

INVITATION FOR TENDER FOR SUPPLY OF EQUIPMENT

Sealed tender offers are invited in two separate sealed covers (Technical and Commercial offers) from eligible manufacturers/suppliers or their direct Indian agents for supply of the following equipment.

- 1. Load cells for measurement of forces on the mooring chain of offshore mariculture cage.**
- 2. Load cells for measurement of forces on the fishing net twine of offshore mariculture cage**

Please send offers, ALONG WITH DESCRIPTIVE CATALOGUE/ BROCHURE. The validity of the bid should be at least three months (90 days) or more from the date of opening of this tender. Please ensure that your quotation reaches not later than 16.02.2012 at 16:00 hrs at the following address:

Prof. C.K.Mukherjee
Department of Agricultural & Food Engineering
Indian Institute of Technology,
Kharagpur – 721 302 (India)

Earnest money of Rs. 10,000/- for each equipment is to be deposited in the form of Account payee Demand Draft in favor of IIT Kharagpur, payable at Kharagpur, India. Any Bid which is not accompanied with an EMD shall be summarily rejected. Earnest money deposited will be forfeited if the tenderer withdraws or amends its tender or impairs or derogates from the tender in any respect within the period of validity of its tender. No interest will be paid on the earnest money of the unsuccessful bidders.

Please indicate on the top of the separate envelope “

- 1) Load cells for measurement of forces on the mooring chain of offshore mariculture cage.
2. Load cells for measurement of forces on the fishing net twine of offshore mariculture cage

Tender Reference	IIT/SRIC/AGFE/CNP/CKM/2011-12/1 Dated: 11.01.2012
Price of Tender Document	NIL
Last Date and Time for submitting the tender document	16.02.2012 at 16:00 Hrs (Indian time)
Time and Date of Opening of Bids	16.02.2012 at 15:00 Hrs.
Place of Opening tender offers	Department of Agricultural & Food Engineering, Indian Institute of Technology Kharagpur, West Bengal, INDIA, PIN-721302
Address of Communication	As stated above
Contact Telephone Numbers	Tel-fax: +91- 3222 283136 E-mail: ckm@agfe.itkgp.ernet.in

DETAILED SPECIFICATION OF THE EQUIPMENT

1. Load cells for measurement of forces on the mooring chain of offshore mariculture cage

IIT Kharagpur is carrying out a research project entitled ‘Development of cage for mariculture through numerical and physical modeling’ in collaboration with Central Marine Fisheries Research Institute and National Institute of Ocean Technology. It is intended to measure the forces on the mooring chain and fishnet twine of the mariculture cage at sea. The offshore mariculture cage is a floating structure exposed to open sea installed off the coast of Visakhapatnam. A layout of the offshore mariculture cage is shown in Fig. 1. The installation point of the load cells on the cage is shown in Fig. 2.



Fig. 1 Offshore mariculture cage installed in sea.

