Mitsubishi Heavy Industries Compressor
International Corporation

MITSUBISHI HEAVY INDUSTRIES

SEEING WHAT'S UNDER THE SURFACE

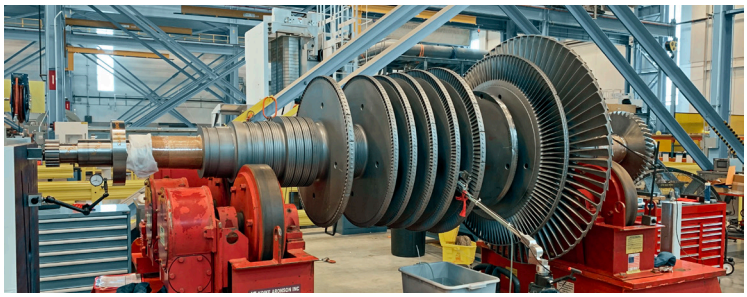
HOW MCO-I UTILIZES PHASED ARRAY ULTRASONIC TESTING (PAUT)

WHAT PAUT IS AND HOW MCO-I UTILIZES IT

In the petrochemical and power generation industries, steam turbines are essential. They are the backbone of many power and chemical plants, and, when maintained well, ensure long term and reliable operations. Undetected issues within steam turbines can lead to costly repairs and downtime. Traditional nondestructive inspection methods, such as magnetic-particle or liquid penetrant tests, are not sufficient to detect all underlying problems.

Mitsubishi Heavy Industries Compressor International Corporation (MCO-I) is utilizing Phased Array Ultrasonic Testing (PAUT) to bring more value to the end user through advanced steam turbine inspection. PAUT uses multiple ultrasonic elements and advanced signal processing to provide insight on the condition of steam turbine blade attachment areas, that could be invisible using other techniques. PAUT is a non-destructive testing technique, useful for investigating bladed rotor disks allowing for accurate sizing and mapping of rotor material defects.

PAUT is a very capable rotor diagnostic tool. To fully capitalize on its potential, we select the proper scanning equipment and plan the testing arrangement. Prior to inspection, we require dimensional details of the rotor and information about its service conditions and history.



PAUT BENEFITS

There are many benefits to utilizing PAUT for steam turbine maintenance.

- High accuracy scans identify small anomalies
- Detects corrosion pitting and early stages of stress corrosion crack indications
- Allows end user to plan rotor maintenance and repair tasks to ensure steam turbine reliability.
- Provides inputs for a detailed remaining life assessment analysis of the turbine rotor attachments.
- Reduces risk of unplanned outages.
- Minimizes downtime costs.

FOR MORE INFORMATION

To learn more about our steam turbine maintenance and use of PAUT, visit our website: https://www.mhi.com/group/mcoi/

Scan or click the QR code below for access to our full catalog of information on our products and services.

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