



# Ultrasonic Testing for Wind Blades

## Detect Sub-Surface Defects with UT Services

When it comes to managing blades, asset owners deal with many daily challenges and integrity threats that could derail a blade's overall effectiveness. Visual testing provides a limited set of information, but operators can utilize ultrasonic testing (UT), a non-destructive testing (NDT) solution, to get the information they need on their offshore and onshore blades.

With over 40 years as an NDT industry innovator and leader, MISTRAS Group offers expert traditional and advanced UT inspections, including phased array and their proprietary Spider Semi-Automated Scanner.

### What is Ultrasonic Testing?

Ultrasonic Testing is an NDT solution that uses advanced techniques to inspect material make-up.

Here's how it works. When UT is performed, a transducer introduces ultrasonic waves into a material, which travel in a straight line and at a constant speed until they encounter a surface, at which point the waves either reflect or transmit through the material. Reflected energy vs.

transmitted energy provides information on the size, type, and location of the damage. Because of these capabilities, UT can effectively detect and accurately size sub-surface defects that cannot be identified through visual testing.

### UT Damage Identification

Wind blade damages detected by UT may include **delamination, cracks, disbonds, wrinkles, porosity, thickness, voids/foreign inclusions, and width/lack of adhesive** on a wind blade.

### Data Collection and Reporting

Following a UT inspection service, MISTRAS delivers data to customers in a fast, easy, and transparent manner, with reports typically including:

- ▶ Defect locations
- ▶ Type(s) of discontinuities discovered
- ▶ Size and depths
- ▶ Excel data export of all ultrasonic signal (A-Scan) readings (*if applicable*)

### Other Advantages of UT

- ▶ Excellent repeatability
- ▶ Increased inspection speed
- ▶ Accurate results
- ▶ Ability to inspect complex geometries
- ▶ Ability to inspect large areas
- ▶ Permanent auditable results



SCAN ME

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