

Integrated Sika Solutions for Tram Track and Historic Bridge Rehabilitation

Krakowska Street and Józef
Piłsudski Bridge, Kraków,
Poland

Rail Fixing | Waterproofing |
Corrosion Protection | Joint Sealing

Sika@Work



BUILDING TRUST



Project description

The reconstruction of the tram route along Krakowska Street and across the historic Józef Piłsudski Bridge formed part of a major modernization of Kraków's urban transport infrastructure. The project included approximately 1.7 km of single tram track, also used by buses, as well as approximately 0.3 km of track across the bridge. Roadways, sidewalks, utilities and associated infrastructure were also reconstructed.

Opened in 1933, partially demolished during World War II and rebuilt in 1948, the Józef Piłsudski Bridge is an important historic crossing over the Vistula River. Its rehabilitation included replacement of the bridge deck and parts of the steel structure, together with new waterproofing and corrosion protection. Sika supplied solutions for both the tram track and bridge rehabilitation, helping improve passenger comfort while preserving the historic structure.

Project requirements

The reconstructed tram route required effective reduction of vibration and secondary noise in the densely developed urban environment. A continuous elastic rail-fixing system combined with vibration-isolation mats was specified along the renovated section. The system also had to provide electrical insulation to minimize stray currents and the associated risk of corrosion.

On the historic bridge, the existing steel structure required comprehensive corrosion protection suitable for highly corrosive environments, while the new bridge deck needed durable waterproofing and resistant surfaces for the sidewalks. The selected systems also had to preserve the characteristic historic appearance of the bridge, including its distinctive blue color.

Construction in Kraków's historic Kazimierz district presented significant logistical challenges. Archaeological discoveries caused delays and frequent changes to the construction schedule, while restricted access in the city center complicated material deliveries.

Sika solutions

For the tram track, Sika supplied a mass-spring system combining continuous elastic rail fixing with vibration isolation. Icosit® KC 340/45 was used to embed the rails in prefabricated reinforced concrete track slabs, while Sylomer® MFSTP polyurethane mats reduced the transmission of vibration and secondary noise. Icosit® KC-330 Primer prepared the substrates, Icosit® KC 330 FK provided flexible bonding of filler blocks, and Sikadur®-53 was used where bonding to wet substrates or fresh concrete was required.

For the bridge refurbishment, approximately 13,000 m² of steel surfaces were protected with the SikaCor® EG System. The multilayer coating system provides long-term corrosion protection for exposure categories C4 and C5 according to EN ISO 12944, while restoring the bridge's characteristic blue finish. Joints and gaps between steel elements were sealed with Sikaflex® PRO-3.

The new bridge deck was primed with Sikafloor®-161 and waterproofed with Sikalastic®-841 ST, a fast-curing, spray-applied polyurea membrane. The bridge sidewalks were protected with SikaCor® Elastomastic TF, providing a durable, highly resistant protective wearing surface.

Sika products

Rail Fixing:

- Icosit® KC 340/45
- Icosit® KC-330 Primer
- Icosit® KC 330 FK
- Sikadur®-53

Waterproofing:

