

## Testing of heat-affected zones (HAZ) through conductivity measurement on aircraft structures using SIGMATEST

### Case & challenge

Very high temperatures occur near turbines or when a lightning strike hits an aircraft. These can negatively affect the aluminum structure of the aircraft. As a result, the material loses its strength.

The change caused by the heat correlates with the electrical conductivity of the material, so conductivity measurement can indicate weakened structures in the material.

The most commonly used solution to identify these type of damages is a conductivity meter.



*Aircraft struck by lightning*

### Application solution

A test specification defined by the manufacturer of the aircraft contains exact test points with predefined electrical conductivity values.

If the electrical conductivity value is outside the tolerance of the definition, the components must be repaired/replaced.

### Benefits of the solution

Using the SIGMATEST ensures precise measurements, making it easy to identify damages accurately by tracking conductivity changes effectively.

With the SIGMATEST being both quick and simple to use, you can swiftly detect conductivity issues, streamlining the process of assessing damages for improved efficiency.

### Technical setup

- SIGMATEST device
- Probe diameter of the user's choice (8 mm or 14 mm), preferably as broad as possible