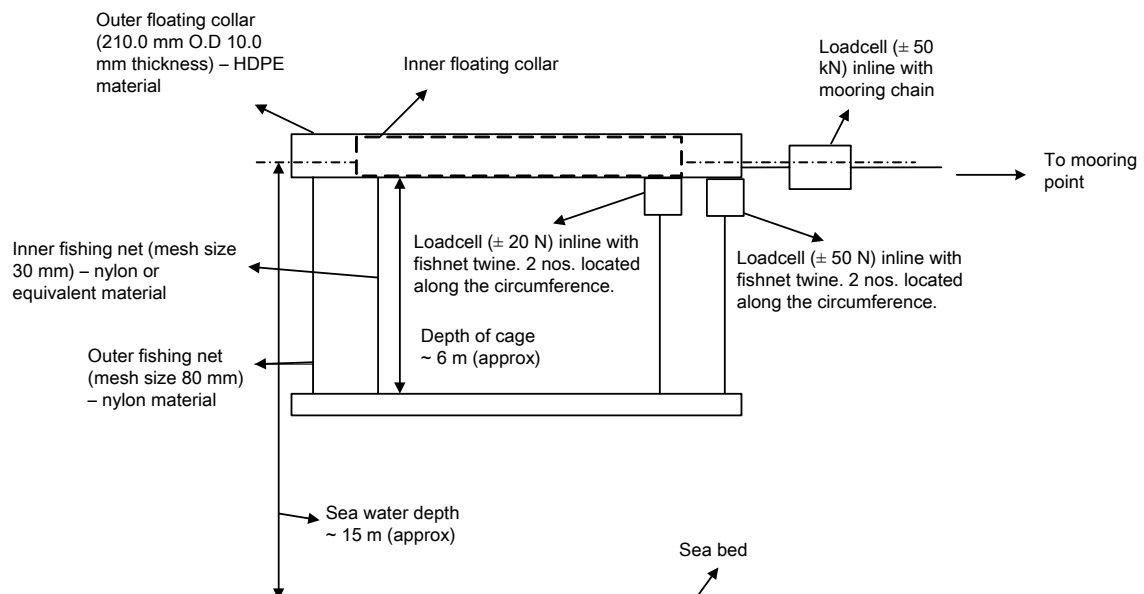


Fig. 2 Layout showing the installation point of the load cell.

The preliminary specifications of the load cell are given below:

One no. load cell, load range ± 50 KN, suitable for inline loading, seawater submersible to depth of 20 m, suitable for use in Indian tropical conditions. The load cell will be mounted inline with 10 mm thick D link type mooring chain. The load cells shall be provided with

suitable eye at both the ends for connecting to the mooring chain. For e.g. eyes to fit 10 mm thick D type shackle, etc. Preference will be given to lightweight sensors.

- Excitation voltage: ≤ 12.0 V DC, internal or inline amplifier, analog output (industry standard) 0 ~ 5 V DC, full scale (0 V – 2.5 V – 5.0 V).
- In case of inline amplifier, the amplifier shall be sea water tight (minimum upto 2 m depth).
- The load cell shall be shock/ vibration resistance and suitable for heavy-duty outdoor use. Preference will be given to lightweight sensors.
- Cable connector on the load cell shall be seawater tight sealed for 20 m depth operation.
- In case of inline amplifier, the cable connector on the amplifier end shall be sea water tight (minimum upto 2 m depth).
- The cable shall be capable of being immersed in seawater up to 20 m depth and provided with steel wire braiding protection.
- Length of cable (from the load cell to the data acquisition system) about 20 m.
- The load cells shall be suitable for microcontroller ADC use.

2. Load cells for measurement of forces on the fishing net twine of offshore mariculture cage

IIT Kharagpur is carrying out a research project entitled ‘Development of cage for mariculture through numerical and physical modeling’ in collaboration with Central Marine Fisheries Research Institute and National Institute of Ocean Technology. It is intended to measure the forces on the mooring chain and fishnet twine of the mariculture cage at sea. The offshore mariculture cage is a floating structure exposed to open sea installed off the coast of Visakhapatnam. A layout of the offshore mariculture cage is shown in Fig. 1. The installation point of the load cells on the cage is shown in Fig. 2.



Fig. 1 Offshore mariculture cage installed in sea.

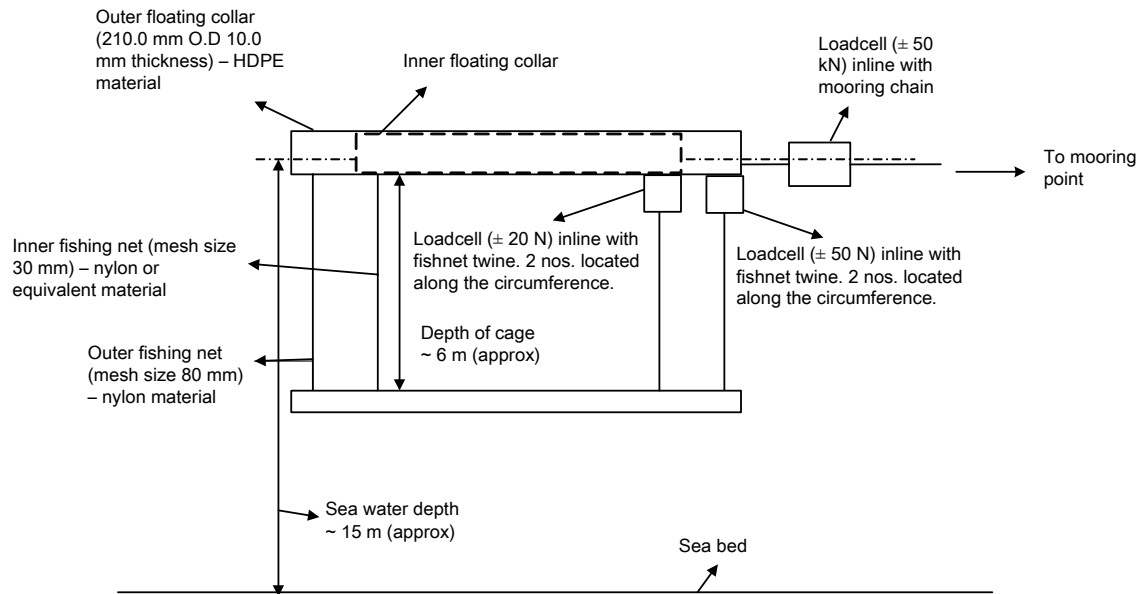


Fig. 2 Layout showing the installation point of the load cell.

