



**QUESTEK'S FERRIUM® C64™ ALLOY TO BE APPLIED
BY BELL HELICOPTER IN U.S. ARMY FARDS PROGRAM**

*Ferrium C64 Expected to Reduce Helicopter Gearbox Weight, Increase Durability,
Improve High-Temperature Performance, and Provide Manufacturing Benefits*

EVANSTON, IL, Mar. 15, 2011 - QuesTek Innovations LLC has been awarded a subcontract from Bell Helicopter, a Textron Company, to jointly evaluate the application of QuesTek-designed *Ferrium*® C64™ steel for helicopter gears. This subcontract is part of the \$30 million Technology Investment Agreement awarded to Bell by the U.S. Army Aviation Applied Technology Directorate to develop state-of-the-art drive system technology under the Army's Future Advanced Rotorcraft Drive System (FARDS) program, as announced by Bell on November 8, 2010.

The FARDS program is targeting a 55 percent improvement in power-to-weight ratio, a 35 percent reduction in production, operating and support costs, and other improvements in drive systems for the U.S. Army's Current/Future fleet of rotorcraft and for commercial rotorcraft. The application of C64 can contribute to these goals because its ultimate tensile strength is about 35 percent greater than that of incumbent alloy *Pyrowear*® 53 ("X53"). C64 is also able to be case hardened up to about 64 Rockwell C, leading to improved durability. The combination of increased strength and high hardness of C64 can improve gearbox life and power-to-weight ratio. The high thermal stability of C64 is also expected to improve "oil-out" survivability, and may reduce the size and weight of auxiliary gearbox cooling systems.

QuesTek will work closely with Bell to further develop the thermal processing and finishing processes of C64 to optimize the combination of strength and hardness in the gear case and core. Manufacturing cost savings will also be assessed, since manufacturing processes for C64 can be significantly simplified over incumbent options.

Latrobe Specialty Steel Company of Latrobe, PA, USA produces and sells C64 under license from QuesTek. Applications for C64 beyond rotorcraft gear assemblies include integral drive shafts and power transmission components in high-temperature, high-performance, or weight/space-sensitive applications.

Charlie Kuehmann, President and CEO of QuesTek, commented: "We thank Bell Helicopter and the Army for this opportunity to apply *Ferrium* C64 to improve the performance, economy, capacity and durability of demanding rotorcraft platforms. We also thank NAVAIR, the U.S. Navy's Naval Air Systems Command, for their guidance and financial support during earlier STTR Phase I and Phase II projects under which we computationally designed C64."

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ABOUT QUESTEK

QuesTek Innovations LLC (www.questek.com) is a global leader in computational materials design. QuesTek uses its proprietary *Materials by Design*® expertise to rapidly develop new materials that reduce capital, processing, operating or maintenance costs, or improve environmental protection or competitive



supply. QuesTek has been highlighted in many leading business and technical publications, and has more than 30 patents awarded or pending worldwide. For more information, contact Rich Kooy at 1-847-425-8213 or rkooy@questek.com.