

Repairs

Thomassen Energy
a Hanwha company

Repairs

Your gas turbine components are in safe hands with us.

Two fully equipped Centers of Excellence for repairs are available to recondition your gas turbine components into perfect shape:

- Rheden, the Netherlands
- Abu Dhabi, United Arab Emirates

These service centers are equipped with advanced tools and machinery. Experienced engineers and in-house capabilities enable us to perform repairs in a controlled manner.

Gas Turbine Rotor Repair

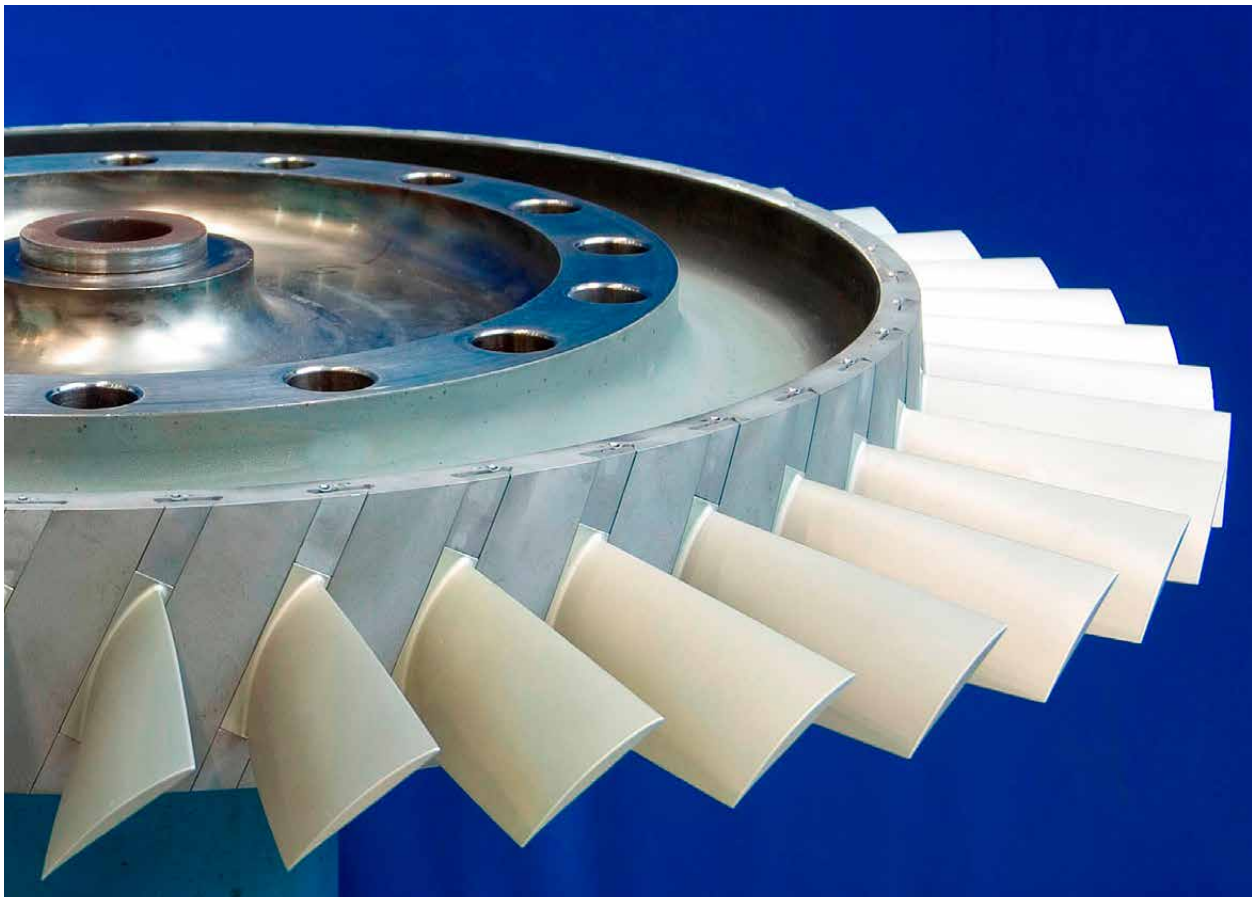
Full refurbishment of gas turbine rotors is one of our core competences. To determine the condition of your rotor a Rotor Lifetime Assessment has to be performed.

The result of the assessment might show a standard rotor overhaul is sufficient to get your rotor up and running again. In case severe damage is found it is also possible rotor components should be replaced.

Thomassen Energy is able to replace the damaged sections with own manufactured components. Besides repairing your rotor you can also choose to upgrade it by installing new designed compressor blades. This upgrade will result in a power increase while heat rate will be reduced.

Hot Gas Path and Combustion Components Repair

We are capable of repairing your buckets in-house. All HGP and Combustion parts repairs are performed using the latest welding, machining, heat treatment and cleaning techniques.





- Welding: TIG, Micro TIG, MIG and resistance spot welders
- Machining: 4/6-axis CNC milling, EDM, CNC wire eroding, vertical and horizontal boring and conventional machining
- Heat treatments: vacuum (Ar/Nit 10 bar quench), heat tint furnaces, curing and drying ovens
- Cleaning: chemical strip cleaning, ultrasonic cleaning, fluoride ion cleaning and high pressure water flush cleaning

For the combustion liner the possibility of Sectional Replacement is available. More information regarding this technique can be found on the technical product sheet.

Combustion parts can be fitted with Thomassen Extended Lifetime Program (ThomELT) kits. ThomELT kits are designed to increase the lifetime of the parts and thus lengthen inspection intervals.

We also have proven processes for special brazing which we use to repair cracks and restore worn, depleted or damaged surfaces as well as to hard-face wear-prone surfaces. Brazing pastes, brazing slurries and brazing foils

developed in house are applied to repair procedures. Hot parts are prepared for coating, using procedures such as air and vacuum plasma spraying, High Velocity Flame Spraying (HVFS) and diffusion coating processes.

Overhaul and Testing

Another one of our specialties is the overhaul and flow testing of fuel nozzle tips and complete assemblies for gas, fuel-oil and dual fuel. We continue to research and invest in the latest techniques and technology. Our repair and refurbishment capabilities include flow dividers, fuel pumps, gas control valves, AA compressors and other components within an extremely broad range of on-base and off-base equipment.

Thomassen Energy

Innovation and Service for a World with Clean Power

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