PRESS INFORMATION

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4 press photos
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New extension to the Debeka headquarters: Rapid construction progress with a high level of occupational safety

Ratingen/Koblenz, May 2021 IG Bau recently published frightening figures: last year, 97 construction workers suffered fatal accidents on German building sites, with a total of more than 104,000 accidents. Only those working safely can work precisely and efficiently. That is why formwork developer and supplier Hünnebeck relies on its products' „built-in" occupational safety. The current reference is the shell construction for the expansion of the Debeka Group headquarters in Koblenz.

Demanding shell construction tasks

It is a large construction site with high technical demands on the shell builders: the Debeka Group is expanding its headquarters in Koblenz with a 17-storey office and administration building. The Z-shaped new building comprises 15 above-ground and 2 underground floors (mainly underground car park). The new building and the existing building will be connected via a closed bridge. This will create a lot of space for green areas on campus. According to the architects (RKW Architektur), a 15 m high and 29 m wide rectangular „eye" in the new building, which is particularly striking, will create „a magnificent visual axis".

Formwork concept for safe, efficient working

The client, Aachener Grundvermögen Kapitalverwaltungsgesellschaft, has awarded the contract for the extended shell construction services to the Lupp group from Nidda near Frankfurt. Hünnebeck's specialists are on hand to assist the site team as formwork planners and suppliers. „We prioritise occupational safety in all our projects," says the Lupp project manager, adding that this plays a key role in the selection of the companies involved in the project.

The formwork solutions proposed by Hünnebeck were impressive. The detailed formwork concept, developed in coordination with the construction site, is especially adapted to the large and high rooms as well as the standard floor slabs.

Safely lowering heavy loads

One of the most technically demanding shell construction tasks is the aforementioned „eye". For this, three 30 m long and approx. 3.40 m high steel composite girders had to be lifted into place by special crane. In its final state, these girders carry the nine projectiles present above the eye. The bridge slab at a height of 7.60 m, which forms a transition to the neighbouring existing building, also constitutes a demanding formwork task with its thickness of 70 cm. Hünnebeck has developed special support concepts in order to be able to safely transfer the heavy loads occurring with both projecting components.

ST 60 shoring towers impress with safe handling

The powerful ST 60 support system plays the key role here. The shoring towers are impressive (not only) on the Koblenz construction site due to their consistently safe and ergonomic assembly and disassembly from inside the tower. This is ensured by the advancing side protection and a patented slab repositioning method in which the slab (load class 4) is transferred safely and effortlessly to the next level using a system-specific lifting device. Another safety aspect: The ST 60 construction kit only consists of six basic parts with a maximum weight of 15 kg, which enables particularly simple, ergonomic handling.
At the same time, the system offers a high degree of adaptability to the conditions on site, ensured by:
• The flexible floor plan dimensions.
• The variable installation height at 1-metre intervals.
• A spindle height of up to 62 cm at head and foot spindle.

For example, ST 60 towers can be found anywhere on the Koblenz construction site where a high load transfer over greater heights is required. Up to 240 kN load capacity per shoring tower (60 kN per leg) and the combinability of the system with aluminium, steel and timber girders ensure a high load-bearing capacity and safe load transfer. In addition, the towers can be connected very easily to form a really sturdy birdcage scaffold: there are load-bearing nodes on the ST 60 frames in a 50 cm grid, which allow non-positive connections in eight directions. This makes the ST 60 system very versatile.

Topmax and Topec for fast forming times on slab surfaces

The site team uses the manually operated Topec beamless aluminium modular system and the Topmax steel-frame slab table for efficient forming of slab surfaces, which are usually 32 cm thick. The Topmax table is ideally suited for fast and safe forming of large slab surfaces with regular layouts, as table areas of up to 26 m2 including mounted guardrails can be moved with one crane lift.

Topec, on the other hand, is Hünnebeck‘s robust yet lightweight aluminium system for shuttering and striking slab surfaces quickly, safely and without fatigue without crane support. Panel and support – these are the two basic parts of the system, which are assembled and disassembled in three simple steps from the ground for heights of up to 3.50 m: hang up the panel, swing it up, support it – simple and safe.

Wherever the slab geometry allows, the 180 cm x 180 cm Topec large panel is used on the Koblenz construction site. This speeds up formwork even more. In the underground floors, for example, the Topec modular system was used to pour slab surfaces of up to 55 cm thick.

For the construction of the above-ground standard floors of the high-rise building, a slab formwork concept consisting of Topmax tables at the slab edge and Topec in the centre of the component was developed in order to efficiently utilise and combine the advantages of

both systems. „We also utilise the possibility of combining Topmax tables with panels from the Rasto series. In this way, the fitting areas on supports can be minimised, which further increases safety and speed during forming work," says the site team.

Standard and special formwork from a single source

In any situations where special formwork was needed on the Koblenz site, Hünnebeck called in its own special formwork construction team – for example, for the construction of the main staircases in SB 2 fair-faced concrete quality and concrete surfaces in the foyer with SB 3 fair-faced concrete quality. The SB 3 walls need to have a board structure with wood grain in their final state. For this purpose, Hünnebeck designed and manufactured specially covered girder formwork and delivered it to the construction site in ready-to-use modules. This saves an enormous amount of time on site, as the shell builders only have to erect the special formwork.

Quality ensures safety

Now that nine storeys have been completed smoothly and quickly, the shell construction team is convinced in many respects: „Hünnebeck has developed formwork solutions for us that are tailored to the site conditions. At the same time, the formwork products themselves are very well thought-out and of high quality. We notice this in our daily work. No one has to think long and hard about how something works, every move is perfect. This makes it possible to work quickly, safely and economically." The best prerequisites for on-time construction of the shell. The new Debeka campus is scheduled to be ready for occupancy in June of next year. Then around 1,350 Debeka employees will fill the new building with life.

