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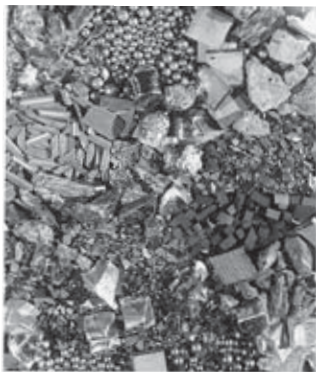
INSTITUTE MEMBER SINCE 2004—

Firth Rixson Limited Plans Metal Sales to Investment Casters

Firth Rixson Limited, a holding of The Carlyle Group, is emerging as a powerful force in the global metalworking industry.

As part of its business, Firth Rixson has an independent manufacturing operation that supplies superalloy material to the investment casting, forging and ring-rolling sectors. This facility already supplies to the 15 operating facilities Firth Rixson owns in North America, the United Kingdom and continental Europe.

In October, 2004, the company acquired Schlosser Forge Company, located in California. By the end of a busy year, Firth Rixson had completed deals for the construc-



Firth Rixson purchases raw material from leading suppliers worldwide to ensure alloy cleanliness, conformity to specification and quality, resulting in the optimum target chemistry.

tion of two green-field ventures in mainland China.

Chief Executive Officer Armand Lauzon, Jr. indicated Firth Rixson's membership in the Institute is a key part of the company's strategy to expand its sales of superalloy materials to the North American investment casting industry.

"As a forging organization, we do not manufacture metals for captive casting operations of our own. We are independent and can focus externally on our customers. And because our casting customers won't have to compete with us for material that is sometimes in short supply, we can establish ourselves as a stable, reliable source of supply to investment casting customers. Stability can be particularly important in periods, like now, when the market is turning up and investment-casting-quality raw material is sometimes in short supply," he said.

Philip Kirkham, the managing director of Firth Rixson Superalloys Limited, the superalloy melting operation of the company, is based in Glossop, Derbyshire, UK. He participated in the Institute's technical conference in Cincinnati last year to learn more about the state of the US market and



Superalloy melts are computer-controlled to meet customers' exacting chemistry requirements for ingots, billets and barstock.

to meet with Institute members and customers at the event.

"Customers are often surprised at the broad range of alloys, superalloys and steel products we can supply for investment casting applications. We provide metals in several forms, customized to the requirements of individual customers. For example, we have two vacuum induction melting (VIM) furnaces, which were designed and built to process heat sizes ranging from 3,000 to 20,000 lb.," Kirkham said.

"Also, in addition to the reorganization that has occurred under our new owner, we have a number of initiatives underway, which include both training and capital investments, that will enhance our

ability to meet customer requirements for the highest-quality investment casting alloys, as well as requirements for reliable delivery," he added.

At Firth Rixson Superalloys, the VIM process is used primarily to make remelt bar stock for precision-foundry customers. Firth Rixson also uses VIM to manufacture electrodes that are subsequently remelted to produce ingots or that can be converted by customers to billet and bar stock. In addition, the company supplies cast master alloy in various diameters from 2" to 8" and cut to any cut-charge weight, as customers require.

James Males, Firth Rixson Superalloys sales and marketing director, is charged



Firth Rixson maintains the raw material supply network, production resources and capacity to quickly meet the needs of high-volume superalloy users.

with spearheading the sale of the company's superalloys worldwide. "Whatever nickel-, cobalt- or iron-based superalloy customers are looking for, we can probably provide it," Males said. "Our metals are typically put to use in aerospace, defense, power generation, oil and gas, medical, petrochemical and other industry segments that use highly engineered castings in critical or technically advanced applications. For this reason, we have an intimate knowledge of the requirements of a variety of end-user applications that call for high-quality raw materials."

In addition to VIM manufacturing capabilities, Firth Rixson's superalloy produc-

tion unit also draws upon electroslag refining and air induction melting technologies to manufacture product. "One production route will always satisfy differing requirements better than others when it comes to chemistry, cleanliness, form, size and finish," Males continued. "We have the option to choose the route that serves the customer best."

Robert Pancoast, one of Firth Rixson's technical field representatives, is based in Newport News, VA. He joined the company after a 29-year career selling investment castings. His experience provides a background for understanding what end-customers look for in the castings they buy and



Materials are processed in one of Firth Rixson's two vacuum furnaces, such as this unit in Derbyshire, UK, designed to handle heats up to 12,000lb.

what investment casters look for in the material they select to make those castings.

To demonstrate its commitment to supplying top-quality material, Firth Rixson has earned and maintains numerous quality assurance certifications such as ISO9002, AS9100, ISO14001, NADCAP and QS9000. "We have also earned approvals from all of our major customers," Pancoast said.

"Firth Rixson follows rigorous quality control procedures throughout every stage of the production cycle. All melting operations are monitored by computer and data stored electronically," he added.

A full laboratory service complements production, employing chemical, mechanical and micro-metallography techniques throughout the manufacturing processes. The fully accredited service with UKAS

approval tests all material to customer specifications.

"These capabilities would not impress prospective customers if they were not supported by business practices that allowed us to be responsive to customers' need for fast, reliable delivery," Kirkham said. "To those ends, Firth Rixson follows lean manufacturing principles. As we practice it, lean is used to identify and manage constraints, eliminate unnecessary steps in manufacturing and administration, introduce or upgrade computer-controlled technologies in every department and improve internal and external communication. As a result of this approach, we are continuously improving our production throughput capabilities and on-time delivery performance, while increasing the flexibility of our process to respond to surge orders and changes."