KENYA ELECTRICITY GENERATING COMPANY PLC

RFx: 5000016598

KGN-GDD-018-2025

TENDER FOR SUPPLY AND COMMISSIONING OF N370 DRILLING RIG MUD MIXING PUMPS

(WOMEN ENTERPRISES)

17th March 2025

ADDENDUM No. 1

In accordance with the **TENDER FOR SUPPLY AND COMMISSIONING OF N370 DRILLING RIG MUD MIXING PUMPS**, KenGen PLC issues an **Addendum No.1** as follows.

SECTION III - EVALUATION AND QUALIFICATION CRITERIA

STAGE 1: MANDATORY REQUIREMENTS

(i) Additional Mandatory Evaluation Requirement

No.	Requirements
MR 22	Submit Valid Minimum of Class NCA 6 (Both Electrical & Mechanical Contractors)

STAGE 2: TECHNICAL EVALUATION ON CAPACITY TO DELIVER THE CONTRACT

(ii) Additional Technical Evaluation Requirement

No	TECHNICAL EVALUATION CRITERIA	RESPONSE (Yes or No)
TR8	Submit detailed program for commissioning and training proposal	

SECTION IV ~ TENDERING FORMS

(i) REVISED PRICE SCHEDULE FOR GOODS

Item	Description	Unit	Qty	Unit Price	Total Price
1	Mud Mixing Pumps Complete with Accessories as detailed in technical requirements (Section V)	Set	2		
2	Commissioning & Training	Activity	1		
SUB TOTAL					
Discount (%) if any					
Other Charges where applicable e.g. inland transport					
Total Price Delivery Duty Paid (DDP) to Olkaria Rig Store					
Currency of Tender					
Delivery period (after signing contract)					

TENDERER'S NAME (Company): _____

TENDERER'S SIGNATURE & STAMP_____

DATE_____

SECTION V ~ SCHEDULE OF REQUIREMENTS

TECHNICAL SPECIFICATIONS

Description of Mud Mixing Pumps complete with Accessories

Parameter	Requirement
Enclosure	Casted Aluminum Alloy
Finish	High pressure electrostatic spray with powder coating
Control	Thermal relay electromagnetic component
Switch	Self-set conversion switch with high breaking capacity MCB, with provision for remote panel control from master panel
Cable flow	Down entry, Down exit Threaded G1/4" minimum entry
Protection	IP67
Pressure	Positive pressure build
Temperature class	T6
Ex proof	ExdbII

Voltage	415VAC
Frequency	50 Hz
Motor control Method	Star delta
Motor power	55 kW
Shaft power	31 kW
Coil Voltage	L-L
Shaft Seal	Treated PTFE
Outlet Pipe (mm)/(in):	DN150 / 6
Impeller size:	6x5x14
Flow (m3/h):	200
Lift (m)/(ft):	33 / 108
Working Piressure	0.25~0.4MPa
Rotating speed (rpm):	1480
Efficiency (%):	64
Cavitation margin (m)/(ft):	3 / 10
Weight (kg):	836Kgs
External dimension:	1925×584×917mm

Additional Features;

- Open impeller design with an anti- loosening impeller lock bolt
- Mechanical seal, Tungsten
- Installed with lip seals and exclusion seal
- Fluid end parts made of magnachrome corrosive and abrasive resistant. Impellers with 400brinell hardness and magnachrome casings and stuffing boxes should feature 600 Brinell hardness.
- Equipped with replaceable shaft sleeve
- Installed with single row roller bearing at the non drive end and duplex angular bearings at the drive end.
- The Mud mixing pumps must have API and IEC Ex/Atex/CNex certifications that will be verified
- Installed with suitable mixing Hoppers 750mm x 750mm
- Oil field base
- Elastomeric coupling
- OSHA compliant carbon steel coupling guard

Motor

55kW 4P 380Vac 50Hz, CE/ATEX, CE/ATEX & IEC Ex Certified, 113G T3 GC, IP55, Ambient -20°C to 50°C, insulation class F, class B, ICE, TEFC

Motor control panel

The motor pump assembly should be supplied with a complete ready to operate motor control panel. The motor control panel should be able to operate and protect a motor of up to 80kW. The control panel is meant for the operation of 3 phase asynchronous motors at voltages of 380V to 415V. The control circuit voltage should not exceed 240V. The motor control panel should be a soft starter type and run the motor without the need of an additional running state contractor.

All component to be supplied should be compliant with the devices respective IEC and IECEX standards.

Enclosure

The panel's enclosure should be explosion proof with a protection rating no less than ExDbII T6, and an ingress protection rating no less than IP57. The enclosure should have a rain hood to prevent water pooling or collecting around the door seals. The entire enclosure should be galvanized and painted or powder coated. The panel should feature two explosion proof cable glands in line with the enclosure's explosion proof protection rating for one incoming power cable, and one outgoing power cable. The cable glands should be able to accommodate 16mm^2 to 25mm^2 five core power cable.

