

Underground Cable Link

West Coast Mainline



Cable data

Rated voltages	12 kV and 72.5 kV AC
Length	29 + 58 km
Weight	13.5 kg/m and 18 kg/m
Power	40 MVA and 80 MVA
Insulation	XLPE
Conductor	1 x 1000 mm ² Cu, 2 per pole
Customer	National Grid Company
Year	1999-2000

Project content

XLPE cable and accessories
Cable System design
Type testing

In co-operation with:

ABB Limited, UK

- Project Management

Balfour Beatty Power Networks Ltd, UK

- Installation

KEMA Nederland B.V

- Testing



In 1999 ABB was awarded the prestigious contract for the cable system supply to West Coast Mainline after an extreme competitive process both technical and commercial. This was our first order from the National Grid Company UK (NGC), which is one of the network operators in England.

The application was a matter of supplying power to the West Coast Mainline Railway in the south part of England. Besides the 58-kilometre 72 kV cable transmitting power to several sites, there were also 29 kilometres of neutral-leads.

By using a standard cable with a lead sheath, could the cable be produced in standard machinery, which were a cheaper solution and a benefit for the client in the future too. The assignment was

carried out via ABB's subsidiary in England and included cabling, accessories and installation.

Broad competency

Through its network, ABB has the collective competency to be able to offer the most attractive and cost-effective complete solutions. During the last few years we have collaborated on a series of interesting medium- and high-voltage solutions in the UK.

ABB can offer

- System studies
- System optimisation
- Optimised protection of cable installation
- Project planning
- Handling concession matters
- Land work
- Location and assembly
- Testing and start-up
- Documentation

- Monitoring and maintenance
- Addition guarantees
- Financing through e.g. leasing

The right system for you

We are happy to go through the networks together with our customers, to examine what possibilities there are to employ the latest developments in cabling technology, at a reasonable price.

Leading development

Over the last few years ABB has launched several important innovations as for example: HVDC Light – the world's first system with extruded DC cables Powerformer – the world's first concept for cable-based turbo and hydroelectric generators Dryformer – the world's first cable-based power transformers



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