



TRAVANCORE TITANIUM PRODUCTS LIMITED

Kochuveli, Thiruvananthapuram 695 021

Phone: 0471 2502163

FAX: 0471 2501533

EOI No.TTPL/CD/IT-4/EOI/Prodn./2018-19

20.08.2018

NOTICE INVITING EXPRESSION OF INTEREST

Expression of Interest (EOI) is invited from reputed firms /companies/Agencies having inline experience for providing services for the following:-

Operation and maintenance (OM) of our 6 MLD water treatment plant with water recovery module. We are seeking solutions to operations, maintenance which includes dedicated manpower supply also for operation and maintenance. The agencies who are in the field of erection, commissioning, normal operation, periodical maintenance and trouble shooting of similar effluent water treatment with water recovery facility, comprising of Dual media filters, Micro filters, reverse osmosis skids and associated chemical handling and dozing systems, may submit their Expression of interest (EOI).

The contract shall be awarded through **two part bidding** among shortlisted agencies participated in the EOI. The interested parties are requested to submit their EOI in the prescribed format along with all supporting documents/ Credentials **on or before 07.09.2018** and forwarded to **“The Dy General Manager (Commercial), Travancore Titanium Products Limited, Kochuveli P.O, Thiruvananthapuram, Kerala, Pin- 695 021”.**

For detailed information please visit www.etenders.kerala.gov.in

For any technical clarification on the bid, please contact Mr. S. Perumal (9048505628) / Mr. Kabeer (8589067080).

There is an e-tender cell functioning at Kerala State IT Mission at Thiruvananthapuram with contact numbers 0471- 2577088 / 257718. Bidders can go there in working hours (10.30 hrs to 17.30 hrs) for “hands on training” or call over phone for clearing doubts. For Hindi/English, call toll free no-18002337315.

for TRAVANCORE TITANIUM PRODUCTS LTD.,

Dy General Manager (Comml.)

PROJECT OVERVIEW

1. Introduction

M/s. Travancore Titanium Products Limited (TTPL) established in the year 1946 owned by Government of Kerala, is the largest producer of Anatase grade TiO₂ pigment in India through Sulphate route process.

2. Process Overview

TTPL has set up an effluent water treatment plant (6 MLD) which comprise of neutralization of effluent water in two streams. Process is designed to neutralize the sulfuric acid effluent water from TiO₂ manufacturing process in two stage neutralization process. Two stream of effluent are in the design basis, strong effluent containing higher acid concentration (Stream B) and weak effluent containing very low acid concentrations (stream A). Stream A effluent water is designed to neutralize in two stage, in the first stage controlled neutralization using calcium carbonate to form white gypsum and in the second stage complete neutralization using calcium hydroxide forming red gypsum. Completely neutralized water from stream A is treated using sodium carbonate and filtered in dual media filters and micro filters before feeding to RO process. RO skids are designed to recover 70 % of the feed water as permeate product water. Whereas the stream B effluent is neutralized using calcium carbonate in first stage and calcium hydroxide in the second stage and white and red gypsums are separated and the neutralized clear water is disposed.

3. Objective of the EOI

Operation and maintenance (OM) of our 6 MLD water treatment plant with water recovery module which is currently operating at about 3 MLD as per revised process conditions. The agencies who are in the field of erection, commissioning, normal operation, periodical maintenance and trouble shooting of similar effluent water treatment with water recovery facility, comprising of Dual media filters, Micro filters, reverse osmosis skids and associated chemical handling and dosing systems, may submit their Expression of interest (EOI) before **7th of September 2018, 12.00 hrs.**

The Agencies shall **have minimum 15 years** of experience in the field of settling up of identical plants with operation and maintenance service solutions to reputed firms in India or abroad. The scope work is as follows:

4. Scope of work

The contractor shall operate and maintain the plant with adequate spares and manage the plant which comprises:

- (1) Stream A neutralization with water recovery module
- (2) Stream B neutralization.

