

ITA

Today

ITA CONTACT INFORMATION

International Titanium Association
11674 Huron Street, Suite 100
Broomfield, CO 80234

Telephone: (303) 404-2221
Facsimile: (303) 404-9111

Website: www.titanium.org
Email: ita@titanium.org

Jennifer Simpson
Executive Director

Kate Pennella
Sales & Marketing
kpennella@titanium.org

Stacey Blicher
Member Services
sblicher@titanium.org

Andrea White
Operations & Conference Support
awhite@titanium.org

Jennifer Cunningham
jcunningham@titanium.org



Visit us online at
www.titanium.org

Volume 2012 Issue III

Table of Contents

Titanium News	1
ITA Board of Directors.....	12
2012 Titanium Achievement Award Recipient.....	13
2012 Titanium Development Award Recipient.....	14
2012 Scholarship Recipients	15
2012 New Members	16
TITANIUM EUROPE.....	20
TITANIUM 2013 Exhibition.....	22
Fundamentals of Titanium Workshops.....	23
Classified Ads	24
Current Membership	27

About the Association

The International Titanium Association (ITA) is a nonprofit networking trade association for the titanium industry. Established in 1984, the Association's mission is to connect the public interested in using titanium with titanium specialist all over the world who may offer technical and sales assistance. The ITA also offers titanium literature and sponsors a variety of events such as educational workshops, seminars, and the annual TITANIUM Conference and Exhibition. The Association currently has over 200 member companies worldwide.

Titanium News

T.I. Expands Global Footprint to Include Facilities in Shanghai, China

Rockaway, NJ 9/5/12– Titanium Industries, Inc. (T.I.) today announced the expansion of their Global Service Center Network to include Shanghai, China. From this location, T.I. will be strategically placed to service the growing aerospace, medical, industrial, and oil and gas market across the Asia Pacific region.

Heading up the operation is Sutton Chen, Regional Manager, China and Alexis Zhu, Regional Sales Manager, Shanghai, who both have extensive experience in the metals industry in this region. Both Chen and Zhu will report to John Tien, Managing Director, Asia, T.I.

“We’ve been operating in the Asia Pacific region since 2008 when we first expanded into Taiwan. This is an exciting addition to our global footprint, and we look forward to serving the Chinese market from the mainland,” said Tien.

“We pride ourselves on being global and local. We have the ability to speak the local language of our customers

Continued on Page 10

Increased Emphasis on Quality at Sims Metal Management Aerospace

9/6/12 - Sims Metals Management Aerospace is now registered AS9100C (ISO 9001: 2008). “The new quality standard for aerospace operations, which took effect in July 2012, is part of a powerful system for controlling quality operations, and we are proud to meet the requirements,” said James M. Nathan, President of Sims Metal Management Aerospace, Hartford, CT. “It is part of our on-going effort to address the needs of our clients for melt-ready nickel, cobalt, and titanium alloy scrap feedstock and to meet global standards. We invite ITA conference attendees to visit us at Booth 700.”

Indicative of the company’s continued emphasis on quality is its participation in the SHEC program (Safety, Health, Environment, and Community). Recently SHEC was instituted at Sims FE Mottram in Sheffield, UK. Acquired by Sims Metal Management Aerospace in 2011, Sims FE Mottram has completed its vertical integration with the emphasis on quality in all aspects of the business. This includes workplace safety and operating in an ecologically sound way with

Continued on Page 7

Tico Titanium, Supra Alloys, Alloy Metals, and Snappy Materials Successfully Implement STRATIX Metal Industry ERP Software from Invera

Wallingford, CT (PRWEB) 8/20/12 - Tico Titanium, Supra Alloys, Alloy Metals, and Snappy Materials, a titanium, stainless and specialty metals metal service center, and part of the Lawrence Holdings, Inc. (LHI) group of companies, has implemented STRATIX, the metal service center software from Invera, a metal industry software specialist. STRATIX was implemented using the ON-DEMAND hosting service.

Benefits: Lawrence Holdings implemented a full complement of STRATIX features such as on-line sales order entry, purchase and receiving functions, shop floor receiving and production recording, multi-step processing functions, welded assemblies, and on-line transport planning. They also use integrated financials functions for Accounts Receivable, Accounts Payable, and General Ledger.

All LHI companies were migrated from three separate

Continued on Page 5

Solar Atmospheres Climbs Aboard Boeing’s 787 Dreamliner - Private Tour Reveals The Future of Air Travel



09/07/12 - The first, all-new airliner of the 21st century, the Boeing 787 Dreamliner, landed at Philadelphia International Airport on June 27th for its first visit to the city. As a major supplier to this “game changing” new aircraft, Solar Atmospheres received a personal invitation from Boeing for a private tour.

