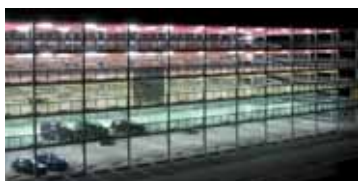


Schreiber

INNOVATIVE BUILDING



NEW COLORFULNESS IN THE CAR PARK

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An efficient parking space maintenance becomes more and more important in times with constantly increasing traffic volume.

If parking space on ground level is exhausted and surface area for parking vehicles is no longer available, multi-storey car parks have to be build.

Next to a quick and cost-efficient construction method, user-friendliness, a short building phase and architectural integration into the surroundings are the most important points. Regarding these points, steel composite construction with additive profile sheet metal ceilings has immense advantages.

The construction consists mainly of a split-level system which includes large usable areas on mezzanine parking levels. The two lowest parking levels are usually on ground level and carried out with interlocking paving stones. For the upper parking levels additive profile sheet metal ceilings are used. Short ramps on the front sides connect the mezzanines. The girders are drawn freely above the parking levels. The high carrying capacity of the only 1.25 mm thick additive profile sheet metal ceilings make a girder distance of 5 m possible which makes this a very economic solution.

The low component height and the large spans make the whole construction look light and transparent. The car park is clearly laid out because voluminous bearers in the entry area are not required.

The colour design of the car park presented here is very eye-catching: There is a different colour for each parking level. The ceilings in the two mezzanines facing each other are carried out in one of five light colours. The matched NCS colours in yellow, orange, green and blue have been chosen by the architect because of their „rainbow effect“. Orientation in the multi-storey car park becomes much easier.

Apart from the ceiling profiles, the steel construction and the parking space markings of the concrete ceilings are carried out in one colour.

The colourfulness of the building is accentuated during dawn and night by the indirect illumination of the par-



king levels. The effective colour choice makes the multi-storey car park look light and friendly. The bearer-free entry areas, the straightforwardness of the architecture and a simple traffic routing offer an optimum usability and safety.

Next to these aspects the short construction time is essential as many car parks are build on existing parking spaces. Another advantage is that the erection of the steel construction is almost independent of weather conditions.



The bearers are prefabricated and can be mounted directly from the lorry which means that a large space for the construction side is not necessary. The additive profile sheets are mounted manually (after delivery of the packets) without the help of a crane.

The profile sheets serve not only as working platform, but also as reinforcement of the construction and tilt stabilization for the bearers during concreting. As the whole construction does not need any support at any time, all works can be carried out independently.

By using additive profile sheet metal ceilings with a 5 m span, considerable savings regarding steel tonnages and number of used components can be made compared to using other support-free constructions with 2.5 m spans. Apart from that, the parking levels are absolutely joint-free. The maintenance of the car park is reduced to a minimum.

The low construction height of the ceilings has a positive effect on the clear storey height and the complete building height. The low weight of the construction enables large bearer spans and the usage of slim bearers. That saves material costs, down to the foundation.

The material for the additive ceilings is made of strip-galvanized and organically strip-coated steel sheets. This factory-applied duplex coating of the profile sheets provides best corrosion protection (class III according to DIN 55928-8). The colour of the coating is arbitrary and another coating or painting is not necessary.

Costs can be saved even in the area of concrete coating.



The „Institut für Bauforschung der RWTH Aachen“ (Institute of Building Material Research, Aachen University) has examined the fatigue strength of the additive profile sheet metal ceilings: An exhaustive, area-wide crack-covering coating is not needed.

Depending on the requirements, a crack-covering stripe coating or an area-wide rigid coating can be used.

It is also possible to completely do without a concrete coating. This concept is completely adjusted to the increased requirements of DIN 1045-1 and thus means a future-proof investment.

Schreiber Stahlbau GmbH has more than 10 years of experience with using additive profile sheet metal ceilings for car parks. Our customers appreciate our know-how and the competent consultation by specialists.

If you have any questions, please do not hesitate to call us!

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