Wazirabad Signature Bridge (India)

Project description

The beautiful Signature Bridge over the Yamuna River, north of New Delhi, opened to traffic in November 2018.

It is a new cable stayed bridge across the Yamuna River in Wazirabad, Delhi. Its dramatic inclined steel pylon, at 154 m high, and elegant stay cable design, makes it a particularly attractive addition to the Wazirabad skyline.

As well as its pleasing aesthetic impact, the shape of the pylon enables it to provide, to a substantial extent, the stress balance required to support the deck.

mageba scope

The ROBO®CONTROL SHM system was installed to monitor the structure's condition, behaviour and performance during both the construction and service phases.

In particular, it is designed to monitor the effects of weather, earthquakes and other environmental influences, and to detect and report any damage that may occur.

For this purpose, the SHM system uses a wide array of sensors (100 in total). The precisely measured data is made available to the bridge's engineers in real time, via a user-friendly interface, greatly improving the efficiency of monitoring work compared to manual methods.

Furthermore, mageba supplied modular expansion joints TENSA®MODULAR with up to twelve individual movement gaps each, accommodating longitudinal movements of up to 960 mm.

Highlights & facts

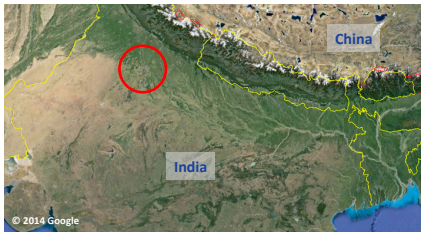
mageba Products:

Type:	TENSA®MODULAR expansion joints
	ROBO®CONTROL monitoring system
Features:	100 sensors
Installation:	2013 / 2018

Structure:

City:	Delhi
Country:	India
Completed:	2018
Type:	Cable stayed bridge with composite deck
Main span:	251 m
Length:	675 m
Contractor:	Gammon JV
Designer:	Schlaich Bergermann JV

The bridge crosses the Yamuna River in the Wazirabad district of Delhi, India



A sensor on a stay cable, measuring high-frequency vibrations (up to 200 Hz)

The modular joints were fabricated at mageba's Indian factory in Kolkata

mageba sa – Solistrasse 68 – 8180 Bulach – Switzerland – T +41 44 872 40 50 – info.ch@mageba-group.com