About Hünnebeck

The BrandSafway Group, headquartered in Kennesaw, GA, USA, is a leading global provider of a broad range of products and services for access solutions, specialized industrial services and formwork and support solutions for industrial, commercial and infrastructure applications. BrandSafway facilitates conversion and modernization measures as well as expansion and new construction programs using defined processes and with safety as its uppermost priority. As part of its global presence, BrandSafway serves more than 32,000 customers worldwide through a closely knit network of more than 38,000 employees at 350 locations in 30 countries.

The BrandSafway Group comprises a number of strong traditional brands that are among the market leaders in their respective segments and regions. Hünnebeck, headquartered in Europe, is part of this international group of companies – a name that dates back to 1929 and stands for formwork, scaffolding and safety equipment characterized by high quality, flexibility and cost-effectiveness. Hünnebeck also offers a broad spectrum of project-related services, ranging from engineering, site logistics, cleaning & repair services, user training and formwork services to complete project development. The BrandSafway formwork division also includes SGB (Middle East/Asia) and Aluma Systems (North and Latin America).

Further information about Hünnebeck is available at www.huennebeck.com

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Motif DSC913320201110:
The Debeka Group is expanding its headquarters in Koblenz with a 17-storey office and administration building.

(Photo: Hünnebeck)

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Motif DSC907920201110:
The ST 60 shoring tower impresses on the large construction site in Koblenz with its safe, simple handling and versatility of use.

(Photo: Hünnebeck)

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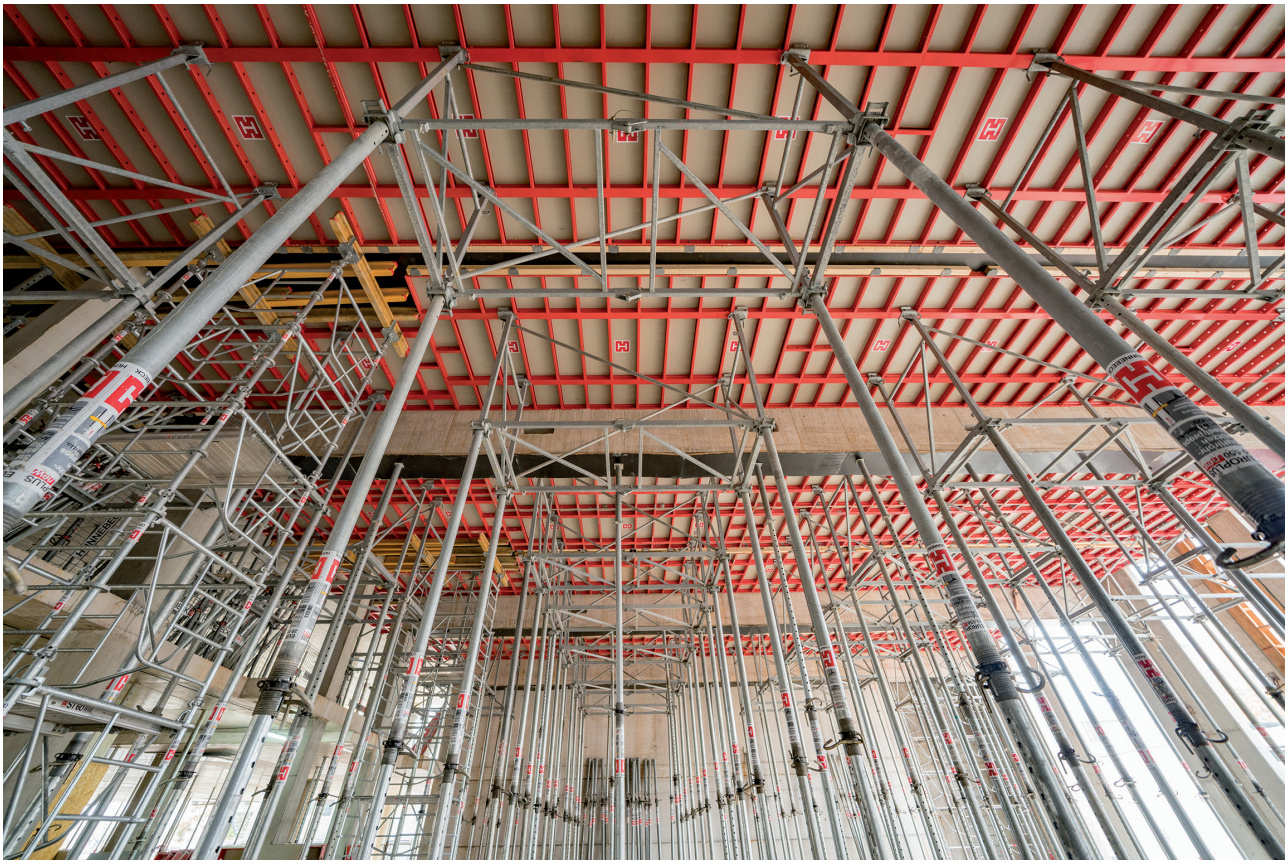

Motif DSC908220201110:
The Topmax table is ideally suited for fast and safe forming of large slab surfaces with regular layouts.

(Photo: Hünnebeck)

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Motiv DSC909720201110:
Safety thanks to Protecto side protection: whether on the Topmax slab table or on the finished slab edge, the Protecto side protection system can be found at all points where there is a risk of falling on the Koblenz construction site.

(Photo: Hünnebeck)