The factory of the future – smart, lean and green

09/09/2019 The premiere of Porsche's first all-electric sports car is also accompanied by major changes to the traditional location in Stuttgart.

Of the six billion euros that Porsche is investing in electric mobility by 2022, more than 700 million euros go into the construction of new production facilities for the Taycan. Parallel to the tightly balanced production of sports cars – with 250 Series 911 and 718 automobiles, more vehicles leave the plant than ever before – a new factory is being built in the existing factory in Zuffenhausen.

The spatial distribution of the various lines of work across the entire company premises is necessary because of the urban location. For example, the new body shop, which was commissioned with the premiere of the 911-Generation 992 and placed at the heart of the site, will be joined by the buildings erected to the west for the electric drive and component production as well as a new paint shop. In the northeast is the Building 70 a multistory assembly. The painted bodies and drive components reach the assembly building by means of a 900-meter connecting conveyor bridge – unaffected by weather and without impairing public transport. The loading logistics for the finished Taycan are located east of the

Building 70.

The large-scale project becomes reality within record time. After the trade fair premiere of the Mission E Study in September 2015, almost four years pass from the Supervisory Board's decision on the construction of the new electric sports car in December 2015 to the official factory opening on 9 September 2019. 21 individual projects with over 6,000 relocations are needed alone to prepare for the new construction. For the assembly building on a slope, a 25-meter-deep construction pit is excavated. In the process, 240,000 m^3 of soil are moved. The material of the demolished old halls will be processed on site and reused for the basic construction of the new buildings.

Porsche pays the highest attention to sustainability in all its aspects. Production on the site is CO_2-neutral, the energy-efficient buildings are well below the statutory energy requirements, all roofs of the new buildings are landscaped and partly equipped with photovoltaic systems. The electrical energy used at Porsche comes from renewable sources. Biogas-powered combined heat and power plants supply the site with heat and additional electricity. Increasingly electrified logistics vehicles and rail transport powered by green electricity reduce CO_2 emissions in logistics. Added to this there are a host of other measures, with which Porsche is pursuing the goal of the "Zero-Impact-Factory", a production without environmental influences.

Sustainability is one of the three pillars of the Porsche Production 4.0: smart, lean and green are the buzz words for the modern production methods of the sports car manufacturer. In addition to the ecological aspects (green) and the responsible and efficient use of resources (lean), Porsche Production 4.0 stands out for its transparency and networking (smart). People continue to be at the center of production. Modern technologies facilitate their work and support their craft.

This includes new, up to 110 degrees pivoting swivel, thanks to which the unergonomic overhead work belongs to the past. The driverless transport systems, so-called AGVs, of the Flexi-Line replace the classic assembly line. They offer flexibility in production and in the architecture of the new plant.

What started with the brick building called Plant 1 has today grown into a site that covers an area of 614,000 m^2 and on which around 12,000 employees produce four-wheeled enthusiasm. In total, more than 33,000 people work now for Porsche.

The step into electric mobility is a job engine for the company: The Taycan and its CUV off shoot Taycan Cross Turismo will create 1,500 additional jobs. At the same time, the sports car manufacturer is establishing an unprecedented qualification initiative, in which the topic of electric mobility at Porsche is introduced to Porsche employees. All employees are offered a four-day qualification program in addition to extensive e-learning opportunities. For the colleagues which are directly involved in the production of the Taycan a multi-week training is planned.

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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