Solar provided vacuum heat treating of flight critical components, mostly made of titanium. With the majority of the aircraft’s weight made up of titanium and graphite composites, the Boeing 787 Dreamliner is the first midsize airplane capable of flying long range with a 20% increase in fuel efficiency. The 787 will allow airlines to open new, non-stop routes preferred by the traveling public. This airplane can leave PHL and fly non-stop to most any other airport in the world - up to 8,200 to 8,500 nautical miles!

Continued on Page 10

Titanium News

VAR skull melter furnace successfully built by GfE

GfE has successfully commissioned a VAR skull melter furnace, which is dedicated to the production of Titanium Aluminides (TiAl). This novel, high-temperature, intermetallic material is being used in new aircraft engine generations replacing Ni based superalloys in the last stages of the Low Pressure Turbine. Due to its low density, TiAl contributes remarkably to increasing aircraft engine efficiency.

The furnace was designed and built by ALD Vacuum Technologies, Hanau (Germany). The innovative technology allows the production of any feed stock materials for subsequent investment casting, forging and rolling operations at a reasonable cost level. In the future, the source for highest quality TiAl materials remains Nuremberg.



About GfE: GfE, founded in 1911 and being part of the AMG Advanced Metallurgical Group N.V., is a leading manufacturer and global supplier of high performance metals and materials.

Having gathered valuable expertise in the production of master alloys for more than 40 years, we have thus become one of the leaders in this sophisticated business worldwide.

We offer a wide range of high-quality products for different specialized sectors such as aerospace industry, super alloy industry, leisure industry, automotive industry, power plants, chemical plant construction, ship-building, off-shore technology, and many others.

Our master alloys are used, for example, in titanium and nickel based super alloys to produce special corrosion and heat-resistant parts for aircraft engines, land based turbines, off-shore drilling applications, and exterior shields.

Specialty products for the steel and aluminum industry and for powder metallurgical applications, as well as for the storage of hydrogen, complete our product range.

Through stringent testing such as visual, black light and X-ray inspection we are able to provide world class quality products that meet the highest technical requirements. We hold certificates in ISO 9001, EN 9100, ISO 14001 and BS OHSAS 18001.

With more than 90 years of know-how our R&D Department is continuously developing new tailor-made materials according to our customers' requirements, while our worldwide sales channels enable us to individually serve and support them.

Carver Machine Works Receives AS9100 Rev C and ISO9001 Certification

Carver Machine Works, Inc. (CMW) announced that they are now certified as meeting the requirements of AS9100 Rev C and ISO9001.

This achievement was a direct result of a multi-year project to implement a total quality system that confirms to the rigid requirements of AS9100 and ISO9001.

The certification will allow CMW to continue their growth into the Aerospace, Defense and Manufacturing industries by providing the highest level of quality, reliable delivery and most competitive price.

For more information contact CMW at 252-975-3101 or visit www.cmwglobal.com.



About Carver Machine Works: CMW is a 100% employee owned "build to print" custom fabricator and rotating

machinery repair facility located in Washington, NC employing Nadcap, AS9100 and ASME certified welders, master machinist and master mechanics. We provide a 2 shift manufacturing operation with quick turnaround capabilities. Our facility consists of 72,000 sq. ft. of manufacturing space, of which 50,000 sq. ft. is equipped with three 60' X 248' bays with 34' OAH and four 15 ton cranes. We have extensive experience working with exotic metals such as Titanium and high Nickel Alloys as well as Aluminum, various types of Stainless Steel and other duplex materials.

TITANIUM 2012 Conference Proceedings



TITANIUM 2012 Conference will be available to all registered delegates of the TITANIUM 2012 through the pathables social media website. You must register for the site and create your profile in order to download your copy of the presentations. The internet address is: <http://titanium2012.pathable.com/#users>

A flash drive of the proceedings will be shipped to all registered attendees following the conference.

Titanium News

ADMA Hydrogenated Titanium Powder Anticipates Growth

In January 2011, ADMA Products Inc. (a dba of Advance Materials Products, Inc.) produced its first Hydrogenated Titanium Powder in the United States of America. With this step, ADMA, a powder metallurgy solid state consolidator of products made from titanium, zirconium, niobium, stainless steel, nickel, and other advanced materials for almost thirty years, became a fully integrated titanium manufacturing enterprise. ADMA now produces "in house", ADMA Hydrogenated Titanium Powder and semi finished and finished titanium products.

