



QUESTEK WINS SBIR PHASE II AWARD TO DEMONSTRATE FERRIUM® S53® ALLOY IN MH-60S HELICOPTER ROTOR SHAFT

*Ferrium S53 Expected to Reduce Total Life-Cycle Costs and Maintenance Costs
by Increasing Fatigue Life and Reducing Corrosion Occurrences*

EVANSTON, IL, April 24, 2012 - QuesTek Innovations LLC has been awarded a Small Business Innovation Research (SBIR) Phase II project from the U.S. Naval Air Warfare Center Aircraft Division (NAWCAD) to demonstrate QuesTek-designed *Ferrium*® S53® as an improved steel for Navy helicopter rotor shafts (*i.e.* masts), and specifically on the MH-60S helicopter designed and manufactured by Sikorsky Aircraft Corporation. Prototype MH-60S helicopter rotor shafts will be fabricated from S53 in a cooperative effort by the Navy, Sikorsky, QuesTek and key industry suppliers. The 2-year contract is valued at \$749,832.

The overall objective of this project is to reduce life-cycle and maintenance costs of Navy helicopter rotor shafts by increasing fatigue life and reducing corrosion. Alloys currently used for Navy helicopter rotor shafts such as 4340 provide high strength but offer limited resistance to corrosion, which may result in corrosion condemnations during overhaul and repair. S53 provides greater strength and fatigue resistance than 4340, and also significant resistance to general corrosion and stress corrosion cracking (SCC).

Applications for S53 beyond helicopter rotor shafts include landing gear, pins, rotary actuators, drive shafts, and other power transmission components in high-performance, corrosion-sensitive applications.

Two commercial suppliers, Latrobe Specialty Metals Co. and Carpenter Technology Corp., produce and sell S53 under license agreements with QuesTek. S53 has received extensive industry certifications including SAE AMS 5922 and a listing in the Metallic Material Properties Development and Standardization (MMPDS) Handbook.

Charlie Kuehmann, President and CEO of QuesTek, commented: "We thank the Navy for this Phase II award, and the opportunity to further demonstrate how *Ferrium* S53 can reduce operating and life cycle costs, enhance reliability, and reduce environmental impact. We also thank our project partners for their active participation applying new materials to help improve the performance, capacity and durability of critical products and platforms such as the MH-60S helicopter."

ABOUT QUESTEK

QuesTek Innovations LLC (www.questek.com) is a global leader in computational materials design, serving commercial and governmental clients. 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 Jeff Grabowski at 1-847-425-8241 or jgrabowski@questek.com.