

Aluminum Furnaces

Ultimate in Flexibility and Versatility
for the Aluminum Industry



Heat Treat Furnaces for the Aluminum Industry

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Roller hearth T6 solution and age line

The AFC-Holcroft Advantage

AFC-Holcroft's furnaces for the aluminum industry include continuous roller hearth, chain conveyor, pusher tray, mesh belt conveyorized and batch equipment. These systems are used for solution heat treating, artificial aging, homogenizing, stress relieving, annealing, and removal of sand from castings.

Since 1960, the furnace companies that make up AFC-Holcroft – Atmosphere Furnace Company (AFC), Holcroft, Pacific Industrial Furnace Company (PIFCO), and ThermAlliance (TA) – have provided these furnaces to aluminum foundries, forging operations, stamping operations, and aluminum fabricators. These furnaces have always been supplied with the latest technology in system design and manufacturing technologies.

Each of the furnaces manufactured by AFC-Holcroft for the aluminum industry utilizes modular construction for ease of future expansion when required.

Quench System

AFC-Holcroft's experienced engineering and manufacturing staff will provide a water, polymer, or air quench system designed and manufactured with the optimum heating, cooling, recirculating system and internal ductwork that will meet customers' specifications.

On a continuous solution heat treat system, AFC-Holcroft has the experience to provide a rapid transfer time from the furnace to fully submerged in the quenchant. AFC-Holcroft has the capability to provide the "time to quench" as specified by the customer.

Left side:
3-Tier Chain Conveyor
Installation

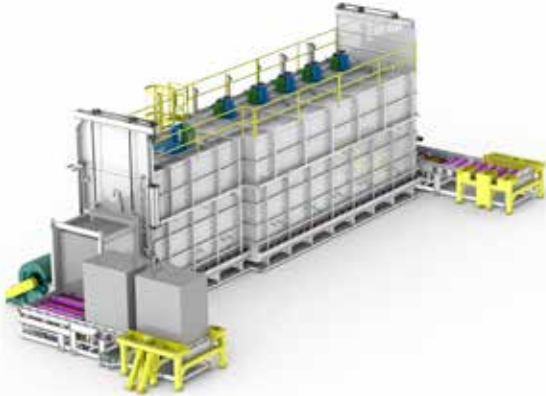
Right side:
Robot Loading



Temperature Uniformity

The recirculating air system within the furnace, the combustion system or electric heating system, and the control system are designed for optimum temperature uniformity and fastest heat-up capabilities. Each component is designed to provide the necessary temperature uniformity to meet the customer's requirements.

Temperature uniformity of $\pm 10^{\circ}\text{F}$ has been proven for all of the AFC-Holcroft furnaces used in the aluminum industry.



Left side:
Aluminium Billet
Homogenizing Line

Right side:
Water Quench System
Shown

Turnkey Installations

AFC-Holcroft can supply you with a turnkey installation that will provide:

- Complete installation of the equipment.
- Full automation of the material handling of the parts to and from the heat treat process.
- Automated, programmable process control for ease of operation.
- SCADA (Supervisory, Computer-Aided Data Acquisition) capabilities.
- Part tracking capabilities.
- Training on operation and maintenance.

Applications

AFC-Holcroft has experience providing heat treat processes for the following products:

- Aluminum wheels for automobiles, trucks, motorcycles, and aircraft.
- Automotive engine blocks, heads, pistons, water pumps, intake manifolds, and transmission casings.
- Automotive and aircraft suspension components.
- Aluminum cylinders i.e. automobile air bags, SCUBA tanks, and fire extinguishers.
- Aluminum castings.
- Aluminum forgings.
- Aluminum fabrication.
- Aluminum stampings.