The preliminary specifications of the load cell are given below:

Two nos. load cell, load range ± 20 N, Two nos. load cell, load range ± 50 N, suitable for inline loading, seawater submersible to depth of 20 m, suitable for use in Indian tropical conditions. The load cell will be mounted inline with 1 ~ 5 mm thick nylon/ polypropylene or equivalent material fishnet twine. Suitable eye at both the ends shall be provided for this purpose. The maximum sensor dimension in all direction shall be preferably < 50 mm (to be accommodated within fishnet mesh size). Preference will be given to light weight sensors.

- Excitation voltage: ≤ 12.0 V DC, internal or inline amplifier, analog output (industry standard) 0 ~ 5 V DC, full scale (0 V – 2.5 V – 5.0 V).
- In case of inline amplifier, the amplifier shall be sea water tight (minimum upto 2 m depth).
- The load cell shall be shock/ vibration resistance and suitable for heavy-duty outdoor use. Preference will be given to lightweight sensors.
- Cable Connector on the load cell shall be seawater tight sealed for 20 m depth operation.
- In case of inline amplifier, the cable connector on the amplifier end shall be sea water tight (minimum upto 2 m depth).
- The cable shall be capable of being immersed in seawater up to 20 m depth and provided with steel wire braiding protection.
- Length of cable (from the load cell to the data acquisition system) about 20 m.
- The load cells shall be suitable for microcontroller ADC use.

IMPORTANT INSTRUCTIONS

PLEASE SPECIFICALLY INDICATE THE FOLLOWING POINTS IN YOUR QUOTATIONS AND COMPLY THE TERMS AS MENTIONED HEREUNDER:-

1. PRICES ARE TO BE QUOTED ON 'EX-WORKS' DULY PACKED OR ON "F.O.B. INTERNATIONAL PORT" BASIS AND ALSO INCLUDING AGENCY COMMISSION PAYABLE TO YOUR INDIAN AGENTS, IF ANY SHOWING CLEARLY THE FOLLOWING BREAK UP:-

- i) Ex-Works Price
- ii) Packing & Forwarding
- iii) Freight
- iv) Any other relevant expenses.
- v) Taxes payable by the Institute

Insurance will be paid by our Institute separately and should not form part of the quoted price.

2. INDIAN AGENTS ADDRESS AND PERCENTAGE OF AGENCY COMMISSION INCLUDED IN ABOVE F.O.B./EX-WORKS PRICE. (THIS WILL BE PAID TO THE INDIAN AGENTS IN INDIAN RUPEES ONLY AND NOT IN **FE**). PLEASE ENCLOSE COPY OF AGENCY AGREEMENT ENTERED INTO WITH YOUR PRINCIPALS INDICATING THE NATURE OF AFTER SALES SERVICES OF INDIAN AGENTS, PRECISE RELATIONSHIP & MUTUAL INTEREST IN THE BUSINESS.

3. MEASUREMENTS/WEIGHT: NETT/GROSS OF THE CONSIGNMENT AND ESTIMATED AIR FREIGHT CHARGES FROM YOUR INTERNATIONAL PORT TO KOLKATA (INDIA). IN CASE OF AN ORDER, YOU SHALL USE AIR WORTHY PACKAGE (AS APPLICABLE) DULY CERTIFIED WITH DOCUMENTS – PLYTO – SANITARY CERTIFICATE (AS PER QUARANTINE ORDER 2003).

4. ESTIMATED SEA-FREIGHT (IF APPLICABLE) CHARGES FROM YOUR F.O.B. SEAPORT TO KOLKATA SEA-PORT, INDIA.

5. YOUR BANKER'S ADDRESS.

6. WHETHER ANY EXPORT LICENCE IS REQUIRED FROM YOUR GOVERNMENT, IF SO, PLEASE CONFIRM WITH DETAILS.

7. OURS BEING A GOVERNMENT OF INDIA ORGANISATION, WE PREFER "SIGHT DRAFT" TERMS OF PAYMENT. PLEASE CONFIRM ACCEPTANCE OF THE SAME. NO ADVANCE PAYMENT. L/C IN EXCEPTIONAL CASES ONLY.