Titanium components consolidated from ADMA's domestically and internationally patented Hydrogenated Titanium Powder achieve full density after sintering and processing, have extremely refined microstructures, and extremely high purity. They are completely "weldable". The ADMA "blended elemental" alloying process allows any titanium alloy to be prepared quickly and easily from ready to consolidate alloy powders.

Independent government laboratory and OEM testing has consistently shown that ADMA Hydrogenated Powder produced components surpass the requirements of ASTM, Mil-DTL 46077, and Aerospace Materials Specifications (AMS) established for ingot based titanium, and, they do so at far lower cost, with lower energy input and shorter lead time to finished products. Speakers from the Boeing Company and Pacific Northwest National Laboratory will announce at the AeroMat 2012 Conference in Charlotte, North Carolina, that ADMA Hydrogenated Titanium Powder Based Components have met and surpassed high cost ingot metallurgy titanium processes. To review the abstracts of those presentations we direct you to the following link: <http://asm.confex.com/asm/aero12/webprogram/Session4041.html>

In the next twelve months ADMA Hydrogenated Titanium Powder production capacity will grow to over 100,000 lbs per annum. Three Million lbs per annum production is planned by the end of 2013. Given ADMA Hydrogenated Titanium's "buy to fly" ratio of 1.02 to 1.0 (close to zero scrap rate), this amount of titanium will have a significant impact in the marketplace. For further information please contact Moxson@Admaproducts.com (330) 650-4000.



1880 Georgetown Road, Hudson, OH 44236
tel (330) 650-4000 fax (330) 650-4000
www.admaproducts.com

Service Steel Aerospace announces appointment of new management and facility

Seattle, WA 7/1/2012 - Service Steel Aerospace Corp announced the appointment of Doug Nesbitt as President. Mr. Nesbitt replaces Terry Wilson who retired on June 30th. Erich Thompson has assumed Mr. Nesbitt's previous role as Vice President of Sales and Marketing.

In addition to these key upper management changes, SSA announced the relocation of its corporate office and Washington operation to a new 75,000 SF facility, located in Fife WA. This relocation has allowed Service Steel Aerospace to expand its capabilities as well as storage capacity to better service its customers base.



Service Steel Aerospace Corp.
4609 70th St E
Fife, WA 98424
phone: (253) 627-2910

Medart Announces First Modern Bar Peeler & Straightener Delivered to India

6/8/12 - Medart is proud to announce that the first modern Medart bar peeler and straightener line has been delivered to Bangalore India for commissioning June 16th, 2012. Medart also has two line of order for delivery to India in 2013 that include:

Rough straightening, peeling and burnishing bars
between 6-25mm

And:

Bar Peeling bars between 38-200mm
Burnishing of bars between 38-150mm

Other new orders received include a bar peeler retro-fit for Mexico for bars between 22-75mm

Coil to bar line for the oil industry for coils from 31-40mm

Two (2) coil to coil peeling lines for small diameter wire.

For more information visit the website at www.straight-to-medart.com.



Titanium News

Metalysis successfully produces titanium powder directly from ores - Breakthrough sand to metal process

Metalysis, the UK based specialist metals company, has developed an innovative process that can transform natural rutile sands directly into titanium metal powder in a single step. Rutile is a naturally occurring titanium ore present in beach sands.

The Metalysis process, developed at the company's plant in Yorkshire, UK, has successfully carried out a series of production runs using rutile feedstock and is now able to produce a range of titanium powders. The breakthrough in the use of rutile ore as the feedstock is part of the decade-long development of a process to provide highly-efficient, cost effective and transformational specialist metals production. Metalysis' use of rutile ore as a feedstock is a low cost and environmentally benign method of titanium powder production. The new rutile derived titanium powder, can be used in a variety of new applications to satisfy the latent demand for a low cost, light weight, high strength and corrosion resistant metal.

In addition to titanium, tantalum and specialist metals (including rare earths), a wide range of innovative 'designer' alloys can be produced on a commercial scale

with a significantly reduced environmental impact. The process is also suitable for the recycling of strategic metals.

The nature of the Metalysis process means that it can produce alloys that would not be cost effective by traditional processes. It is entirely solid-state; therefore metals with significantly different densities or melting points can be alloyed. These innovative alloys can be tailored to have the desired properties for applications within a variety of industries including automotive, marine, electronics, clean energy and aerospace. Metalysis, originally a spin out from Cambridge University, has developed an extensive global patent portfolio and substantial 'know-how'. The portfolio currently comprises over 24 live patent families providing worldwide coverage for the technology.



