TAMIL NADU FISHERIES UNIVERSITY
METRO FISH PROCESSING FACILITY, DEPARTMENT OF FISH PROCESS ENGINEERING, COLLEGE OF FISHERIES ENGINEERING, TAMIL NADU FISHERIES UNIVERSITY, KEECHANKUPAM - 611 001, TAMILNADU.

TENDER SCHEDULE

Tender for the supply and installation of "laboratory model high shear twin-screw extruder cum cooker and flavor coater".

Issued to:

12/2/18

Dean
College of Fisheries Engineering
Panangudi,
Nagapattinam – 611 002
Tamil Nadu

Sl.No.	No. of Unit required	Particulars of the equipment	Rate in Figures & Word	Unit in Figures & No.	Total
1.	One	Laboratory model high shear twin-screw extruder cum cooker and flavor coater		1	1

Technical Specification for laboratory model high shear twin-screw extruder cum cooker and flavor coater

A) Laboratory Model High Shear Twin-Screw Extruder cum Cooker, designed for teaching, R&D and product development to process food materials which can be extruable without abrasive materials, either as constituents or as contaminants. The equipment is provided with following features :-

- Nominal rated capacity of **5-15 Kg per hour** (depending upon nature of feed materials and quality of products desired)
- Feed Funnel.
- **Twin-Screw Feeder**, UHMW-HDPE Screws driven by **variable speed Motor** which can be monitored from RPM Meter.
- Barrel fabricated from **Nitriding Steel** with two water jackets operated by two solenoid valves.
- Two nos. Band Heaters, ceramic insulated.
- **Multi-start Screws** fabricated from Nitriding Steel.
- **Drive – 7.5 HP Motor** driven through **reduction gear unit and duplex gear** driven by AC drive i.e. Variable Frequency Drive (VFD) (**imported make from Europe or USA**) to control rpm.
- **TORQUE-LIMITER** fixed before duplex gear – to cut-off power if the load exceeds pre-determined limit – a reliable safety limit.
- **"DEBLOCKING CUM CLEANING DEVICE"** to clear blockage.
- Die Plate assembly with **two nos. round dies of different diameter, one no. flat die** and **one no. pipe die.**

- **'Stellited' edge stainless steel cutter**, driven by **variable speed motor**.
- **Safety device** vide limit switch for the cutter.
- **'Stand alone' panel board** consisting the following :

(a) 2 nos. Electronic PID Temperature Controller-Indicator with sensor for 2 nos. Band Heaters.
(b) 1 no. Electronic Temperature Indicator with sensor for mass temperature.
(c) 3 nos. rpm meters for monitoring the RPM of Main Drive, Feeder & Cutter 1 no. meter for **display of torque** of Main Drive.
(d) Ammeter, Voltmeter, Push-button Switches, Indicating Lamps etc.

- Transformer to stabilize control voltage in case of fluctuation of supply voltage.
- M. S. fabricated sub-frame
- **Rat-proof design.**

(B) Flavor Coater

It is provided with following features:-

- Capacity: 5- 15 kg/h.
- Flavor tank capacity– 15 – 25 L (MOC stainless steel AISI 304).
- Suitable air compressor.

Note: 10 numbers of Performance Certificates (not installation & commissioning certificates) from reputed customers in India operating the equipment for at least 3 years after supply are to be given with the tender.

SPECIAL CONDITIONS

- Price may be quoted in Indian / foreign currencies (along with its equivalent in Indian Rupees) for the main equipment and the accessories inclusive of all the prices for the delivery at our site.
- Price and taxes should be quoted separately.
- Five years warranty from the date of installation & commissioning including spares, unlimited break down visits and two preventive maintenances every year should be included.
- Accessories and other sources may be from own source or from third party producers.
- Such third party manufacturers of accessories who fulfill the general conditions furnished above should be included in the tender.
- Five years warranty period should cover all third party accessories quoted.
- The manufacture of the third party accessories should have sales and service network in Tamilnadu.
- Service and AMC policies of the third party accessories should be given in the technical bid of the tender.
- Application training should be provided to our faculty and research personnel in the reputed and recognized application facility at free of cost.
- Other service conditions are given with separate sheet attached with the schedule.
- Specification sheet – A detailed specification sheet highlighting all above specifications along with detailed experimental conditions must be attached.
- User list – The details of the number of installations of similar application with similar instruments to be enclosed.
- Training – Operational & Application Training should be provided during demonstration in our processing facility after the Installation.