Operation and maintenance of stream A involves all the equipments starting from effluent inlet point to the final disposal of treated water and gypsum:

1. Effluent inlet flow meter from main plant and inlet UV valve and piping line connected from flow meter to inlet UV valve.
2. Equalization tank and all the associated auxiliary equipments.
3. Effluent transfer pumps and connected piping, instruments.
4. Flash mixer A connected associated instruments and auxiliaries

5. Clarifier A and associated auxiliary system , which includes rakes, underflow handling arrangements/ equipments including sludge holding tanks and thickeners and connected pumps, overflow handling equipments.
6. Flash mixer B and associated equipments and instruments
7. Clarifier B and associated auxiliary equipments, which includes connected raking mechanism, underflow handling system including thickener B and sludge holding tanks, pumps and agitators
8. Press filters and associated auxiliary equipments and connected instrumentation.
9. Chemical preparation system of calcium hydroxide and calcium carbonate which includes chemical feeding and preparation and dosing and associated equipments and instrumentation system.
10. Chemical preparation and dosing system for water recovery module which includes, sodium carbonate preparation Chemical preparation and dosing system for water recovery module which includes, sodium carbonate preparation and dosing and connected equipments, hydrochloric dosing system which includes bulk storage and associated hydrochloric dosing tanks, caustic soda lye dosing system which includes bulk storage and connected dosing tanks and pumps and associated equipments and all instruments, Hypochlorite dosing system which includes, bulk storage ,dosing tanks, associated pumps, all other equipments and instruments, poly electrolyte dosing system which includes preparation/dosing tanks and associated pumps, other equipments and instruments, anti oxidant dosing system which includes dosing/preparation tanks and associated pumps and instrumentation system, Antisclant dosing system which included dosing and preparation tanks and associated dosing pumps and other equipments, Ro cleaning chemical preparation system and associated pumps and equipments. Any new chemical or a substitute chemical, as the case may be, if introduced as per modification or alteration on mutual agreement basis for improvement of process and the system for preparation and dosing to the process.
11. RO feed water pretreatment stages and equipments which include all tanks and equipments starting from clarifier B overflow tank, Reactor clarifier; DMF feed tank, dual media filters, Micro filters, Reverse osmosis skids, cartridge filters and connected equipments, storage tanks, associated pumps and all instrumentation system.
12. Handling and disposal of white and red gypsum separated from press filter to the earmark area of the TTPL plant.

Stream B operation and maintenance involves the operation and maintenance of strong acid effluent inlet flow meter, inlet UV valve and the subsequent collection tank, pumps and other equipments, reaction cum settling tanks and associated pumps agitators, instrumentation and control system and the dedicated press filter for separating white and red gypsum, calcium carbonate and hydroxide chemical preparation and dosing using the dedicated equipments.

4.1 Standards of performance service

The contractor shall perform the services required, in a prudent, reasonable and efficient manner and in accordance with

- Operating manual and control philosophy and applicable process design basis and vendor warranties.
- Or on mutually accepted process conditions on streams or equipments where modification or revamping is required

4.2 Contractor's Personnel standards

Contractor shall provide as reasonably necessary laborers and professionals, supervisory and managerial personnel required to perform the services. Such personnel shall be qualified to perform the duties to which they are assigned and shall meet any requirements to full fill the requirements for the services.

All individuals employed by contractor shall be the employees of contractor, and their working hours, rate of remuneration and all other matters relating to their employment shall be determined solely by the contractor with respect to labor matters, hiring personnel and employment policies, contractor shall comply with all applicable rules, regulations, laws including that of PF,ESI etc in accordance with various state and central government acts and rules.

4.3 Compliances

The contractor shall comply with all laws applicable to the operation and management of neutralization plant with water recovery and the performance of the services. The contractor shall apply for and obtain, and company shall assist contractor in applying for and , obtaining all necessary permits, licenses and approvals (and renewals of the same) that company is required to allow contractor to do business or perform the services in the jurisdiction where the services are to be performed.

Contractor shall provide reasonably necessary assistance to company, to secure permits, licenses, and approvals (and renewable of the same that the company is required to obtain from or file with any government agency regarding neutralization plant. Contractor shall also file such reports, notices, and other communications as the case may be required by any government agency regarding Neutralization plant.

