

AEROSPACE

PRECISION AT ITS HIGHEST LEVEL

COMPLEX COMPONENTS FOR THE
FUTURE IN AVIATION

Your Partner: Pankl Aerospace

Innovative technological concepts will result in massive changes in aviation over the coming years.

Pankl Aerospace is already setting new standards when it comes to developing and manufacturing complex, flight safety engine systems and components for aircrafts and helicopters, from production all the way to approval.



01. PERFECTION AT THE HIGHEST LEVEL

Pankl Aerospace is among the top international suppliers of highly reliable, lightweight engine components and systems for the aerospace industry. Every single product is developed precisely to fulfil individual customer requirements. The result: tailor-made solutions that are optimised to exceed quality, functionality and safety. Practical experience in the aerospace sector that spans several decades, technological expertise and a global market presence with sites in Kapfenberg, Austria and Cerritos, California make Pankl Aerospace a reliable partner who takes tried-and-tested solutions further and optimises them in the process. The entire team aims to exceed customer expectations and requirements, and further strengthening trust by consistently proving our technical skills, competence and cooperation.



As a tier one supplier for the aerospace industry, Pankl Aerospace provides customised services for dynamic engine components: from design and development to assembly, manufacturing, material testing using the in-house laboratory, performance, stress and fatigue analyses, complete safety and reliability assessments, all the way to efficient prototype testing, qualification and certification.

All relevant processes, components and systems are approved by customers and certifying bodies (AS/EN 9100, ISO 14001) as well as by the European Aviation Safety Agency and Austro Control (Part 21G POA and Part 21J DOA). Further to this, the special processes painting and the non-destructive testing methods eddy current testing, magnetic particle testing and fluorescent penetrant testing, performed at Pankl Aerospace Systems Europe within the scope of manufacturing, are accredited by the industry standard Nadcap (AC7108, AC7114).

Key elements include our sophisticated quality management system and state-of-the-art, high-tech processes for developing, manufacturing and assembling complex powertrains and other components for the challenging aerospace market.



HIGHEST SAFETY STANDARDS AND PRECISION

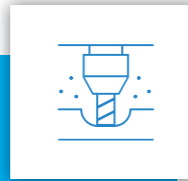


The new High-Tech and state of the art Aerospace plant in Kapfenberg.



02. QUALITY AT THE HIGHEST LEVEL

The Pankl Aerospace product portfolio is as varied as the wishes of our customers. The portfolio includes lightweight engine components and systems, rotor shafts, tubes for air refuelling systems and landing gear components for more than 60 different engine, airplane and helicopter types, which comply with the stringent requirements of Federal Aviation Administration (FAA), and the European Aviation Safety Agency (EASA). In addition, Pankl Aerospace is the flight safety parts supplier of choice for many OEMs, among them several market leaders in the aerospace industry.



03. QUALITY IN DEVELOPMENT AND PRODUCTION IS FLIGHT SAFETY IN OPERATION

With one of the most high-tech machinery suitable for all common operations, Pankl is able to process high-tech alloys of the aerospace industry. In addition, Pankl Aerospace uses approved processes for component assembly, bonding, and coating for high-precision complex rotative components.

Pankl has many years of experience as a development and manufacturing partner for the aerospace industry and is among the largest manufacturers of non-redundant safety-critical components for helicopters, engines and airplanes.

COMPETENCIES

- | | |
|-----------------------|---|
| TECHNOLOGY | <ul style="list-style-type: none">• Upsetting, swaging, cold sinking, trepanning, bottle boring, honing and complex machining such as 5-axis milling & turning• Complex assemblies, high speed super critical balancing and bonding• Non destructive testing (NDT) can be performed in house to the highest standard with qualified and certified personnel |
| PRODUCTS | Engine Shafts & Rotative Components, Helicopter Mainrotor Shaft & Tailrotor Driveshaft, UAV Mainrotor Shaft, Tail Gearbox, Refuelling Tubes, Landing Gear Components |
| CERTIFICATIONS | AS/EN 9100, ISO 14001, NADCAP CP & NDT, Part 21J, Part 21G |



Safety critical

Engine shafts are located within the core of jet engines. These components are one of the most sensitive parts and require utmost precision during manufacturing.