12/2/18

Dean,
College of Fisheries Engineering,
Panangudi – 611 002

TENDER FORM AND CONDITIONS

No. 97 /DFPE/COFE/TNFU/ laboratory model high shear twin-screw extruder cum cooker and flavor coater /2018-19, dt: 12.02.2018

I. GENERAL:

Last date for submission of tender is 26.02.2018 at 4PM. Technical bid cover will be opened on 27.02.2018 at 11AM and scrutinized and the commercial bid cover will be opened on 05.03.2018 at 11 AM. Tenderers should state in the body of their letter whether they are:

i) Manufacturers
ii) Manufacturer's Authorized Agents
iii) Holders in stock of the stores tendered Items

II. DEVIATION FROM SPECIFICATION:

The tenderers are requested to study the specification stated below:

Specification : as given in the schedule
Nos. required : as given in the schedule

SERVICE CONDITIONS:

Guarantee period and after sales service conditions to be mentioned. In case of deviation or alteration the same should be brought out boldly and prominently in the offer made.

III. Any terms or conditions not brought out in the body of the offer will not be considered.

IV. In case any condition or terms of contract applicable in the invitation of tender is not acceptable to the tendering firm they should specifically state deviation therein from the body of their tender.

V. In the body of the letter, the tenderer should specifically state that he/she agrees for sole arbitration by the Office of the Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002.

VI. PRICE:

a. Prices for the main equipment and accessories may be quoted in terms of Indian/ foreign currencies.
b. The unit prices should be for the equipment as indicated in the schedule of tender enquiry and not for any other equipment.
c. Prices quoted should be for delivery at site, as specified, inclusive of charges such as packing, forwarding and installation.
d. Discount if any, should be indicated prominently
e. Prices quoted shall be firm in all respects and for each equipment.
f. Tenders with price variation basis will not be accepted.
g. The offer should be kept valid for six months from the date of tender and supply is expected before **31.03.2018**.

VII. The tenderer is solely responsible for the equipment till delivery and demonstration of the equipment to be conducted.

VIII. EARNEST MONEY SECURITY DEPOSIT AND EXECUTION OF AGREEMENT :

Each tender should be accompanied by an Earnest Money Deposit of **1% of the total value of the product** in the form of a **demand draft drawn in favour of The Dean, College of Fisheries Engineering,** payable at **Nagapattinam,** Tamilnadu failing which the tender will not be considered. Cheques and cash will not be accepted. If for any reason the tenderer withdraws the tender before or after being selected or before being rejected by the competent authority, the Tamilnadu Fisheries University reserves the right to forfeit the deposit in part or in full. The earnest money deposited will be refunded to the unsuccessful tenderers. In the case of successful tenderer, the amount will be adjusted towards Security Deposit.

The successful tenderer (hereinafter referred to as contractor) shall also furnish a security deposit of not less than **5% of the total value of the contract** within 15 days from the date of intimation of the acceptance of the tender. The Security deposit will be inclusive of the Earnest Money Deposit, already remitted.

The security deposit will be refundable only after the expiry of a period of **ONE YEAR** from the date of handing over the stores in working conditions / completion of the work to the full satisfaction and upon the Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002, Tamilnadu issuing a certificate that no amount is due from the contractor under the agreement and that the contractor executed on a non-judicial stamp paper of the value to be fixed incorporating the terms and conditions of the contract within one month from the date of intimation of the acceptance of the tender. In case of default of these conditions, i.e. remitting security deposit and executing agreement within the time allowed, the earnest money deposit will be forfeited without prejudice to any other right of the University will also be entitled to make other arrangement for obtaining these items from others and recover from the contractor any excess expenditure or cost incurred by the University, over the contract price together will all charges, expenses and damages attending to such purchase, provided the Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002, Tamilnadu in specific application from the contractor grant extension of time in specific circumstances in the matter of payment of security deposit and execution of agreement.

IX. DELIVERY : The supplies should be subject to inspection and acceptance or rejection by the The Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002 or such other person authorized by The Dean, College of Fisheries Enineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002, shall from time to time name and appoint for the purpose, the said person to be named and appointed being hereinafter referred to as the Inspection Officer.