Guppy Dhariwal, CEO of Metalysis, said: 'Metalysis has spent a significant period of time and resource developing a process that can produce titanium powder from a relatively inexpensive feedstock in a single step. We now expect that our process will have a transformational effect on the metals industry through the production of titanium on a greater scale, at a lower cost and in an environmentally benign manner.'

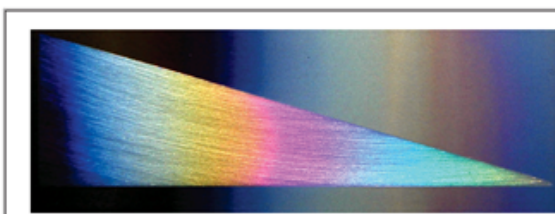
Reactive Metals Studio, Inc. Offers Multi-Etch®

09/06/12 - Multi-Etch® The Non-Acid Etching Alternative for Titanium and Other Metals

Clean titanium without hydrofluoric acid! At a nonacid pH of 6.8, it's much safer than traditional etching methods. Multi-Etch® will remove contamination and oxides while maintaining surface finish. Etch rates from .0005" to .050" depending on grade of titanium and etch time. Multi-Etch® can be used either hot or cold. Both processes are easy to set up and use.

Whether you are anodizing medical parts, cleaning off surface oxides, removing anodizing mistakes, making beautiful jewelry or enhancing patterns on meteorites, Multi-Etch® is the safest, most user friendly product on the market today. Sold exclusively through Reactive Metals Studio for the US market.

For more information, contact Reactive Metals Studio on the web at
<http://www.reactivemetals.com> or
<http://www.multietch.com>



This titanium sample has been masked and partially treated with **Multi-Etch & Scotch-Brite**. It was all anodized at the same time. Demonstrating the brilliant colors of chemically cleaned titanium.

Titanium News

LHI Organizations Implement STRATIX Metal Industry ERP Software Continued From Page 1

legacy enterprise systems and consolidated onto the single enterprise software STRATIX.

K.C. Jones, CFO of Lawrence Holdings, added, "The consolidation of all our companies onto a single platform has been an important step forward for the Lawrence Holdings companies. This will allow us to not only consolidate our inventory and operations, but also take advantage of synergies and the knowledge expertise in our company to benefit our customers."

The sales department benefited from the on-line Order Status Inquiry, which allows their sales staff to provide the status of the customer's Sales Order at a single glance no matter where the order is being processed. This includes processing, shipping, and invoicing status as well as other information. Sales can now also take a single order and source each line item from any number of company warehouses located across the country.

The implementation also included the STRATIXimage product to scan the Original Mill Certificate into STRATIX. This allows the certificate for a tag in inventory to be viewed from a stock inquiry, and automatically printed or emailed based on the customer profile at shipping time. STRATIX also provided LHI with a robust quality data profile for each inventory item with chemical results, mechanical tests, and metal specifications. This includes various checks that are performed throughout order fulfillment to ensure that the material being shipped to the customer is within their specification and quality requirements. Sales can also quickly search stock based on a specific customer chemical, mechanical test, and/or metal specification requirement.

The production department is making full use of the on-line Production Planning functions to view the order to be picked or processed before releasing it for fulfillment. Production managers now use on-line Production Schedules to manage work in the warehouse, and, as orders are fulfilled, warehouse personnel record production and print any item or package labels using the on-line work center lineup.

Implementation: The implementation of the metals ERP software solution STRATIX included sales, purchasing, receiving, inventory management, multi-step production, production scheduling, delivery and logistics planning, invoicing, and financials. A seamless integra-

tion of native metal industry terminology, functions, and features made the STRATIX metal enterprise software fast to deploy with minimum implementation costs.

Ray Vasson, Managing Director of Invera Ltd., added, "Each of the Lawrence Holdings companies had unique inventory, quality, processing and operational requirements that could natively be handled by our enterprise system STRATIX. The metal specific features already built into STRATIX allowed us to implement STRATIX with no modifications and complete the entire project in 7 months."

STRATIX ON-DEMAND Hosting Service: Lawrence Holdings chose the STRATIX ON-DEMAND hosting service to allow them to focus on their core metal operations and outsource their technology operational requirements to Invera. With this service, all software applications and data are hosted at the Invera Technology Center.



