Basement Waterproofing with „White Box“
Case Study at FIFA Headquarter
Zurich, Switzerland
The New FIFA Headquarter in Zurich, Switzerland
Fédération Internationale de Football

Project Description
Unique Design: The new Headquarters of FIFA is an extraordinary building. The facade is designed with the appearance of a stretched goal net. The global emblem of FIFA’s worldwide significance and international position is a steel football as a globe filled with earth from every single one of FIFA’s 207 member countries.

The building includes eight floors with six stories actually below ground level and these are used for the extensive conference facilities, the archives, the main auditorium, the technical support rooms and the underground car park.

Impressive Dimensions: The total building volume is 180’000 m³ with the two floors above ground and the six floors below, providing office space for 300 employees, plus 240 parking places and the main auditorium for up to 200 people. The site also includes an international standard football pitch and training ground.

Project Requirements

Watertight below ground construction without visible movement joints was required to be. The construction had to be able to be executed uninterrupted throughout the year – including during the cold winters in Switzerland. Tight programmes and cost pressures were combined with high quality and performance standards for all of the materials and their application in this prestige project. The Sika Permaton ‘White Box’ watertight construction system was selected for all of the underground works as it is the most proven and durable system for this purpose.

Sika Switzerland were asked to provide detailed advice and on-site support throughout the whole of the design and construction process for this internationally important and prestige project.

Sika Solutions

The Sika Permaton watertight design concept was provided together with all of the necessary concrete admixtures and waterproofing products from Sika. The Sika Concrete Service team also supported the project team on site and supervised the waterproofing details.

The Sika Permaton System Solutions can be summarized as follows:

- Basement floors and walls with Sika® ViscoCrete® admixtures to produce watertight concrete
- Movement and construction joint sealing with Sika® Forte Waterbars
- Waterproofing of the construction details such as pipe entries with the Sikkadur®-Combiflex® System and Sikalastic® liquid membranes

Sika products which were used in different parts of the construction:

- Watertight Concrete: The Sika® Permaton® ‘White Box’ system with Sika® Viscocrete® admixtures
- Joint Sealing: Sika®-Forte Plus waterbars and Sikadur®-Combiflex®
- Sprayed Concrete: Sigunit®-S4 AF accelerator
- Liquid Applied Waterproofing Membrane for Construction Details: Sikalastic®-822
- The Underground Car Park Deck Waterproofing: Sikafloor®-350/-355
- Internal Resin Floors: Sikafloor®-261 Self Smoothening epoxy
- General Concrete Admixtures: Sikament® MFD-1/-2 and Sikafrostproofer®
- Steel Coating Systems: Icosit® EG System with Icosit® EG 5 High Build
- Glazed Façade Joint Sealing: Sikasil®-SG 500
- Wood Floor Bonding System: Sika® Primer MB and SikaBond®-T64 FC elastic adhesive.

Note:
The design and supervision of the waterproofing details, including their installation and quality control on site, was also all undertaken by Permaton to provide the Permaton 10-year Guarantee of Watertightness.
Project Participants
Architects: Tilla Theus und Partner AG, Zürich
General Contractor: HRS (Hauser, Rutishauser, Suter AG), Zürich
Consulting Engineers (ARGE): Ribi & Blum AG and Romanshorn Andrin Urech & Partner, Zürich
Construction organization (ARGE): Zschokke Bau AG, Zürich, Marti AG, Zürich
Watertight System: Sika – Permaton
Project Manager: Peter Weber, Sika Switzerland

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