Project report
Office building SMA Solar Technology AG
Niestetal, Germany

Architect: HHS Planer + Architekten AG
Fabricator: Schindler Fenster + Fassaden GmbH
Product: ca. 4,420 m² Reynobond® Architecture aluminium composite panels
Surface: Colour: white
Fixing system: Riveted system
Office building SMA Solar Technology AG
Corporate philosophy mirrored in the architecture of buildings

SMA Solar Technology AG has already been distinguished several times as a pathfinder for energy efficient production and buildings. Characteristics such as dynamics, flexibility and technical curiosity, which are typical of the market-leading manufacturer of solar inverters, are reflected in the architecture of the new office building in Niestetal, Germany.

The imposing five-storey building is situated near a crossing on one of the main thoroughfares in Kassel. It is the management headquarters of SMA, but is also used for events and as a visitors’ portal for the adjacent inverter production facility. The façade of “SMA Solarwerk 1”, like the new office building, is clad with white aluminium composite panels. Taking the cue from the SMA Solar Technology AG corporate identity, the Reynobond® facing panels indicate the company philosophy: durability, flexibility, energy efficiency and functional aesthetics. The windows consist of a glass-and-aluminium structure with external shades.

The footprint of the building resembles a distorted parallelogram with rounded corners that is aligned with the two adjacent streets. This gives the building the desired dynamic. The central point is a glass-roofed atrium of the height of the building. The atrium roof itself is designed as a linear barrel vault.

In addition to the photovoltaic installation on the roof, various other ecological aspects are taken into consideration. The various measures contribute to consistently reducing the external thermal load of the building. As such, the building uses the waste heat from the cogenerating plant. Also, the office areas are air-conditioned by combined heating and cooling ceiling panels. In addition to forced ventilation systems, there is also the option of natural window ventilation. A well is used to cool the rooms using groundwater. Additional constructional measures, such as insulation of the building shell and the use of high-quality glazing, bring the building close to the passive house standard.

All the decisive sustainability criteria were defined for implementation in the initial planning phase. Hence, the building project met all the requirements necessary to receive the gold pre-certification of the German Sustainable Building Council (DGNB).