ROTOR LIFE MANAGEMENT

Advanced, OEM engineering assessment, inspection, and repairs to enable operation beyond original design life

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Rotors are the highest-energy components in a gas turbine, are critical to performance, and are subjected to extreme mechanical stresses and high temperatures over their operating life. Their integrity can be negatively impacted by operating issues such as corrosion and undetected vibration; but even normal operation will gradually diminish their structural integrity over time. So each rotor is designed for a finite lifespan measured in factored fired hours (FFH) and factored fired starts (FFS).

Exceeding the recommended design life, or not adhering to specified inspection intervals and maintenance activities can put your turbine at risk of failure that could cause extensive damage to your turbine and adjacent assets, and serious injury to your personnel.

But every turbine’s operating life is unique—so it is possible for a rotor to safely and effectively operate beyond its original design life, if the proper assessments and preparations are performed.

Advanced, condition-based solution

The Specialized Rotor Life Management (RLM) service from Baker Hughes, a GE company (BHGE), is the best way to determine if your rotor meets the requirements, or if specific repairs could enable extended operation. RLM combines inspection results with a dedicated design analysis based on the actual condition of the rotor, specific unit configuration, operating history, and prior maintenance history at the inspection interval.

Key benefits
- Possible life extension up to two major inspection cycles
- Reduced operating costs through proven life-extending repairs
- Reduced or postponed CAPEX by avoiding current rotor replacement

Components covered
- Turbine wheels
- Shafts
- Compressor disks

Compressor blades are typically removed to allow a complete analysis of the disks. Turbine buckets, cover plates, and consumable parts (bolts, nuts, twist locks, tie rods, damper pins), will be maintained or replaced as determined by the RLM assessment.

Applicability
The RLM service can be performed on a range of gas turbine models. Please contact us (oilandgas.rotorlife@bhge.com) to verify its applicability to your machine.
About our company

Baker Hughes, a GE company (BHGE), is the world’s first and only fullstream provider of integrated oilfield products, services, and digital solutions. Drawing on a storied heritage of invention, BHGE harnesses the passion and experience of its people to enhance productivity across the oil and gas value chain.

BHGE helps its customers acquire, transport, and refine hydrocarbons more efficiently, productively, and safely, with a smaller environmental footprint and at lower cost per barrel. Backed by the digital industrial strength of GE, the company deploys minds, machines, and the cloud to break down silos and reduce waste and risk, applying breakthroughs from other industries to advance its own.

With operations in over 120 countries, the company’s global scale, local know-how, and commitment to service infuse over a century of experience with the spirit of a startup—inviting smarter ways to bring energy to the world.