



मंगलूर रिफाइनरी एण्ड पेट्रोकेमिकल्स लिमिटेड

MANGALORE REFINERY & PETROCHEMICALS LTD.

(ऑयल एण्ड नेचुरल गैस कॉर्पोरेशन लिमिटेड की सहस्रिक कंपनी)

(A Subsidiary of Oil and Natural Gas Corporation Ltd.)

Addendum/ Reply to Pre-Bid Queries

To

MRPL Tender No. 320000207 dated 09.01.2019

DESIGN, ENGINEERING, SUPPLY, INSTALLATION AND COMMISSIONING FOR
CONVERSION OF HRSG-1 & HRSG-2 TO GAS FIRING FROM LIQUID FUEL IN
CPP-3 ON LUMPSUM BASIS.

With reference to the above tender, bidders are requested to note the
following:

The items, conditions, specification and stipulations of the Bidding Document stand modified to the extent indicated in the attached replies to the Pre-Bid queries as per attached **annexure -1**. The implications of the same, elsewhere in the tender shall be taken care of appropriately by the bidders. All other terms and conditions, stipulations and specifications of tender shall remain unaltered.

Note:

Bidders shall submit copy of these documents along with the technical-commercial bid, **duly signed and stamped**, as a token of having read and understood the same.

Bidder's Seal & Signature

ANNEXURE -1

MRPL TENDER NO. 3200000207: DESIGN, ENGINEERING, SUPPLY ,INSTALLATION AND COMMISSIONING FOR CONVERSION OF HRSG-1 & HRSG-2 TO GAS FIRING FROM LIQUID FUEL IN CPP-3 ON LUMPSUM BASIS.

Subject:			Pre-Bid reply/addendums and Clarifications		
SI No	Tender clause	Page No	Tender requirement	Bidder's Query	MRPL RESPONSE
1	2.1.13	114 of 294	Vendor scope involves dismantling of existing burners.....	We understand that existing HRSGs are provided with both oil and gas firing provision. MRPL may clarify whether it is a retrofit of gas firing in place of oil firing by retaining earlier gas firing provision or replacement of total burner assembly.	Both HRSGs currently have Oil fired burners and skidders, which shall be removed along with main skid and individual burner skids. Also, existing duct burners along with gas piping provided shall be removed and new duct burners and piping shall be provided. This retrofit is for conversion of HRSGs from Oil firing to Gas firing.
2	2.1.2	113 of 294	Vendor to check adequacy of existing HRSG burner openings, coils and suggest suitable changes in firing system by retrofit of gas burners		
3	General			Vendor shall provide additional minimum space of 8m length x 3m width for gaseous fuel control station	Bidder shall provide gas fuel station to suit site requirements.
4	General			MRPL may clarify that simultaneous firing of both the gaseous fuels (RFG/NG) is required or not?	Simultaneous firing is not envisaged
5	2.1.14	114 of 294Fabrication and supply of gas skids for RFG and NG.....	We understand for existing NG fuel gas piping (Fittings, valves and instrumentation) need not be palced	Tender conditions prevail. New skid shall be suitable for both RFG and NG.
6	2.1.8	114 of 294	The burners shall have post conversion capability of 100% RFG or NG firing. Either RFG or NG can be fired	Please clarify simultaneous firing of NG and RFG is required or not?	Simultaneous firing is not envisaged
7	4.0	117 of 294	Performance Guarantees	Performance guarantees of HRSG will be furnished only by replacing the existing burner	Performance guarantees to be met post replacement of oil fired to gas fired burners

8				<p>i. We presume that PG test will be conducted at GT base load</p> <p>ii. Please specify ambient conditions at which PG test will be conducted?</p>	<p>HRSGs will be tested at maximum possible GT load. Ambient conditions can be taken as 88% RH & 35 Deg.C</p>
9	2.0 Scope of work	112 of 294	All statutory clearances and approvals like PESO, IBR	For the current scope of work IBR and PESO are not applicable. HRSg firing system will be designed in accordance with Latest NFPA requirements	All statutory clearances wherever applicable shall be in vendors scope
10	2.1.23	115 of 284	Vendor to supply Mass flow meters in individual gas lines to each HRSg for flow measurement	We presume that mass flow meters will be supplied only for RFG line. Kindly concur	<p>i) Mass flow meter and other instruments are common for RFG and NG .</p> <p>ii) Vendor to ensure the sizing of massflow meter and all skid instruments are suitable for the specifications of both RFG and NG.</p>
11	2.2.4	116 of 294	Vendor to hook up new instruments to existing DCS. Necessary modification of interlocks, BMS and DCS logics are in scope of vendor	BHEL will furnish the necessary inputs such as logics/interlocks/controls etc., MRPL shall get implemented by OEM of PLC/DCS vendor	Tender conditions prevail. It is bidder's responsibility to implement necessary logic /control modifications in existing DCS/PLC through OEM of PLC/DCS vendor. The existing DCS is Yokogawa Centum VP and PLC is Yokogawa Prosafe RS.
12	General		Gas conditioning skid	Please clarify whether separate gas conditioning skid	Separate gas conditioning skid is not required
13		112 of 294		Precast Pedestals / Sleepers for piping supports: We will lay Gas pipes on the existing Oil pipe rack, required Guide supports will be provided by us.	Laying of gas pipes in the existing oil piperack is not feasible due to inadequate space and presence of other hydrocarbon lines. The routing of pipes for RFG,NG,IA,Nitrogen,Plant air from tap off points (which was shown to vendors present in pre-bid meeting during site visit) shall be done as per routing shown by MRPL during site visit. Necessary civil works/structural supports/pedestals for the same shall be in the scope of bidder.

