



SIKA AT WORK

RECONSTRUCTION OF THE TRAM INFRASTRUCTURE ALONG POWSTAŃCÓW ŚLĄSKICH STREET, ZABRZE

SIKA TECHNOLOGY: railfixing: **Icosit® KC** system,
anti-vibration mats: **Sylomer MFSTP**

BUILDING TRUST



RECONSTRUCTION OF TRAM INFRASTRUCTURE IN ZABRZE

RECONSTRUCTION OF THE TRAM INFRASTRUCTURE IN ZABRZE, ALONG POWSTAŃCÓW ŚLĄSKICH AND RELIGI STREET FROM WOLNOŚCI STREET TO THE INTERSECTION WITH STALMACH STREET with branches is task No. 6.1 as part of the project: "Integrated project for the modernization and development of tram infrastructure in the Silesian-Zagłębie Agglomeration along with the purchase of tram rolling stock - stage I", co-financed by the European Union from the Cohesion Fund under the Operational Program Infrastructure and Environment.

The purpose of the reconstruction is to increase the capacity of the public rail transport network, as well as to improve the safety and comfort of driving, the quality, reliability and flexibility of the tram line.

Source: www.tram-silesia.pl

PROJECT REQUIREMENTS

The reconstruction of the single tram track with a length of approximately 0.7 km included three different technical solutions for the track:

- track at Plac Teatralny and at Prof. Regili were designed in ballast technology on prestressed concrete sleepers with flexible fixing,
- track on Powstańców Śląskich Street, at the intersection of Prof. Religi and Powstańców Śląskich and at crossings over the track along Prof. Religi rails are designed in the ballast-free technology on prefabricated track slabs,
- the track at the intersection of Powstańców Śląskich and Wolności streets was designed in the ballast-free technology, while the newly built pavement had to correspond to the existing surface.

Source: PROGREG development project



COMPREHENSIVE SOLUTIONS FOR TRACK REPAIRS

SIKA SOLUTIONS

Along Powstańców Śląskich Street and in the area of adjacent intersections, **Sylomer MFSTP** vibration insulating mats made of foamed polyurethane were applied. They provide protection against vibrations and secondary noise, as well as a continuous rail fixing system in prefabricated tram slabs. The rails in the channels were fixed with **Icosit K® 340/45**. The materials from the **Icosit® KC** group were also used in the construction of the track on the tram bridge over the Bytomka River along Plac Teatralny Street. The track along Religi Street was made in the classical technology with the use of prestressed concrete sleepers and broken stone.

The difficult geometry of the track was a technical challenge during the project implementation. The intersection shield is located in close proximity to Powstańców Śląskich Street with a high longitudinal slope. An additional problem was carrying out works in the city center, which was associated with difficulties related to the storage of materials needed for the reconstruction of the track. The exclusion of the track along Powstańców Śląskich Street was inconvenient for the residents due to the lack of access to important institutions such as: Zabrze City Hall, Platan Shopping Center.

Icosit® KC 340/45 is a flexible, polyurethane based material with high elastic recovery, characterized by excellent insulation properties, eliminating the creation of stray currents and thus corrosion of steel components in the vicinity. **Icosit® KC 340/45** reduces noise and absorbs vibrations. It is designed for both manual and machine application. One-component, ready-to-use polyurethane primer **Icosit® KC-330 Primer** is used to prepare substrates and improve adhesion. **Sikadur®-53** epoxy resin is used for wet substrates or when it is necessary to use on fresh concrete. The entire system is supplemented with **Icosit® KC 330 FK** material - a solvent-free, flexible, two-component polyurethane-based adhesive designed for track works to glue concrete, rubber and other cell blocks to the chamber of the rail.





PROJECT PARTICIPANTS

Owner: Zabrze City Hall

Investor: Tramwaje Śląskie S.A.

Project: PROGREG Sp. z o.o.

General contractor: KZN RAIL Sp. z o.o.

Sika Poland: Tomasz Wesołowski

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