About Lawrence Holdings: Lawrence Holdings Inc., a metal service center group based in Wallingford, CT, carries all products required for Aerospace, Industrial, Chemical, Petro-Chemical, Oil & Gas, Refinery, Pulp & Paper, Utility, Heat Exchanger, Navy & Marine markets. Lawrence Holdings Inc. consists of the following companies: Tico Titanium, Supra Alloys, Snappy Materials, and Alloy Metals. LHI's headquarters are located in Wallingford, CT. They have six other metal service center locations in the USA (Wixom, MI, Rochester Hills, MI, Houston, TX, Wallingford, CT, Camarillo, CA, and Wilmington, DE). In addition, LHI's titanium products include Titanium Plate, Sheet, Bar, Billet, Titanium Weld Wire, Tube, Pipe, Forgings, Fasteners, Titanium Fittings, Flanges, Tanks Sputtering Targets, and Custom Fabrications. LHI has a comprehensive focus on domestic distribution of non-ferrous exotic and specialty alloys such as high temperature alloys, stainless steel, aluminum and copper. Lawrence Holdings' state-of-the-art facilities include some of the industry's most sophisticated equipment with the following processing capabilities: water-jet cutting, plate sawing, shearing, precision bar sawing, CNC machining, drilling, straightening, chemical milling, kitting, weldments and fabrications, and PVC laminating.

INVERA **About Invera:** Invera has been providing steel and metal service center software (ERP) and Internet metal systems for over 30 years. Invera is the largest software company dedicated exclusively to the steel and metal service center, metal distribution, steel stockholder, and metal processing industry. Their metal industry software products STRATIX and eSTELPLAN are used by more than 13,000 users at over 600 sites in the United States, Europe, Mexico, Canada, Dubai, South Africa and the Far East. Contact (514) 925-8558 for North America, or +44 (0)7740-664007 for the UK and Europe, or visit www.invera.com.

Titanium News

- **TITAL investment in China**
- **Long-term expansion of German plant**
- **Good order book allows for investments home and abroad**
- **Chinese importance for civil aircraft production**

The titanium and aluminum investment casting specialist TITAL will start production in China in 2013. The German Company signed an agreement with the Chinese authorities for the set-up and operation of a plant in Nantong. As of next year aluminum investment castings for the European and Chinese markets will be produced in Nantong, a city of two million inhabitants about 75 miles north of Shanghai.

“China’s importance for the production of civil aircraft will strongly increase. Strategic alliances between western aircraft and engine manufacturers show this trend. And we do not want to stand outside”, Philipp Schack, Managing Director of TITAL confirms the company’s plans.

TITAL is the first international aluminum investment casting specialist for aircraft components to take this chance and start producing castings in China. The signature of the agreements with the Chinese Authorities at the end of last year was a prerequisite for setting up the new TITAL site in Nantong in the Chinese province of Jiangsu. The Chinese company has already been founded and the refurbishment of the production facility has started.

A team of three experienced TITAL engineers coordinated the production set-up. Machinery and equipment are scheduled to be finished by end of 2012. “We plan to start full production in the first quarter of 2013 and to deliver the first aluminum parts in the same year”, Schack explains the ambitious time schedule. The official business license has already been granted by Chinese authorities. This is the main prerequisite for the operational start of TITAL (Nantong) Co. Ltd.

TITAL benefits from the good international economic conditions and focuses on a strategic improvement of its market position. As a consequence investments are not only foreseen in China, but also into the TITAL’s headquarter in Bestwig. There TITAL plans to enlarge production in order to further reinforce its position as one of the worldwide leading investment casting specialists.

About TITAL GmbH: TITAL supplies industry leading



companies around the world in the field of aerospace, defense, motor sport and industrial systems with sophisticated aluminium and titanium investment casting products using the lost wax process. TITAL was founded in 1974 and in 2006 the management took over the company. Today the company employs more than 500 people with 2011 revenue of €53M. Press contact intern: P. Jerusalem / TITAL GmbH, Fon +49 (0) 2904 - 981 - 0, Kapellenstraße 44, D- 59909 Bestwig www.tital.de - Press contact extern: Papenbusch media GmbH, Fon +49 (0) 2373 – 179098 - 0, Unnaer Straße 50 D- 58706 Menden www.papenbusch.de

Titanium Alloy Hard Anodizing

Russamer Lab LLC (www.russamer.com) developed a new variation of the titanium alloy hard anodizing, fully complied with AMS2488D. The coating is smooth and does not require additional step of soft “fur” removal. The thickness of the anodized film is 4-8 microns, depending on the requirements.



The distinctive feature of the technology is that the growth of the anodic film is stable, without arc flash and burn-through spots.



