

Underground Cable Link

Challenging installation on Sri Lanka



Cable data

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|------------|------------------------|
| Voltage | 220 kV AC |
| Power | 60 MVA |
| Length | 9,4 km |
| Conductor | 630 mm ² Al |
| Insulation | XLPE |
| Weight | 9 kg/m |
| Customer | Buhrmeister & Wain |
| Year | 2000 |

Project content

XLPE cables and joints
Opto fibre cable installation
Cable system design
Installation and testing



The installation was a true challenge when virtually ten kilometres of cable should link together the diesel power station with Sri Lanka's main grid. A full 90% of the cables were laid in pipe under difficult conditions.

ABB could offer a cost effective solution to the customer, Buhrmeister & Wain, that markets reserve power stations and diesel power stations (15-100 MW). This also included connection to an existing ABB switchgear.

The production of electric power is very limited on Sri Lanka and this installation is only a small part of the existing requirement. This concerned four diesel power stations of 15 megawatt. The power stations are constructed on a barge, which is placed on the sea bed inside the Colomo Dockyards area.

The route was a total of some 3 kilometres and was divided into four parts. The shortest distance was about 600 m and the longest a little more than 900 m. The cable was laid about one metre below the water table under extremely difficult working conditions with continuous rain, so the pumps were working flat out. Bearing in mind all the water it was not possible to keep cable trenches open so pipe laying was the only option. At this particular time the situation in the country was unsettled, thus security was another important aspect. Laid in pipes, the cables were more protected against sabotage and theft.

On the barge (diesel power station) the cables were terminated with APEC 245 and in the GIS-switchgear with APEGA.

The result was a successful installation with nine joints and six terminations within the agreed time frame.

BU Cables

ABB Power Technologies AB
www.abb.com/cables

Telephone
+46 455 556 00

Telefax
+46 455 556 55

E-mail
sehvc@se.abb.com

SEHVC M-059E