CASE STUDY

STATE-OF-THE-ART TECHNOLOGY FOR CRANE HOUSE IN COLOGNE

In the Crane House South (Kranhaus Sued), the developers offer tenants a modern communications infrastructure based on a Datwyler system solution. The safety cabling also comes from the portfolio of the international manufacturer.

At Rheinauhafen in Cologne, Germany, a modern business and residential centre is taking form. The Crane Houses, visible from afar with their glass façades and "arms" cantilevering over the river, are already considered a new landmark of the Rhine metropolis. Owner and operator of Crane House South, which was completed in 2009, is Suedliche Kranhaus GmbH, a joint venture between Deutsche Immobilien Development GmbH and moderne stadt GmbH. The new building has a gross floor area of nearly 20,000 square metres on 16 floors. Nine standard floors, with gallery and ground floor below, form the "tower," crowned by the "arm" formed by five upper floors – all with flexible partitioning in accordance with tenants' wishes and high-class interiors.

Besides the spectacular architecture and the sustainable energy concept, the new building is remarkable for its intelligent, high-quality technical equipment and its advanced security concept. This includes a high-performance Class F_A communications network, and safety cabling fully tested for extended functional integrity in case of fire. Both of these cabling systems were supplied by Datwyler.

State-of-the-art communications system

For the network technology, the team in charge deliberately chose a solution with a reserve capacity of up to 1000 megahertz, representing a secure long-term investment. Horizontal cabling was executed in a Datwyler Prime Solution (PS), screened and suitable for multimedia. The installation comprises 100 kilometres of Uninet 7150 4P copper data cable, 7200 PS GG45 modules, about 420 patch panels and management panels, and 800 floor boxes in the offices. 1700 metres of OM3 12-fibre optical cable is built into the back-bone, connected to a total of 56 fibre optic boxes.

"The modern infrastructure was designed to meet the main tenant´s requirements and developed in close coordination between our engineers and the top IT managers of the tenant," reports Friedhelm Koerner, who leads technical project management at moderne stadt along with his colleague Hans-Joachim Franken. The main tenant is a large international society of lawyers, which moved into the entire "arm" in spring and building control systems, including regulation and surveillance, are integrated into the new cabling system. "To be able to respond to the needs and wishes of other tenants regarding interior systems, we installed the same technology in the standard floors."

In the patch cabinets the cabling is prearranged for the patch arrays and already tested. For both communications and power supply, tenants have plug-and-play floor boxes with cable reserves in the offices. The exact locations of these floor boxes can be adjusted at short notice to meet any of the tenants´ needs.

Investment for the future

The contractor Elektro Meissner Industriemontagen GmbH installed all the electrical equipment in the building for the general contractor Zueblin AG. Dirk Erben, IT specialist hired by Meissner, gained his first experience working with Prime Solution GG45 from Datwyler on this job. He is particularly satisfied with the quality of the connection technology, which can also handle conventional RJ45 plugs: "With the GG45 module, you have no interferences and therefore no signal corruption at high frequencies. Therefore this connector type is very interesting for future applications."

Products from Datwyler:
Prime Solution GG45:
105 km data cable Uninet 7150 4P Multimedia
7262 PS GG45 modules
417 patch cables (screened)
800 sub-floor boxes
1700 m 12-fibre FO cable (OM3)
as well as FO adapters and pigtails (OM3)
18 km Pyrofil Keram safety cable (E30, E90)
1400 SAS and Hermann clamps
100 WUM and other fixing/fire protection accessoires

Friedhelm Koerner emphasises, above all, the high security of the investment in the new cabling system: "We offer our tenants a communications infrastructure that will still be up to date regarding performance and flexibility in five years."

Fire safety

For supplying power to the safety systems in Crane House South, Elektro Meissner Industriemontagen exclusively used safety cable, clamps and fire protection plugs from the respective portfolio of Datwyler, including 18 kilometres of ceramic-insulated low-voltage and high-voltage cable with E30 to E90 extended functional integrity as well as some 1400 SAS and Hermann clamps. This cabling system ensures reliable power supply to the fire-alarm, electro-acoustic, sprinkler, emergency lighting, and smoke-evacuation systems and to elevators for the building occupants and the fire brigade. The cabling system is tested to ensure that these various safety systems will reliably support evacuation of occupants and intervention by the fire brigade for up to 90 minutes in the event of fire.

(March 2010)

