Algeria, Africa’s 2nd largest country has a population of over 34 million, of which almost half live in coastal areas. Rainfall has been 30% below normal in recent years. This situation has forced the country to make potable water network one of its highest priorities.

The construction of more than 20 desalination plants along the 1300km Algerian coast by 2020 has been foreseen in the country’s long-term planning. The production capacity of these plants will exceed 250000m³/day and supply around 12.5 million inhabitants.

A total of 7 new regional hydraulic projects, of which the M.A.O project is one, will link the Kerrada reservoir dam to the cities of Mostaganem, Arzew and Oran supplying 155 million cubic meters of potable water per year to 2.5 million inhabitants. Lot 1 will envisage pumping water from Oran city to the water treatment plant Sidi Lahdjiel.

The main scope of supply for the M.A.O. project (Lot 1) consists of the dam, water inlet, sedimentation plant, pumping station, 220kV substation, regulation reservoir and all necessary pipe-work and infrastructure.

The project was awarded to an EPC contractor. ABB Germany was the EPC’s subcontractor responsible for the complete electrical and mechanical works of the pump station.

Enduser: Agence Nationale Barrages et Transferts d’Algérie (ANBT), Algeria

Completion is scheduled for December 2010.
Technical Specification / ABB Scope

M.A.O. Pumping Station

- 4x 220kV outdoor feeders
- 2x 35MVA 220/10kV power transformers
- 21x 10kV switchgear cubicles
- 5x 5MW 10kV motors
- 5x pump units (flow: 5760m$^3$/h head: 203m)
- 7x 2.9MW 3.3kV motors
- 7x pump units (flow: 5400m$^3$/h head: 133m)
- 7x 2.9MW variable frequency drives
- 1x 150kVA diesel generator set
- 7x 4MVA distribution transformers
- 2x 1250kVA auxiliary transformers
- 1x 10kms 30kV overhead line
- 5x LV distribution boards
- DC/UPS system
- Control system
- Instrumentation
- 3x 250m$^3$ surge vessels
- 3x 225m$^3$ surge vessels
- 2x 90m$^3$ surge vessels

- Pump station piping DN1400-DN700 in pump house and within pump station area including accessories and all related equipment
- Heating, ventilation and air-conditioning
- Valves in the pump house
- Valves in the pump station area
- Complete earthing system
- Cooling system for motors and frequency drives
- Complete HV, LV and control cabling
- Fibre optic cables
- Supervision of erection
- Complete commissioning of electrical and mechanical works

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