



Customer

Betuwe Route project organisation

Location

Netherlands, A-15 route

Delivery date

1 June 2007

Summary

- Detailed engineering of catenary
- Double track (2 x 72 km)
250,000 sleepers
430,000 tonnes of ballast
- Catenary (104 km)
25 kV (auto-tensioned, fixed, ready) and 1500 V
- ERTMS

Building of Betuwe Route

A-15 section

Strukton Rail and the German company Fahrleitungsbau GmbH have constructed the double track and overhead wiring along a long section of the Betuwe Route. The greatest challenge was the limited time available for this major project. The work started in 2004 and was completed in 2006.

Double track

Strukton Rail has laid double track along the 72-kilometre section between Gorinchem and the tunnel under the Panterdensch Canal. The total track was therefore 144 kilometres long. This involved approximately 250,000 sleepers in total, nearly 170,000 tons of ballast for the substrate and another 260,000 tons of ballast for the top layer.



Strukton
Rail

Catenary

Strukton Rail was responsible for the detailed engineering of the catenary construction. In addition, Strukton Rail has constructed the catenary system along a 104 kilometres long section together with the German company Fahrleitungsbau GmbH.

The section included several intersections, resulting in four different overhead wiring systems: B5 (25 kV auto-tensioned), B8 (25 kV fixed), B4 (25 kV ready) and B1 (1500 V traditional).

Logistics

The logistics operation was crucial in this major project. Most materials were brought in on inland waterway vessels and trucks. Some 2,400 sleepers arrived every day, spread over twenty loads. About 80 loads of ballast were also unloaded every day. A self-unloading Robel train brought the 360-metre long rails to the site.

The holding of stocks was avoided as far as possible by delivering the materials directly to the site. An important logistics hub in the section was the Central Exchange Point (CUP) in Valburg.

The construction of the overhead wiring followed closely behind the construction of the track. In the interests of rapid and efficient working, there was a separate assembly team for each stage of the process, and prefabrication was used wherever possible.

Gemma

The advanced catenary construction train Gemma was deployed for installing the wiring. Immediately behind the Gemma followed the Strukton Rail shuttle train, a number of wagons that function as a working platform. They had their own power supply for smaller tools. This combination achieved a high production rate together with high operational reliability.

