

ATI Wah Chang — Huntsville Operations

OVERVIEW

ATI Wah Chang Huntsville Operations, located in Huntsville, Alabama, has been producing niobium-titanium and other rod and wire products since 1984. The facility comprises 111,955 ft² in five buildings on 21 acres.

CAPABILITIES AND EQUIPMENT

Huntsville Operations makes numerous sizes of superconducting grade niobium-titanium rod. Rivet-grade niobium-titanium sizes include 0.248" (6.2992 mm), 0.185" (4.699 mm), 0.1555" (3.9497 mm), 0.1245" (3.1623 mm), and 0.093" (2.3622 mm) in diameter. Rivet-grade wire is supplied unannealed with lubricant left on the material to help in the heading of rivets by the end user.

Huntsville's facilities include an 8F four-die swage that can swage-point up to 4" diameter multifilamentary bar. The facility's 200,000-pound draw bench is capable of processing bars up to 80' length with a capacity of 100,000 pounds-per-month. A second draw bench is capable of drawing nominal 2.4" diameter bars and lengths up to 180'.

Additional equipment in Huntsville's rod processing department includes a continuous annealing furnace, an aging furnace, straightening equipment, and ultrasonic testing equipment. The site's numerous bull blocks process material from 0.625" – 0.011" in diameter.

Huntsville Operations can anneal up to 1,000 pounds of material in its vacuum anneal furnace. After annealing, material is pickled in an acid cleaning facility, which includes 30' tanks for rods up to 28" long and tanks for pickling coils ~ 48" diameter.

Huntsville's protective surfaces on all machinery and handling equipment enable it to maintain high yields and unparalleled metallurgical and surface qualities.

PRODUCTS

Huntsville Operations manufactures a variety of products, including rivet-grade niobium-titanium, various diameters of zirconium and its alloys, NiTiNOL, Zr4 nuclear weld rod, hafnium for welding plasma tips and rod and wire, and 0.011" Zr 702 demister wire. In addition, the facility does the final processing for Smith and Nephews Zr2.5Nb and performs conversion processing of copper-clad superconductor for outside customers, processes nickel-base alloys, and draws various grades of titanium for other ATI operations.

Niobium-titanium alloys produced in Huntsville are used in Magnetic Resonance Imaging (MRI) devices (which safely scan the body's soft tissues) and in high-energy particle accelerators. In addition, niobium alloys emerging technologies, such as energy storage devices and ultra-efficient motors, use niobium-titanium. A niobium-titanium alloy is even used in pipe and other forms in gold mining autoclaves, where corrosion and ignition of materials are a great concern.

SALES AND SERVICE

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