

Betuwe Route A15 section



Client	Project Organisation Betuwe Route
Client website	http://www.betuweroute.nl
Country	The Netherlands
Location	A15 section
Delivery date	01 06 2007
Size	Over 1 million EUR Overhead wiring equipment

The Betuwe Route is the new freight railway line linking the port of Rotterdam with the German border. This is the Dutch part of the Trans European Rail Freight Network (TERFN), which connects the ports of Rotterdam and Genua.

Strukton Rail has constructed the double track and overhead wiring along a long section of the Betuwe Route.

Double track

Strukton Rail has laid double track along the 72-kilometre section between Gorinchem and the tunnel under the Pannerdensch Canal. This line will see for a fully connection on the European rail network. The Netherlands has a strategic position next to the sea and contains a lot of rivers, which makes it an excellent distribution country.

Catenary

Strukton Rail, together with the German company Fahrleitungsbau GmbH, have constructed the catenary system along a 104 kilometres long section between the Sophia track tunnel and the tunnel in Zevenaar.

This section included several intersections, resulting in four different overhead wiring systems: B5 (25kV tension-regulated), B8 (25kV rigidly anchored), B4 (25kV ready) and B1 (1500V traditional). The B4-system is agreed as standard in the EU. This system enables longer and heavier trains to drive more frequently.

The advanced catenary drawing machine Gamma was deployed for installing the wiring. The Strukton Rail shuttle train directly followed the Gemma. This is a number of wagons that function as a working platform and have their own power supply for smaller tools. This combination achieved a high production rate together with high operational reliability.

Logistics

The logistic operation was crucial in this major project. Most materials were brought in on inland waterways vessels and trucks. The holding of stocks was avoided where possible by delivering the materials directly to the site.

Separate teams were composed for each stage of the process to increase the working speed and efficiency. Prefabrication was used wherever possible.

An important logistics hub in the section was the Central Exchange Point (CUP) in Valburg, where complete train parts are reclassified per destination as from 2006. This exchange point has had an important role with the construction of the Betuwe Route since 2004.

Modern security systems

ERTMS, the new signalling and management system for Europe, has been installed on the Betuwe Route. In case a machinist misses a sign or if anything else does not work well, ERTMS will take over the control of the train.

Special sprinkler systems have been installed in the five tunnels to prevent the trains and tunnels to become overheated in case of fire.

Strukton Rail's contribution to Betuwe Route

Total length track
144 kilometres

Number of tunnels
5

Total length of tunnels

18 kilometres

Total length of the catenary
104 kilometres

Number of sleepers
250,000 / 2,400 per day distributed over 20 freights

Ballast
430,000 tons