



**Dept. of Ocean Engineering,  
Indian Institute of Technology Madras  
Chennai - 36**

**Dr. Rajesh R. Nair**  
Associate professor

**Phone : 044-2257 4824**  
**Fax : 044-2257 4802**

**Date: 21.11.12**

**Ref. No.: OED0312**  
**Hydraulic Fracturing Equipment**

**Dear Sirs,**

**DUE DATE: 10.12.12**

1. Quotations are invited in duplicate for the various items shown in Enclosed list (Annexure - I).
2. The Quotations duly sealed and super scribed on the envelope with the reference No. and due date, should be addressed to the undersigned so as to reach him on or before the due date stipulated above.
3. The Quotations should be valid for sixty days from the due date and the period of delivery required, warranty terms etc. should also be clearly indicated. A minimum of one year warranty required.
4. Brochure detailing technical specifications and performance, list of industrial and educational establishments where the items enquired have been supplied must be provided.
5. Compliancy certificate is to be provided indicating conformity to the technical specifications.
6. If the item is under DGS&D Rate contract No. and the price must be mentioned. It may also please be indicated whether the supply can be made direct to us at the Rate contract price (Please note that we are not Direct Demanding Officers). If so please send copy of the RC.
7. Relevant literature pertaining to the items quoted with full specifications (and drawing, if any) should be sent along with the Quotations, wherever applicable. Samples / machine/ equipment if called for should be submitted / demonstrated at free of charges, and collected back at the supplier's expenses.
8. Packing and delivery charges must be clearly indicated.
9. The rate of sales / General Taxes and the percentage of such other taxes legally leviable and intended to be claimed should be distinctly shown along with the price quoted. Where this is not done, no claim for Sales / General Taxes will be admitted at any stage and on any ground whatsoever The taxes leviable should take into consideration that we are entitled to have concessional Sales Tax applicable to non Government Educational Institutions run with no profit motive for which a concession. Sales Tax Certificate will be issued at the time of final settlement of the bill.
10. Goods should be supplied carriage paid and insured.
11. Goods shall not be supplied without an official supply order.
12. Payment: Every attempt will be made to make payment within 30 days from the date of receipt of bill / acceptance of goods, whichever is later.
13. In case of LC payment, 90% of the payment will be made after completion of the supply. The balance 10% of the payment will be made after satisfactory installation of the software.
14. IIT Madras is exempt from payment of Excise Duty and is eligible for concessional rate of custom duty. Necessary certificate will be issued on demand. IIT Madras will make necessary arrangements for the clearance of imported goods at the Airport/Seaport. Hence the price should not include the above charges.
15. **Acceptance and Rejection:-** I.I.T. Madras has the right to accept the whole or any part of the Tender or portion of the quantity offered or reject it in full without assigning any reason.

Yours faithfully

Dr. Rajesh R. Nair, Department of Ocean Engineering.

