



**KERALA AGRICULTURAL UNIVERSITY**  
**AROMATIC AND MEDICINAL PLANTS RESEARCH STATION**

Odakkali, Asamannoor P.O., Ernakulam District, Kerala, India, PIN-683 549  
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No. A/704/2021

Dated, 2.09.2024

**TENDER NOTICE**

Sealed tenders are invited for *Supply, erection and commissioning of steamer of lemongrass oil distillation unit* in the farm.

**DESCRIPTION OF WORK**

A steam distillation unit is installed in the research farm for distillation of essential oil from lemongrass. The unit comprises 2 Nos of 350 kg capacity SS distillation chambers, steamer and condenser. The steamer is now damaged and is to be replaced with a newly fabricated steamer as per specification detailed below.

**TECHNICAL PARAMETERS OF THE STEAMER**

Type : Vertical, Multitubular, Two stage Steamer  
Steam generation capacity : minimum 350 kg/hr (F & A 100 ° C)  
Working pressure : 3.5- 4.5 kg/cm<sup>2</sup>  
Fuel : firewood Briquettes, Agrowaste etc

	<b>MAIN UNITS TO BE SUPPLIED &amp; Material specification for each unit</b>	Number
1	Water jacketed combustion type Furnace <i>Furnace :1400 mm OD x 1100 mm ID X 750 mm Height with MS fire door</i> <i>Furnace shell : IS 2062 MS 10 mm thickness</i> <i>Furnace Top Plate : IS 2062, 10 mm Thickness</i> <i>Furnace bottom Plate : IS 2062, 10 mm Thickness</i> <i>Fire grating : BS 3059/ASTM A106 Gr. B water pipe of 40 nb</i>	1
2	Steam Generator : 860 mm OD x 800 mm Height x 85 tubes <i>Steamer shell : IS 2062, MS plate (10 mm)</i> <i>Tube plate : IS 2062, MS plate (10 mm)</i> <i>Tubes: BS 3059/ASTM A106 Gr. B</i> <i>Tube size 50.8 mm OD</i> <i>Tube thickness : 3.66 mm</i> <i>No. of Tubes : 85</i>	1
3	Steam Super Heater: 860 mm OD x 450 mm Height x 85 tubes <i>Steamer shell : IS 2062, MS plate (10 mm)</i> <i>Tube plate : IS 2062, MS plate (10 mm)</i> <i>Tubes: BS 3059/ASTM A106 Gr. B</i> <i>Tube size 50.8 mm OD</i> <i>Tube thickness : 3.66 mm</i> <i>No. of Tubes : 85</i>	1
4	Conical Hood: 860 mm Bottom Dia. x 250 mm Top Dia. x 300 mm Height <i>MS Plate, 5 mm thickness</i>	1
5	Connection ducting: Dia. 250 mm x length 5000 mm x thickness 2 mm. <i>2mm Stainless Steel 304 Gr.</i>	1

6	Chimney: Diameter 300 mm x length 5000 mm with top rain water protection round conical hood at top of 2 feet diameter 3 mm, Stainless Steel 304 Gr.	1
<ul style="list-style-type: none"> <li>The chimney should be fixed outside the shed on existing MS angle (1.5" x 6 mm) structured tower of 16' height the chimney hole on the roof shed should be properly sealed to avoid rain water leakage into the shed.</li> </ul>		

### **INSTRUMENTS AND CONTROLS**

<b>Particulars</b>	<b>Number</b>
<i>Feed water control valve of size 40 mm.</i>	<i>One</i>
<i>Feed check valve of size 40 mm.</i>	<i>One</i>
<i>Steam stop valve of size 40 mm.</i>	<i>One</i>
<i>Blow down valve of size 25 mm.</i>	<i>Two</i>
<i>Water level gauge glass assembly of size 15 mm.</i>	<i>One</i>
<i>Vertical, open discharge type Safety Valve of size 25 mm.</i>	<i>Two</i>
<i>Pressure gauge with Syphon tube of size 3/8".</i>	<i>Two</i>
<i>Isolating valve of size 3/8" for Pressure gauge.</i>	<i>Two</i>

- *scrap of the damaged steamer including the 4 mm MS plate of furnace of 812 mm dia, & 762 mm height, fire bar made of cast iron, 8mm MS plate of steam generator of 660 diameter & 711 mm height & 8mm MS plate of super heater of 660 mm & 304 mm height, MS hood & 4 m long aluminium ducting of 10 inch diameter, 4 meter long MS chimney of diameter 10 inch must be taken back. The price offered for the scarp must be mentioned in the tender offer and must be adjusted in the net price of new steamer*
- *The tenderer may visit the site for assessment of scrap value if needed*

### **INSTALLATION AND DEMONSTRATION**

The steamer should be installed in the same position of the existing damaged steamer. All works connected with the installation except masonry should be undertaken by the supplier. Test run should be conducted to demonstrate satisfactory performance after loading the chamber with lemongrass.

