

FACT SHEET

# SAFETY SOLUTIONS AEROSPACE INDUSTRY

On-wing inspections, testing and engineering evaluations

**Testing, inspection and materials engineering can help minimize the risk of parts failing by ensuring they meet quality standards and industry regulations.**

**These activities manage your risk and ensure quality parts are used in critical equipment items.**



## Ensuring Safety with Intertek

The aerospace industry (both commercial and defense) has established very high standards when it comes to safety and reliability, and this for very good reasons.

Millions of people and countless tons of cargo travel the world daily. Safe travel is heavily dependent upon, not only the proper manufacturing of aircraft parts and equipment, but also the inspection and testing of these components.

Aircraft engines are the most active piece of mechanical equipment on an aircraft. Over time the engine blades can age and become more susceptible to failure.

Through proactive routine maintenance and Intertek's expert technical services such as non-destructive testing, stress analysis, material testing and on-wing inspection, defects and other mechanical integrity issues can be detected early. The resulting repairs or replacements contribute to safe and reliable operations.

**Should a failure occur, aircraft owners and operators are required to determine the cause of failure.**

Intertek's failure analysis and forensic engineering department can play a key role in obtaining this information and helping ensure the failure does not reoccur.

## Intertek's Key Aerospace Services

### Stress Analysis & Failure Assessments

Intertek's multidisciplinary teams with specialist knowledge in areas of materials fracture mechanics, fatigue, finite element analysis, materials, inspection and welding have conducted failure analyses as well as hundreds of fitness-for-service assessments. We maintain metallurgical failure analysis laboratories with state of the art equipment and employ powerful tools like ANSYS and other proprietary suite of finite element analysis software for our fracture mechanics and stress analysis projects.

### Non-Destructive Testing (NDT)

Using conventional and advanced NDT techniques, defects and irregularities can be detected without destroying or impacting the integrity of the items being tested. Utilizing techniques such as digital radiography, phased array ultrasonic testing, magnetic flux leakage and eddy current testing can help ensure safe operation and extended life of equipment, components and assets.

### 3D Laser Scanning / Metrology

Surveying services have become an essential element in managing the entire life cycle of a project from design and construction through to installation, upgrade and revamp. Using innovative surveying solutions Intertek can shorten project duration, improve site safety, increase integration accuracy and reduce the potential for component modification.

## Engineering Consulting

Managing risk and the reliability of assets is challenging. Through customized engineering services, advanced technology and world-class expertise, our unique solutions help owners and operators minimize costs, improve efficiency, meet safety standards and ensure installations conform to operation and design parameters.

### Failure Analysis and Forensic Engineering

When equipment and assets do not function or perform as designed, owners and operators look to understand how to improve equipment reliability and determine the root cause of failure. From stress testing and design engineering to materials and microscopy testing, scientific analysis provide the insight to solve the problem, take remedial action and prevent recurrence.

## FOR MORE INFORMATION

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