14		113 of 294		Please provide details of existing gas burner opening dimensions. This is required to size the New Gas fired Duct Burners.	Dimensions are not indicated in the drawings available with us
15		113 of 294		After removing the oil burner we will blind the opening and install the Gas fired Ductc Burner at the Gas Burner opening as per the GA. please confirm?	Vendor is free to install the duct burners at any elevation as per vendors design without hampering the safety & integrity of HRSG.
16		113 of 294		Please clarify whether Fresh Air firing is applicable for this project? Augmenting air fan is stand by or required all the time to supplement the GT exhaust flow to meet the overall stoichiometric air requirement, Please clarify this? Please also provide data sheet for Augmenting air fan to check the adequacy of fan.	By fresh air firing, MRPL understands that vendor is asking without GT running, HRSG may be fired? If so, no fresh air firing is required. Presently augmenting air fan is required all the time even if supplementary firing is not there in HRSGs. This is to prevent the oil burner and its guide pipe from distortion when GT is running. Primary purpose of augmenting air fan as the name suggests is to provide additional air so as to have a stable flame at design GT exhaust O2.
17		114 of 294		Gas Outlet temperature: As per tender, gas outlet temperature is 160° C for HRSG.1 and 165° C for HRSG 2. As per PG Test log sheet, flue gas outlet temperature is around 175 deg C at full load, please clarify?	Design HRSG-1 and HRSG-2 stack temperatures are 160 Deg.C & 165 Deg.C respectively.
18		116 of 294		As per tender the NOx emission requirement is 350 mg/Nm3, Please provide the NOx at GT outlet, so that we can take that into account while designing the burner.	Data not available

19		117 of 294		Performance Guarantee: Please provide us the pressure part details, present logsheets and Boiler data sheet enable us to cross check the performance of the boiler.	HRSG is running in unfired mode. Hence relevant data are not available.
20		General		We will provide tapping at our battery limit for both fuels i.e. RFG and NG. Only one Gas skid with necessary Valves & Instruments as per NFPA 85 will be supplied which will be used to fire either RFG or NG.	Noted.
21		General		Please provide GT exhaust Gas composition at 100% & 50 % Load	Data not available
22		118 of 294		New Civil pedestals - Adequacy check in STAAD - civil work is excluded from vendor scope	All civil jobs in Vendor's scope. Adequacy check also in Vendor's scope. Vendor has to submit adequacy check report.
23		119 of 294		Native files of Autocad, Caesar C2, cfg, STAAD Files and air flow analysis native files. As part of company policy we will not be in a position to provide documents in native files.	All documents in native files to be provided.
24		122 of 294		Mandatory Spares List: Complete Burner Assembly for 2 Burners, Burner assembly means with Igniter & Scanner?	Complete Burner Assembly' shall be read as 'Complete Runner with Burners'
25		122 of 294		Mandatory Spares List: Air Register - This is not applicable for Duct Burner	Noted.
				<u>Commercial</u>	
26		57 of 294		Lumpsum Price Quoted including Taxes or Not? GST amount to be indicated separately in SOR or not?	Lumpsum Price Quoted including of all Taxes, but excluding GST. GST rate and amount to be indicated separately in SOR.
27		110 of 294		Use of Index and whether this is part of Unpriced or Priced bid?	This is checklist to submit the bids, and part of unprice bid.

Additional points for Addendum					
28		112 of 294		Construction of required Structural for piping.....necessary operating platforms	<p>i)Extension of existing structural platforms including rerouting of existing cable trays/provision of additional supports wherever required shall be in the scope of bidder.</p> <p>ii) All civil/structural works for mounting of Skid ,installation of panels in field and for all jobs in this project shall be in the scope of bidder.</p>
29		122 of 294		B. Control & Instrument terminal points	<p>Laying of branch cables/trays from instruments to existing JB and laying of any inter connecting electrical cables in field shall be in the scope of bidder. New Junction boxes (either instrumentation or electrical) if required shall be supplied and installed by bidder. Main cable from DCS/PLC to JB and main electrical cable from source to field is in scope of MRPL.</p> <p>Removal of existing panels for Flame indications and installation of new panels & necessary cabling shall be in the scope of bidder.</p>
30				Delivery Period	<p>Retrofit and commissioning of 1st HRSG (whichever given by MRPL) shall be completed within 10 months of placement of order. The 2nd HRSG shall be retrofitted and commissioned within 12 months of placement of order. 2nd HRSG will be handed over only after successful commissioning of the 1st HRSG. PGTR to be completed within 30 days of start-up of respective HRSGs. Total completion of project is 13 months form placement of order.</p>