### **COST OF TENDER FORMS**

<b>Particulars</b>	<b>Original (Rs.)</b>
Supplies costing above Rs.1,00,000/- and upto Rs.10 Lakhs	0.2% of the quoted amount rounded to the nearest multiple of 100, subject to a minimum of Rs.400 and maximum of Rs.1500+18% GST as applicable

**Last date of Receipt of Tender : 12.09.2024; 03:00 pm**

**Date and Time of opening of Tender : 12.09.2024; 03:30 pm**

## **THE TENDER DOCUMENTS AND CONDITIONS**

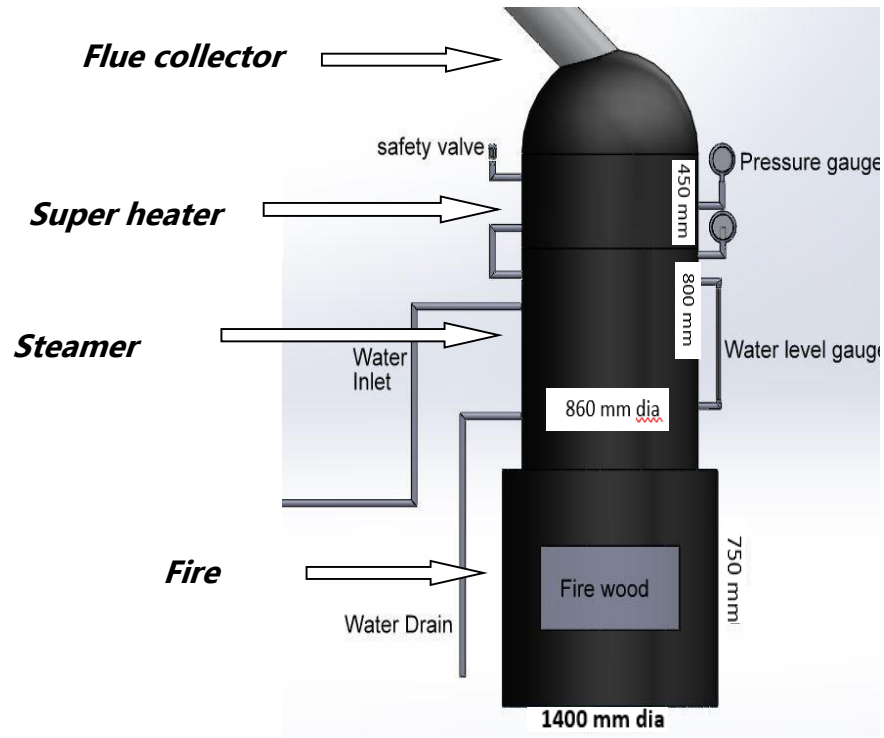
1. The tender form may be downloaded from the following web link in the Internet: <http://www.kau.in/tenders>.
2. Sealed cover containing the tender should be superscribed "***Tender for the Supply erection and commissioning of steamer of lemongrass oil distillation unit***" and should be addressed to the 'Professor and Head, Aromatic & Medicinal Plants Research Station, Odakkali, Pin-683549, Asamannoor P.O., Ernakulam District, Kerala State'.
3. Each tender should be accompanied by Tender fee (0.2 %) and Earnest Money Deposit (EMD) of 1% of the total rupee equivalent cost of the equipment offered (subject to a minimum of Rs.1500/-) by way of **two Demand Drafts separately** for tender fee and EMD drawn in favour of 'The Professor and Head, Aromatic & Medicinal Plants Research Station, Odakkali, Pin-683549, Asamannoor P.O., Ernakulam District, Kerala State'. payable at State Bank of India, Odakkali Branch (Code- SBIN0070519). Those claiming exemptions on payment of EMD should attach all relevant supporting documents failing which the claim shall not be admitted.
4. Agreement on Kerala Stamp paper for **Rs. 200/-** must be enclosed. Form of agreement can be downloaded from the **website <http://www.kau.in/tenders>** under the Related Documents section.
5. Price quoted should be inclusive of all charges, taxes etc.
6. Tenders received late or incomplete in any respect will be summarily rejected without notice and the decision of the undersigned on such matters will be final.
7. Successful tenderer will have to execute an agreement and remit **security deposit @ 5%** of the value of the articles ordered, drawn as DD or fixed deposit receipt.
8. The item should be supplied, erected and commissioned at **Aromatic & Medicinal Plants Research Station, Odakkali**.
9. Payment will be released only after commissioning and satisfactory test running of the unit. No advance payments will be made.
10. Details of warranty, after sale service offered on expiry of normal warranty period etc. should be specified. The steamer should have a minimum warranty of 1.5 years including replacement of damaged parts
11. The undersigned reserves the authority to accept or reject any or all the tenders without assigning any reason.
12. The decision of the undersigned in finalizing the tenders shall be final and binding.
13. The supply, erection and commissioning should be completed under the supervision of the undersigned before 22-10-24.
14. All conditions of Kerala government tenders are applicable in this case also. Further information can be had from the web site <http://www.kau.in/tenders> or from the office of The Professor and Head, Aromatic & Medicinal Plants Research Station, Odakkali, Pin-683549, Asamannoor P.O., Ernakulam District, Kerala State.

(Sd/-)

PROFESSOR & HEAD

*A brief sketch of the required unit is given below. Visit the distillation unit of the farm for more details.*

**Sketch of the unit**



**FRONT VIEW OF THE STEAMER**

