

Brief Scope of Work

Tender: T/2455530/2023

Supply and Installation of Transmission Pumps in AL-Hazm Pumping Station in AL Rustaq Wilayat- South Al Batinah Governorate

SUMMARY OF SCOPE FOR WORK:

Supply and installation/ Replacement of 2 Nos old transmission pumps which pumping toward Rustaq GSR, Hoqain ET, Ghrwa ET.

The existing Hazim Transmission Pumps consist of Five pumps (2 new + 2 old) in operation and one old standby. These pumps feed from Hazim GSR to Rustaq GSR and Hoqain ET and Ghrwa ET. In view of the increased demand for water, consumption needs to place two existing old pumps with 2 new pumps of higher flow capacity of 500 m³/hr @ 190 Mtr Head. Associated piping works (Suction & discharge branches), Electrical, Civil & SCADA work

1 Pump and Motor Details-

- Pump type: Horizontal Multistage pump
- Flow Capacity: 500 M³/hr @ 190 Mtr Head
- Valves
- VFD
- Motor Make
- Output:- 450 kW/415 V/50 Hz
- Speed in R.P.M. -: 1490 R.P.M.
- Suction & discharge branches: MS with suitable coating for drinking water application
- Electrical Breaker & VFD
- Power cables, termination kits etc.
- Cable trays & other accessories

2 Construction scope of work:

2.1 - Mechanical Works:

- Removal of Existing Pumps-2 Nos
- Installation of New Pumps-2 Nos
- Suction & Discharge branch pipe fittings-2 No's
- Suction Gate Valve: 2 No's
- Discharge NRV: 2 No's
- Discharge Butterfly Valve with actuator: 2 No's
- Need to check the discharge line capacity for pumping from new system pumps

2.2 - Electrical Works:

- Bus bar extension for the existing Panel
- Installation of Two new feeders with VFD & connection to an existing breaker
- Laying of Power cable from Motor to VFD panel
- Cable termination

- Earthing cable laying & connecting to existing earth pits

2.3 - Instrumentation Works:

- Utilizing the existing pump signals for new pumps
- Continue the current operation logic for new pumps
- Pump vibration & temperature signals will be taken to the new panel & providing hard wire tripping protections.
- The instrumentation require for control and SCADA operations shall be installed and connected and integrate to existing system and Central Control center (CCR)

2.4 - Civil Works:

- Breaking the existing pump foundation: 2 No's
- Construction of new Foundation: 2 No's
- Base plate grouting: 2 No's
- Any supports on suction & discharge pipe branches

a. Testing & Commissioning:

- Pump testing & Commissioning- 2 No's
- Panel/VFD & commissioning-2 No's
- Pumps & Motors will be supplied with Vibration & temperature sensors. The integration of sensors with PLC panel & Central SCADA and Central SCADA works are considered.
- Any work additional work (Electrical, Mechanical, SCADA & Civil) needed for insulation work should be considered and the company needs to be considered during the site visit.
- FAT in Factory & SAT include