



HIRSCHMANN

A **BELDEN** BRAND

Water supply in Abu Dhabi modernized with optical PROFIBUS.

Water / Wastewater

The transport of freshwater from the sea water desalination system is supported by modern PROFIBUS technology.



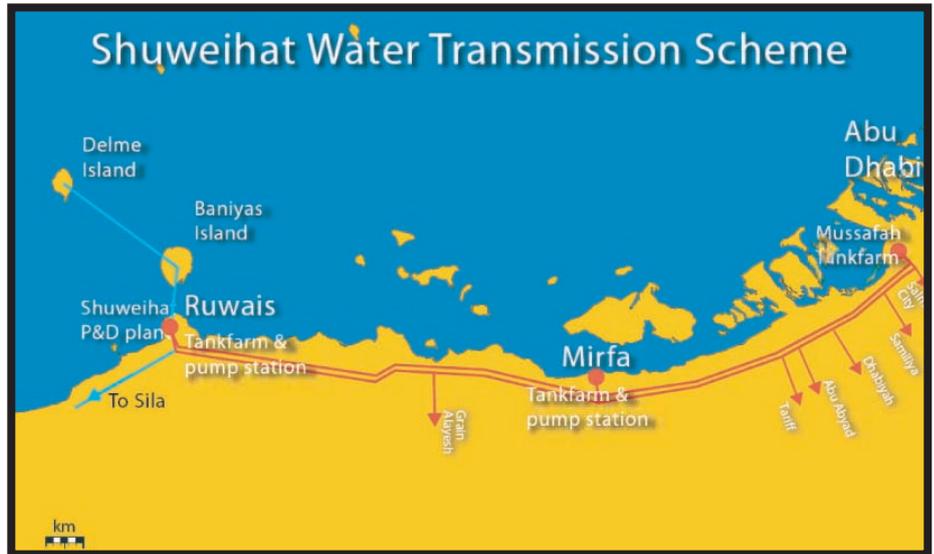
The United Arab Emirates have a demand for freshwater which is growing by 10% every year. An enormous challenge in the desert of the Arabian peninsula which can only be met with the building of sea water desalination systems on the Persian Gulf. The world's largest system is located in Shuweihat. In order to transport the 400 million liters of water produced per

day to Abu Dhabi, 250 km away, a new pipeline was built by an international consortium under contract to the Abu Dhabi Water and Electricity Authority.



شركة أبوظبي للمياه والكهرباء
Abu Dhabi Water & Electricity Company





Project details

ABB is the technological leader for the electrical equipping of pump stations and has already carried out several projects under contract to the Abu Dhabi Water and Electricity Authority. ABB supplied the entire electrical equipment of the pump stations for the water pipeline for 26.6 million Euro. This includes high voltage networks, uninterruptible power supplies, the process data acquisition and the motor drives for the freshwater pumps. Every pump station requires as much power as a small central European town with 50 MW! The corresponding control and inspection system is based on a data network with modern fiberoptic cable technology. ABB chose FOC converters from Hirschmann™ for the networking of the PROFIBUS-based control technology. The use of fiberoptic cables is a plus in terms of operational reliability, an important aspect especially in case of such expansive systems.

Project parameters

- 400 km total pipeline length
- 400 million liters of drinking water per day
- 50MW connection power per pump station
- 33kV, 11kV and low voltage technology
- DC and uninterruptible power supply
- Modern SCADA system (Supervisory Control and Data Acquisition)

Requirements

- FOC-based PROFIBUS due to EMC strength and transmission length
- Wide operating temperature range

Solution

- Line structure
- Connections between electrical PROFIBUS segments
- Networking within the area of the pump stations
- 96 OZD Profi 12M G11
- 10 OZD Profi 12M G12

Why Hirschmann™?

- Robust and industrially compatible equipment
- Proven product at ABB
- Wide operating temperature range



OZD Profi 12M G11



OZD Profi 12M G12