4.4 Plant operating reports and records

Contractor shall maintain, at a location acceptable to company, operating logs, records, and reports that document the operation of Neutralization plant including water recovery module, all in form and substance sufficient to meet company's reporting requirements

Contractor shall maintain current revisions of drawings, specifications, lists, clarification, and other material related to operation of the plant provided to contractor by the company and vendors. Contractor shall provide company reasonably necessary assistance in connection with company's compliance with reporting requirements to the Neutralization plant, applicable laws or

any other agreement to which company is a party relating to Neutralization Plant. Such assistance shall include, providing reports, records, logs, and other information that company may reasonably request as per the Neutralization plant operation.

5 General and Particular conditions applied

5.1 The workers engaged by the contractor shall be abide by the rules and regulations formed under various acts and rules of government and should follow the same in true sense and sprit.

5.2 If any worker engaged by the contractor is found violating the code of conduct specified by the company, as per the relevant rules and regulations, shall be barred from entering the plant, by the Manager, with immediate effect.

5.3 Contractor should give relevant information to company as required to properly perform the services and otherwise as may be reasonably required for efficient planning and conduct of the services by the contractor.

6 Safety and Rules

6.1 The contractor shall strictly abide by the safe working practices of and procedures and the plant rules applicable.

6.2 The contractor should take all safety measures and provide all safety measures and provide all safety gadgets and accessories to the workers as safety regulations provided for while working in such environment. If the contractor fails to provide the same workers at the cost of the contractor and shall be deducted from the bills of the contractor.

6.3 The contractor shall be responsible for the safety of his men and machinery while working at the site.

All queries may be sent to e-mail id: purchasetp@gmail.com

for TRAVANCORE TITANIUM PRODUCTS LTD.,



Dy General Manager (Comm.)

LETTER OF TRANSMITTAL

(in the firm's letterhead)

To

The Dy. General Manager (Commercial)
Travancore Titanium Products Limited
Kochuveli, Thiruvananthapuram,
Kerala – 695 021.

Sir,

Sub: Submission of Expression of Interest (EOI) for providing services for solutions to operations, maintenance which includes dedicated manpower supply for 6 MLD water treatment plant with water recovery module

Ref: EOI No. TTPL/CD/IT-4/Prod./18-19 dt.21.08.2018

Having examined the notice inviting Expression of Interest (EOI) for the above project, I/ We hereby submit our Expression of Interest and the relevant information.

1. I/ We undertake, if application is accepted, to present our conceptual plan and facilitate TTPL to study and proposal for Operation and maintenance (OM) of our 6 MLD water treatment plant with water recovery module
2. I/ We have read the provisions of the EOI and confirm that these are acceptable to us. All necessary clarifications, if any, have been sought for by us and duly clarified in writing by TTPL
3. I/ We fully understand that the submission of this EOI does not bestow upon us any rights in any further tender arising out of this conceptual plan. Such tenders may be governed under the terms of reference as deemed essential for that
4. I/ We also authorize TTPL to approach individuals, employers and firms to verify our competency and general reputation
5. I/ We understand that TTPL will be at liberty to finalize project parameters and issue a Tender to appoint a consultant for the project after assessing the response from the parties
6. This call for EOI does not constitute solicitation. TTPL/Govt. of Kerala reserve the right to change or cancel the requirement at any time during the EOI

Signature(s) of the Applicant(s)

Seal with Place and Date:

ANNEXURE - II

General Information about the Applicant Entity

1	Name of the applicant entity/ firm	
2	Head of the Organization (with designation)	
3	Legal status (a) Proprietary firm (b) Partnership firm (c) Limited Company or Corporation	
4	Number of Offices (including Head Office)	
5	Address with Telephone, fax & e-mail address	
6	Contact person- Name, Contact No. and e-mail address	
7	Date of Establishment	
8	Details of firm/ Organization	
9	Quality Certification attained by the firm, if any	
10	Annual Turnover (INR) (last 3 years audited financial statements)	
11	Details of PAN No and GST No.	
12	List of present major clients	

ANNEXURE – III

Particulars of similar major works implemented/ under implementation/ managed by the Applicant firm/ Entity

Sl. No.	Name of Client	Nature of work and processing capacity	Technology used	Contact person, address & Contact No.	Year of implementation	Project cost

NB: Please enclose client's Certificate and reference wherever required.