

## REFERENCE

### TENSION ROD SYSTEM M105 M100 M85

### Tied arch bridge BR25 in Beringen, Belgium

#### PROJECT DATA

##### Brief description

Tension rod systems used in a hanger design

##### Details of the system elements

Tension rod system sizes M105 M100

M85 maximum system length 29.5 metres

##### Technical parameters

Tension rod systems for carrying tensile forces; the design consists of a combination of the load-bearing properties of a lower stiffening beam suspended on tension rods under a slender arch.

##### Country, Year

Germany, 2019 - 2020

#### PROJECT DESCRIPTION

The BR25 tied arch bridge over the Albert Canal in Beringen (Belgium), due for delivery next year, will be Mürmann's largest tied arch bridge to date.

The span width is 173 metres and the arch height is over 30 metres. A total of 62 nominal size M105 M100 M85 tension rod systems will be used. The design of the longest tension rod systems will incorporate connection sleeves. The largest hanger length will be 29500 mm.

The BR25 Beringen bridge will have 2 opposing arches, reducing the need for transverse bracing and wind bracing and achieving an aesthetically pleasing appearance.

#### SOLUTION

Tied arch bridges are the domain of steel construction despite the fact that there are construction variants in other materials (concrete/wood). High-strength tension rod systems with optimised geometry are ideal for use in the filigree steel design of steel tied arch bridges. This method of construction reduces the need for complex welding work and the adjustability of the systems enables component tolerances to be easily compensated for.



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