Zuari and Mandovi railway bridges (India)

Project description

The Konkan Railway runs between India's commercial capital, Mumbai and Mangalore. The 741-kilometer-long line connects Maharashtra, Goa and Karnataka States, a region of criss-crossing rivers, plunging valleys and the Konkan or Sahyadri Mountain Range.

As a consequence of this very difficult terrain, the project involved the construction of over 2,116 bridges and 92 tunnels, and it is regarded as one of the largest railway project that has ever been undertaken in Asia.

As they had outlived their service life, the bearings of two bridges that crosses the Zuari and Mandovi Rivers were required to be replaced.

mageba scope

mageba proposed a complete solution that included the design, manufacturing, supply and replacement of suitably dimensioned and detailed RESTON®POT bearings, that were precisely matching the old ones in certain respects.

The old bearings were in hard-to-access locations, high above the water in the middle of the river, therefore temporary platforms also had to be constructed beforehand to facilitate the replacement work.

The works could be only carried out during severely limited track closures, which lasted 3 hours, thus the setting time of the grout used underneath the new bearings had to be reduced to a large extant.

Normally, non-shrinkable, free flowing cementitious grouts take 28 days to cure before loads can be transferred. In this case however, due to the short time frame, a rapid curing grout was used to overcome this problem.

Highlights & facts

mageba Products:

Type:	RESTON®POT bearings
Installation:	2021

Structure:

Region:	Goa State
Country:	India
Type:	Tied arch bridges
Owner:	Konkan Railway Corporation
Contractor:	Afcons Infrastructure Ltd.

The bridges are located in Goa State, in western India

Injection of rapid-cure grout beneath a new pot bearing

One of the pot type bearings after installation

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