RHEINZINK®

THE MOVING ROOF

LARGE TILES MADE OF RHEINZINK-PREPATINA GRAPHITE-GREY

PROJECTREPORT

CAREFUL ROOF LAND DESIGN WITH LARGE TILES

The idea was for the roof covering to „be able“ to cover both the façade and the roof, and to create a consistent architectural envelope for the highly structured upper part of the new building. The decision to use large tiles made of titanium zinc meant that a variety of references to the surrounding buildings could be taken up and interpreted in an unmistakably modern design language.

At first glance, the roof, with its very different heights, partial surfaces and inclinations, seems somewhat surprising, perhaps even unsettling. A second look, however, clearly demonstrates the care with which the roofscape at the Dresden intersection of Maxim-Gorki-Strasse and Trachenberger Strasse has been integrated into the surrounding buildings.

The houses on Maxim-Gorki-Strasse date mainly from the Wilhelminian period, with mansard roofs with slate roofing and a strong emphasis on the street corners.

Trachenberger Strasse, howver, has older and lower buildings. This difference in height between the two streets is reflected in the new corner building: its striking eaves cornice connects to the eaves in Trachenberger Strasse, while the roof bend is on the level of the historic eaves line of Maxim-Gorki-Strasse. Moreover, directly at the intersection, a modern twist on the corner accentuation was created with an additional storey. „We had been looking for a material that would be suitable for both the roof and the façade,“ says architect Bastian Engelmann from the Dresden-based office Architekten 11 balzer engelmann GbR, explaining their considerations for the roof covering. „The titanium zinc we opted for accentuates the geometry of the upper building finish as a homogeneous enveloping surface with clearly defined edges.“ All of the visible parts of the building were covered with large rectangular tiles made of RHEINZINK prePATINA graphite-grey, whose small-scale appearance creates a modern interpretation of the neighbouring mansard roofs with slate covering. Only the very shallowly pitched and concealed areas on the dormers and the top floor at the corner were covered with standing seam roofing.

„In the end, the very moving roofscape creates exactly the sculptural impression we had in mind when we were planning.“

„Ultimately, the very moving roofscape creates exactly the sculptural impression that we were aiming for during the planning process,“ the architect sums up. „Of course, we also owe this to the excellent work of the roof plumber. The company Blitzer understood what we had in mind, enriched it with their own ideas and planning details, and skilfully implemented them in the end.“

PRECISE WORK PREPARATION

The new building on the corner of Maxim-Gorki-/Trachenberger Straße, including the attic, is a classic regular solid construction with vertical walls. The sloping surfaces of the roof and thus its moving geometry were entirely

constructed with a wooden substructure. In fact, it rests like a large overhang over the solid core and forms the shape of the mansard roof with its distinctive bend as well as the parapet and the dormers. The unventilated construction, insulated to the full rafter height of 160 to 200 mm thickness, is finished with a full wooden formwork. From this formwork onwards, the Blitzer oofing company based in Ottendorf-Okrilla took over the rest of the construction.

In the first step, they implemented underlays that were chosen according to the respective installation: For instance, the RHEINZINK AIR-Z structural underlay was used on the flat sloping sub-surfaces, which not only has a moisture-balancing effect, but also compensates for tolerances and nail marks in the substructure and reduces rain-induced sound transmission. RHEINZINK VAPOwall intends to work as a diffusion-open weather protection on the steeply sloping or vertical façade sections, specially adapted to the cladding. Following these preparatory measures, the large tiles could be fitted, which the roof plumber had prefabricated from 0.8 mm thick material in 50 x 31 cm format by the specialist Boehme Systems GmbH from Dresden.

However, especially with a roof as strongly structured as the one in Dresden, the real work actually begins long before the covering is laid, as Blitzer's managing director Jan Keller points out: „The success of the final result is determined right at the beginning, above all by the precise division of the cladding and the careful planning of all connections and details. For instance, in this case it was a question of the exact height division above and below the roof bend, which was to be located exactly on a horizontally continuous tile joint."

HISTORICAL REFERENCES IN MODERN FORM

In contrast to panels or shingles, tiles have front edges on their upper side and back edges on their underside so that they can be joined using the hook-in seam technique. They are fastened to the substructure indirectly using staples or adhesive bar. The installation technique creates concise edges that emphasise the two-dimensional effect of the large tiles, which were laid here in a regular pattern with 1/2 staggered joints.

A particular challenge on the strongly articulated roof was the routing of the rainwater, which is led from the various sub-surfaces and the roof terrace to the box-shaped gutter on the main cornice. It juts out about 12 cm and distinctively accentuates the transition from the plastered wall surfaces to the mansard roof with its tiled roofing. The windows in the mansard were framed with titanium zinc in the same material as the surfaces, thus repeating the motive of the dormers in the surrounding buildings. Seen from the inside and thus from the perspective of the occupants of the flats, they are not dormers built out of the roof, but classic vertical windows in the outer wall that allow maximum daylight into the rooms. Not only in form, but also in terms of materiality and colour, the new roof plays with connotations of the Wilhelminian period houses in the neighbourhood.

The dark colour of the RHEINZINK prePatina graphite-grey tiles is directly related to the slate roofing of the historical mansards. However, the pre-weathered surface is not a coating, but is created in a special staining process. As a result, the material already shows the typical zinc patina, but retains important properties. For example, the surface can be soldered and is subject to natural patina formation on the roof. The new building with its modern interpretation of the accentuated building corner and the mansard roof will thus develop over time more and more into an organic component of the Wilhelminian development in the north of Dresden.

CONSTRUCTION PANEL

Project
New construction of a residential building in Dresden, execution 2020

Architecture
Architekten 11 balzer engelmann GbR, Dresden

Roof covering
Blitzer-Dachdeckerei-Dachklempnerei Limited, Ottendorf-Okrilla

Material
RHEINZINK-prePATINA graphite-grey,
large tile system and double standing seam technique
Production of the large tiles: Böhme Systems GmbH, Dresden

Photos
RHEINZINK

RHEINZINK TILES DIRECTLY CONNECT TO HISTORIC SLATE ROOFING OF THE MANSARDS