

Köhlbrand Bridge Hamburg (DE), Axis 15 + 30



Product description

The Köhlbrand bridge has been connecting Wilhelmsburg Elbe Island with the national A7 motorway since 1974. The bridge spans the 325 m wide Köhlbrand, an arm of the Süderelbe.

The construction represents the second longest road bridge in Germany with a total length of 3,618 m. The 520 m long structure crosses the Köhlbrand Canal as a 3-span cable-stayed bridge. When the tide is moderate, the headroom is 53 m.

The adjoined ramp bridge on the west side is 1,048 m long, while the east side ramp measures 2,050 m in length.

The east concrete ramp bridge is interrupted by two movement joints. They are located on top of the "Gerber" joints in axes 15 and 30. These joints are designed for a movement capacity of up to 760 mm.

mageba scope

mageba supplied the following products:

- 17.60 m of TENSA®MODULAR SILENT joint of type LR8 LS 100 with "QUICK-EX system"
- 19 m of TENSA®MODULAR joint of type LR8 with "QUICK-EX system"
- 170 m of ROBO®DUR support ribs to prevent lane grooves (installed before and after the expansion joint constructions)

The expansion joints in axes 15 and 30 are located above the "Gerber" joints. Therefore they are not accessible from the bottom. Our QUICK-EX-System offers the advantage, that in the case of a damage, the expansion joints can be quickly removed without causing any work at the asphalt, concrete or sealing.

Highlights & Facts

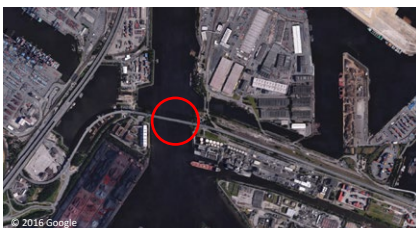
mageba products:

Type:	TENSA®MODULAR LR8 „QUICK-EX-System“ TENSA®MODULAR SILENT LR8- LS100 „QUICK-EX-System“ ROBO®DUR support ribs
Installation:	2015–2016

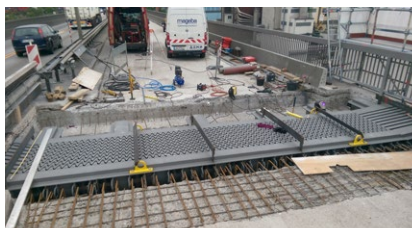
Structure:

City:	Hamburg
Country:	Germany
Type:	Cable-stayed bridge
Length:	3,618 m
Completion:	1974
Contractor:	Hamburg Port Authority (HPA)
Engineer:	Paul Boué, Egon Jux, Hans Wittfoht

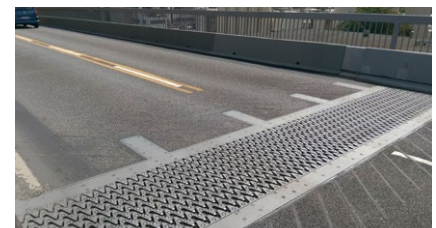
Köhlbrand Bridge Hamburg



Installation of the new transition structure in Axis 15



New waterproof noise reduction lamella expansion joint with QUICK-EX-System



Köhlbrand Bridge Hamburg (DE), Axis 0 + 100



Product description

A total of 81,000 cubic meters of concrete and 12,700 tons of steel were used to build the bridge. The construction was completed after four years and amounted to a total cost of 82 million EUR (160 million DM). In March 2014, a comprehensive rehabilitation of the bridge was launched. The bridge features four lanes and is used daily by approximately 30,000 vehicles.

In axes 0 (east) and 100 (west), the movements of the three bridge sections are recorded. These expansion joints have a movement capacity of up to 1,140 mm.

mageba scope

The following services were carried out by mageba as general contractor:

- 17.60 m TENSA®MODULAR SILENT Type LR10 LS 100 with steel connection
- 17.60 m TENSA®MODULAR SILENT Type LR12 LS 100 with steel connection
- 170 m ROBO®DUR support ribs to prevent lane grooves (installed before and after the expansion joint constructions)

Reconstruction of the steel cross beams in the axes 0 and 100. The supporting edges of the original roller shutter assembly had to be removed and replaced by new load introduction brackets for the slat extensions. As a final step the total construction was re-welded to the end crossbeams.

Highlights & Facts

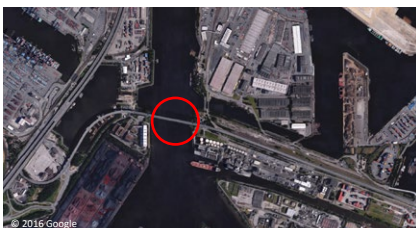
mageba products:

Type:	TENSA®MODULAR SILENT LR10 / LR8-LS100 ROBO®DUR support ribs
Installation:	2014–2015

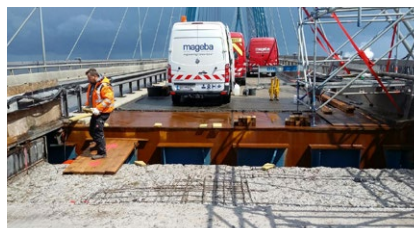
Structure:

City:	Hamburg
Country:	Germany
Type:	Cable-stayed bridge
Length:	3,618 m
Completed:	1974
Contractor:	Hamburg Port Authority (HPA)
Engineer:	Paul Boué, Egon Jux, Hans Wittfoht

Köhlbrand Bridge Hamburg



Groove gap after the removal of the old roller shutter construction



Incorporation of the new waterproof noise-relieved expansion joints

