



The Rendsburg High Bridge across the Kiel Canal

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Abstract

The Rendsburg High Bridge – a railway viaduct across the Kiel canal – is a more than 100 year old technical monument. Nevertheless, it is used under full traffic load – as a bottleneck for the traffic to Scandinavia. The bridge, a riveted steel construction, is currently being extensively retrofitted. The measures comprise, beside the renewal of the corrosion protection and the repair of defects, a strengthening for today's railway traffic loads. Thus, the bridge can be preserved for the long run – also an important contribution to the building culture.

Keywords: railway bridge, riveted structure, historical monument, retrofitting.

1 Overview of the structure

The Rendsburg High Bridge is one of the most important technical monuments in Germany and the landmark of the town Rendsburg. The more than 100 year old bridge leads the railway line Hamburg–Flensburg (–Denmark) across the Kiel Canal. This railway line is the main line to Scandinavia, which lies under a very heavy railway traffic. The viaduct was built between 1911 and 1913 and facilitates a clear passage height for the shipping of 42 m.

Due to the great importance of the bridge for the national and international railway traffic, the bridge is being extensively retrofitted by its owner, the Federal Water and Shipping Administration (WSV), as well as by the German railway company Deutsche Bahn (DB).

The structure is built as a riveted steel construction with an entire length of nearly 2.5 km.



Figure 1. Rendsburg High Bridge