



Metal Technology

ISO 9001 REGISTERED

Metal Technology (MTI), an ITAR Certified and ISO9001:2008 Registered company has a long history in propulsion and space applications and is on the leading edge of manufacturing technology in reactive and refractory metals.



ADDITIVE MANUFACTURING OF C-103, A NIOBIUM-BASED ALLOY, TAKING SHAPE AT MTI

July 28th, 2014

Metal Technology (MTI) has successfully 3D printed coupons in a key alloy required for space travel. C-103 is a niobium based alloy containing approximately 10% Hafnium and 1% Titanium. It is widely used in space applications because of its excellent formability, cost, weight, and reliability. However, until now it had not been sintered from a powder form using the additive manufacturing processes. MTI is the first to use a powder-bed laser, Additive Manufacturing system to produce solids from C-103. MTI's 3D Systems ProX 300 uses a powerful 500 watt laser which now opens the

door for MTI to develop complex components for Space Primes such as Aerojet Rocketdyne, ATK, Boeing, European Space Agency, Honeywell, JAXA, Lockheed Martin, Moog, NASA, Orbital Sciences, Pratt & Whitney, Sierra Nevada Corp., SpaceX, United Launch Alliance, UTC Aerospace and others.

MTI has been precision machining, deep draw forming, forging and fabricating in C-103 for years. "This project began in January, 2014 when we decided to pursue additive manufacturing as an additional capability to our operations. It's a natural evolution of our work

with C-103, to provide customers quicker delivery and more complex geometries" said Steve Smith, MTI's Director of Sales & Marketing.

MTI will display an overview of its capabilities at the AIAA Propulsion and Energy Conference in Cleveland, Ohio from July 28-30. Stop by booth number 609 to discuss all of the developments at MTI and discuss how the company can partner in your propulsion development projects.

MTI serves the Aerospace, Defense, High-Energy Physics, Medical, Semiconductor, Thin Film, Glass, Chemical Process and Scientific Industries.

> ABOUT METAL TECHNOLOGY (MTI)

With more than forty years' experience applying innovative, proprietary technologies, Metal Technology (MTI) is making possible the use of difficult alloys for a wider range of applications with greater efficiency, versatility, and reliability. Alloys include Tantalum, Niobium, Zirconium, Titanium, Tungsten, Nickel, Inconel, Molybdenum, and Vanadium. MTI uses specialized additive manufacturing, deep-draw, spinning, forging, machining, EDM, and fabrication methods to deliver superior products according to your exacting specifications. MTI produces components for ion source components, targets, seamless crucibles, explosively formed penetrators, tubing and vessels as well as custom parts that go beyond common configurations. Visit the company's website to learn more: www.mtialbany.com

TANTALUM NIOBIUM ZIRCONIUM VANADIUM TITANIUM TUNGSTEN NICKEL INCONEL COPPER

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