8. TECHNICAL CATALOGUE/LEAFLET SHOULD BE ENCLOSED WITHOUT FAIL.

9. PLEASE CONFIRM WHETHER YOU ARE AUTHORISED TO QUOTE ON BEHALF OF YOUR PRINCIPALS AND IF SO, PLEASE ENCLOSE A COPY OF SUCH AUTHORISATION WITH YOUR QUOTATION.

10. THE SUPPLIER SHALL PROVIDE A COPY OF THE INSURANCE POLICY ALONG WITH INVOICE TO THE PURCHASER WHO MAKE ARRANGEMENTS TO EXTEND THE VALIDITY OF THE POLICY, IF NECESSARY.

(A) THE SUPPLIER SHALL INITIATE AND PURSUE CLAIM TILL SETTLEMENT, AND

(B) PROMPTLY MAKE ARRANGEMENTS FOR REPAIR AND / OR REPLACEMENT OF ANY DAMAGED ITEM (S) IRRESPECTIVE OF SETTLEMENT OF CLAIM BY THE UNDERWRITERS.

11. FOREIGN SUPPLIERS ARE REQUESTED TO SEND THEIR OFFER INDICATING THE COMMISSION PAYABLE TO THE INDIAN AGENT DIRECTLY TO US FOR CONSIDERATION.
12. COUNTRY OF ORIGIN OF THE GOODS IS TO BE MENTIONED.
13. BANK CHARGES ON LC/SD (BOTH WITHIN INDIA AND OUTSIDE INDIA) SHALL BE TO YOUR ACCOUNT.
14. THE INSTITUTE SHALL PROVIDE THE CUSTOMS DUTY EXEMPTION CERTIFICATE AGAINST GENERAL EXEMPTION NO. 37 [NOTIFICATION. NO. 10/97-CE, DATED 1.3.1997 AS AMENDED BY 16/07 CE].
15. LIQUIDATED DAMAGES: THE STORES SHOULD BE DELIVERED / DISPATCHED TO DESTINATION AND READY FOR OPERATION NOT LATER THAN THE DELIVERY DATE SPECIFIED. IF THE SUPPLIER FAILS TO DELIVER ANY OR ALL THE STORES OR PERFORM THE SERVICE BY THE SPECIFIED DATE, LIQUIDATED DAMAGES AT 1% PER MONTH OR PART THEREOF IN RESPECT OF THE VALUE OF STORES WILL BE DEDUCTED FROM THE CONTRACT PRICE SUBJECT TO A MAXIMUM OF 5%. ALTERNATIVELY, THE ORDER WILL BE CANCELLED AND THE UNDELIVERED STORES PURCHASED FROM ELSEWHERE AT THE RISK AND EXPENSE OF SUPPLIER.
16. PATENT RIGHTS: THE SUPPLIER SHALL INDEMNIFY THE PURCHASE AGAINST ALL THIRD PARTY CLAIMS OF INFRINGEMENT OF PATENT, TRADEMARK OR INDUSTRIAL DESIGN RIGHTS ARISING FROM USE OF THE GOODS OR ANY PART THEREOF IN INDIA.
17. TENDERS ARE INVITED IN DUPLICATE SETS COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE COMPANY'S / FIRM'S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPES CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPES SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOPE.
18. PRICE BIDS WILL BE OPENED ONLY FOR THOSE BIDDERS WHO'S TECHNICAL BIDS HAVE BEEN FOUND TO BE ACCEPTABLE.
19. ONLY THOSE BIDDERS WHO'S BIDS HAVE BEEN TECHNICALLY FOUND ACCEPTABLE WILL BE INVITED FOR PARTICIPATION IN THE PRICE BID. OPENING DATE AND TIME OF WHICH WILL BE CONFIRMED LATER ON.
20. THE INSTITUTE DOES NOT BIND ITSELF TO OFFER ANY EXPLANATION TO THOSE BIDDERS WHO'S TECHNICAL BIDS HAVE NOT BEEN FOUND ACCEPTABLE BY THE EVALUATION COMMITTEE OF THE INSTITUTE.