Highest durability

A center tie shaft connects turbine with compressor stage within the jet engine.



Utmost robustness

A helicopter's main rotor shaft is very important part of the rotorcraft. It connects the main gearbox with the rotor head and carries the helicopter in flight.



Maximized safety

Tail rotor transmission systems are distributing power from the main gearbox to the tail rotor of the helicopter which creates the anti-torque to control the helicopter.



Endurance technology

Refueling tubes are used for air-to-air refueling for long-haul operations

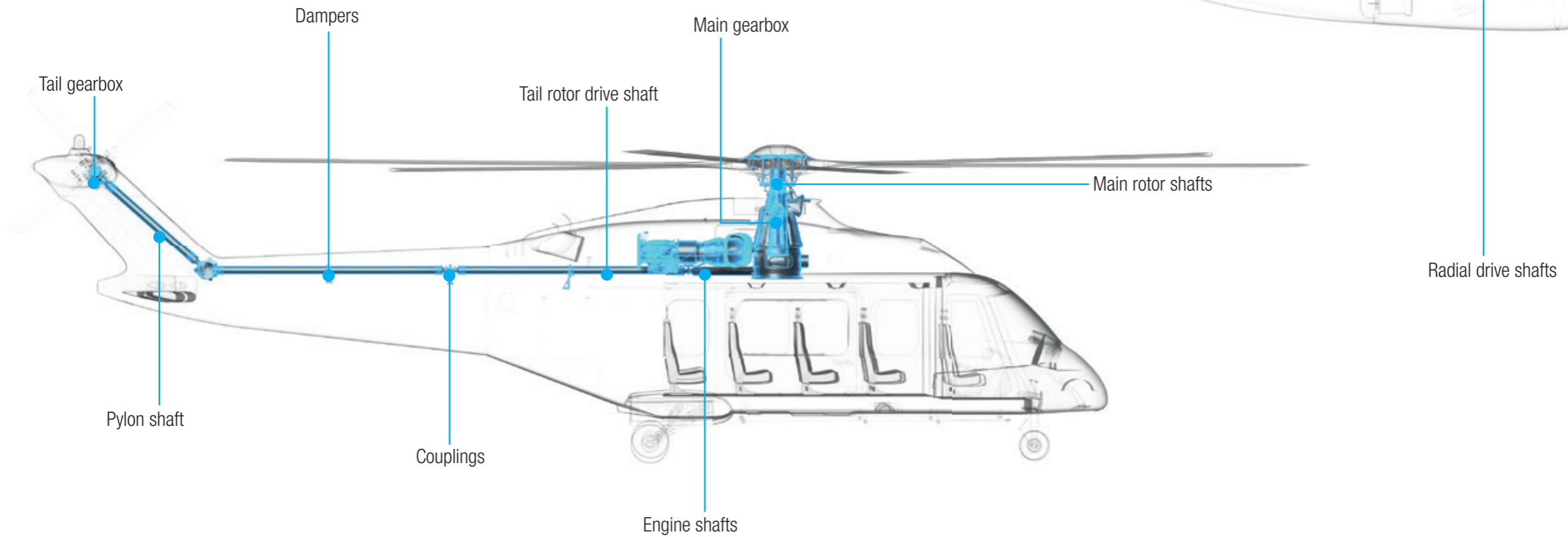
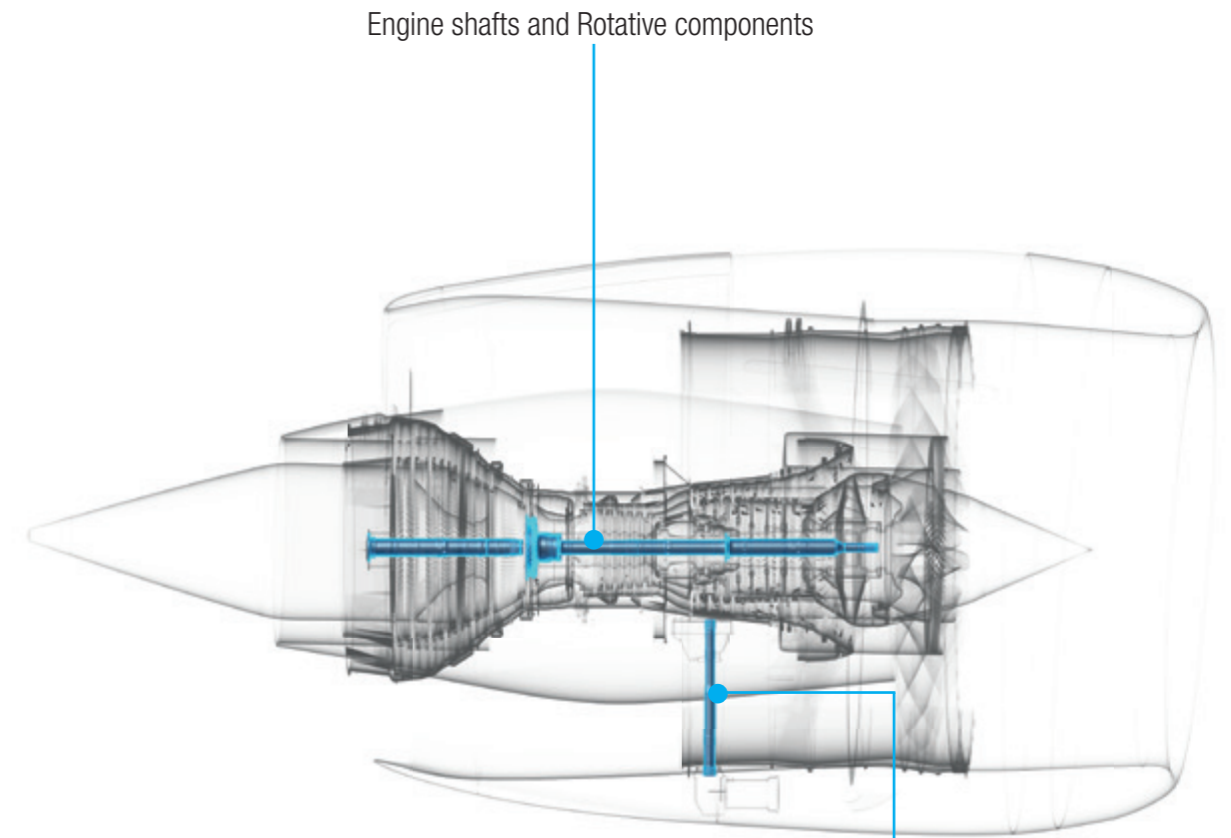


