



भारतीय समुद्रीय विश्वविद्यालय
Indian Maritime University
(केन्द्रीय विश्वविद्यालय, भारत सरकार / A Central University, Govt. of India)
कोलकता परिसर / Kolkata Campus



CORRIGENDUM – II

Date: 17.10.2023

Point-wise clarifications towards the tender IMU-KC/MARINE BOILER/02/23-24 dated 18.09.2023 towards supply and installation of 01 no. 5 TON/HR Water Tube Saturated Steam Boiler and associated system at IMU – Kolkata Campus:

Following clarifications are inculcated in the tender documents, which should be considered before submission of bids by the prospective bidders towards the tender no. IMU-KC/MARINE BOILER/02/23-24 dated 18.09.2023 for supply and installation of 01 no. 5 TON/HR Water Tube Saturated Steam Boiler and associated system at Indian Maritime University – Kolkata Campus, located at P-19, Taratala Road, Kolkata – 700088:

Sl. No.	Subject	Clarifications
01.	Smoke Tube Boiler / Water Tube Boiler	Only Vertical Water Tube Boiler.
02.	Fuel used for the Boiler	Natural Gas, Diesel Oil. No Thermal Oil
03.	Gas Station	To be supplied by the Vendor, location to be finalised in consultation with Committee Members of IMU KC. A bank of CNG bottles protected by weather that meets safety norms is suitable.
04.	Licence/authorization/certification for Gas Station	Part of the scope for supply by vendor. Installation that meets the norms as applicable to central universities / for academic and research purposes would be sufficient.
05.	Verification of site	It is very important to verify the site first before start working on the tender.
06.	Position of Burner on Boiler	Burner can be located either on top (depending upon the availability of space vertically) or may from sides. Care must be taken that suspended flame should not touch the water tubes inside furnace.
07.	Single Burner / Multiple Burner	The oil and gas burners should be separate. However, they must be located at the same point.
08.	Requirement of fire-fighting equipment.	The scope of supply includes the fire alarm, monitoring and extinguishing system. The norm should meet the safety standards as per Indian fire / local fire approvals.
09.	Design	Preferably Aalborg Marine Design (not Scotch Marine Design). Type approval from Marine Classification Society is required.

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10.	Whether Buy-back method is applicable or not for evaluation of bids	Out of the 2 Boilers which are to be dismantled and shifted, 3 pass Smoke Tube Boiler needs to be under Buy-back mode as per the Tender. Hence, the evaluation would be done based on composite L1. The separate row for quoting for Buy-back is inserted in the Price Bid of the tender documents in the revised BOQ.
11.	Usage of Steam produce in Boiler	The sole purpose of procurement of the Marine Boiler and associated systems in IMU KC is for hands on training to the cadets to meet latest industry requirement. Training will be given for the entire cycle of Steam Generation and condensing from fresh water. The produced steam will also be used intermittently to run existing Steam Engine at IMU KC. Steam will also be used to show the rolling of existing Steam Turbine.
12.	Condenser Size	New Shell and Tube Type Condenser as per Marine Standard needs to be installed in IMU KC to condense the saturated steam produced in Boiler. The capacity should not be less than 20% maximum of evaporation capacity of Boiler. Existing cooling tower can be utilised for circulation and cooling of the condenser. Necessary circulating pumps with pipelines (of approved capacity) also needs to be procured and installed by vendor. The dump steam under normal operating conditions should not damage or cause pressure rise over and above the safe working for all the parts in the downstream.
13.	Venting system with silencer facility.	Not required except the Steam Drum Air Vent as Boiler Mounting with suitable capacity. No silencer required. However, the noise generated should be acceptable as per relevant workspace norms.
14.	Noise 80 DB – steam vent with silencer is required or not	Separate venting system with silencer not required.
15.	Boiler Control & Automation System - Load limitation may be set through a processor	Graphical User Interface touchscreen with illustrative display is required. The software should feature necessary protection by password or such means to prevent unintentional tampering of essential settings. The HMI should also feature all safety and interlocks and data display essential for normal / emergency modes including performance evaluation.
16.	Capacity / Data sheet of cooling tower?	Existing Paharpur FRP Cooling Tower Series 3800 to be utilised. Capacity must be confirmed before designing the Condenser
17.	Lay-out/drawing of the workshop	IMU-KC does not have any lay-out. The vendor has to measure the available area physically before tender submission.

18.	Purifier control	Fully automatic system with Human Machine Interface as per Marine Standards.
19.	IBR / ASME? Clarification needs to be provided for standardisation	Legally acceptable norms are mandatory. ASME approvals are required in addition.
20.	Boiler water testing, dosing	Boiler water sample to be taken through a Sample Cooler. Whereas feed water sample to be taken from feed tank through a sample cock. Once collected, the sample will be tested in IMU KC laboratory.
21.	Provision for manual/auto	Burner should have both Manual and Automatic operation.
22.	Flooring	Finished floor level + 300 mm high pedestal as frequent water logging persists in the campus for all the installations.
23.	ASME Code	ASME Code is used for performance criteria, efficiency of the Boiler (carbon emission) etc. and needs to be followed during Boiler manufacturing.
24.	Skin temperature	As mentioned in Tender document.
25.	Electrical works through IRS	All electrical connections, cables, cable laying, insulation with relevant safety systems must be of Marine Standard and can be surveyed through any Marine Classification Society for certification.
26.	MSME Exemption	Applicable as per the norms of CPPP.
27.	Emission as per WB Govt. norms, measurement as per Marine norms	Provision must be given to measure the emission standards of the exhaust from the Boiler combustion. Equipment to be installed as per Marine standard with proper calibration record and certification. Alarms must be logged in the control panel of Boiler and should be retrievable by USB or communication interface.

All other terms and conditions of the tender documents will remain valid unless and until any further corrigendum.



Langubal
DIRECTOR
IMU-KC