

Modern building technology

A comprehensive environmental and sustainability concept has been implemented at the new Siemens Headquarters. For example, smart solutions from Siemens Building Technologies control all the building-services engineering. An intelligent connection to the power grid – known as a smart grid – regulates load fluctuations. The smart energy controller optimizes the efficient use of power, including charging stations for electric cars and bicycles. To distribute electricity throughout the building, 250 kilometers of cable were laid. Security technology featuring systems for access control, fire safety, alarms and video monitoring, along with a parking guidance system, help ensure the safety of visitors and employees.

The Siemens DESIGO building management platform controls the building technology around the clock. More than 300 kilometers of cable bring information from 30,000 data points together on this platform, where the data is evaluated continuously. The system controls the entire heating, ventilation and air conditioning (HVAC) technology as well as the roughly 2,500 glass louvers on the façade. In addition, DESIGO controls the lighting and shading as well as the intrusion-protection, access-control and fire-protection systems. Should any of the more than 5,000 smoke and fire detectors go off, DESIGO automatically alerts the fire department and controls operation of the more than 50 smoke extraction systems.

The people who work at the new Siemens Headquarters benefit from this technology. Using the Siemens RoomOptiControl module, they can adjust the lighting and room climate to meet individual needs. The ventilation system in the meeting rooms uses CO₂ sensors to measure air quality, and it optimizes the intake of fresh air. For this ventilation, the central air-control system drives the flow of about 200,000 cubic meters of fresh air per hour. In addition, all windows can be opened manually.

Furthermore, RoomOptiControl helps make employees aware of factors that are

important for ensuring the responsible use of resources. In connection with the Green Building Monitor information system from Siemens, RoomOptiControl displays a symbol to inform room occupants when energy is being consumed unnecessarily. At the press of a button, the system automatically switches to an environmentally friendly mode. To make this possible, the Green Building Monitor evaluates all the building's consumption and measurement values in real time and supplements this data with information such as details on current weather conditions. One-third of the building's overall power consumption is generated using the more than 800 solar panels on the roof.

At the new Siemens Headquarters, indirect light-emitting diode (LED) lamps from Osram illuminate the office areas and workspaces as well as the conference areas and the zones that link different parts of the building. Overall, 7,400 LED lamps have been installed in the building. Compared to conventional lighting, these LEDs cut power consumption in half. In combination with daylight sensors and presence detectors, smart control technology helps reduce power consumption by another 25 percent.

The building is also equipped with digital infrastructure consisting of a private Wi-Fi network and a public one, an in-house cell phone network, LED monitors, and information panels. In the auditorium, the two million LEDs used for the 13-square-meters, full high-definition LED video wall ensure a brilliant image, regardless of the lighting conditions. The sound system includes 100 high-end speakers.

This press release and additional press materials are available here:

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