

RUWAIS HOUSING COMPLEX PHASE IV CIVIL & ELECTROMECHANICAL WORKS

Electro: Mechanical / Infrastructure



AL NASR SCOPE OF WORKS:

Construction of water storage tank consisting of:

- 3 Water storage tanks
- 2,641,721 gal of 42 m diameter and 7.65 m each

Structural work

- 2300 m³ of concrete
- 2450 m² of water proofing external
- 4300 m² of crystalline waterproofing internal surface
- 2600 m² of high-performance coating finishing

Mechanical work

- Installation of water supply, fire-fighting and drainage
- Including all pipes, valves, vent pipes, covers and frames, fittings and accessories
- Tie-in with existing water source and new water source from Takreer

Electrical work

- SCADA System and Instrumentation
- Complete control system including all necessary control and instrumentation items, cabling and accessories

Sewage pumping station 03(SPS-03) consisting of:

Structural work

- 450 m³ concrete
- 285 m² precast wall
- 650 m² water proofing external
- 580 m² surface plaster
- 135 m² protective covering ballast; crushed gravel
- 1450 m² interior and exterior coating finishing
- Metal fabrications for trench cover and access ladders
- Balustrades and handrails and metal gratings

Client: ADNOC

Location: Ruwais, Abu Dhabi, UAE

Contractor: Ghantoot Transport & Gen. Cont. LLC

Contract Period: 24/02/2015- 23/08/2016

Value: AED 98,106,930.00

PROJECT STATISTICS

Peak manpower	700
Man- hours accident free	889,380
Total lost time through incidents	Zero
Equipment hours accident free	95,120
Total Concrete Poured	9759m ³ (total 15,000m ³)



RUWAIS HOUSING COMPLEX PHASE IV CIVIL & ELECTROMECHANICAL WORKS

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Control and chlorination building consisting of:

Structural work

- 150 m³ concrete
- 230 m² precast wall
- 350 m² water proofing external
- 120 m² block work
- 300 m² surface plaster
- 900 m² high-performance coating finishing
- Metal work hollow metal doors and aluminum alloy fixed louvers
- Sand trap, access doors and overhead coiling doors

Mechanical work

Supply and installation of:

- Gas chlorination system including chlorine drums, vacuum regulators, gas detectors, chlorinators
- Dosing pumps, emergency scrubbers, air compressor
- Lifting beam, scale and all necessary equipment
- HVAC system
- 2.5 t monorail crane

Plumbing work

- Domestic water booster pumps and water piping
- Sanitary waste, vent and storm drainage piping
- Clean-agent fire extinguishing systems

Electrical work

- Power and lighting including all necessary cabling, cable trays, termination and all necessary works
- ATS , MCC , MCCBs, UPS
- Earthing system
- Lightning protection
- Fire alarm system
- Communication
- SCADA system and instrumentation
- Complete control system including all necessary control and instrumentation items, cabling and accessories

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Sewage lifting station (SLS1A) consisting of:

Structural work

- 1160 m³ concrete
- 1200 m² water proofing external
- 480 m² GRP Lining for wet well
- 300 m² block work
- 600 m² surface plaster
- 375 m² ceramic tiles for wall
- 750 m² epoxy coating finishing
- Metal fabrications for trench cover and access ladders
- Handrails and metal gratings

3 evaporation pond pump station consisting of:

Structural work

- 78 m³ concrete
- 120 m² water proofing external
- 300 m² block work
- 600 m² surface plaster
- 375 m² ceramic tiles for wall
- 64 m² polyurethane coating finishing
- Metal fabrications roof access hatches and roof scuttle
- Comprising galvanized steel cover, curb mounted, with lifting mechanism and automatic hold open arm
- GRP Fabrication platform, ladders and balustrade
- Handrail, rails and gratings

Mechanical work

- Supply and installation of 2 of 85 L/S flow rate submersible drainage pumps with, DI pipes, fittings and accessories and all relative supports up to 350 mm diameter , GRP pipes, fittings and accessories, UPVC Pressure Pipes, fittings and accessories
- Gate valves, check valves, dismantling couplings and flange adaptors

Electrical work

- Cabling, cable trays, termination and all necessary works
- SCADA system and instrumentation
- Complete control system including all necessary control and instrumentation items, cabling and accessories

RUWAIS HOUSING COMPLEX PHASE IV CIVIL & ELECTROMECHANICAL WORKS

Electro: Mechanical / Infrastructure

Mechanical work

- HVAC system
- Heating flat plate solar collector with 80 L storage tank

Plumbing work

- Kitchen and toilet
- Domestic water piping
- Sanitary waste, vent and storm drainage piping

Electrical work

- Lighting including all necessary cabling termination and all necessary works
- Earthing system
- Lightning protection
- Fire alarm system
- Communication
- SCADA system and instrumentation
- Complete control system including all necessary control and instrumentation items, cabling and accessories

Water Pump Station

Earth work

- | | |
|--|--------|
| ■ Excavation | 325 m3 |
| ■ Filling of imported or suitable excavated material | 80 m3 |
| ■ Soil replacement under foundations | 50 m3 |

Structural work

- | | |
|---|---------|
| ■ Concrete | 550 m3 |
| ■ Water proofing external | 1250 m2 |
| ■ Surface plaster | 1300 m2 |
| ■ Protective covering ballast; crushed gravel | 640 m2 |
| ■ High-Performance Coating finishing | 2000 m2 |

Mechanical work

- Supplying and installation
- 4 nos. Vertical Turbine Double Case Water Pump
- 1 nos. Vertical Turbine Double Case Water Pump Jockey Pump
- DI pipes, fittings and accessories and all relative supports
- Motorized Butterfly Valves , Check Valves, Dismantling Couplings
- Surge Protection 20,000L Bladder Type Pressure Tank 2 nos.
- Monorail crane - 5 Tons

RUWAIS HOUSING COMPLEX PHASE IV CIVIL & ELECTROMECHANICAL WORKS

Electro: Mechanical / Infrastructure

Irrigation central control room consisting of:

Structural work

- 35 m³ concrete
- 79 m² precast wall
- 116 m² water proofing external
- 24 m² block work
- 105 m² surface plaster
- 70 m² ceramic tiles for wall
- 208 m² high-performance coating finishing
- Metal work hollow wooden doors

Mechanical work

- HVAC system
- Heating flat plate solar collector with 80 L storage tank

Plumbing work

- Kitchen and toilet
- Domestic water piping
- Sanitary waste, vent and storm drainage piping

Electrical work

- Lighting including all necessary cabling termination and all necessary works
- Earthing system
- Lightning protection
- Fire alarm system
- Communication
- SCADA system and instrumentation
- Complete control system including all necessary control and instrumentation items, cabling and accessories

5 guard houses

Structural work

- 35 m³ concrete
- 79 m² precast wall
- 116 m² water proofing external
- 24 m² block work
- 150 m² surface plaster
- 70 m² ceramic tiles for wall
- 208 m² high-performance coating finishing
- Metal work hollow wooden doors



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Plumbing work

- Domestic Water Booster Pumps & Water Piping
- Sanitary Waste, Vent and Storm Drainage Piping
- 9,500L capacity Fuel Oil Underground Storage Tank
- Rotary Gear Fuel Pump Set including all specialties, piping, valves and accessories

Electrical work

- Power and Lighting including all necessary cabling, Termination and all necessary works
- Earthing System
- Lightning Protection
- SCADA System and Instrumentation
- Complete control system including all necessary control and instrumentation items, cabling, accessories