Russamer Lab will anodize samples for free for the companies willing to evaluate the coating and provide their feedback. Contact Anna Berkovich at admin@russamer.com

Low Cost Titanium Forms

Sponge is melt processed into alloy forms consisting of near net shapes, preforms for secondary processing and into final componentry at a cost of approximately 3 to 5 times basic sponge cost depending on alloy composition. Titanium can be cost competitive in transportation and many other industries utilizing this advanced low cost processing.



7960 S. Kolb Road, Tucson, AZ 85756-9237
 PH: 520-574-1980 FX: 520-574-1983
 mercorp@mercorp.com

Titanium News

Machining technology a cut above the rest

A CSIRO machining technology capable of machining titanium components up to 80% faster has the potential to reduce costs of machining by up to half.

The technology, called thermally assisted machining (TAM), uses heat from laser energy to soften the metal immediately in front of the cutting tool, so that it is more easily removed – reducing wear on the cutting tool and prolonging tool life by up to three times.

TAM increases machining productivity in several ways – rough cutting time is reduced by up to 80 per cent and the material removal rate can be up to five times faster, with similar increase in the feed speed of metal past the cutting tool.

The technology is supported by the Australian Department of Defence New Air Combat Capability Industry Support Program and Lockheed Martin, with the aim of providing Australian suppliers of precision machined titanium components with a globally competitive advantage.

CSIRO, leading a consortium including Queensland based SME Ferra Engineering, Lockheed Martin, RMIT University and CAST CRC, is applying the technology to develop an integrated production cell, which incorporates a moveable laser head into a 5-axis CNC (computer numerical control) milling machine in a factory environment.

CSIRO plans to licence the TAM technology to producers of machining equipment.

CSIRO anticipates that the TAM technology will boost Australian industry competitiveness in production of precision milled and machined components for the global aerospace and automotive markets. The technology can be exploited for machining parts made from titanium, titanium alloys, and other hard metals such as nickel based superalloys and high strength steels.

Ferra Engineering, CSIRO's Australian partner on the project, already holds several contracts for manufacture and assembly of aerospace components for major customers including Lockheed Martin, Northrop Grumman and Marvin Engineering, including machining of aerospace assemblies made from titanium for the Joint Strike Fighter (JSF) program.

“Ferra's innovation in titanium machining has been essential to our success in winning previous JSF contracts, so we're excited to be a part of the CSIRO industry team working to commercialise TAM. We expect the TAM technology to be important in our continued growth as a supplier to the aerospace industry,” said Mark Scherrer, Managing Director of Ferra Engineering.

“We feel that reducing costs through innovation is a shared responsibility across the global supply chain and we are making an investment in Australian innovation. Lockheed Martin is proud to be a part of the industry team that CSIRO has assembled,” said Graham Bentley, Director of International Business Development Australia at Lockheed Martin Aeronautics.

With the technology, CSIRO hopes to foster growth of a specialised machining capability in Australia. Australian companies wanting to use TAM technology will be able to access CSIRO support for development of specialist skills, including best practices, know-how and guidelines for optimal machine operating conditions.



For more information visit the website at: www.csiro.au/TitaniumMachining or contact: John.Barnes@csiro.au; Kapil.Talwar@csiro.au

*Increased Emphasis on Quality at Sims
Continued From Page 1*

sustainable use of resources to minimize waste and protect the environment. SHEC also focuses on working constructively with local communities. “These changes mean that Sims FE Mottram is positioned well to take advantage of upward movement in the ferro-titanium market once the steel industry begins to strengthen and issues in the EuroZone resolve,” said Mr. Nathan.



Sims Metal Management is the world's largest listed metal recycler with approximately 270 facilities and 6,600 employees globally.

Sims' core businesses are metal recycling and electronics recycling. The Company's ordinary shares are listed on the Australian Securities Exchange (ASX:SGM) and its ADRs are listed on the New York Stock Exchange (NYSE:SMS).

Titanium News

American Titanium Works Adds Mike Wellham to Board “Titanium Village” Taking Shape

09/19/12 -- American Titanium Works LLC (ATW) today announced that Mike Wellham, President and Chief Executive Officer of Bluewater Thermal Solutions, has joined its Board of Directors. Bluewater Thermal, headquartered in Greenville, SC, provides thermal processing solutions to a number of specialty end markets including automotive, aerospace, defense, energy, heavy equipment and medical industries. Mr. Wellham joined Bluewater Thermal Solutions in November of 2009.

Prior to Bluewater, Mr. Wellham served as President and Chief Operating Officer of RTI International Metals, Inc. from April 2007 until October 2009. He also served as Senior Vice President, Fabrication and Distribution for RTI International Metals, Inc. as well as various roles in leadership after joining RTI in 1998. He has an MBA from the University Of Tennessee.

