KCCP LIMITED

(A Govt. of Kerala Undertaking)
"CLAY HOUSE", PAPPINISSERI PO. 670 561, KANNUR DT. KERALA
Telephone: 0497-2787671 & 2789633 Fax: 0497-2787281,
E-mail: keralaclays@gmail.com Website: www.kccpl.in

Ref: KCCP/TENDER/368/2024-25 **Date: 17.05.2024**

NOTICE INVITING E-TENDER

Tender ID: 2024_KCCPL_673106_1

Competitive e-tenders are invited through e-procurement from manufacturer/suppliers for supply, erection and commissioning of wood fired IBR Boiler (1 No.)- 0.75 TPH, 10.5 kg/cm^2 pressure, Horizontal, Multi-tubular 3-pass wood fired for Integrated coconut processing unit at Kannapuram Kannur Dist.

Cost of Tender form	:	Rs.9,735/- (Including GST)
EMD	:	Rs.33,000/-
Pre-bid meeting	:	27.05.2024 at 12.00 PM
Tender closing date	:	04.06.2024 at 11.00 AM
Technical bid opening date	:	05.06.2024 at 11.00 AM

For details please visit www.etenders.kerala.gov.in

Sd/
MANAGING DIRECTOR

DETAILED SPECIFICATIONS OF WOOD FIRED IBR BOILER (1 No.) REQUIRED FOR COCONUT PROCESSING UNIT.

	Specifications of Wood fired IBR boiler	
	Design, Fabrication, Inspection and testing	As per Indian Boiler regulation 1950 with latest amendments
	Type of Boiler	Horizontal multi-tubular 3-pass
	Evaporation capacity	750 kg/hr
	Design pressure	10.5 kg/cm^2
	Thermal efficiency based on GCV of fuel	72 $\pm$ 2 % (minimum expected)
	Design temperature	185 ^{0} C
	Dryness fraction of steam	0.98
	Steam quality	Dry, Saturated
	Fuel	Wood/Biomass Briquettes
	Caloric value of fuel	2988 kcal/kg and 4000 kcal/kg for biomass briquettes
	No of passes	3-Pass
	No of furnace	1
	Feed water (min requirement)	1 m^3/hr pump capacity, 120 mmwc pump head and 2HP pump motor
	ID fan (min requirement)	100 mmwc head, 0.80 m^3/hr flow and 3 HP motor
	Design Code	IBR
	Type of feeding	Manual
	Make of material for shell plates, furnace, end plates, tubes, stay bars, reversing chamber, nozzles and connections, fire bar, smoke boxes, saddle and platform etc.	As per IBR standards and as per norms specified by Dept. of Factories & Boilers

	Scope of supply for boiler	Boiler with accessories	Horizontal multi-tubular 3-pass wood fired boiler with necessary mountings, fittings and saddle to mount the boiler
			Lining of Boiler with refractory materials
			Feed water line from pumps to boiler
			Blow down line from Boiler to blow down valve
			Platform handrail & ladder
			Fire bar assembly
		Accessories	Feed water pump with motor-2 Nos
		Electrical	Automated water level controller – 1 No
			Control panel board- 1 No
			Cables from Boiler control panel to all boiler electrical terminals
		Single cyclone dust collector	Basic MS support structures and pollution control equipment
		Feed water tank 1500 L	MS feed water tank with necessary inlets & outlets, water level gauge and drain valve
		MS chimney	Dia: 400 mm, total height: 15m, Foundation base plate, Lightning arrestor, U-type ladder
		Piping	Feed water line: two feed water line between feed pump and boiler inlet IBR steam line: 15m max Common steam header: 1.5m, Header pipe, necessary mountings & fittings, safety valve, pressure gauge Condensate recovery line: Return line from processing machines to condensate recovery system All drains & air vents: Safety valve outlet & air vent outlet line up to Boiler house (1 inch line-10 m maximum), AWLC & Level Gauge drain line (10m maximum), Blow-down line up-to blow-down pit (1.5 inch line 15m maximum) Ducting: Flue gas ducting between Boiler and Chimney (4mm thick)
		Insulation & Cladding	Boiler insulation, Feed water tank, Steam-header, Condensate recovery line
		IBR formalities	Site layout-2D sketch, IBR documentations, Boiler inspection, IBR fee payment formalities
		Packing & Forwarding, Transportation & Material handling system	Supplier's scope
		Erection & Commissioning	Supplier's scope
		Boiler mountings and fittings	As per requirement
	Feed water specifications	Total Hardness	< 5 ppm
		pH value	8.5 to 9.5
		Oil/Organic matter	Not Detectable (preferred)
		Dissolved Oxygen	0.1 ppm (maximum)
		TDS	400 ppm (maximum)
		Chloride	< 50 ppm

		Free CO_2	Nill
		Bound CO_2	< 5 ppm
	Boiler water specifications	TDS	3500 ppm (maximum)
		Total Alkalinity	700 ppm (maximum)
		Phosphate (as PO_4)	20-40 ppm
		pH value	10.5 to 12
		Sodium Sulphite as Na_2SO_3	30 to 50 ppm
		Silica as SiO_2	< 0.4 ppm of caustic
		Conductivity	1000-10,000-µS/cm
	Exclusions for supply	Civil work	Grouting of foundation for all equipments, modification, dismantling of existing building/system/structure/equipment
		Electrical work	Illumination in boiler house, Approval from KSEB for all electrical works, Earthing, Lightning protection system etc.
		Water treatment plants	Raw water storage tank, DM water storage tanks, transfer pumps, feed water condensate tank
		Refractory & Insulation works	For the boiler work
		Flue gas ducting	For removing flue gas from boiler end to atmosphere, design as per specifications of Kerala State Pollution Control Board
		Steam line/waterline Drain & Vent lines	From respective valves
		Flue gas	Approval from State Pollution control board
		Fuel	Fuel preparation & handling system
		Steam	Moisture separator. Water for testing and power for site works is to be excluded from supplier's scope
		Ash	Ash handling system from bed, boiler, air pre-heater and other hopper outlets, Ash storage silo
	Additional requirements	The supplier should specify the warranty period and support services that will be provided	
		Boiler must comply with industrial standards, certifications and regulations	
		Attachment Required: Catalogue or diagram of the boiler and mention the parts.	