



INDUSTRY PROBLEMS SOLVED THROUGH TECHNOLOGY BASED ON NECESSITY

Global metals industries, and the markets they serve, face many challenges such as increasingly stringent government regulations, added customer demands, volatile fluctuations in commodity prices and added competition, among others. Consequently, innovation is ever more imperative.

To support the implementation of promising technologies, Retech's unique research and development capabilities provides customers the ability to explore ideas and objectives with the support of the experienced R&D team. Retech places special emphasis on objectives that provide the greatest value to the customer.

MORE THAN JUST THE WORLD'S LEADING PROVIDER OF COLD HEARTH MELTING SYSTEMS

Since 1963, the mission at Retech Systems LLC has always been to grow into the leader in the supply of metallurgical processing equipment for demanding industries in ever-changing markets worldwide. Retech has been a pioneer in the application of Vacuum Arc Remelting and Vacuum Induction Melting equipment as well as Electron Beam and Plasma Cold Hearth Melting systems. Traditionally, these advanced processes and technologies have been applied to melting, refining, casting and atomization of reactive and refractory metals, such as titanium, titanium alloys, super alloys and rare earth metals. However, there have been more recent advances at Retech related to the production of silicon, glassy metals and carbides. Each custom engineered Retech System delivers products with the unique metallurgical and geometric properties that are required by the specific customer application.

CUSTOMIZATION IS FUNDAMENTAL

As a cornerstone upon which Retech was founded, Vacuum Arc Remelt (VAR) systems can be configured for a range of capacities for producing ingots or castings, from a laboratory scale to many tons, all while providing the very latest in commercial-scale, maintenance friendly systems utilizing fully integrated process control architecture and built-in features for safe, efficient operation.

Vacuum Induction Melting (VIM) systems stand proven to consistently deliver value and competitive advantage through intelligent design, precise and reliable heating, recipe driven controls and data acquisition. Retech equipment can easily handle a wide range of materials used in everything from automotive and consumer products to critical, high-value equiax (EQ), directionally solidified (DS) or single-crystal (SC) aerospace parts. Furthermore, Retech pioneered the design and engineering of Cold-Wall crucibles as well as equipment used in the production of the first single-crystal turbine blades.

A Retech Plasma Cold Hearth melting system uses an electrically excited gas, typically Helium or Argon, to melt reactive and refractory metals in a sealed chamber, under inert atmosphere. Similarly, a Retech Electron Beam Cold Hearth system capitalizes on the ease of use and low maintenance of Von Ardenne electron beam guns for melting metals under hard, or high vacuum conditions. For either system, the Cold Hearth is a water-cooled, copper vessel is devoid of contaminating elements, like Oxygen, and which yields clean, as-cast metal by removing high and low density inclusions during the refining process. Both Plasma and Electron Beam systems can be designed in a wide range of sizes, from a few pounds to many tons, as well as production of everything from ingots to castings and, in some cases, even powder.

CONTINUING IMPROVEMENT

Identifying customer needs, as well as understanding the importance of producing relevant, cost-effective technologies, is the foundation upon which Retech is built. As a true innovator, Retech continues to contribute important system advancements in many areas of process and technology development, most recently through hybrid plasma arc melting, consumable casting and metal powder production. With over half of Retech's systems built to service the international customers, Retech understands the need for vacuum metallurgical equipment and processes that are both proven and state-of-the-art.

In 2011 Retech became a part of the SECO/Warwick group of companies which has expanded its global presence through added sales and service centers around the world. Such a widespread exposure benefits all customers through improved proximity.

Additionally, Retech's experience and service, coupled with complete research, development, engineering and manufacturing facilities, are the key elements to the company's success and that of Retech's customers. Effectively, Retech is also the most fully integrated melting system manufacturer in the world by providing customer access to a wide range of in-house resources, including technology, material and process development. Retech works with each customer to tailor relevant, reliable, and cost-effective solutions all in an effort to achieve the individual requirements of each project, thus making Retech the leader in the supply of metallurgical processing equipment.