Lamp

The control panel should have a minimum of four status lamps for;

1. Main incomer live (lamp color: amber) - This lamp will light up when the incoming lines before the main breaker has power.
2. Bus live (lamp color: amber) - This lamp should light up when the bus between the soft

starter and main breaker is live
3. Motor on (lamp color: green) - This lamp should light up when the motor is running
4. Fault (lamp color: red)- This should light up in the case the soft starter identifies or stops on a fault condition

The bidder should include any additional lamps that may be require to improve monitoring and diagnosis of the of the operations of the panel

Push buttons

The control panel should have a minimum of three push buttons for the operation of the panel. Namely

1. Start button – Starts the motor based on the soft starter settings when the emergency button is not engaged
2. Stop button – Stops the motor based on the soft starter settings
3. Emergency stop with lock out - tag out mechanism – Stops the motor immediately, the button should feature a lock out - tag out mechanism that prevents operation of the unit when depressed and locked out

The bidder should include any additional buttons that may be required to improve operation and troubleshooting of the panel.

Internal Components

The panel should feature at a minimum, one 5 pole incomer feed through screw connection type terminal blocks, and one 3 pole outgoing feed through screw connection type terminal block for incoming and outgoing power cable terminations. The incomer and outgoing terminal block should be separated by physical distance (at their closest) of not less than 5cm. The terminal blocks should have a current carrying capacity of not less than 200 amps and nominal voltage rating not less than 1kV. The terminal should be able to accommodate cables of cross-sectional area ranging from 16mm^2 to 50mm^2.

The panel should have a 4 pole (3P+N) incomer molded case circuit breaker (MCCB). The MCCB should have a rated operation voltage (Ue) of not less than 600V and rated current (In) of not less than 100A. The MCCB should have a rated ultimate short circuit breaking capacity (Icu) of not less than 35kA at 380/415 V AC 50/60 Hz conforming to IEC 60947-2. The MCCB should feature a minimum of a thermal overload protection system, and magnetic short circuit protection system. All 4 poles of the circuit breaker should have protection and trip units.

The panel should feature a soft starter protected by the main MCCB in the panel. The soft starter should be able to start and run the motor without the need of an additional running state contractor. The soft starter to be supplied should equivalent or better than the rating detailed below:

Specification	Minimum Rating
Phases	3 phase
Utilization Category	AC-3A, AC-53A
Rated Supply Voltage	208 – 690 V
Supply Frequency	50Hz-60Hz
Rated Operation Current	Not less than 110 A
Torque Control Capable	Yes
Motor Power, kW	90.0 KW 400 V to the motor delta terminals normal duty 75.0 KW 400 V to the motor delta terminals heavy duty
Control circuit voltage	110-230 VAC
Protection	-Phase failure line -Integrated thermal protection motor -Thermal protection starter -Current overload motor -Underload motor -Excessive starting time, locked rotor motor -Motor phase loss motor

	-Line supply phase loss line -Line supply phase loss motor -Thermal protection motor
Standards	IEC 60947-4-2 UL 60947-4-2 IEC 60664-1
Other features	-It should have programmable protection -It should have a display allowing the viewing of line voltage and current -It should have programmable inrush profile and preset inrush current profiles

All cabling on the main power line of the panel (between the incomer and outgoing lines powering the motor) should have a cross-section of no less than 25 sq mm. The control panel should feature an appropriately sized bus bar to carry no less than 200A with no more than a 5-degree Celsius temperature rise in normal operation (1 hr operation at 200 Amps).

Control system cables should be sized appropriately to meet IECEx temperature rating. All control circuit power should be protected by an adequately sized miniature circuit breaker rated ultimate short circuit breaking capacity (Icu) of not less than 10kA at 230V AC 50/60 Hz conforming to IEC standards.

All cabling and components should be labelled, and technical drawings of the internal components and wiring provided with correct corresponding labels at the time of delivery of the equipment. All internal cabling should be appropriately color coded with respect to their respective phases.

Alarming and control	Over voltage, under voltage, single phasing, over current, under current Complete with audio visual alarm on panel
Explosion proof	EXdbII
Temperature rating	T6
Enclosure protection class	IP67

- An SLD shall be required for the electrical control panel in addition to the datasheet and explosion proof certificate for verification. The SLD should be in clear legible format and in the English language capturing ALL the above-mentioned parameters of the control panel.
- Monitoring equipment for programming and maintenance diagnostics with the following specification; Processor; Intel Corei7-8550U@1.8GHz, Display: 13.3-inch, RAM: 16GB DDR4, Storage capacity: 1512GB SSD or equivalent

Must attach datasheet. No internet web pages.

Training:
Onsite training, at KenGen Olkaria, MUST be offered, supplier shall be required to commission the equipment and conduct training of KenGen Engineers & Technicians on operation, troubleshooting and maintenance of the unit. The commissioning and training shall be for at least 10pax comprising of technicians and engineers. Supplier to attach Proposed Training Schedule on Operation and Maintenance.

User Manual
Pump unitization manual to include minimum of;

i. Operation & Maintenance Manual
ii. Assembly drawing
iii. Weight/Center of gravity (COG) data
iv. Motor data
v. Electrical interconnect/termination design
vi. Pump performance curves
vii. Lubrication/operating fluid list
viii. Special tools list
ix. Spares list- operating
x. Preservation & depreservation for long term storage procedure
xi. Installation procedure
xii. Outline/general arrangement drawing/layout drawing

ACKNOWLEDGEMENT OF ADDENDUM NO.1

We, the undersigned hereby certify that the Addendum is an integral part of the document and the alterations set out in the addendum has been incorporated in the tender proposal.

Signed……

Tenderer……

Date…….....