Aluminum Aging Line



U-Shaped Configuration
Solution Age Line

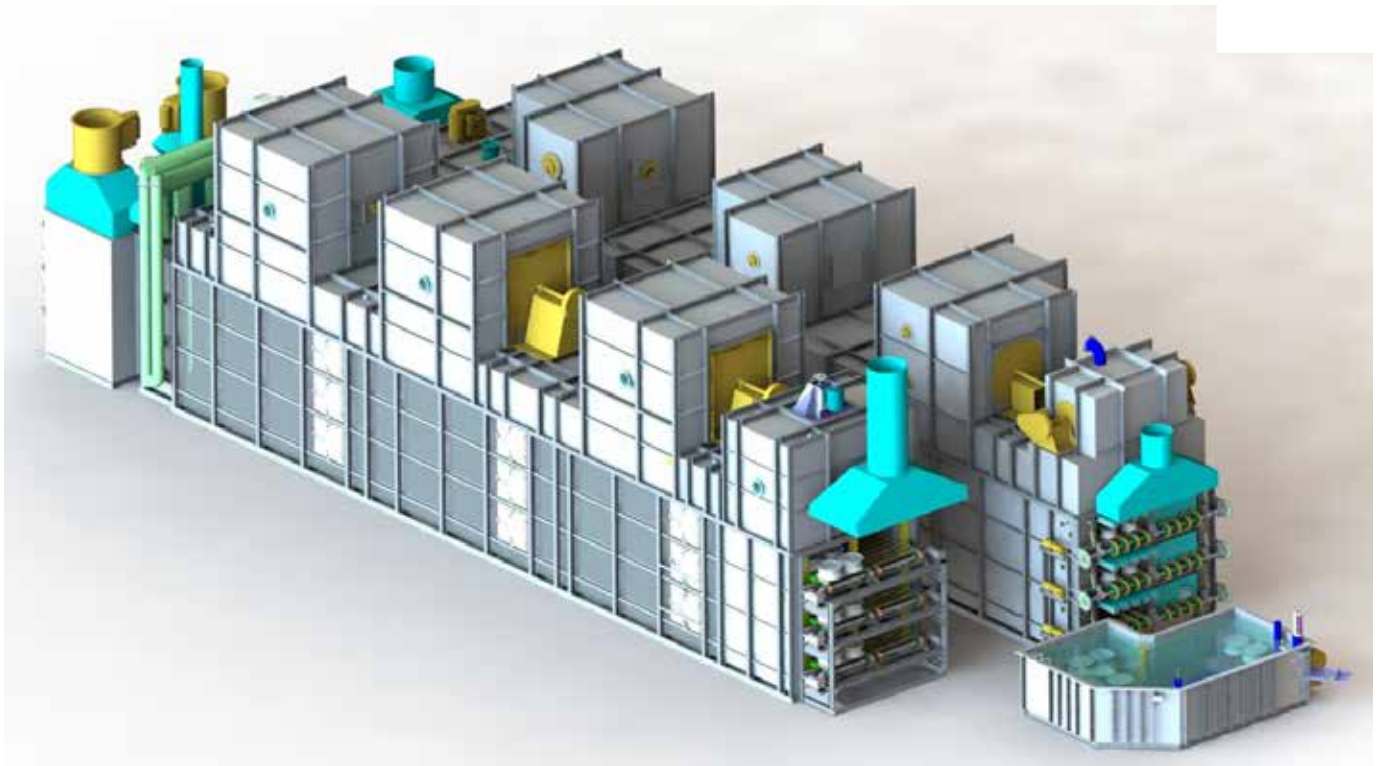


Ingenuity In Action

AFC-Holcroft has developed a concept for solution heat treating, quenching, and aging aluminum products without the need for carriers or baskets. This fully automated continuous solution heat treat system will transport your parts through the solution furnace, quench, and age systems by utilizing proven chain conveyors and robots. The system can process different size products at the same time, thereby increasing your heat treat flexibility.

This concept will GREATLY REDUCE OPERATING COSTS by:

- Eliminating the costs of maintaining or replacing the carriers and/or baskets.
- Eliminating costs of heating and quenching carriers and/or baskets.
- Eliminating the need for a quench pit.
- Eliminating any mechanism inside the quench tank.



**OUR OBJECTIVE:
KEEP OUR CUSTOMERS COMPETITIVE.**

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