



## Case Study

### Repair Blade Qualification



AddQual specialise in the development, qualification and production of components for aerospace, medical and power generation industries. We identify and implement solutions that help you reduce cost and lead-time.



## Summary

Turbine blades are an expensive consumable component and undergo repair several times during their operational life cycle to maximise performance.

The rotating blades undergo substantial centrifugal forces during operation, causing creep and increased wear on the tip seals.



## Problem

Our client had several engine sets of blades that had experienced increased wear and required more data to determine if the component still met the dimensional requirements.

To confirm this, they needed to capture the full surface geometry, which would allow them to take measurements, confirm deviations and run simulations.



## Solution

Due to the urgency of the project, AddQual designed and additively manufactured bespoke tooling to locate the blades securely and repeatably.

3D scanning allowed the capture of a rich data set for the customer, enabling a dimensional analysis and identification of deviations from component features that allowed them to understand the lifecycle performance.