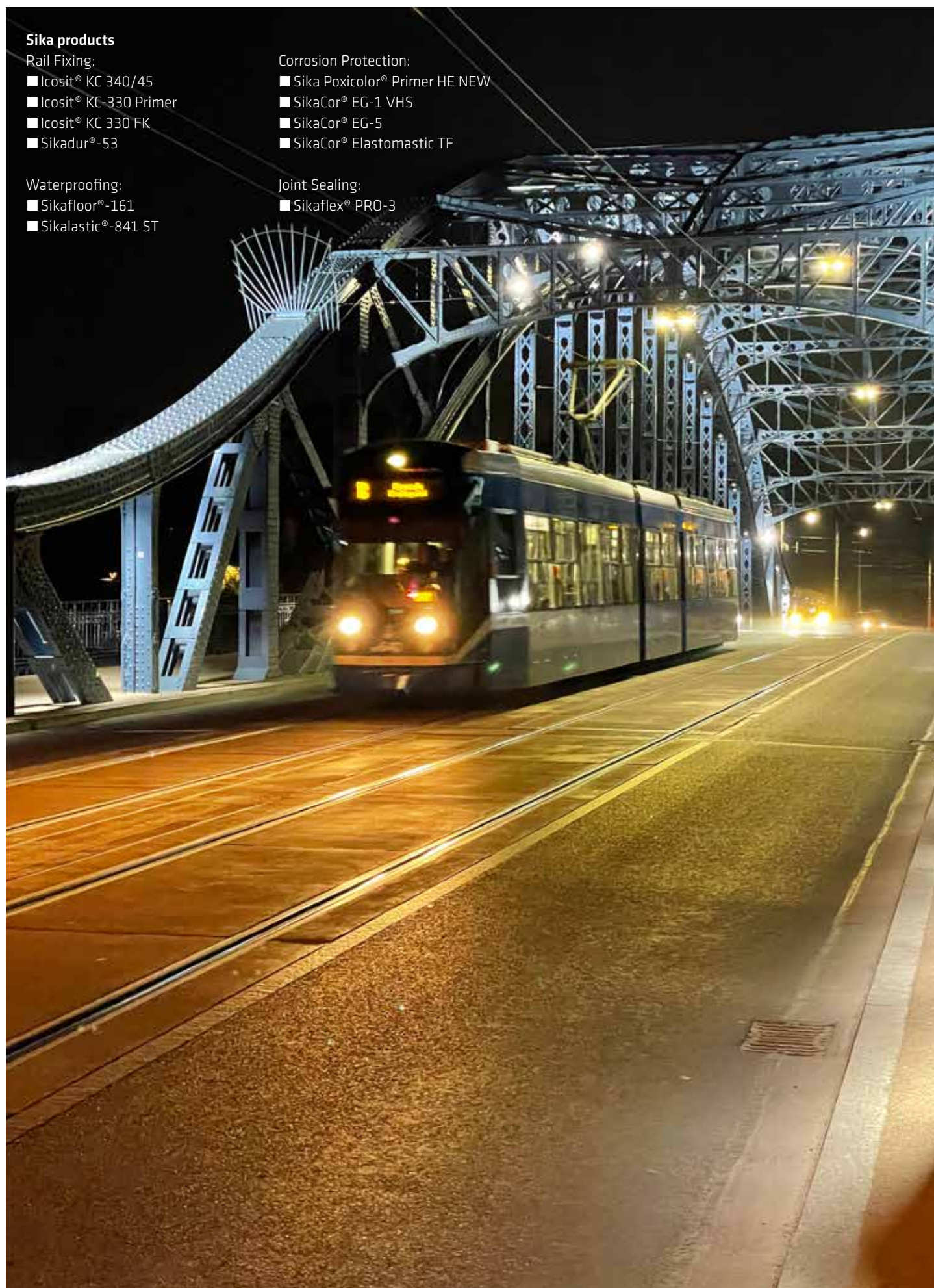
- Sikafloor®-161
- Sikalastic®-841 ST

Corrosion Protection:

- Sika Poxicolor® Primer HE NEW
- SikaCor® EG-1 VHS
- SikaCor® EG-5
- SikaCor® Elastomastic TF

Joint Sealing:

- Sikaflex® PRO-3





Technical support and service

Sika specialists provided technical support throughout all stages of the project, working closely with the contractors to coordinate the different rail-fixing, waterproofing and corrosion-protection systems. Long-standing cooperation between Sika and the contractors, together with compatible and proven materials, supported successful execution despite changing schedules, archaeological discoveries and the challenging logistics of construction in Kraków’s historic city center.

Project participants	
Project owner	Municipality of Kraków
Investor	Road Authority of the City of Kraków
Designer	M-Tor Design, Construction, Supervision – Michał Stochniał
Main contractor	TRAKCJA S.A.
Bridge works contractor	POLWAR S.A.
Sika Organization	Sika Poland Sp. z o.o.

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