: Make	Submitted 2.5 Million BTU/Hr Maxon / Eclipse / John Zink / Combustex / ACL / G.I.E. s.r.l. Maxon / Eclipse / Natco (Cameron)/ACL/ Zeeco / Combustex-Canalta Controls / Sigma Controls/ Smitsvonk / G.I.E. S.r.l.	Yes Yes Yes Yes	No No No No	
7	a) Flame Arrester comprising of following: i) 'O' / Box Type (Aluminum housing) ii) Flame Cell iii) Adaptor Spool b) Flame Arrester Capacity:	Make: Zirco / Flameco / Cameron (Natco) / Wenco / Grit Industries Suitable for Burner of Heat Duty: minimum 2.5 Million BTU/Hr. (0.7325 X 10 ⁶ Watt) with Natural Gas as Fuel	Yes Yes	No No	
8	Instrumentation for Shell: a) Liquid Level Switch i) Type ii) Action iii) Output	Pneumatic ON/OFF 15 psig	Yes Yes Yes	No No No	

	iv) Supply v) Make	20 psig Kimray / Fisher / Norriseal	Yes Yes	No No	
9	Instrumentation for Coil: a) Temperature indicators b) Pressure indicators	As per NIT Specification As per NIT Specification	Yes Yes	No No	
10	Pneumatic Burner Control System: a) Fuel Shut off Valve b) Temp. Control Valve c) Pilot Gas Regulator d) Main Fuel Gas Regulator e) Pressure Gauges	As per NIT Specification As per NIT Specification As per NIT Specification As per NIT Specification As per NIT Specification	Yes Yes Yes Yes Yes	No No No No No	
11	High Energy Battery Operated Remote Igniter a) Flameproof Box b) Battery c) Output Voltage d) Make Hand-Held High Energy Igniter: i) Battery ii) Output Power iii) Igniter Tips iv) Weight: v) Make:	IP 65 (min.) 12V/24V, Rechargeable type with suitable charger (Electric / Solar with solar panel) Sufficient for establishing flame in pilot burner at a distance of more than 20 mtrs Chentronics (sureSPARK, Model: BD-5) / GIE / GBA Flare Systems / meggitt/ Sigma Controls Systems / G.I.E. s.r.l. 12 V DC, Rechargeable including charger min 1.5 Joules, 5 SPS 3 feet 3 kg Chentronics, Model: Motivator or Sigma Control Systems/ Smitsvonk / G.I.E. S.r.l.or Equivalent	Yes Yes Yes Yes Yes Yes Yes Yes	No No No No No No No No	
12	High Voltage Remote Ignition Cable	As per NIT specifications	Yes	No	
13	Flame Failure Shutdown	FMCInvalco CM7 /ACL	Yes	No	

	switch	/ Kimray			
14	Temp. Indicating Controller	Fisher 4196B or Fisher 4196C or Samson or ABB 440 R Series or OMC s.r.l.- Italy	Yes	No	
15	Servo gas pressure regulators for all pneumatic instruments	Fisher model 67 CFR / Norgren // Norriseal / OMC s.r.l.- Italy	Yes	No	
16	Isolation and Bypass Valves for Fuel Shutoff Valve & Temperature Control Valve	As per NIT & Valve datasheet	Yes	No	
17	All requisite and standard accessories quoted	As per NIT	Yes	No	
18	All valves of fire safe design as per API 607	To be confirmed	Yes	No	
19	Documents to be forwarded along with the bid				
	a) Process and Instrumentation diagrams	Submitted	Yes	No	
	b) General Arrangement Diagram (GAD) of the unit.	Submitted	Yes	No	
	c) Sectional drawing showing the internals of the indirect heater.	Submitted	Yes	No	
	d) Drawings showing details of Remote Ignition System of Pilot Burner and Flame Failure shutdown system.	Submitted	Yes	No	
	e) Circuit Diagram of Remote Ignition System with details of electronic components and Battery.	Submitted	Yes	No	
	f) Drawing showing Bean housing and Bean Holder.	Submitted	Yes	No	
	g) Instrument data sheets along with make and model.	Submitted	Yes	No	
	h) Make/ Models of all the bought-out items along with technical literature, GAD etc.	Submitted	Yes	No	
	i) Calculation/ datasheet from OEM for selection of Main Burner sizing for heat duty of 2.5 MMBTU/Hr considering the various parameters viz. Fuel Gas Calorific Value, Fuel Gas Pressure to Burner Inlet, Chimney Height, Fire Tube Dia& Length etc.	Submitted	Yes	No	

