A factory arises

09/09/2019 While Zuffenhausen produces 250 two-door sports cars of the 718 and 911 series every day – and thus more than ever before – a new factory is being built in parallel at the plant.

The spatially close urban location makes a distribution of the individual buildings over the entire area necessary. And it calls for creativity, meticulousness, planning competence and ongoing dialogue with the neighbors. In total, ten project managers from Porsche's own construction department as well as 30 project controllers, 150 planners and site managers led the major project. A total of 130 companies and suppliers as well as 2,050 construction workers were involved in the construction phase. The construction site clearance organized in 21 subprojects alone made more than 6,000 relocations necessary. Construction logistics included the erection of 530 construction containers, the issuing of 10,000 construction site passes, the erection of three kilometers of construction fence and the laying of 35 kilometers of construction site cables.

In total, 300,000 m^3 of earth were excavated, 35,000 tons of steel processed and 130,000 m^3 of concrete used. With the amount of steel installed, the Eiffel Tower could be reproduced five times. In total, the newly created area of all buildings and floors measures 170,000 m^2.

The body shop

The bodywork, which is 30 meters high, produces the stiff yet lightweight material mix body with its all-aluminum outer shell. The building consists of 20,000 tons of steel and 35,000 cubic meters of concrete. Inside, robots are moving like ballet dancers, skillfully choreographed by humans. Also in the body show new types of human-robot cooperation are demonstrating pioneering paths for the labor-coexistence of man and machine. In total, the green space on the building constructed for the production of the Taycan measures 42,000 m2, the equivalent of six soccer fields.

New paint shop

Built on a 26,000 m² plot, this is the first paint shop to follow the new 2015 Industrial Construction Directive. Environmental protection and energy efficiency were the main focus when planning the building and the plant. This includes, for example, the efficient use of energy and other resources in the heating of the body dryer with direct heating in the individual process steps and the cleaning of the exhaust air from the dryers together with the paint booth exhaust air. Upstairs are the process areas such as the dipping baths for cathodic dip painting (CDP) and the paint booths. The manual workstations are all located on the ground floor. This keeps the paths for employees short. It also simplifies the communication and the cooperation between the colleagues.

E-engines and component manufacturing

The first series production of electric drives at Porsche is being created in the vicinity of the V8 combustion units production, which are also used, among others, in the hybrid models of the Panamera and Cayenne. In the building arise both the e-machines including assembly of the gears and axles, which together represent the drive units for the all-electric four-door sports car with fourwheel drive. Also housed in the building is efficient logistics with state-of-the-art warehouse technology, which also uses driverless transport systems (AGVs) for automatic material provision. The modern building was awarded the highest grade "Platinum" by the German Sustainable Building Council (DGNB).

The conveyor bridge

The conveyor system measures 900 meters, with which the painted bodies, electric drives and components find their way across several streets into the assembly hall. The roof of the conveyor bridge – like the roofs of all new buildings – is green.

The assembly and quality assurance

To create space in the midst of a well-established, city-based location, the 62,000 m² production,

logistics, testing and staff space is spread over four floors. From the foundation to the roof, the probably largest building complex in Stuttgart-Zuffenhausen measures 38 meters. They are partly hidden through the hillside towards the railway embankment. Therefore, a construction excavation depth of considerable 25 meters resulted.

Consumption data

Taycan Turbo (Predecessor model)

Taycan Turbo S (Predecessor model)

*Further information on the official fuel consumption and the official specific CO_2 emissions of new passenger cars can be found in the "Leitfaden über den Kraftstoffverbrauch, die CO_2-Emissionen und den Stromverbrauch neuer Personenkraftwagen" (Fuel Consumption, CO_2Emissions and Electricity Consumption Guide for New Passenger Cars), which is available free of charge at all sales outlets and from DAT (Deutsche Automobil Treuhand GmbH, Helmuth-Hirth-Str. 1, 73760 Ostfildern-Scharnhausen, www.dat.de).

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