Press Kit

INAUGURATION OF SAFRAN NACELLES’ PLANT IN HAMBURG

October 11, 2018
Safran Nacelles’ plant in Hamburg, located near the Airbus plant and the Hamburg airport, covers some 20,000 square meters (216,000 sq ft).

It is dedicated to the integration of nacelles on the CFM International engines powering the Airbus A320neo, prior to delivery to the Airbus final assembly line at Hamburg-Finkenwerder.

20,000 square meters of land & 8,000 square meters floorspace

Investment of almost 10 millions €

Nearly 70 employees now, rising to about 100 in 2020

4 assembly lines with 4 EBU (Engine Build Up) assembly stations

33 nacelles/month delivered in 2020

2014

Cornerstone laid

2016

Delivery of first LEAP-1A propulsion system

2018

Plant inauguration and delivery of the 200th propulsion system to Airbus
Safran Nacelles’ Hamburg plant is at the heart of the German aerospace cluster in this region.

The new plant reflects Safran’s strategy of staying close to its customer Airbus to support the strong ramp-up in production rates for the A320neo, powered by LEAP-1A engines from CFM International. Up and running since September 2016, this plant is Safran Nacelles’ second facility dedicated to nacelle integration for the Airbus A320neo, after Toulouse in France. A third integration facility was also opened in early 2018 in Mobile, Alabama in the United States to round out the supply chain for propulsion systems. The Mobile plant integrates nacelles for the A320neos assembled by Airbus in the United States.

The Hamburg plant spans some 8,000 square meters of floorspace dedicated to the assembly of all nacelle components – air inlet, fan cowl, thrust reverser and exhaust system – and the painting and assembly of the final set of engine accessories (EBU: Engine Build Up). It also offers reception spaces for airline representatives who take delivery of their integrated propulsion systems (engine and nacelle), and perform a final inspection, before these systems are shipped to the Airbus final assembly line in Hamburg.

The plant currently has about 70 employees, including machinists, painters, inspectors, support staff and employees who provide direct support at the customer’s final assembly line. By 2020, the plant should count about 100 employees.

Both the building itself and its tools and equipment draw on Safran Nacelles’ 20 years of experience in applying Lean precepts, enabling the company to create a facility organized for highly efficient workflows. The plant features a modular design, which means it can be completely reorganized in just a few minutes, giving it the flexibility needed to adapt to fluctuations in production rates. Designed along with the architecture firm Goldbeck, the plant does not have any support pillars in the middle of production zones. All machinery is mounted on wheels or air cushions for easy displacement. In addition, energy sources have been placed higher up to make production lines more adaptable. This type of organization has become the benchmark across Safran.

SAFRAN NACELLES HAMBURG HAS JUST DELIVERED ITS 200TH PROPULSION SYSTEM TO AIRBUS

The plant’s production rate will rise considerably in the coming months to support the ramp-up in A320neo production. A total of 216 propulsion systems are to be delivered in 2018, increasing to nearly 400 by 2020.

1 - CFM International, a 50/50 joint company between Safran Aircraft Engines and GE.
2 - Lean Manufacturing is an organizational method that supports faster, more efficient and less expensive manufacturing.
Safran Nacelles is a world leader in nacelles for aircraft. With nearly 21,000 modules now in service, Safran Nacelles offers a range of nacelles adapted to all types of aircraft: business, regional and mainline single-aisle and widebody commercial jets (over 100 seats).

Safran Nacelles is the world’s only nacelle producer active in all market segments, from business and regional aircraft to the largest widebody commercial jets.

Safran Nacelles develops and supplies, alone or in partnership with GE, nacelles for the LEAP-powered Airbus A320neo and COMAC C919, engines powering the Airbus A330neo, and for business jet engines such as the GE Passport™, and the Rolls-Royce BR710 or PEARL15.

Safran Nacelles has developed proven expertise in composite and metallic materials alike, as well as in the acoustic linings needed to ensure that nacelles are both light and quiet.

We have built up our expertise in the manufacture and assembly of thrust reversers in our plants at Le Havre in France, Burnley in the United Kingdom, Casablanca

THE NACELLE, A COMPLEX SYSTEM

The nacelle is in fact a structure that links the engine to the airplane. It comprises an air inlet, engine cowl, thrust reverser and exhaust system. It’s a complex system, and plays a critical role in the aircraft’s performance. While performing multiple functions in a harsh environment (extreme temperatures, size constraints), it has to be as light as possible. The nacelle channels the engine’s airflow, while also protecting it. It also helps brake the aircraft during landings, through its built-in thrust reverser, and helps attenuate noise. At the same time, the nacelle has to provide easy access for engine maintenance.
in Morocco and Xi’an in China. Over the last few years, working with other Safran companies, Safran Nacelles has also developed an electric thrust reverser actuation system, already in service on Airbus A380 nacelles and chosen for the COMAC C919. This type of system significantly improves operational efficiency.

Safran Nacelles’ new integration facilities in Hamburg and Mobile, Alabama drew on all the expertise built up by the two legacy facilities: in Toulouse (for nacelles on the Airbus A380, A330 and A320neo, and on the Dassault Aviation Falcon 7X bizjet) and in Komsomolsk-on-Amur in Russia (for nacelles equipping the Sukhoi Superjet 100 regional jet).

We naturally provide 24/7 product support to all operators, especially through our new NacelleLife™ service package. NacelleLife™ supports operators every step of the way, from entry into service, during through-life support and all the way to withdrawal from service or sale of the aircraft.

