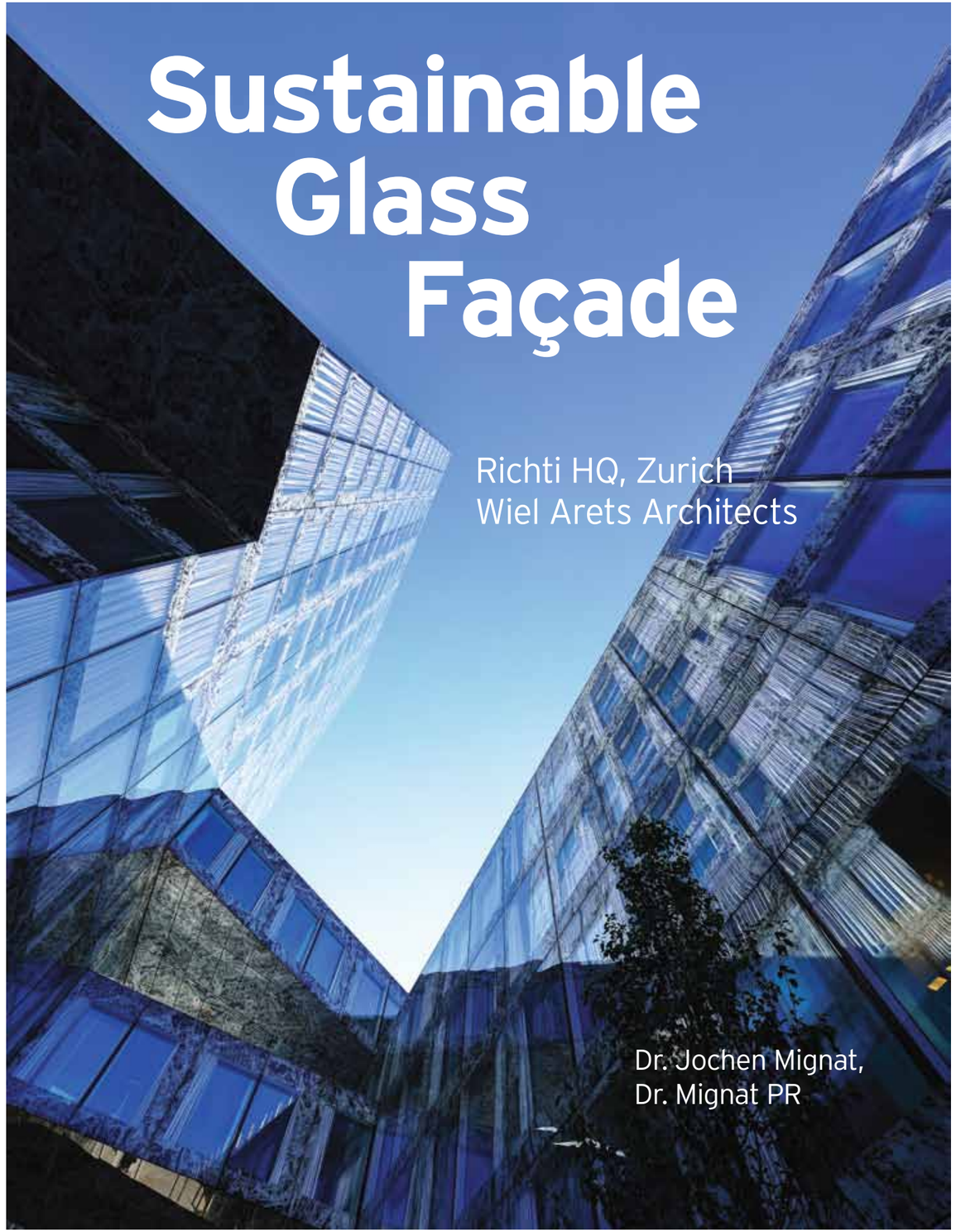
Sustainable Glass Façade

Richti HQ, Zurich
Wiel Arets Architects



Dr. Jochen Mignat,
Dr. Mignat PR

Closed Cavity Façade at Richti District near Zurich with Ucw value of 0.59 W/m²K

Allianz Swiss Insurance moved into their new headquarters near Zurich, which was clad with a glass façade in marble design. The relocation of approximately 1,800 employees into the 68 metre high-rise office building and an adjoining office building on the Richti area in Wallisellen was completed in November.

The energy-efficient closed cavity façade (CCF) of these buildings which was manufactured by Josef Gartner GmbH, reaches an Ucw value of 0.59 W/m²K. This was the first time that a CCF has been provided with two-tone dot screen printing for a stony look and motor-operated sunshade blinds. The g-value achieved in the closed shunshade blind is 7 %. IGS had already published a first report about the façade and building site in issue 4-2012.

New district for maximum energy efficiency

The new high-rise building constructed in accordance with the designs of Wiel Arets Architects, Maastricht, Amsterdam and Zurich is an eye-catching feature of the new district with mixed usage which is being developed on a industrial area of 72,000 m². The Zurich-based Allreal Group has been creating living space for around 1,200 residents and office space for over 3,000 employees. The Richti construction project is thereby currently one of the largest private construction projects in the whole of Switzerland. Surrounded by a railway and motorway, the new complex has perfect transport connections to the city of Zurich as well as the nearby airport. All the buildings meet the demanding Swiss Minergie standard. The first residents already moved in during May 2013.

Sustainable type of façade with triple insulating glazing on the interior and laminated glazing with screen printing on the exterior

The CCF from Gartner has triple insulating glazing on the interior with an Ipasol neutral 70/39 sun-heat protection layer as well as an additional iplus E-heat protection layer. The Ug value of this glazing is 0.49 W/m²K. The CCF has impact-resistant LSG glazing made of clear glass on the exterior. This low iron-oxide glass on the exterior creates excellent transparency. A motor-operated aluminium-coated sunshade blind is located in the closed façade cavity. The

façade cavity is protected from the effects of the weather. Dried air is continuously fed into the cavity in order to prevent condensation forming on the exterior panel with changes of temperature.

Initially, the exterior LSG panels of a CCF are printed with double, two-tone dot screen printing. The glass panels are printed on the edges with black and white screen printing dots. The different motifs result in the overall appearance of the exterior façade looking like a marble stone façade.

Also the four bridges ("walkways") connecting the high-rise-building with the office building have a closed cavity façade. The undersides of the buildings and bridges are clad with screen printed glass panels. The complete exterior glazing of the façade elements and also the undersides are constructed as a structural glazing façade without any visible mechanical brackets.

Motor-operated sunshade blind
In contrast to sunshade slats the motor-operated blind works like a curtain and it provides a certain degree of transparency to the outside world just like a curtain. However, for example, although you can still observe people on the street, the blind provides complete protection against the sun. The blind is aluminium-coated on the exterior and has a silver effect. This means that the sun is better reflected and less energy enters the building.

This aluminium-coated blind provides excellent heat insulation values in summer whilst maintaining a high level of transparency. The sunshade blind can be moved horizontally and individually controlled by the motor. The motor for the shades is located outside of the closed CCF façade cavity inside the room in the suspended ceiling. This ensures easy access, for example, for maintenance or in the event of a repair.

Detailed information can be found at www.richti.ch