

Power Transmission Engineering®

MARCH 2021

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concern for end users” said Linda Raynes, CAE, EASA president and CEO. “EASA’s Guide provides practical insights about repair/rewind procedures for end users who can rely on ANSI/EASA AR100 to evaluate repair services and providers.”

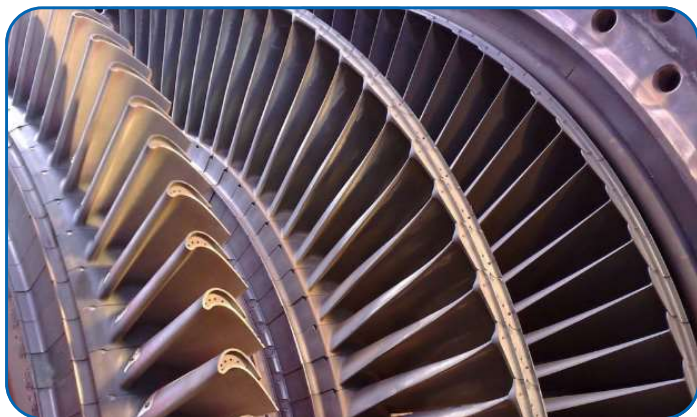
The new Guide covers best practices for inspection, testing, mechanical repair and electrical rewinds. It also explains how repair procedures can affect common types of motor losses and motor efficiency, underscoring the importance of requiring service providers to follow the repair best practices in ANSI/EASA AR100-2020.

www.easa.com

QuesTek

AWARDED MATERIAL DEVELOPMENT FUNDING FOR ENERGY APPLICATIONS

QuesTek Innovations LLC recently announced that it was awarded \$1.2 Million in funding from the U.S. Department of Energy’s Advanced Research Projects Agency-Energy (ARPA-E). The funding will be used to design and develop a novel materials solution for next-generation turbine blade alloys and compatible coating systems. QuesTek will design a system of functionally-graded Niobium-based alloys suitable for Additive Manufacturing and that will be capable of sustaining high temperature operation and thus increasing fuel efficiency.



Dr. Dana Frankel, QuesTek’s manager of design and product development, stated “Designing a new turbine material with significantly better performance than current nickel-based superalloys is one of the biggest challenges facing the field of materials science today.” She added, “We’re excited for this opportunity to apply our proven computational materials design approach to develop a new refractory turbine alloy, paving the way for a step-change in turbine engine performance and efficiency.”

QuesTek will apply its Integrated Computational Materials Engineering-based models and extensive experience in design of superalloys, refractory alloys, high entropy alloys, and coatings to design a printable niobium-based multi-material alloy system. Concurrent design of material and component, with the goal of accelerating adoption of the designed materials into next-generation engines, will be achieved by teaming with leading turbine engine OEM Pratt & Whitney to define aerospace requirements, perform component design,

and guide testing and qualification. Furthermore, the project team includes NASA Jet Propulsion Laboratory for AM process development, and the University of Minnesota for coating development.

QuesTek received this competitive award from ARPA-E’s ULtrahigh Temperature Impervious Materials Advancing Turbine Efficiency (ULTIMATE) program, to develop and demonstrate ultrahigh temperature materials that can operate in the high temperature and high stress environments of a gas-turbine blade.

This effort directly addresses the need to improve gas turbine efficiency for aerospace and energy applications (e.g., ground-based industrial gas turbines), critical for increasing fuel economy and decreasing carbon emissions. Engine efficiency is fundamentally determined by maximum cycle temperature, and thus scales directly with the operating temperature. However, current state-of-the-art superalloys have limited high-temperature stability.

www.questek.com

Auburn Bearing

ACQUIRES AUROTEK TSB

As of February 1, 2021, Auburn Bearing & Manufacturing Inc, an American-based designer and manufacturer of thrust bearings, custom bearings and precision components, is excited to announce that it has acquired the assets of Aurotek TSB, Inc.

Aurotek TSB, Inc. is specialized in the production of precision thin section bearings for a broad array of industries. These bearings are used in a variety of applications, namely, for use in defense weapon systems, medical equipment, radar equipment, aerospace guidance systems, packaging machines, industrial assembly machines, and robotics for security, medical, nuclear and defense systems.

Auburn Bearing & MANUFACTURING

Made in the USA since 1898

Peter Schroth, president of Auburn Bearing & Manufacturing, notes that this acquisition aligns with the company’s strategy to expand their product offerings to include American-made precision radial bearings, along with current thrust ball and roller bearings, in low- to mid- volume production runs and with reasonable lead times.

Aurotek TSB was founded by Dr. Don Cancelmo, who spent his entire career working in the thin section bearing industry. Auburn Bearing & Manufacturing had been a supplier of rings and bearing components to the company since 2011.

Previously located in Herkimer NY, the operations and assets of Aurotek TSB will be moved to Macedon, NY, where the business will continue to operate within the Auburn Bearing & Manufacturing facility, located at 4 State Route 350, Macedon, NY 14502.

www.auburnbearing.com