3 - In China, thrust reverser doors are assembled by SAVI Nacelles, a 50/50 joint company between Safran Nacelles and AVIC Aircraft, an AVIC company.
THE SMART TROLLEY

Using the new Smart Trolley, a propulsion system can now be integrated in less than 11 minutes, compared with several hours previously.

This mobile transport cradle, supported by an air cushion or four steerable wheels, was specially designed along with workshop staff. It is used all the way from integration in the factory to the installation of the propulsion system under an A320neo wing. The Smart Trolley makes life easier for operators. They can now pivot the engine 45° on either side, tilt it forward or backward, and raise it to a height of 2.40 meters (about 8 feet). It can handle loads up to 10 metric tons.

Safran Nacelles is totally responsible for the design of the nacelles on the LEAP-1A engines powering the Airbus A320neo, and for mating the nacelle with the engine (integration). The A320neo nacelle drew on the company’s experience making nacelles for the Airbus A320ceo, A330, A340 and A380.

The A320neo’s nacelle is more aerodynamic, as well as lighter thanks to the use of composite materials, quieter thanks to better acoustic treatment. All of these features contribute to higher performance by the propulsion system and the aircraft in general.

To keep pace with the sustained delivery rate for the A320neo, Safran Nacelles has implemented a new industrial organization, comprising automated assembly lines and innovative inspection methods.

For instance, the company has developed an automated non-destructive testing solution, using infrared thermography, along with augmented reality for complex composite parts. This has cut in half the time needed for inspections.
Safran operates in Germany in the aerospace and defense sectors, as a leading partner to German industrial firms. Safran has nearly 2,500 employees in the country, at 12 production facilities and two R&D centers, helping the Group develop its technological leadership and innovation capabilities.

AEROSPACE

A major partner in the Hamburg region aerospace cluster, Safran mainly develops aircraft equipment for Airbus, its leading customer in Germany. Safran’s engineers are involved in all of the aircraft manufacturer’s development programs in the country, calling on innovative technologies such as 3D printing.

Safran Helicopter Engines Germany has provided support services in Germany since 1991 (spares, support by the hour, flight-line technical assistance, training, etc.), including maintenance for 1,700 helicopter engines deployed by over 250 operators in 27 countries (Scandinavia, central and eastern Europe, central Asia and Russia), including 300 engines powering German military helicopters. Safran Helicopter Engines is the exclusive supplier of engines for the German federal police and also supplies engines for seven regional police forces (about 200 engines in all).

Safran Engineering Services provides services for electrical harness production lines, especially for the Airbus A350.

In the aircraft cabin sector, the Zodiac Inflight Innovations plant in Wessling (near Munich) works on connectivity solutions, in the aircraft and with the ground. Zodiac Aerospace has two facilities specialized in cabin equipment, in Herborn and Burg (Hessen), which design and produce galleys for airlines and aircraft manufacturers from around the world.
SAFRAN IN GERMANY

DEFENSE

Safran is a long-standing trusted partner to the German aerospace and defense industries. Primarily based in the Stuttgart region, Safran Electronics & Defense Germany designs, develops and produces inertial sensors and equipment for flight control and navigation systems, as well as for industry. Its core expertise is fiber-optic gyros (FOG), producing over 4,000 units a year in Germany to rank among the world’s leading manufacturers.

For its new-generation Patroller tactical drone, Safran Electronics & Defense calls on a partnership with the airframe manufacturer STEMME. The French army has already ordered 14 of these drones, with the first...
delivery planned for early 2019. Two drones have already been delivered to Safran Electronics & Defense, which continues to move forward on this program.

In Bergish Gladbach, Zodiac Data Systems Germany develops and produces data acquisition and recording systems, fixed and mobile, for space and defense applications.

Safran also carries out engineering projects, and markets MRO (maintenance, repair and overhaul) services for the defense industry.

**SAFRAN IS ALSO A PARTNER IN FOUR JOINT VENTURES, ALL BASED IN MUNICH**

- Europrop International GmbH, a joint venture between Safran Aircraft Engines, ITP, MTU and Rolls-Royce that makes the TP400 turboprop engine for the Airbus A400M military transport.

- MTR GmbH, a joint venture between Safran Helicopter Engines, MTU and Rolls-Royce that makes the MTR 390 turboshaft engine powering the Tiger military helicopter.

- AES Aerospace Embedded Solutions GmbH, a joint venture between Safran Electronics & Defense and MTU that is developing electronic equipment for civil and military applications.

- ArianeGroup, a 50/50 joint venture between Airbus and Safran that manufactures and integrates solid-propellant upper stages in Bremen and combustion chambers in Ottobrunn (Bavaria), while operating design offices and test stands in Lampoldshausen (Baden-Wurttemberg).
Safran is an international high-technology group, operating in the aircraft propulsion and equipment, space and defense markets.

Safran has a global presence, with more than 58,000 employees worldwide, and logged sales of 16.5 billion euros in 2017. Comprising a number of companies, Safran holds, alone or in partnership, world or European leadership positions in its markets. Safran undertakes extensive Research & Development programs to keep pace with its fast-evolving markets, including expenditures of 1.4 billion euros in 2017.

In February 2018, Safran took control of Zodiac Aerospace, significantly expanding its aircraft equipment activities. Together with Zodiac Aerospace, Safran has more than 91,000 employees and would have around €21 billion in adjusted revenue (pro forma 2016).

Safran is listed on Euronext Paris, and its shares are included in the CAC 40 and Euro Stoxx 50 indices.

(1) In partnership with GE through CFM International.
(2) In partnership with Airbus through ArianeGroup.
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