



## **QUESTEK AWARDS FIRST PRODUCTION LICENSES OF FERRIUM® C61™ AND C64™ TO LATROBE SPECIALTY STEEL COMPANY**

*Computationally-Designed, High-Performance Alloys for Power Transmission and Other Applications to be Available from Latrobe Specialty Steel Company*

LATROBE, PA and EVANSTON, IL, Nov. 20, 2009 - QuesTek Innovations LLC has awarded licenses to Latrobe Specialty Steel Company to produce and sell *Ferrium*® C61™ and C64™ alloys. These are the first licenses granted by QuesTek to make commercially and market these two alloys using QuesTek's compositions, processing expertise and intellectual property. Terms of the multi-year agreement were not disclosed.

*Ferrium* C61 and C64 are premium-quality carburizing steels that offer high core strength, high fatigue strength, high temperature resistance and high surface (i.e. case) hardenability. *Ferrium* C61 can achieve case hardness of 60-62 Rockwell "C" hardness (HRC), while *Ferrium* C64 can achieve case hardness of 62-64 HRC. The alloys were designed to permit gas quenching and to use conventional low-pressure carburization technology in order to minimize distortion, to reduce manufacturing times, and to give "dial-in" carburized case hardness profiles. The 900-950°F tempering temperature of these alloys provides a 400-600°F increase in thermal stability relative to incumbent alloys, yielding superior oil-out survivability.

These alloys are expected to benefit product applications where weight savings, compactness, high surface fatigue resistance, durability and high temperature resistance are valued, such as helicopter transmissions, racing car differentials, power transmission couplings, and similar demanding applications in aerospace, energy, racing, off-road vehicles, mission-critical systems, manufacturing equipment and other industries. Applications that combine structural loads with integral gearing, such as main power transmission shafts with integral gearing, can especially benefit.

*Ferrium* C64 was computationally designed and developed by QuesTek under an earlier Phase I and a current Phase II Small Business Technology Transfer (STTR) project awarded by the U.S. Navy Naval Air Systems Command (NAVAIR). QuesTek designed, invented and achieved successful results from the first commercial production heat of *Ferrium* C64 in less than 24 months after the property design goals were established for the new alloy. *Ferrium* C61 has been previously available only directly through QuesTek, and is currently used in product applications such as off-road racing vehicles and process machinery.

Scott A. Balliett, Latrobe Specialty Steel's Director Technology and Quality, said, "We sell these premium quality, high-hardness carburizing steels to customers worldwide to boost the performance and durability of their products. These alloys are produced in our state-of-the-art vacuum melting (VIM) and vacuum remelting (VAR) facilities which include the recently completed VIM and VAR expansion to our Latrobe, PA facility. Working with QuesTek, we accelerate introducing premium alloys to customers for vital defense and commercial applications."

Charlie Kuehmann, President and CEO of QuesTek, commented: "We're pleased to award these licenses to Latrobe. These licenses build upon our earlier license to Latrobe of *Ferrium* S53®, our ultra-high-strength, corrosion-resistant steel used for aircraft landing gear and other applications. We look forward to working further with Latrobe, their customers and design engineers worldwide to identify valuable product applications of *Ferrium* C61, C64 and S53."



## ABOUT QUESTEK

QuesTek Innovations LLC ([www.questek.com](http://www.questek.com)) is a global leader in computational materials design. QuesTek uses its proprietary *Materials by Design*® expertise to quickly develop new materials that reduce capital, processing, operating or maintenance costs, or improve environmental protection, competitive supply or competitive advantage. 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](mailto:jgrabowski@questek.com).

## ABOUT LATROBE SPECIALTY STEEL COMPANY

Latrobe Specialty Steel, headquartered in Latrobe, PA, has been in continual business in the same location since 1913 and supplying the aerospace and defense sectors since 1958. The firm employs approximately 800 people. Find additional information about Latrobe Specialty Steel at [www.latrobesteel.com](http://www.latrobesteel.com) or contact Lisa Pierce at 724-532-6324 ([lisa.pierce@latrobesteel.com](mailto:lisa.pierce@latrobesteel.com)).