

GSW Headquarters - Berlin, Germany
Essay by Martin Rodriguez

Design for the GSW headquarters began in 1990 and became the first skyscraper to be built in Berlin after the fall of the Berlin Wall in 1989. The city of Berlin hosted a competition for the design of the building. Sauerbruch Hutton won with a critique against the “critical reconstruction” that was previously established. The construction of the low-energy building used a dynamic facade, natural ventilation, and natural lighting. GSW is a real estate company which was once Berlin’s largest social housing association. It was city-owned until sold in 2004 and is now privatized.

The structure was built onto an existing office space that dates back to 1961. This space includes 17 stories and a round-volume that stands 20 meters tall known as the “pillbox” that all have been renovated to match the architectural style of the new addition. The new addition of the building, built in 1999, is a 50,000m² tall, 22-story building attached to the west side. The addition also includes a basement. Red and pink hues on the new office building allow the new structure to contrast to the old offices. The building was constructed to paint the city with its vibrant colors and to set an example with its improved sustainability. The 22-story building has double-skinned thermal system windows that open. This allows shading, natural light, and increased thermal resistance which reduces the amount of energy consumption.

The structure is built using steel and reinforced concrete and a double skin of glass. Sauerbruch Hutton, the architects, wanted a clear distinction between the new building and the old offices. To do so both structures are structurally independent and consist of their own floors and facades.

The ventilation system of GSW headquarters begins with a membrane ceiling which is composed of polyester and PVC. The double west facade allows for the creation of a negative pressure and causes a pull of cool air through the building. If both the east and west facing facades are open the breeze is able to flow freely through the structure. The roof system consists of a solar chimney and a winged roof. The winged roof provides an aerodynamic structure that increases the wind speeds of east to west winds. The stove is cooled and this air flow is used to cool the building comparable to the mechanical HVAC systems that are also included in this building. The colored panels and natural lighting included along the facades also help achieve required solar heat gain.

Sauerbruch Hutton, for the design of GSW headquarters, won both UK’s Stirling Prize for architecture and the European Union Prize for Contemporary Architecture. It was the forefront of

sustainability in Berlin and was a model for modern renovation in the city. The GSW headquarters allowed for the rehabilitation of the urban space beneath it.



References

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