



RETECH
A SECO/WARWICK COMPANY

PLASMA ARC MELTING

(PAM) Furnace



PLASMA ARC MELTING

PLASMA ARC COLD HEARTH MELTING

- Materials: Reactive Metals, Refractory Metals, Amorphous Metals, Super Alloys, Silicon
- Refining to the Application: Alloy Production, Ingot Casting, Atomization

PLASMA ARC WELDING SYSTEMS

- Materials: Reactive Metals, Refractory Metals, Amorphous Metals, Super Alloys
- Applications: Remelt Electrode Production

PLASMA TORCHES

- Materials: Reactive Metals, Refractory Metals, Amorphous Metals, Super Alloys, Silicon
- Applications: Alloy Production, Ingot Casting, Atomization, Remelt Electrode Production

LABORATORY SCALE PLASMA FURNACES

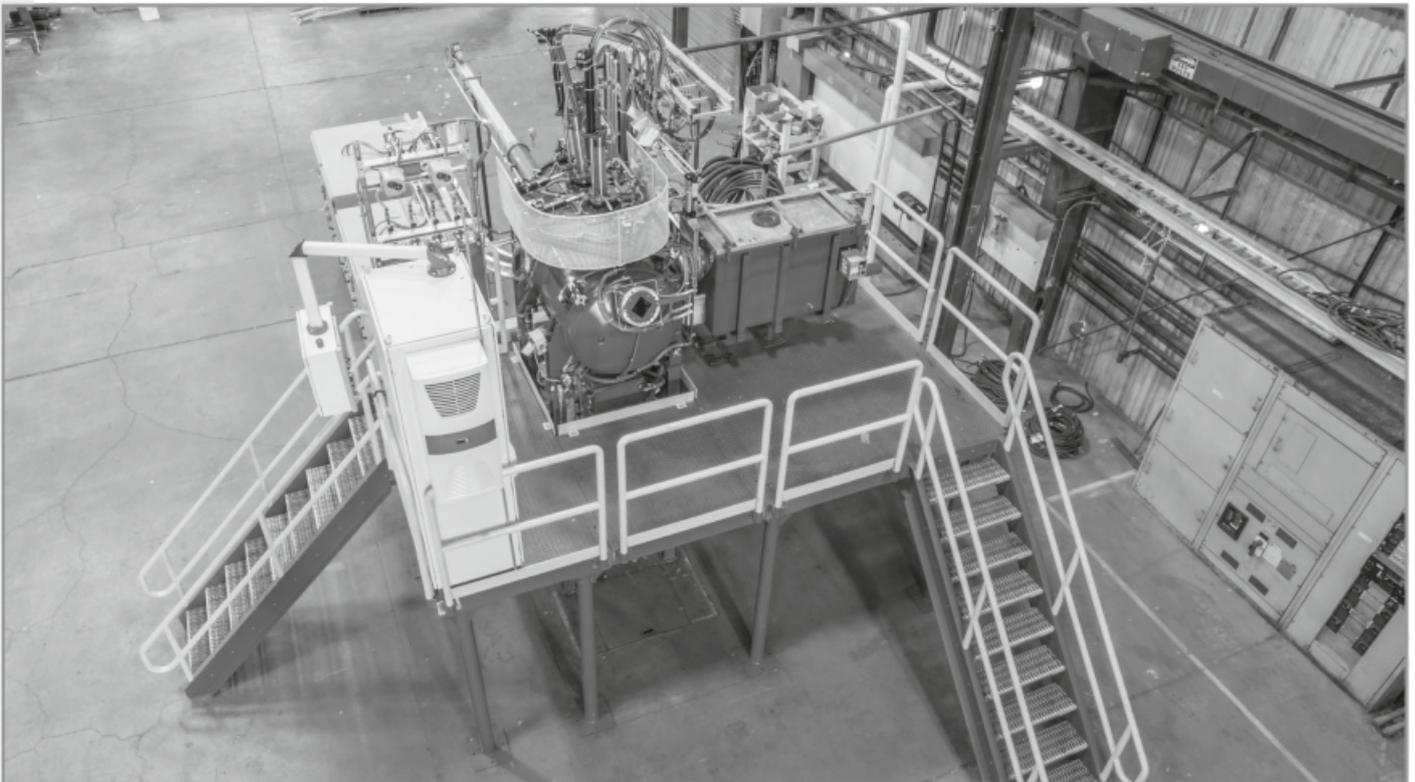
- Materials: Reactive Metals, Refractory Metals, Amorphous Metals, Super Alloys, Silicon

Retech a SECO/WARWICK Company is the global leader in the production of Plasma Arc Melting (PAM) furnaces used for melting, refining and casting reactive, refractory, and other metals, oxides, and metalloids like silicon. In fact, Retech's customers are currently the only qualified PAM producers of rotor-grade alloys.

Plasma Arc Melting system uses an electrically excited gas, typically helium or argon, to melt the materials in a sealed chamber, under inert atmosphere. The PAM process allows for low evaporative losses, thereby creating higher tolerance alloys. As the world's foremost producer of Plasma Arc Melting systems, our equipment is designed to provide:

- Proven refining technology to eliminate high and low density inclusions
- Sizes from single torch lab-scale to high volume, multi-torch systems
- A proven variety of feed and withdrawal solutions for various material forms
- Production of a wide variety of products from ingots and powder





Plasma Hearth Melting

Plasma melting systems offer significant cost savings by eliminating the need for electrode welding and primary Vacuum Arc Remelting. As with all furnaces, each can be designed for a wide range of sizes, configured with one or multiple torches, feed systems and withdrawal chambers for production of a wide variety of products from ingots and powder to castings. Utilizing plasma melting technology is an excellent option for processing a wide range of reactive and refractory metals.

Plasma Torches

Plasma technology uses an electrically excited gas from a plasma torch to heat and melt metals and other materials. Temperatures in the arc column can be higher than 10,000°C (~18,000°F). Three-axis torch manipulation can utilize either electrically or hydraulically actuated manipulator systems. Our ongoing plasma research and development programs have melted countless specialty materials for our customers. Further, our torches can be designed and adapted to replace or retrofit existing old and outmoded torches.

Plasma Arc Welding

Plasma Arc Welding Systems (Normally just PAW for Plasma Arc Welder) designed to longitudinally and compacted metals like titanium sponge into electrodes or, alternatively, end-to-end, first melt ingots. Retech Plasma Welders are multi-torch systems designed to easily operate with either argon or helium by conveniently changing process control parameters. All PAW include automated welding sequences and weld-strip patterns in addition to being designed to weld a variety of compact geometries.

Laboratory Scale Plasma Furnaces

Laboratory Scale Plasma furnaces are supplied to a wide range of companies, individuals and institutions for performing even larger variety of development and sample production.



About Retech Systems LLC, a SECO/WARWICK Company

Since 1963, Retech Systems LLC has been a global leader in the supply of vacuum metallurgical processing equipment. As an integral part of SECO/WARWICK Group, the most fully integrated furnace manufacturer in the world, we provide customer access to a wide range of in-house resources, including technology, material and process development. Whether a laboratory scale furnace or complete custom design, identifying customer needs, as well as understanding the importance of producing cost-effective technologies is the foundation upon which Retech is built.



SECO/WARWICK

INVENTION MEETS RELIABILITY