

M51, KM1442 bridge, Novosibirsk (Russia)



Project description

A three-span bridge that carries the Russian Federal road M51 across the railway lines near the Novosibirsk International Airport was renovated in 2013. The bridge is located in the Siberian capital - Novosibirsk, Russia's third most populous city.

The work included replacement of the single gap expansion joints in the bridge's concrete deck. Unusually for single gap joints, the gaps in the bridge follow the shape formed by the pre-cast concrete beams arranged in a skew, creating a zigzag longitudinal profile. The demanding geometry of each joint is complicated by numerous additional vertical bends, making this one of the most complex single gap joints ever made.

mageba scope

TENSA®GRIP Type RS single gap expansion joint replacement project, due to their excellent adaptability and their outstanding strength and durability. Each of the delivered joints has a length of 20 m, and includes 12 horizontal bends and 4 vertical bends. They are detailed with anchor studs instead of anchor loops for connection by concreting to the bridge deck, the size of recess required could be minimised without compromising on the strength of the connection.

To ensure watertightness, all steel elements in the bends were individually machined.

Highlights & facts

mageba products:

Product: TENSA®GRIP Type RS-B expansion joints

Notable: Complex longitudinal profile of an RC-beam bridge features many individually machined bends

Installation: 2013

Structure:

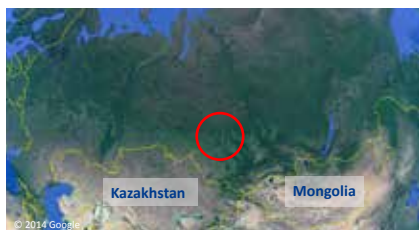
Location: Novosibirsk

Country: Russia

Type: Asphalt road bridge

Renovated: 2013

The bridge is located in Novosibirsk, Russia's third most populous city



A special TENSA®GRIP joint during installation, showing both horizontal and vertical bends



One of the joints following completion of installation, showing its very peculiar shape

