GE Power

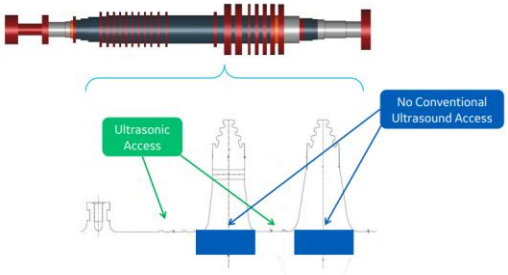
URIS* – Un-bored Rotor Inspection System for Steam Turbines

An advanced volumetric inspection for un-bored rotors in their highest stress areas underneath wheels/discs

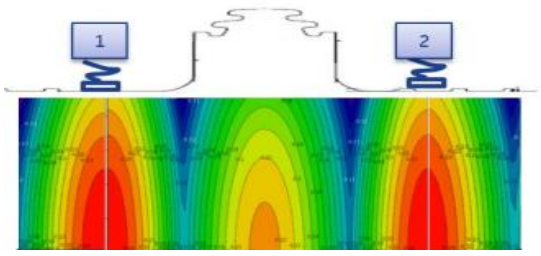
Reliability/Availability – inspection results assess the current condition of the rotor & provide the required action to help ensure continued reliable operation

The need...

In response to an ever-changing industry, GE has continued to invest in the development of comprehensive inspection processes to help ensure the reliable operation of un-bored steam turbine rotors. Many un-bored rotors which entered the fleet over 20 years ago will be in need of inspection capabilities that address the highly-stressed areas underneath the wheels as they manage repair/replacement decisions for assets that will be nearing the end of their expected life cycle. GE has developed an advanced ultrasonic inspection technology to provide evaluation of critical rotor regions that were previously not inspectable. The newest product offering is the URIS* rotor inspection system. The URIS* inspection system was developed to inspect un-bored steam turbine rotors in highly stressed areas. A quality inspection in these areas was previously not possible due limited accessibility or geometric constraints.



The URIS* system is based on state-of-the-art phased array ultrasonic technology. It is this innovative approach – providing efficient 3D volumetric inspection – that allows the inspection of regions underneath the wheels / discs of the un-bored steam turbine rotor material not covered with current periphery ultra-sonic inspections.



To learn more about this offering, contact your GE sales representative or visit powergen.gepower.com.

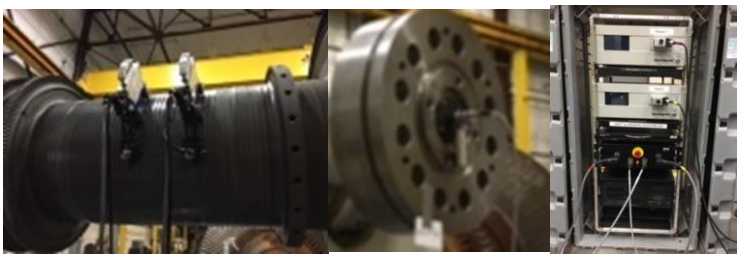
GEA33937 (08 / 2018)

Key Features

GE has leveraged State-of-the-art hardware and advanced software platforms to conduct comprehensive rotor assessment while still retaining repeatability to previous GE ultrasonic inspection results. System features include:

- Efficient data acquisition and evaluation
- Indication sizing
- 3D Data imaging
- Accuracy to known reflectors
- Repeatability

System validation was performed through numerous tests using rotors containing flat bottom holes and known indications to assure performance and repeatability.



Key Benefits

GE's In-Service Steam Turbine Rotor Inspection Process provides several important advantages including:

- Accurate and repeatable detection and sizing of indications
- Comparison with manufacturing baseline data and all previous GE in-service inspections to detect internal changes in the rotor condition.
- GE Engineering evaluation and fitness or duty recommendation
- Repair options to mitigate operating risk and return rotors to service.

Experience

More than 60 years of experience in nondestructive testing has enabled GE to provide systems and processes to the utility market aimed at keeping your rotor safely in service. GE has been upgrading and improving automated inspection systems since 1975.

*Trademark of General Electric Company

Fact sheet