	<p>j) Calculation/ datasheet sheet from OEM for selection of Flame Arrester sizing with required air flow rate for Main Burner heat duty of 2.5 MMBTU/Hr considering Burner efficiency.</p> <p>The scope of the bidder also includes proper selection of the Main Burner Inspirator and Nozzle size and Flame Arrester Assembly size to ensure that the indirect water bath package meets the minimum heat duty requirement of 2.5 MM BTU/Hr taking into account all the parameters viz. Chimney height, fire tube diameter & length, air flow through the flame arrester, natural gas calorific value, burner efficiency etc.</p>	Confirmed	Yes	No	
20	Welding shall be done as per ASME Section IX	Confirmed	Yes	No	
21	Painting and Insulation of Shell, Chimney & Fire Tube	As per NIT	Yes	No	
22	Inscription on the vessel	As per NIT	Yes	No	
23	<p>INSPECTION & TESTING</p> <p>a) Third party inspection</p> <p>b) Third party inspection charges shall be quoted separately</p> <p>c) Name of Third party inspector</p> <p>d) OIL's inspection</p>	<p>As per NIT</p> <p>Quoted</p> <p>M/s Lloyds or M/s Bureau Veritas or RITES or M/s IRS or M/s DNV.</p> <p>As per NIT</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>No</p> <p>No</p> <p>No</p> <p>No</p>	
24	<p>COMMISSIONING:</p> <p>a) Commissioning</p> <p>b) Inspection of material at site by the supplier</p> <p>c) Commissioning charges quoted separately.</p>	<p>As per NIT</p> <p>As per NIT</p> <p>Quoted</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p>	<p>No</p> <p>No</p> <p>No</p>	
25	<p>EXPERIENCE:</p> <p>a) Experience details</p> <p>b) Collaboration details for bidders with 2</p>	<p>5 year minimum</p> <p>To be confirmed</p>	<p>Yes</p> <p>Yes</p>	<p>No</p> <p>No</p>	

	years experience				
26	WARRANTY: 12 months from the date of commissioning	To be confirmed	Yes	No	

(C) Check List for offered OEM for Bought-out Items:

Sl No	Description	Make	Bidder's Offer (To indicate make & Model)	Bidder to indicate Relevant Page No. of their Bid to support the remarks / compliance
1	Flame Arrested Burner	Maxon / Eclipse / John Zink / ACL / G.I.E. S.r.l.		
2	Flame Arrester	Zirco / Flameco / Cameron (Natco) / Wenco / G.I.E. S.r.l.		
3	PILOT BURNER ASSEMBLY with Ignition Electrode	Make : Maxon / Eclipse / Natco (Cameron)/ACL/ Zeeco / Combustex-Canalta Controls / Sigma Controls / G.I.E. S.r.l.		
4	High Energy Battery Operated Remote Igniter	Chentronics (sureSPARK, Model: BD-5) / GIE / GBA Flare Systems / Meggitt / Combustex-Canalta Controls / Sigma Controls Systems / Smitsvonk/ G.I.E. S.r.l.		
5	Hand-Held High Energy Igniter:	Chentronics ,Model : Motivator or Sigma Control Systems or ACL or Combustex-Canalta Controls / Smitsvonk/ G.I.E. S.r.l. or Equivalent		
6	Indicating Type Temperature Controller	Fisher 4196B or Fisher 4196C or Samson Type 3430 or ABB 440 R Series / OMC s.r.l.- Italy		
7	Fuel Shut-off valve	Invalco/Samson/ Fisher/ Forbes Marshall /Combustex/ Murphy/ Kimray / Norriseal / OMC s.r.l.- Italy		
8	Temperature Control Valve	Invalco/ Fisher /Samson/Forbes Marshall/Combustex / Kimray / Norriseal / OMC s.r.l.- Italy		
9	Pilot guard	FMC Invalco , CM7 / ACL-2000 / Kimary		
10	Liquid Level Switch	Kimray / Fisher / Norriseal		
11	Main Fuel Gas Regulator	Invalco/Samson/ Fisher/Invalco / Norriseal / OMC s.r.l.- Italy		

1 2	Pilot Gas Regulator	Invalco/Samson/Fisher/Invalco / Norriseal / OMC s.r.l.- Italy		
13	Servo Gas Pressure Regulators	Fisher Model 67 CFR/ Norgren / Maxitrol / Norriseal / OMC s.r.l.- Italy		
14	Temperature Indicators	Wika/ Odin / Waree / Ashcroft		
15	Pressure Indicators	Wika / Odin / Waree / Ashcroft		
16	Positive Choke Housing, Bean Adapter & Bean	Masterflo / WKM /BHEL / JVS / PARVEEN		
17	Level Gauge	Pratolina/ Levcon/ Daniel/Chemtrol/ V Automat / Norriseal		
18	Strainer	Zoloto/Leader/Sant or equivalent		
19	Instrumentation Tubes & Fittings ii) MOC	SS Swagelok, Parker or Hylok.		