“Mike is a great addition to our board,” said Tom Sax, ATW President and CEO. “He brings terrific insight and experience regarding the manufacturing, distribution and sale of titanium. His advice and leadership are incredibly valuable. We are thrilled to have him on the team.”

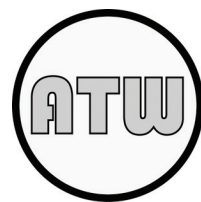
“I am very excited about joining the ATW Board,” said Wellham. “The company has an industry changing concept that is long overdue and I look forward to working with the Board and management in the years to come on this necessary endeavor.”

American Titanium Works plans to build its new world-class titanium manufacturing facility in Laurens, South Carolina. The team remains focused and together after 5 years, despite facing delays due to the downturn in the economy.

“We had to adjust to the realities of the financial crisis,” said Scott Jackson, VP and co-founder of the company. “Things are clearly coming back around for us. This project will create manufacturing jobs at home. Our project is just what this country needs right now and we are optimistic that we will get this done soon. The financial markets are once again receptive to projects like ATW. We couldn’t be more excited. The project is fully developed. The basic engineering is done. Major equipment contracts have been let to suppliers subject only to completion of financing. Raw material supply

agreements are in place. South Carolina incentives are in place. Projects delivery risks have been fully mitigated with an EPC agreement with Archer Western Contractors. We are in a position to break ground literally within weeks of finalizing our financing. Our expectation is that financing will be concluded in the near term”. As part of the effort to change the industry, ATW has developed a unique vision with its “Titanium Village” concept for its Laurens County site. The company is aggressively working to attract a number of synergistic, strategically important upstream and downstream companies in order to capture efficiencies associated with the co-location of complementary businesses.

“We have a number of notable companies discussing co-location with us who are leaders in their industries,” said Tom Sax. “It is our desire, together with Village Founders, to streamline the process of making titanium. Therefore we are being selective and thoughtful about which companies pair well with one another. When you combine these elements, along with the ATW Technical and Applications Development Center that will be located at the Clemson University International Center for Automotive Research Center (CU-ICAR) in Greenville, 30 miles from the plant, it is a complete program to bring efficiency, know-how and customer service to one location.”



American Titanium Works manufacturing activities will include an extensive solids and machine turnings preparation and blending equipment, Electron Beam (EB) melting, Plasma Arc Melting (PAM) and vacuum arc melting (VAR) furnaces and a best-in-class 4-high rolling mill designed and purpose-built for rolling of alloyed and commercially pure titanium plate. A wide range of titanium conditioning and finishing equipment will be on site to ensure quality and reduce lead-times. The facility will incorporate proprietary technologies and process innovations enabling American Titanium Works to convert a wide variety of inputs into alloyed and commercially pure ingots, rounds and slabs of various sizes. Rolled product will be available from 0.1875 in. to 4.0 in. in thickness, widths up to 96 in. and lengths in excess of 240 in. American Titanium Works also will offer melting, rolling, and conditioning services each on a toll basis.

Titanium News

NEW CAPABILITIES AT BODYCOTE SOUTHERN CALIFORNIA LOCATIONS TO SERVE TITANIUM INDUSTRY

9/10/12 - Bodycote, the world's largest thermal processing services provider, continues to reaffirm its commitment to support the titanium industry with new capabilities at its Southern California locations. These new additions will benefit the market as it pushes for growth and streamlines the supply chain.

Bodycote Santa Fe Springs facility is installing a new 20 foot (measures 20'x8'x5') furnace with the capability of processing 30,000 lbs at 2,250 degrees Fahrenheit. The new furnace complements the 13 furnaces already running on location serving the local aerospace and engines market. In addition to the new furnace, Bodycote is developing a second location in Santa Fe Springs to support the growing demand for formed titanium structures. This second location will be the Center of Excellence for Titanium Forming focusing on de-twisting, straightening and hot forming of structural components.

Another Bodycote facility in Rancho Dominguez, California recently installed a 130" hot zone, creating the largest commercial vertical vacuum furnace in the United States. Tracy Glende, President of Bodycote Aerospace, Defense and Energy says, "We decided to invest in the additional vertical capacity based on our discussions with key customers and end users. The horizontal market is already well served, so the additional vertical capacity will enable Bodycote to support needs of the aerospace market to heat treat parts such as large diameter titanium rings and aerospace structural components". The Rancho Dominguez plant now operates the most comprehensive range of furnaces in the United States, enabling Bodycote customers to receive a wide range of thermal processing services within a single facility, providing superior quality and turn-around time.

