



RECONSTRUCTION BASCULE BRIDGE PEENE



Floating of the bascule bridge



Lifted bascule bridge

In the Hanseatic town of Anklam in Mecklenburg-Vorpommern, the double-track railway line no. 6081 of the Deutsche Bahn Netz AG from Berlin to Stralsund crosses the river Peene, which is classified as a category IV waterway at this point, at kilometre no. 176.00.

The new bridge consists of two single-track bascule bridges (span: 20.0 m) without counterweights and two fixed single-track approach bridges (span: 31.20 m). The superstructures are designed as single-span supporting structures with trough cross-sections that have a clearance width of 5.0 m between the main girders. The rail attachment is provided in the form of a fixed track in the area of the bascule bridge; while in the area of the trough bridge, the rails are fitted to sleepers that have been laid on ballast. In order to ensure sufficient clearance of the navigation channel for shipping, the bascule bridges must be able to open up to an angle of 54.5°. The new bascule bridge has been designed for an average of 12 openings per day, while a time window of three minutes is available for every opening or closing sequence. During normal operation, the bascule bridges are opened or closed by means of two hydraulic cylinders (two-cylinder operation).

The scope of works included completely replacing the superstructure, hydraulic units and measurement, control and regulation technology as well as strengthening the substructure in accordance with the relevant standards. The most important requirement was that a single-track railway line must be in operation during the entire construction period. That issue had a considerable impact on the sequence of construction.

After completion of the substructures, the prefabricated bascule bridges and approach bridges were installed from the water by using a pontoon unit and a pusher tug.

In future, the Berlin-Stralsund track section will form part of Europe's high-speed rail network, with speeds of up to 160 km/h.

Facts & Figures:

Steel weight:	380 t	Construction:	Two one tracked bascule bridges without counterweight and two trough bridges
Total length:	52.30 m	Customer:	DB Netz AG / DB Energie AG
Length bascule bridges:	20.00 m	Construction period:	2011- 2014
Length trough bridges:	31.20 m	Steel qualities:	S235 J2+N, S355 J2+N, S355 K2+N