(D) 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.

<u>Sl#</u>	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 OEM Dealer/Distributor. To Specify-	Yes / No
2.2	If quoted as OEM Dealer / Distributor, (a) Whether submitted valid and proper authorization letter from manufacturer confirming that bidder is their authorized Dealer / Distributor for the product offered ?	Yes / No
3.0	(b) Whether manufacturer's back-up Warranty/Guarantee certificate submitted?	
	Whether ORIGINAL Bid Bond (not copy of Bid Bond) as per Revised Format(Annexure VII Revised) Sent separately? If YES, provide details	
	(a) Amount :	
	(b) Name of issuing Bank :	

	© Validity of Bid Bond :	
4.0	Whether offered firm prices ?	Yes / No
4.1	Whether quoted offer validity of 180 days from the date of closing of tender?	Yes / No
4.2	Whether quoted a firm delivery period?	Yes / No
4.3	Whether agreed to the NIT Warranty clause?	Yes / No
4.4	Whether confirmed acceptance of tender Payment Terms?	Yes / No
5.0	Whether confirmed to submit PBG as asked for in NIT?	Yes / No
5.1	Whether agreed to submit PBG within 30 days of placement of order?	Yes / No
6.0	Whether Price submitted as per Price Schedule (refer Para 12.0 of BRC vide Annexure – II)?	Yes / No
7.0	Whether quoted as per NIT (without any deviations)?	Yes / No
7.1	Whether quoted any deviation?	Yes / No
7.2	Whether deviation separately highlighted?	Yes / No
8.0	Whether indicated the country of origin for the items quoted?	Yes / No
8.1	Whether technical literature / catalogue enclosed?	Yes / No
8.2	Whether weight & volume of items offered indicated?	Yes / No
9.0	For Foreign Bidders – Whether offered FOB / FCA port of despatch including sea / air worthy packing & forwarding?	Yes / No
9.1	For Foreign Bidders – Whether port of shipment indicated. To specify:	Yes / No
9.2	For Foreign Bidders only – Whether indicated ocean freight up to Kolkata port (Excluding marine insurance) ?	Yes / No
9.3	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	
	© Whether agency commission included in quoted material value?	
10.0	For Indian Bidders – Whether indicated the place from where the goods will be dispatched. To specify :	Yes / No
10.1	For Indian Bidders – Whether road transportation charges up to Duliajan quoted?	Yes / No
10.2	For Indian Bidders only – Whether offered Ex-works price including packing/forwarding charges?	Yes / No
10.3	For Indian Bidders only – Whether indicated import content in the offer?	Yes / No
10.4	For Indian Bidders only – Whether offered Deemed Export prices?	Yes / No
10.5	For Indian Bidders only – Whether all applicable Taxes & Duties have been quoted?	Yes / No
11.0	Whether all BRC/BEC clauses accepted ?	Yes / No
12.0	Whether confirmed to offer the equipment for Pre-despatch/shipment Inspection ?	Yes / No
12.1	Whether offered & quoted for Third Party Inspection charge	Yes / No
12.2	Whether confirmed to carry out Installation & Commissioning of the equipment at Duliajan(Assam) ?	Yes / No

12.3	Whether Installation & Commissioning charge applicable?	Yes / No
12.4	If Installation/ Commissioning charges applicable, whether separately quoted on lumpsum basis inclusive of service tax?	Yes / No
12.5	Whether to & fro air fares, boarding/lodging of the commissioning personnel at Duliajan, Assam(India) included in the quoted charges ?	Yes / No
12.6	Whether confirmed that all Service, Income, Corporate tax etc. applicable under Installation/ Commissioning are included in the prices quoted ?	Yes / No
13.0	Whether Integrity Pact with digital signature uploaded?	Yes / No
13.1	Whether all the clauses in the Integrity Pact have been accepted?	Yes / No

Signature _____
Name _____
Designation _____

DRAWINGS