

Saint Petersburg (Russian Federation) A118 RING ROAD

HIGH-QUALITY MORTARS FOR CONCRETE REPAIR FOR A KEY INFRASTRUCTURE IN THE RUSSIAN ROAD SYSTEM

The A118 Ring Road around the city of St. Petersburg is a public highway serving the city and the Leningrad region. It is about 117 km long and connects all the main highways going from the center of St. Petersburg in the direction of Moscow, Murmansk, Helsinki, Kiev and Tallinn. Its construction began in 1998 and was built in several stages, with each newly introduced section diverting traffic from the city, which was suffering from traffic congestion. One of the most problematic sections of the Ring Road was the construction of a cable-stayed bridge over the River Neva, the Bolshoy Obukhovskiy Bridge. 16 design companies, including Danish and Finnish ones, took part in the design work. The construction was divided into two stages

and completed in October 2007, with the construction of the right half of the bridge with 4 traffic lanes and overpasses on both banks. This new cable-stayed bridge across the River Neva is now one of the symbols of St. Petersburg.

Quality products for maintenance

Mapei products were used for routine maintenance work at the A118 Ring Road during an intervention that took place between 2013 and 2020. Concrete repair mortars such as MAPEGROUT THIXOTROPIC and MAPEGROUT 430 were chosen for repairing and restoring the supports and beams of the main structures. Mixed with water, MAPEGROUT THIXOTROPIC becomes an easily workable mortar with high thixotro-



The Bolshoy Obukhovskiy Bridge is a cable-stayed bridge over the River Neva. It is part of the A118 Ring Road, a public highway serving the city of St. Petersburg and the Leningrad region. Mapei products for concrete repair and chemical anchoring were used for its maintenance in 2013-2020.

pic properties that can be applied on vertical surfaces without sagging even in great thicknesses and with no need for formwork. When hardened, the product features high mechanical strength and resistance to abrasion.

MONOFINISH, one-component, normal setting cementitious mortar for smoothing concrete and cementitious renders, was applied on the repaired surfaces for final leveling. When mixed with water, the product forms a soft paste that is easy to apply even on vertical surfaces in thicknesses up to 2 to 3 mm in a single coat. Because of its high synthetic resin

content, MONOFINISH bonds extremely well to all concrete surfaces, and forms a compact, strong adhesive layer when hardened.

As for repairing the areas around the road expansion joints, Mapei technicians suggested to use ARB-10F* non-shrinking rapid-hardening concrete mix, which is manufactured and distributed on the Russian market by AO Mapei, the Russian subsidiary of the Group.

Besides, MAPEFIX VE SF, styrene-free vinyl ester adhesive, and MAPEFIX EP 385/585, pure epoxy, resin-based adhesives, were used for chemically anchoring metal bars in holes.

Problems and solutions

The Russian authorities for highways and roads required high quality products for maintaining and repairing several elements of the bridge. Therefore, several solutions from the Mapei range for concrete repair were used: MAPEGROUT THIXOTROPIC and MAPEGROUT 430 high performance mortars, the finishing product MAPEFINISH and the sealants MAPEFIX VE SF and MAPEFIX EP 385/585 for chemical anchors.



TECHNICAL DATA

A118 Ring Road, Saint Petersburg (Russian Federation)
Period of construction: 1997-2007
Period of renovation: 2013-2020
Period of the Mapei intervention: 2013-2020
Client: North-West Federal

Highways Department, Russian Federation Road Authority
Main contractor: LLC EuroTransStroy
Mapei distributor: LLC SIM STROY
Mapei coordinator: Ivan Vikhristenko, AO Mapei (Russia)

MAPEI PRODUCTS

Concrete repair: Mapegrout Thixotropic, Mapegrout 430, Monofinish
Repairing areas around the joints: ARB-10F*
Chemical anchoring: Mapefix VE SF, Mapefix EP 385, Mapefix EP 585

*This product is manufactured and distributed on the Russian market by AO Mapei (Russia)

For further information on products visit mapei.com and mapei.ru

MAPEGROUT THIXOTROPIC

Shrinkage-compensated fibre-reinforced mortar for concrete repair

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