



# NON-DESTRUCTIVE TESTING

## NON-DESTRUCTIVE TESTING – INDEPENDENT AND IMPARTIAL EXAMINATION AND TESTING

Over the years, it has been SGS's experience that many failures identified on operating wind turbines are related to either poor material quality, inappropriate choice of material or manufacturing, or welding flaws. Indeed, many wind turbine components require special attention in regard to material composition, surface integrity and internal conditions. In light of these facts, quality supervision during production is strongly recommended.

One appropriate method for verifying material quality before assembling wind turbine components is Non-Destructive

Testing (NDT). Specifically, NDT is an effective means of achieving the following objectives

- Identifying and quantifying material defects found below the product surface
- Assuring that welds contain no unacceptable imperfections
- Controlling the surface of castings
- Detecting possible corrosion

NDT is an indispensable technique for assessing either the quality of new constructions and products or the status of assets in service as a means of preventive maintenance. Our non-

destructive and mechanical examinations provide both quality assurance and process safety.

SGS's R&D, special examination and consulting teams are at your disposal for the most complex test requirements. Our depth of experienced personnel and range of equipment offer technically and financially suitable solutions, whether by means of traditional or more specialised examination techniques.

# PROFESSIONAL SERVICES TO ASSURE INSTALLATION INTEGRITY



## CERTAINTY WITH SGS

Our certified NDT experts provide the necessary certainty and help guide you in choosing the most appropriate and efficient NDT method or combination of methods, either for single components or large-scale projects.

The combination of experienced and highly-qualified technicians and state-of-the-art technology makes SGS a reliable and valuable NDT partner.

## CONVENTIONAL TESTING METHODS

- Radiographic Examination (RT), X-Ray or Gamma Graphic Testing
- Manual Ultrasonic Testing (UT) (Pulse-Echo Method)
- Surface Examination using Magnetic (MT) or Dye Penetrant Testing (PT)
- Positive Material Identification (PMI), Alloy Analysis
- On-site Hardness Measurements
- On-site Material Structure Analyses

## SPECIAL EXAMINATIONS

- Digital Radiographic Examination
- Time of Flight Diffraction (ToFD) Examination

## ACCREDITATIONS

All SGS NDT technicians possess certificates according to relevant international or local standards. Our mechanical testing laboratories are also accredited.

## SHARING KNOWLEDGE

In order to provide maximum added value and competitive advantage for our clients, SGS subscribes to a philosophy whereby education and training of our NDT technicians is our top priority.

Moreover, SGS offers relevant NDT courses and provides workshops (at your company location upon request), where skilled instructors share their knowledge in NDT techniques as well as applicable guidelines and local and international NDT/NDE standards (e.g. SNT TC1A and EN 473).

## CONTACT

[POWER@SGS.COM](mailto:POWER@SGS.COM),  
[WWW.SGS.COM/POWER](http://WWW.SGS.COM/POWER)

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WHEN YOU NEED TO BE SURE

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