

**MANGALORE REFINERY AND PETROCHEMICALS LTD.**  
( A Subsidiary of Oil and Natural gas Corporation Ltd.)

Expression of Interest (EOI) for  
Project Management Consultant (PMC) for Aromatic Complex  
at Mangalore Special Economic Zone

**A. Introduction**

Mangalore Refinery & Petrochemicals Limited (MRPL) is a subsidiary of Oil and Natural Gas Corporation limited (ONGC), a premier public sector undertaking of Government of India.

Mangalore Petrochemicals Limited, herein referred to as MPL, promoted by ONGC group of companies is being incorporated. MPL is proposing to build an Aromatic Complex integrated with the existing refinery complex in Mangalore Special Economic Zone (MSEZ) to produce around 920,000 TPA of Paraxylene. The details of process units and facilities being envisaged are listed as Annexure-1 to this document.

MPL intends to hire an engineering consultant of International repute as Project Management Consultant (PMC) to execute the proposed Aromatic Complex project on a fast track basis.

**B. Broad Scope of work & Services by PMC**

PMC will be solely responsible for the project execution, project schedule cost control.

The broad scope of work of the PMC is listed below.

- 1) Prepare overall engineering design data for the aromatic complex, M/s Engineers India Ltd, has prepared a detailed feasibility report for the project during December 2005.
- 2) Develop a detailed project schedule including commissioning of all facilities in order to complete the project on a fast track basis.
- 3) Prepare detailed bid documents for licensor selection for Licensed process units, float the bids, evaluate the bids and make final Techno economic recommendations of the bids.
- 4) Closely liaison with the licensors to enable the licensors to complete the process design of the licensed units to meet the overall project objectives.
- 5) PMC will ensure that all efforts are taken to reduce the energy consumption of the process units by maximizing heat recovery through heat integration.
- 6) Prepare the Front End Engineering Design Data (FEED) packages based on the licensors basic design packages.
- 7) Prepare the process package and FEED package for all non licensed Process units.
- 8) Do a detailed soil investigation study of the entire project site and develop design basis based on soil investigation studies.
- 9) Prepare detailed bid documents, float tenders, evaluate tenders on techno economic aspects and make final recommendations for LSTK contractors / EPC contractors' selection for detailed engineering, procurement & construction supervision and construction of all Licensed and non-licensed process units.

- 10) Prepare detailed bid documents, float tenders, evaluate tenders on techno economic aspects and make final recommendations for the EPC / LSTK contractor for all utilities, off site facilities, product storage facilities, dispatch facilities, infrastructure facilities and such facilities needed to run the Aromatic Complex facilities integrated along with the existing refinery complex smoothly and efficiently. The data from the licensed process units as required for above activities will be obtained by the PMC from the licensors at an appropriate time as demanded by the project schedule.
- 11) PMC will be fully responsible Time schedule, cost control and for all the quality related aspects of the project
- 12) PMC will closely liaison with Owner, Licensors and other consultants hired by the owner with regards to all aspects of the project and ensure that good engineering practices & standard design codes are followed.
- 13) PMC will be involved fully in the HAZOP study in respect of licensed units, non licensed units, Power plant, utility facilities, off site facilities and other facilities to be provided by contractors in accordance with normal standard practice. PMC will be fully responsible to conduct, supervise and document HAZOP proceedings and implementation of recommendations from HAZOP studies.
- 14) Any facilities that may be needed in Inside Battery limit (ISBL) & Out side Battery limit (OSBL) locations to allow smooth functioning of the integrated upgradation project along with the existing refinery complex as per design intentions will be engineered by PMC (in a way as to be integrated with the concerned process).
- 15) Integration with existing upgraded Refinery Complex.
- 16) PMC will actively assist MPL in obtaining all necessary statutory & environmental clearances.
- 17) PMC will bring to owners notice any delays in the activities of various contractors that may lead to overall delay in the project execution schedule through regular project briefings, project status report, actions necessary to ensure adherence on time and project cost.
- 18) PMC will render active assistance to the owner during pre-commissioning , commissioning activities.
- 19) PMC will develop a detailed document for conducting the guarantee test runs covering all aspects of guarantee test run activity. Further, PMC will organize and supervise the guarantee test run of the various process units and facilities after the commissioning.

### **C. Criteria for short listing**

The Criteria for short listing is detailed below :

- 1) The Engineering consultant as PMC, must have undertaken and successfully completed at least one Refining or Large Petrochemical project of about 400 Million US Dollars in the last 10 years.  
Engineering companies, which have successfully handled complete detailed engineering, project management, procurement, construction management & assistance in pre-commissioning and commissioning (EPCM) of at least one project in the Refining or Petrochemicals in the last 10 years with their portion of the project cost not being less than 400 Million USD, are also eligible.
- 2) For an Overseas Consultant in addition to meeting criteria as serial number 1 above, the Consultant must have experience of working in the Indian environment and should have executed at least one project in the Refining or Petrochemical sector as PMC or detailed

engineering, project management, procurement, construction management & assistance in pre-commissioning and commissioning (EPCM) service provider in India in the last 10 years with an installed value of at least 300 Million US dollars.

- 3) Bidders should be in a position to open their office at Mangalore and at any other convenient location (During the design stage) with MPL.
  
- 4) Consultant should give complete details of :
  - a. Present work load in terms of Man Months, Contract value, Time schedule and available spare manpower.
  
  - b. Complete Reference list with plant capacities, contract value Time schedule, Year of completion (Actual Vs Scheduled), Scope of work undertaken, Contact person & address.
  
- 5) Bidder to provide complete details as desired above.  
Bids with incomplete information / data are liable to be rejected.
  
- 6) MRPL reserves the right to reject any bid, if necessary data, info are not furnished and also if in MRPL's opinion, the said bidder cannot execute the job satisfactorily.

The last date for receipt of EOI along with necessary documentation is 25<sup>th</sup> September'2006. The details may be sent to following address

Adarsh Soni  
Associate President (Technical)  
Mangalore Refinery & Petrochemicals Ltd.  
LGF, Mercantile house  
15, KG Marg. New Delhi 110001

Contact details  
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## Annexure-1

### A. Facilities in the proposed Aromatic Complex in the Mangalore Special Economic Zone (MSEZ) integrated with the existing refinery complex.

The Aromatic complex has been configured to maximize Paraxylene and targeted to produce about 920,000 TPA of product. The feed to the complex will be Reformate & Surplus Heavy Naphtha from the Upgraded Refinery complex. The Aromatic complex is planned to be integrated with the refinery complex with excess Hydrogen & Fuel gas being piped back to the Refinery complex and the Paraffin and Aromatic streams will be returned back to the refinery complex to be blended into MS pool for further disposal. Necessary off site and storage facilities are envisaged. A dedicated captive power plant to meet the energy requirements of the aromatic complex is planned

### B. Capacities of the various facilities planned is as listed below :

SL no	Facility	Capacity, MMTPA
1)	Naphtha Hydrotreating unit	1.2
2)	CCR unit	1.1
3)	Xylene fractionation unit	6.1
4)	PX recovery unit	2 * 2.8
5)	Meta Xylene and Ortho Xylene Isomerization unit	4.8
6)	Benzene Toluene extraction unit	0.6
7)	Benzene Toluene fractionation unit	1.7
8)	Trans Alkylation & Disproportionation Unit (TADP)	1.4
9)	Captive power plant	60 MW and 500 TPH steam.
10)	All offsite facilities (Including product dispatch facilities, waste water treatment plant, treated effluent line) and utilities as required for the Aromatic complex to operate smoothly	

The above figures are subject to modifications.