



- 1 Rotorblade with inspection platform and inspection system.
- 2 Rotorblade inspection from the ground on the spinning blades.
- 3 Detected defects near the flange.

## THERMOGRAPHY ON ROTORBLADES

### Active thermography: Detection of wrinkles

Classic optical inspection of rotor blades showed an increasing number of cracks in the main laminate of the belt during the last years.

In many cases the fibers are not straight orientated in the unidirectional glass fibers, but were found to lay in waves or wrinkles. Consequently, these fibers are not able to absorb the loads which are applied to the fibers by the permanent enormous wind loads to the blades.

An active thermographic inspection system was developed to find even small invisible wrinkles. Repairs are possible in an early stage avoiding expensive replacements of broken blades.

### Passive thermography: Detection of energy losses

Due to surface cracks, broken vortex generators or just dirty surfaces, huge amounts of energy (respectively money) is getting lost every year. Therefore it is necessary to detect such problems in an early state with minimum efforts preferably from the ground.

With our passive thermographic inspection system it is possible to detect heavy loads near the flange or performance losses because of vortex generators placed at the wrong position. Moreover it allows the detection of the transition line and of vortex structures to learn more about the aerodynamic behavior of the used blades.

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