



AR ENHANCED INSPECTOR

Fully automated inspection of wind turbine towers for painting defects in production, providing defect-detection of over 95%.

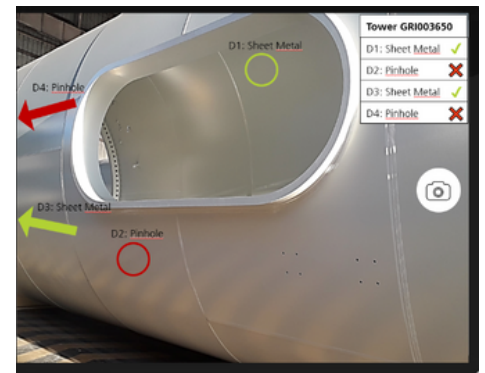
SOLUTION DESCRIPTION

The AR-Enhanced Inspector is able to locate and visualize painting defects on wind turbine towers via augmented reality with a hand-held device.

Able to locate and visualize painting defects on wind-turbine-tower-segments via augmented reality with a hand-held device.

Accurate defect-detection is performed in an initial step by a fully automated computer-vision-system, also available in the ZDZW-context.

For reliably finding and fixing detected defects, workers are guided to them by navigational overlays, augmenting the real-world. For traceability of the repair-process they can document repair-activities by taking pictures and adding textual or graphical annotations.



MAIN BENEFITS

The system is specifically aimed at large-scale system, like wind turbines, that require a moving camera, in order to inspect the whole target object.

- ▶ Makes inspection less error-prone, as machines are more reliable than humans.
- ▶ Makes the repair-process traceable by allowing easy documentation and annotation.
- ▶ Makes fixing defects less error-prone, by reliably guiding workers to defect locations via Augmented Reality.
- ▶ Saves time for workers, as they can quickly locate defects.

PRODUCT OWNER



The ZDZW project has received funding from the European Union's Horizon Europe programme under grant agreement No 101057404.