21. THOSE BIDDERS WHO DO NOT RECEIVE ANY COMMUNICATION FOR PARTICIPATION IN PRICE BID OPENING MEETING MAY PRESUME THAT THEIR BIDS HAVE NOT BEEN ACCEPTED BY THE INSTITUTE.
22. PERIOD OF VALIDITY: BIDS SHALL REMAIN VALID FOR ACCEPTANCE FOR A PERIOD OF 120 DAYS FROM THE DATE OF OPENING.
23. CONDITIONAL OFFER WILL NOT BE ACCEPTED.
24. LATE TENDERS I.E. TENDER RECEIVED AFTER THE DUE DATE AND TIME OF SUBMISSION AS MENTIONED ABOVE SHALL NOT BE ACCEPTED.
25. BIDDERS TO ENCLOSE THE FOLLOWING DOCUMENTS:-

A) CURRENT INCOME TAX AND SALES TAX CLEARANCE CERTIFICATES AND PAN NO.

B) BANKER'S SOLVENCY CERTIFICATE

C) SUMMARY OF AUDITED STATEMENT OF ACCOUNTS FOR THE LAST THREE YEARS TO BE ENCLOSED AND FINANCIAL HIGHLIGHTS AND THE KEY PERFORMANCE DURING THE LAST THREE QUARTERS TO BE ENCLOSED AS PER FORMAT:-

COMPANY'S KEY PERFORMANCE

DESCRIPTION	JAN. TO MARCH	APRIL TO JUNE	JULY TO SEPT.
GROSS REVENUE			
PROFIT BEFORE TAX			
PROFIT AFTER TAX			
RETURN ON INVESTED			
CAPITAL (ROIC)			

D) CUSTOMER SATISFACTION CERTIFICATE FROM ONE SUCH ORGANIZATION IS TO BE ATTACHED WITH THE TECHNICAL BID AND PRICE BID.

E) NAME AND ADDRESS OF MINIMUM THREE CLIENTS TO WHOM SUCH EQUIPMENT HAVE BEEN SUPPLIED SHOULD BE MENTIONED.

26. ALL TENDERS (UNLESS OTHERWISE SPECIFIED) ARE TO BE SUBMITTED / HANDED OVER TO PROF. C.K.MUKHERJEE, DEPARTMENT OF AGRICULTURAL & FOOD ENGINEERING, INDIAN INSTITUTE OF TECHNOLOGY, KHARAGPUR - 721 302 AND ACKNOWLEDGEMENT TO BE OBTAINED.
27. THE PERSON / OFFICER SIGNING THE TENDER / BID DOCUMENTS SHOULD BE DELEGATED WITH AN APPROPRIATE POWER OF ATTORNEY (DULY ENDORSED BY A NOTARY PUBLIC) BY THE CHIEF EXECUTIVE OFFICER OF THE COMPANY TO SIGN SUCH DOCUMENTS.
28. WARRANTY / GUARANTEE: THE WARRANTY / GUARANTEE SHALL REMAIN VALID FOR 36 MONTHS AFTER THE GOODS (OR ANY PORTION THEREOF AS THE CASE MAY BE) HAVE BEEN DELIVERED AND COMMISSIONED AT THE FINAL DESTINATION AS INDICATED ABOVE.
29. TENDERS ARE INVITED IN DUPLICATE SETS COMPLYING THE REQUIREMENT FOR TENDER AS DETAILED IN THE TENDER SPECIFICATION TO BE SUBMITTED IN THE

COMPANY'S / FIRM'S LETTERHEAD NEATLY PRINTED / TYPED DULY SIGNED BY AUTHORIZED PERSON WITH THE SEAL OF THE BIDDERS. ALL ENVELOPS CONTAINING THE TENDER SHOULD BE PROPERLY SEALED. SEPARATE ENVELOPS SHOULD BE USED FOR TECHNICAL AND PRICE BID AND INDICATION TO THEIR EFFECT MAY PLEASE BE SUPERSCRIBED ON THE ENVELOP.

IMPORTANT

1. IIT Kharagpur authority may accept or reject any or all the bids in part or in full without assigning any reason and does not bind itself to accept the lowest bid. The Institute at its discretion may change the quantity / upgrade the criteria / drop any item or part thereof at any time before placing the Purchase Order.
2. In case of any dispute, the decision of the Institute authority shall be final and binding on the bidders.
3. For any query pertaining to this bid document correspondence may be addressed to Prof. C.K. Mukherjee, at the address mentioned above.

LAST DATE FOR SUBMISSION OF SEALED BIDS: 16.02.2012

N.B.

- 1) Please Note that the Institute remains closed during Saturdays & Sundays and all specified government holidays.
 - 2) Fax, e-mail Tender will not be accepted. Duplicate Bid document must be submitted in separate closed cover.
 - 3) General Terms and Conditions as stated above related to supply of stores / equipments /assets etc. and for specific service other terms and conditions of the Institute will apply.
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