

Underground Cable Link

Libya 1978 – Break-through for high voltage XLPE insulated cable



Cable data

Voltage	245 kV AC
Power	200 MVA
Length	300 m
Conductor	400 mm ² Al
Insulation	XLPE
Weight	7 kg/m
Customer	Ministry of Electricity, Libya
Year	1978

Project content

XLPE cables, terminations and joints
Cable system design
Installation and testing

Pioneering for PEX insulated cable at high voltage

ABB has fulfilled customers' new needs early on, for example, for the transmission of greater power. The PEX insulated cable was being produced for 245 kV at the end of the 1970s. It was a further development of an extruded cable for 170 kV, which in those days was considered to be a high voltage. Libya ordered the high-voltage cable for a test plant.

New needs

The background for the investment was an increased need for power transmission to desalination plants and the petrochemical industry. There was also a growing interest in replacing oil-insulated cables by PEX. The two main reasons were, reduced maintenance requirements and a lower risk of oil leakage.

Switchgear station

The cable was produced for a switchgear site in Libya and was supplied in 1978. The length was only 300 metres. At the customer's request, three joints were made in the cable to test ABB's jointing techniques. This was the first commercial installation of XLPE cable with such a high voltage.

Operational experience

The cable has been in operation since 1978. No problems or operational disturbances have been reported by the customer.

Other deliveries

In 1980, we were entrusted again to supply 10,000 metres 30 kV XLPE cable to the Electrical Construction Co. of Libya. This company ordered a further 16,000 metres of the same type of cable the year after.

In 1983, the Secretariat of Electricity in Libya ordered 12,000 metres XLPE cable for 72 kV.

BU Cables

ABB Power Technology Products AB
www.abb.com/cables

Telephone
+46 455 556 00

Telefax
+46 455 556 55

E-mail
sehvc@se.abb.com

SEHVC M-055E