

Tacitus Bridge (Netherlands)



Project description

The original Tacitus Bridge over the Waal River in the town of Ewijk, the Netherlands opened to traffic in 1976. The 10-span structure has towers at two axes, supporting the adjacent deck sections by means of stay cables. In 2013, following the construction of a second structure beside it to double capacity, the bridge was renovated, with the deck raised to increase clearance for river traffic. It is now one of the country's most important bridges, carrying more than 110,000 vehicles per day while allowing ships to navigate the important waterway which connects the port of Rotterdam to Germany.

mageba scope

mageba designed and supplied very special RESTON®SPHERICAL bearings to support the raised deck of the existing bridge, 26 in all. These were designed for loads of up to 84,000 kN, with all but one allowing sliding movements. Four of the bearings were designed to resist very large uplift forces of over 9,000 kN (as well as large downward forces) while also facilitating sliding movements of +/-180 mm. These bearings are also, unusually for bridge bearings, designed to be fatigue-proof. Increasing the challenge yet further, they had to be designed to be very slender due to space limitations, and to be readily replaceable and loading is very high.

Highlights & facts

mageba products:

Type: RESTON®SPHERICAL bearings (up to 84 MN)
Notable: Uplift-resistant, fatigue-proof design
Installation: 2013

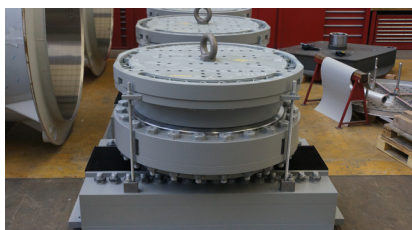
Structures:

City: Ewijk
Country: Netherlands
Completed: 2013
Type: Cable stayed bridge
Length: 1055m
Contractors: Ballast Nedam, Strukton

The bridge crosses the River Waal near the town of Ewijk in the Netherlands



RESTON®SPHERICAL UPLIFT bearings with very special design, as fabricated (each 13,500 kg)



Installation of a RESTON®SPHERICAL UPLIFT bearing (sliding type) under bridge's raised deck

