

Working faster due to safer conditions

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JKG Tower at Jalan Raja Laut, Kuala Lumpur, Malaysia

For the construction of the JKG Tower high-rise building complex – consisting of a 32-storey office tower along with a 13-storey parking facility – safety has been given the highest priority. As a result, the PERI formwork and shoring solution has also included, among other things, a corresponding training programme for the construction team. The high level of safety thus achieved has ensured increased productivity: every month, 3 storeys have been realized on the respective towers.

The tough schedule and tight budget allowance proved to be major challenges for the building contractor, IJM. Therefore, not least due to the positive experiences with PERI systems and support services, the company decided to collaborate with PERI on the JKG Tower.

The comprehensive solution developed by PERI, complemented by planning services and a PERI supervisor on site, is currently making a valuable contribution to ensure full compliance with the client's specifications. For the completion of the building's shell, the construction crew needed only 26 months.

Tailored solutions for walls, columns and slabs

For constructing the core walls, the VARIO GT 24 girder wall formwork on CB 240 climbing brackets provides a cost-effective solution. The climbing system guaranteed safe working conditions at all heights. In addition, the well thought-out design combines easy handling with trouble-free adaptation to suit different building geometries. The wall formwork and climbing formwork system are thereby connected to form large-area units that can be quickly moved to the next level with only one crane lift. This has provided excellent support for the short construction period of only one month for realizing 3 floors respectively.

In the floors, a wide range of rectangular columns with large cross-sections had to be constructed. The VARIO GT 24 column formwork has been easily and quickly adapted to match the different dimensions of up to 1.50 m x 2.00 m. Furthermore, the system with VARIO standard components has safely transferred the high fresh concrete pressure.

For the economical construction of the storey slabs with thicknesses up to 1.00 m, PERI PD 8 slab tables are being used. With only a minimum of system components, the building crew have found it easy to adapt to the varying 4.30 m to 6.00 m floor heights. In many areas, large-sized beams have been simultaneously concreted along with the slabs. Load-bearing GT 24 formwork girders form the underside of the formwork whilst RCS steel walers transfer the loads onto the PD 8 shoring.

Safe working conditions at all heights

The PERI RCS P climbing protection panel RCS P serves as a gap-free enclosure for the storeys in the shell construction. As a result, the construction team can work at great heights without any risk of falling as well as with more productivity. With the system, the protective wall is always guided upwards by means of a rail connected to the building which ensures safe and fast climbing procedures in all weathers. Mobile self-climbing devices raise the protective wall in 50 cm increments on the following floors which reduces crane requirements on the jobsite.

For the JKG Tower, a perforated, air-permeable sheet steel is being used as a housing. This enclosure variant is an advantage particularly in warmer climates because it prevents any heat accumulation inside the shell thus significantly improving the working conditions. In addition, the perforated sheet is being used as highly visible, prominent advertising space.

A PERI RCS landing platform serves as a temporary storage area and for moving loads into the following storeys. The landing platform is assembled using standard components and can be flexibly positioned at any point on the building.

Safety has also been taken into consideration for all access possibilities: 4-legged stair towers on the basis of the flexible PERI UP Rosett Flex modular scaffolding ensure workers safely reach all levels in the structure. The system with its 75 cm

Source: PERI