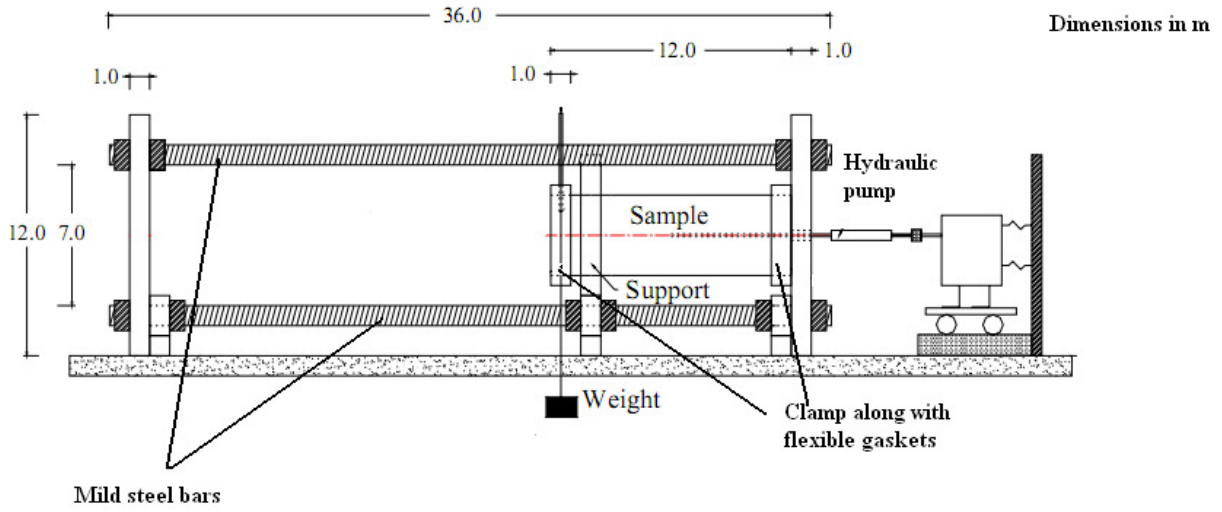
## ANNEXURE – I

Ref. No.: OED0312

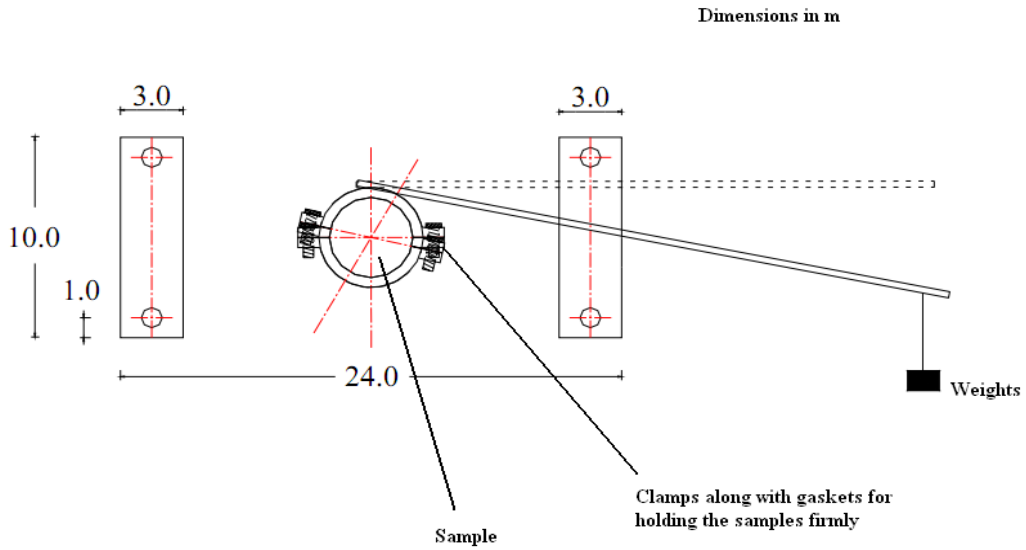
Date: 21.11.12

DUE DATE: 10.12.12

SL. NO.	DESCRIPTION	QUANTITY
1	<p>Hydraulic pump: Minimum pressure of 1 bar to maximum pressure of 1000 bar medium water. The pressure inside the pump should be able to control along with correct digital indication.</p> <p>For measuring the pressure the pressure sensors and strain gauges along with software for measuring the variations directly should be provided.</p> <p>Dimension of the samples used in testing: 20mm to 200~300mm in diameters and length of the sample 40mm to 120~200mm. A suitable casing should be provided for holding the sample firmly figure attached for reference.</p> <p>A privilege for placing the sample in flexible gasket should be provided and it should be movable.</p> <p>Work table construction is shown in the figure below; it should be made with high quality fabrication techniques using mild steel with powder coating.</p> <p>Care should be taken such that in future the accessories shown below must be easily mounted</p> <p><u>Accessories:</u></p> <ol style="list-style-type: none"> <li>1. Device for introducing proppant like sands, ceramics and gels along with water in hydraulic pump.</li> <li>2. Strain gauges on sample for measuring the deflections.</li> <li>3. One furnace for heating of samples</li> </ol>	1



Front View



Side View

Note:

The sealed quotation to be sent to

Dr. Rajesh R. Nair  
 Dept. of Ocean Engineering,  
 IIT Madras, Chennai-600036,  
 Tamil Nadu, India