



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.

ADDENDUM NO 3

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

Specifications under Section V (C) part 5 (Cooling water 6” Motorized shut-off valves) item 1.6 shall be worded as follows:-

5: Cooling water 6” Motorized shut-off valves

1.6 Control of Cooling water Motorized shutoff valve

Each valve shall be supplied complete with the following control system:-

1. Motor control starter shall be installed in the local control panel that shall be mounted near the valve mounting position.
2. The power supply to the motorised valve shall be three phase 415Vac.
3. The starter for the motorised valve contactors (Relays) shall be controlled via 110VDC.
4. The local control panel shall be equipped with pushbuttons for local **OPEN/CLOSE** commands for the valve control. The pushbuttons shall be integrated with LEDs for valve position status indication. The open command shall be red indication in colour and the close command shall be green indication in color. The LEDs shall be powered from 24Vdc supply from the unit control panel.
5. A selector switch for **local/remote** control level selection shall be installed in this panel and integrated in the control functions of the valve. When control level is selected local position, it shall be possible to operate the valve from the local control panel. When remote is selected, control shall be possible from the existing

unit control system. Connections shall be provided to interface the valve starter with commands from the existing unit control system when valve control is selected in remote control level.

6. The valve shall be complete with dry contacts for valve open status, closed status and valve failure status. Relays for multiplication of valve position status contacts shall be mounted on this local control panel. Contacts of these relays shall be interfaced to the unit manual control panel and SCADA PLC panel for status indication.
7. The contractor shall provide and mount LED integrated pushbuttons for valve OPEN and CLOSE commands on the existing unit Manual Control panel and interface to the new local control panel. The open command shall be red indication in colour and the close command shall be green indication in color. The failure status shall be interfaced to alarm system. The LED integrated pushbuttons shall be similar to those in the existing Manual Control panel.
8. The three phase power supply to the motorised valve starter shall connected from the Motor Control Centre for each unit. Connection provision shall be shown to contractor during site works.
9. The motor control starter 110VDC shall be connected from the unit control panel of the associated valve.
10. The contractor shall provide armoured cables for interface to unit control panels and power connection to Motor control centre. The Control signals and power supplies shall run on separate cables.
11. Control drawings for the motorised valve control functions and interface to existing control systems shall be submitted to KenGen for review and approval during design stage.

In Section V (C) add Item 8 with the following heading:

8: Components Mounting and Civil works

The contractor shall mount all the specified components to the approval of the Engineer (Duplex Strainers, Hydro Cyclone Separator, Motorized shut-off valves etc.) and perform all necessary civil works required for proper mounting of specified components. All components shall be well mounted and anchored to be free of any vibrations. Vibration damping shall be provided where necessary.

ACKNOWLEDGEMENT OF ADDENDUM NO. 3

We, the undersigned hereby certify that the **ADDENDUM NO. 3** is an integral part of the document and has been incorporated in the tender

Document.

Signed

Tenderer:

Date