Flight critical components

Agile first tier supplier

Vertically integrated

International footprint





04. DEVELOPING THE FUTURE

Pankl Aerospace is involved in specific aircraft design projects, co-operating with prime manufacturers for design, test and qualification. Advanced equipment combined with a highly trained and dedicated staff enables Pankl Aerospace to meet any challenge in the aerospace industry.

05. PROVEN EFFICIENCY

The Pankl test facility enables rapid prototyping offering our customers short development times including documentation for qualification and airworthiness certification.

06. ACCOMPLISHED EXCELLENCE

Pankl offers unique manufacturing capabilities including upsetting, swaging, cold sinking, trepanning, bottle boring, honing and complex machining such as 5-axis milling & turning. With over 50 years of experience Pankl also provides complex assemblies, high speed super critical balancing and bonding. A well established and controlled supply chain enables Pankl Aerospace to deliver products on time. Customer approved non destructive testing (NDT) can be performed in house to the highest standard with qualified and certified personnel.



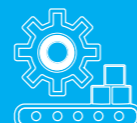
Design /
Engineering



Testing



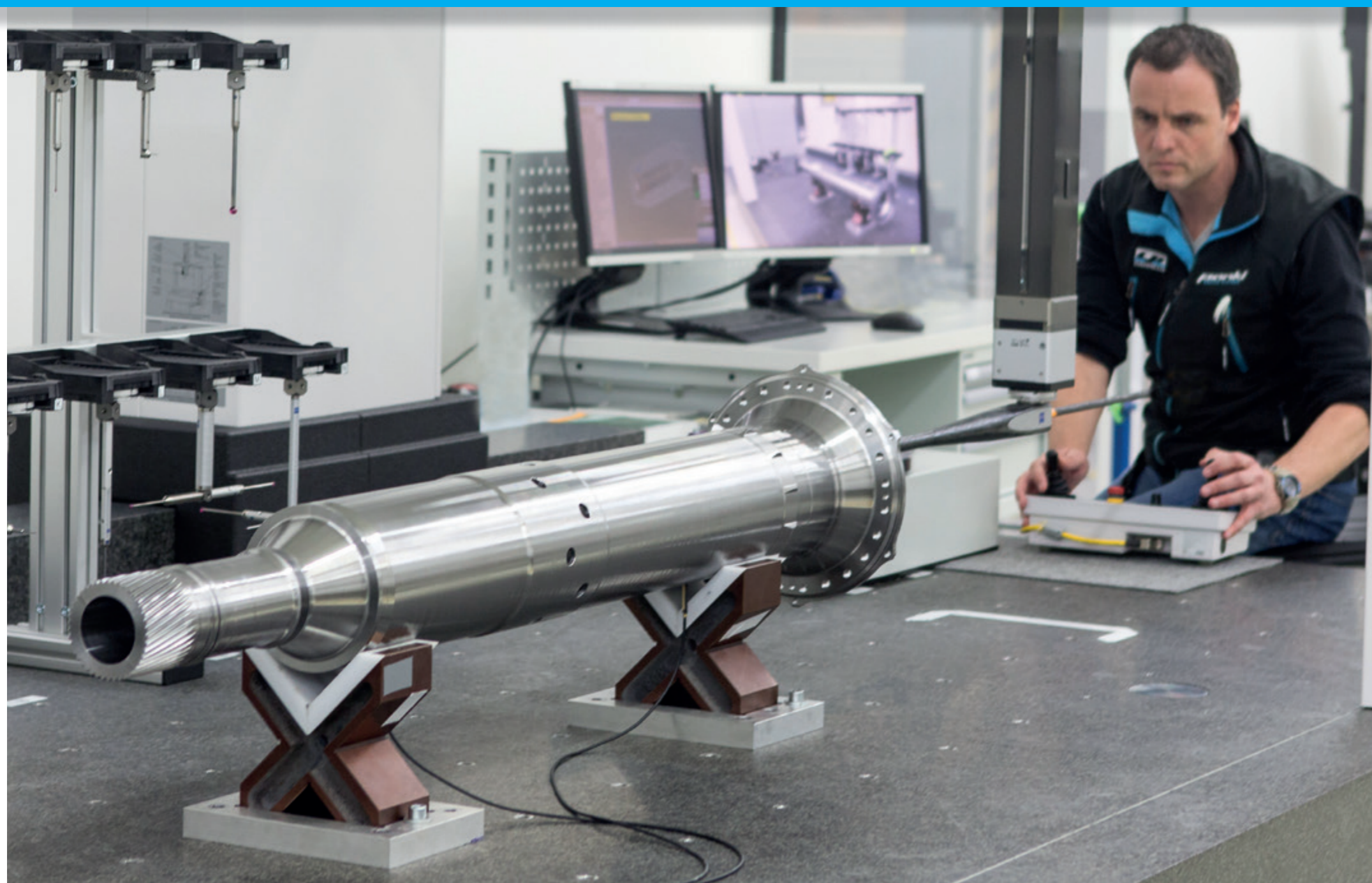
Qualification



Manufacturing /
Supply Chain / Quality



Support | Airworthiness





07. EFFICIENCY AND ENVIRONMENTAL AWARENESS

Today, the aerospace industry requires lighter, quieter engines with reduced emissions and higher fuel efficiency. Pankl Aerospace has paved the way for the manufacturing of innovative, safety-critical structural components that are set to make flying more efficient and environmentally compatible in future. Our state-of-the-art machines with innovative turning and milling applications are optimised and improved on an ongoing basis. They are positioned to overcome the technological challenge of processing alloys for the aerospace industry that are notoriously difficult to machine.

Additionally, we use the latest technologies for assembly, bonding, as well as high-precision balancing of rotative components.

All these synergetic effects create a wide range of services with short development times, efficient logistics, and supply chains ensuring optimal results from a single source.



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