



RWE's NDT expertise led to savings of over €170,000 during turbine outage

# CASE STUDY

RWE's Non-Destructive Testing (NDT) expertise has led to savings of over €170,000 at Fawley oil-fired power station. This was achieved during a single turbine outage by carrying out ultrasonic inspections on generator rotor retaining rings, without removing the rotor from respective stator housings.



## The need for our expertise

Plant operators at Fawley power station faced a significant inspection challenge due to generator rotor retaining ring failures, caused by stress corrosion cracking at internal ring bore locations. Traditionally, inspections of this type required the removal of the generator rotor from the stator and possible subsequent removal of the retaining ring from the rotor itself. These operations have major implications of damage risk, cost, safety and timing to an outage program.

RWE's Non Destructive Testing (NDT) services was asked to develop an alternative NDT process to avoid the need to remove the rotor from the stator housings.

## Putting our expertise into action

To overcome the challenges at Fawley power station and achieve significant savings, our experts used an in-house high integrity retaining ring inspection technique, which utilises powerful ultrasonic data acquisition and analysis software linked to a bespoke scanner. This technique enabled fast and accurate inspection results to be successfully obtained at Fawley, with the generator rotor remaining inside its stator housing.

## The difference we made

During Fawley power station's turbine outage, carried out in 2002, our NDT experts saved over €170,000 through in-situ retaining ring inspections, negating the need for generator rotor removal. Process savings were accrued through reduced outage program interference and a significant reduction in labour costs and plant damage risk.

The experience gained during the turbine outage at Fawley is now benefiting all of our NDT customers.

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