



SIKA AT WORK

PARKING GARAGE SIHLCITY, ZURICH

CONCRETE REPAIR: Sika Monotop®, Sikagrout®

STRUCTURAL STRENGTHENING: Sika® CarboDur®

FLOORING: Sikafloor®, Sikafloor® MultiDur EB, Sikalastic®

JOINT SEALING: Sikadur-Combiflex® SG

BUILDING TRUST



CATHODIC CORROSION PROTECTION AND COATING FOR ANOTHER 35 YEARS OF USE

PROJECT DESCRIPTION

The eight-story Sihlcity multi-story car park in Zurich was renovated with Sika concrete repair, flooring and joint sealing systems.

PROJECT REQUIREMENTS

The car park was built from 2004 to 2005 and commissioned in 2007. Due to high vehicle traffic and thin concrete layer, it shows reinforcement corrosion in various places as well as cracks in the concrete. The drainage channels sunk into the ground and the associated connections are leaking. In 2016, Gruner Wepf AG was commissioned by Wincasa AG to make an investigation and provide a concept of solutions based on it.

Extension of service life

On the basis of these investigation data, the client decided to carry out repairs using cathodic corrosion protection (KKS). With these measures and an overcoated dense coating, it was guaranteed that the repaired areas would have an extended

service life of over 35 years. In addition to the classic concrete repair and protection measures, the client decided to create an inviting and friendly atmosphere by means of a color and surface concept on the floors and walls.

Renovation during shopping operations

Since the refurbishment has to be carried out during ongoing shopping operations, the decision was made to carry out the work in stages. Between 2018 and 2021, two floors were renovated each year between March and October, which also included the renewal of the spindle ramp. To ensure access and egress at all times, traffic is controlled by a traffic service via a ramp in the opposite direction.

SIKA SOLUTIONS

A system that holds what it promises.

On the parking decks, the entire surface of the concrete is removed down to the top reinforcing layer. In areas with advanced corrosion, the reinforcement is partially exposed.



