



KENYA ELECTRICITY GENERATING COMPANY PLC.

KGN-HYD-011-2019.

**TENDER FOR REHABILITATION OF COOLING SYSTEM FOR KINDARUMA
POWER STATION MACHINE 1, 2 & 3.**

15th May, 2019.

CLARIFICATION No. 1

In Accordance with the “Tender for Rehabilitation of Cooling System for Kindaruma Power Station Machine 1, 2 & 3.”KenGen hereby issues **Clarification No. 1**

ITEM	Question/additional information sought by tenderers.	KenGen’s response
1.	Complete drawings of the current situation is needed – please provide.	See attached drawing No. Drawing No. KIN 11 – TUR-4600 (Unit 1 & 2 Cooling Water Inlet) Drawing No. KIN 10 –TUR-4600 (Cooling Water System Unit 3)
2.	Please confirm that civil Works are excluded in the tender.	Civil Works shall be performed to facilitate mounting of all components. Refer to ADDENDUM NO. 3
3.	What type of Communication is needed to communicate with the Plant SCADA System (Mode Bus, BackNet....etc)	For interface to existing control system refer to tender specifications and ADDENDUM NO. 3
4.	As using new reducers is needed in Stainless Steel 316, what is the existing pipes Material of Construction to make sure welding is possible for new parts. – We recommend you do not use	As per tender technical specifications. Flanged stainless steels SS316 shall be provided. arrears

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	stainless steel as this will increase the project cost without reason.	
5.	What is the Stainless steel required, SS316 OR SS304? For all mentioned equipment and materials as some items only described stainless steel.	As per tender technical specifications. SS316
6.	Can we use Class 150 instead of PN16 Rating for fittings?	Bidder to conform to tender technical specifications requirements.
7.	Electrical works start and end points to be cleared.	Refer to technical specifications on motorized shut off valves on section V and ADDENDUM NO. 3
8.	SCADA works start and end points to be cleared, and what are the I/O points required?	Refer to technical specifications on motorized shut off valves on section V and ADDENDUM NO. 3
9.	Location of the control panel that control the motorized valves to be confirmed.	On the walls facing the entrance to the turbine pit.
10.	The tender docs refer to units 1 & 2 only for the modifications, so we need to understand what the situation at unit 3 is. - Please confirm requirements.	<ul style="list-style-type: none"> i. The supply and installation of hydro cyclone, strainers, pipework connections and associated accessories for unit 1, 2 and 3. ii. Supply and installation of shut off valve is for unit 1 & 2 only, hence exclusion of unit 3. Unit 3 has shut off valve installed.
11.	For the motorized valve it is mentioned 415V, 50 Hz, so is this need to be a three phase motor, or we can use single phase motors 220V, 50Hz.	Refer to technical specifications on motorized shut off valves on section V and ADDENDUM NO. 3
12.	The tender documents specifies distances of flange to flange, but we might have slight difference due valve suppliers design, so do we have a preferred vender list?	Bidder to conform to tender technical specifications requirements.
13.	<p>As per Sure Flow Company the specs are somehow contradictory:</p> <ul style="list-style-type: none"> a. The Automation of the DF150 SS cannot be done. b. This is a Plug Style duplex & does NOT have any butterfly valves. c. The description & the summary of features is contradicting. We can offer an assembly like attached ref dwg #Q15186, but with automation. <ul style="list-style-type: none"> i. Will this style/design be acceptable? ii. If so, please confirm that you have 80 psi air supply for the actuators. 	Adopt DF150 SS – but should have pressure gauges for monitoring differential pressure.

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	iii. Will the actuators be Double acting - fail in last position or spring return? iv. Description mentions 5/32" perf basket & point #1.5. Is Convoluted-design baskets. Please confirm the need.	
14.	Does the 18 Months Period mentioned in the Tender documents for the execution time includes (materials sourcing, delivery, installation works per the annual planned maintenance outage)?	Duration of project implementation Shall be 18 months as specified.
15.	This Statement below (refer to no. 17) from the tender docs need to be verified by clear pictures:	Drawings attached.
16.	<p><i>This Statement below (refer to no. 17) from the tender docs need to be verified by clear pictures</i></p> <p>Additionally, Units 1 & 2 do not have a cooling water shut off valve, this means that if the intake gates are open irrespective of whether the machines are running or not, water is always passing through the cooling system. With a conservative approximation of 150 m3 per hour going through the cooling system per machine (approximately 300 m3 per hour for both units), this if checked will result in conserving water that could otherwise be used for generation. It is therefore proposed that cooling water shut off valves be installed on both units 1 & 2 that will be integrated into the existing SCADA system so that during machine shutdown times, the cooling system will no longer be passing water thus saving on water.</p>	<p>Unit 1 and 2 do not have existing shut off valves. Contractor shall Supply and install shut off valve on unit 1&2 as per tender technical specifications.</p> <p>Any other technical data shall be provided after contract signing.</p>
17.	<p>In the Spare parts Schedule I need clear picture for the name plate of the following, and all possible technical data about the existing unit:</p> <p>a. GEAR PUMP: The Model is provided as per tender docs, but still need to know the manufacturer....</p> <p>b. Thrust oil cooling circulation pumps: The specs are provided as per tender docs, but still I need to know the manufacturer...</p> <p>c. High pressure shaft seal cooling water pump: The Mode & Make is provided as per tender docs, but still I need to know the complete details as material of construction for this pump...</p>	<p>a. GEAR PUMP- Manufacturer: GEBR. STEIMMEL GMBH&CO. D-53773 Hennel Germany Type: SF 3/32 GD-VLFM Serial no. 1.PU12 1173 Rating:1.5kW Q= 50 l/min Viscosity at 100deg =8.7 Viscosity at 40deg= 68 Viscosity index 100</p> <p>b. Thrust oil cooling circulation pump:</p>

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		<p>Manufacturer: AC-Motoren GmbH TYPE: FCMP 160MB - 2/HE NO. 11062986 Rating: 15kW</p> <p>c. High pressure shaft seal cooling water Pump – Manufacturer: Grundfos. Motor type: CM5-6A-R-I-E-AOOE F-A-A-N Model: A97507761-P3 Q=4.7 m³ /h Rating: 1.2kW</p> <p>Any other technical data shall be provided after contract signing.</p>

ACKNOWLEDGEMENT OF CLARIFICATION NO. 1

We, the undersigned hereby certify that the **CLARIFICATION NO. 1** is an integral part of the document and has been incorporated in the tender

Document.

Signed

Tenderer:

Date