Narmada River Bridge (India)

Project description

Where the eight-lane Delhi-Mumbai Expressway crosses the Narmada River in the district of Bharuch in Gujarat, western India, a new eight-lane bridge has been constructed to ensure unhindered flow of traffic across the river at this particular location.

The bridge is of the extradosed type, which combines the main elements of a prestressed box girder bridge and a cable-stayed bridge, but with the "stay cables" acting as external prestressing tendons.

The bridge has a total length of 2.22 km, including the viaducts at each end and was built using the balanced cantilever method with structural discontinuities at the mid-span locations where the cantilevers come together.

mageba scope

For this bridge, mageba provided bearings and expansion joints including 64 RESTON®DISC bearings with capacities of up to 10,900 kN installed at the mid-span locations where the main structure's balanced cantilevers come together along with 468 RESTON®SPHERICAL bearings designed for loads of up to 10,300 kN with tapered connection plates to accommodate the superstructure's longitudinal slope – the chosen bearing type for the approach viaducts.

Beyond the bearings, 648 m of TENSA®MODULAR LR expansion joints with up to six individual movement gaps and 124 m of TENSA®GRIP RS single-gap expansion joints were also delivered.

Highlights & facts

mageba Products:

Type:	TENSA®MODULAR LR and TENSA®GRIP RS joints RESTON®DISC and RESTON®SPHERICAL bearings
Installation:	2021

Structure:

City:	Bharuch
Country:	India
Type:	Extradosed bridge
Length:	2.22 km
Owner:	National Highway Authorities of India
Contractor:	Ashoka Buildcon Limited
Designer:	ASC Infratech Pvt Ltd.

The bridge is located in the district of Bharuch in Gujarat, western India

RESTON®DISC bearings were installed at the mid-span locations of the structure

Installation of a TENSA®MODULAR LR joint

mageba Bridge Products Private Ltd. – 45, Jhowtala Road, 3rd Floor – 700 019 Kolkata – India – T +91-33-229 00 250 – info@mageba.in