The supplies made by the tenderer which in the opinion of The Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002 or the Inspecting Officer is in bad order, unsound in quality or description or not in accordance with specifications as have been prescribed in that behalf or otherwise faulty or unfit for use, shall be rejected.

The supplies so rejected shall be removed by and that the expenses of tenderer within 15 days after he/she has been given notice of the rejection. If not taken away, The Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002 may cause the goods to be removed and disposed off in the manner he/she may deem fit and recover from the tenderer the expenses incurred in such removal and disposal.

The substitution of supplies which have been rejected by The Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002 or the Inspecting Officer in whole or in part under the provisions herein before contained the tenderer shall and will within the time permitted by The Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002, or the Inspection Officer after such rejection shall have been notified to him/her as aforesaid supply and delivery without causing any extra cost of expenditure. If not so supplied and delivered by the tenderer or substitution as aforesaid and also in case of failure by the tenderer to supply and deliver supplies demanded from him under this tender within the period prescribed for supply and delivery, The Dean, College of Fisheries Engineering, Tamil Nadu Fisheries University, Panagudi, Nagapattinam – 611 002 or the Inspecting Officer shall have power to purchase from others in lieu of rejected or not delivered goods and any excess expenditure or cost incurred by the University over and above the tenderer price together with all charges and expenses attending to the purchase shall be recoverable from the tenderer. Nothing herein contained shall prejudice any other right of the University in that behalf under the tender or otherwise.

X. A Guarantee towards the supply of spare parts if any when required on the agreed basis for an agreed price.

XI. THE TENDERER SHALL FURNISH THE FOLLOWING GUARANTEE: A Guarantee to the effect that articles supplied shall be of the best quality and workmanship and shall be in with such quantities and such price. A guarantee for a period of one year or more from the date of handing over the equipment for the proper functioning of the equipments and systems and any defects in their proper function during the guarantee period should be rectified by the tenderer free of charge. If during the guarantee period, the supplies are found not to the description and quality offered, the University will be entitled to reject the articles and the supplier shall replace or pay the University such damages as may arise including the replacement of cost and towards delay and damages. Nothing herein contained shall prejudice any other right of the University if that behalf under the tenderer or otherwise.

XII. TRANSFER OF SUPPLY: The tenderer shall not transfer or assign the supply or any part there or any interest therein directly or indirectly to any person or persons whomsoever without the written consent of the University.

XIII. If the supply order is placed on a higher tenderer as a result of inability of the tenderer then he will be liable to pay the University the difference between the suppler rate and that the lowest acceptable tender. This is in addition to and without prejudice to other rights under the terms of the tender.

XIV. INSTALLATION AND TESTING: All deliveries of goods should be accompanied by Invoice bills in triplicate to the officer at site to whom the goods are supplied.

a) The time allowed for completion of supply and delivery as prescribed including demonstration under the conditions of the tender is the essence of the tender

b) Without prejudice to other rights under the terms of this tender or otherwise.

c) If the tenderer fails in the due performance of his supply within the time fixed in the supply or any extension thereof, the tenderer is liable to pay as liquidated damages up to 2% per month of the supply value of such portion of the materials as have not been delivered, installed and commissioned and having been delivered, installed and commissioned cannot in consequence of the delay be used efficiently during each month between the appointed or extended time as the case may be and the actual time or delivery installation.

The tenderer is not entitled for any enhancement of the rates once accepted. It shall be lawful for the purchaser to set off any loss or expense or cost of damages sustained or incurred by the purchaser by reason of the cancellation of the tender form and out of nominees for the time being payable or due to the tenderer from the University otherwise apart from forfeiting the security deposit furnished by their tenderer.

All sums found due to the University under or by virtue of these presents shall be recoverable from the tenderer in any manner as the University may deem fit.

XV. Any notice or communication to the tenderer shall be deemed to be sufficiently served if given or left in writing at his usual or last known place of abode.

XVI. All questions, disputes or difference arising under out of or in connection with the supply, if not concluded shall be subject to the exclusive jurisdiction of the place, from which the acceptance of the tender is issued, is situated.

1/2/18

Dean,
College of Fisheries Engineering,
Panangudi – 611 002