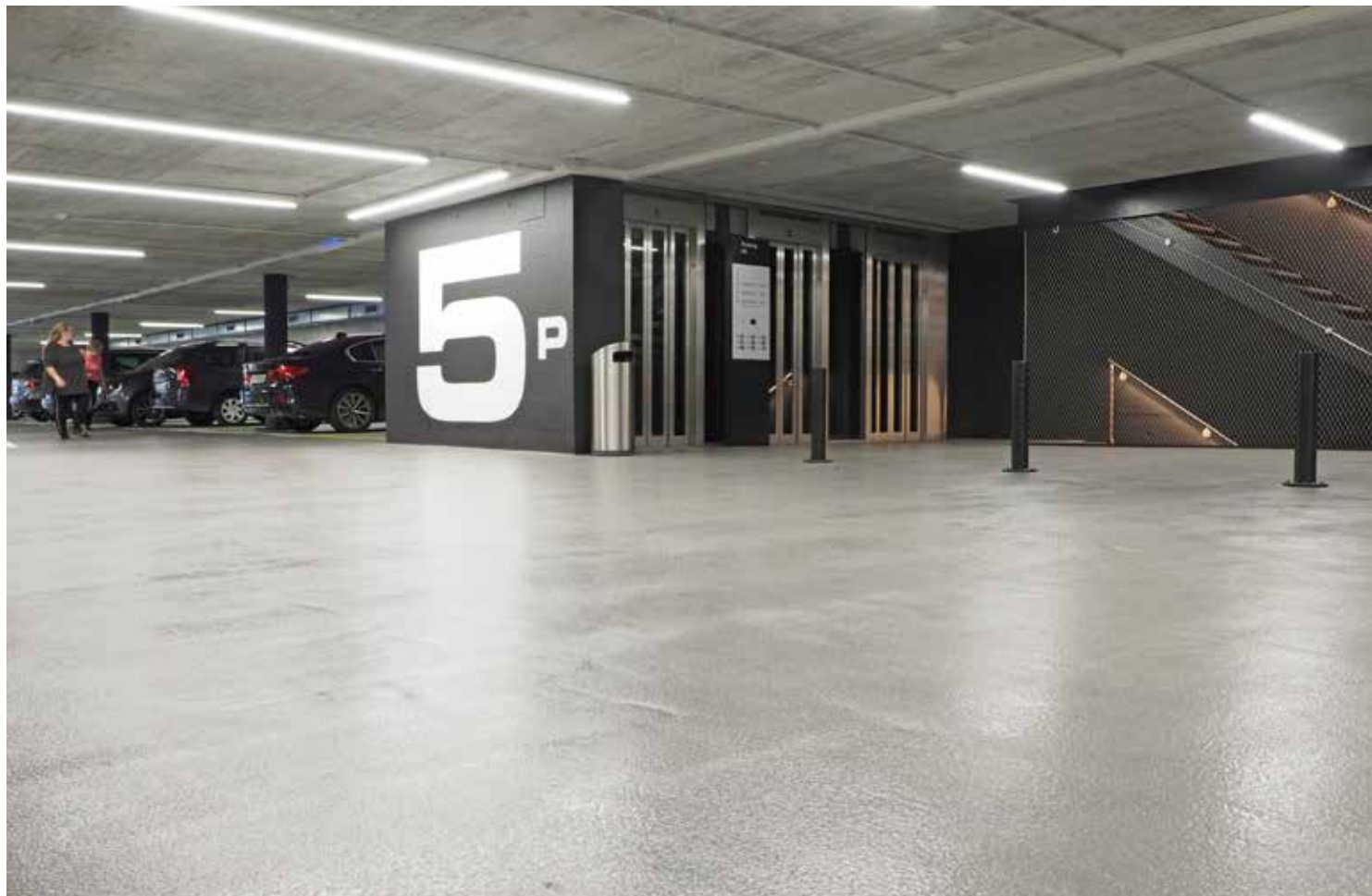
Subsequently, the strip anodes for cathodic corrosion protection are laid over the entire surface. The specially designed Sika MonoTop®-452 N mortar, tested according to EN 1504-3 Class R4, suitable for KKS, with the Sika MonoTop®-910 N bonding bridge, is used for reprofiling and a large-area horizontal equalization. The flexible, durable Sikafloor® MultiDur EB-39 system was selected for the parking deck coating. Sikafloor®-161 was applied as a primer. This was followed by the base layer Sikafloor®-390 N, which was applied in the parking areas, broadcasted with quartz sand and finally sealed with colored Sikafloor®-390 N.

The spindle ramps are the heart of the 24-hour parking garage. Due to the traffic load of more than 1,000 vehicles per day, they had to be completely renovated within two days. This challenge can only be met with the best planning, the right applicators and a fast system. The two ramp towers were coated with the highly reactive, dynamic and crack-bridging Sikafloor® OneShot PB-55 system. The base

layer consists of the highly reactive polyurea liquid waterproofing Sikalastic®-8800, which was machine-sprayed in two layers. The hard bedding material Alox could be blown directly into the second layer. The fast curing and one-colored Sikalastic®-8450 was used for the top coating. Various detail and special solutions were realized with the Sikadur-Combiflex® SG joint sealing system, Sika® CarboDur® S1012 in combination with Sikadur®-30 and the SikaGrout® mortar.



PARKING GARAGE SIHL CITY



SIKA PRODUCTS USED

- Sika MonoTop®-452 N
- Sika MonoTop®-910 N
- Sikafloor® MultiMajor EB-39
- Sikafloor®-161
- Sikafloor®-390 N
- Sikafloor® OneShot PB-55
- Sikalastic®-8800
- Sikalastic®-8450
- Sikadur-Combiflex® SG system
- Sika® CarboDur® S1012
- Sikadur®-30
- SikaGrout®

PROJECT PARTICIPANTS

Client: Wincasa AG, Zurich

Engineer: Gruner AG, Basel

Examinations: Tecnotest AG, Rüschlikon

Processor:

Cathodic corrosion protection – Suicorr AG, Dietikon

Main contractor: Tecton Spezialbau AG, Emmenbrücke

Coating ramp: SikaBau AG, Schlieren

Our most current General Sales Conditions shall apply. Please consult the most current local Product Data Sheet prior to any use.



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