The additional capabilities in Southern California are in line with Bodycote's efforts to continue its global leadership in thermal processing services. This year it acquired nine Curtiss-Wright Corporation locations in the United States, three of which are in Wichita, Kansas with focus on the aerospace and defense industry. The Empalme, Mexico facility was established in 2011 and continues to play a vital role in the area's aerospace and power generation supply chain. Bodycote has also announced the opening of a new heat treatment facility in Toulouse, France next year to serve the region's large

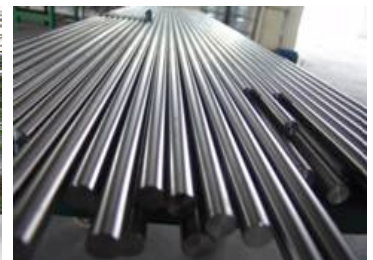
aerospace hub supporting Airbus.



About Bodycote: With more than 180 locations in 27 countries, Bodycote is the world's largest provider of thermal processing services. Through heat treatment, metal joining, surface technology and Hot Isostatic Pressing (HIP), Bodycote improves the properties of metals and alloys, extending the life of vital components for a wide range of industries, including aerospace, defense, automotive, power generation, oil & gas, construction, medical and transportation. Customers in all of these industries have entrusted their products to Bodycote's care for more than 30 years. For more information, visit www.bodycote.com.

For additional information, please contact: Dave Ochar, Strategic Business Manager, Bodycote Aerospace, Defense and Energy, Tel.: +1 310 800 5699, Email: dave.ochar@bodycote.com

California Titanium LLC Opens New Office in Redondo Beach, California, USA



In February 2012, California Titanium LLC moved to its new office at 326 S. Pacific Coast Highway, Suite 201, Redondo Beach, CA, 90277 with convenient access to LAX and the Ports of Los Angeles and Long Beach. This office complements its warehouse operation in the Port of Los Angeles at 430 Lecouvreur Avenue, Wilmington, CA 90744.

California Titanium LLC distributes and supplies all titanium mill products and titanium sponge with an emphasis on titanium round bars.

Please send inquiries to sales@caltitanium.com or call (310) 683-8004, www.caltitanium.com.



Titanium News

*T.I. Expands Global Footprint
Continued From Page 1*

around the world, and to understand the market conditions in which they operate,” said Jeff Wise, VP, Sales & Marketing, T.I.

The expansion comes alongside the launch of T.I.’s Supply Chain Optimization Service, T.I. Materials Management.

“Over the years, we’ve been asked by many customers how to cut costs and improve their business operations. Now we’re formally packaging this service so we can proactively and concisely provide our customers with a custom service package that fits their specific needs, said Brett Paddock, CEO & President, T.I..

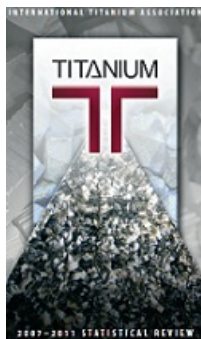
The Shanghai site will be fully functional by the end of September 2012. T.I. Materials Management will launch in mid October.



About T.I. : T.I. is the global leader in performance metal solutions for the aerospace, medical, industrial and oil and gas markets. Holding the world’s most complete inventory of performance metals across a global service center network,

T.I. delivers supply chain solutions at all levels of sophistication and complexity. With a globally experienced, technically driven team and total dedication to quality, T.I. has been providing dependable, quality driven solutions to customers for over 40 years. For more information, contact: John Tien, Managing Director, Asia, p: (+886) 2 2298 9668 or jtien@titanium.com or Jeff Wise, VP, Sales & Marketing, phone: +1 (303) 220-5434; email jwise@titanium.com

Titanium Statistical Review 2007-2011 (pdf format only)



The Statistical Review is a compilation of titanium statistics, organized by the ITA from government and trade association data. The publication includes a full range of industry statistics including Canada, China, European Union, Japan, Russia, Taiwan, and USA. Published annually, the Statistical Review includes information from the new Harmonized System.

Members: FREE Non Members: \$75.00 U.S.

****Note: If you are an ITA Member, Login and download your free copy today****

*Solar Atmospheres Climbs Onboard
Continued From Page 1*

Your first impression of the aircraft is how large and majestic it is. While climbing the boarding stairs, the sweeping and extremely thin all-composite wing was most impressive along with the massive 100,000 pound thrust dual Rolls Royce engines.

As soon as you enter the plane, it is obvious that you are someplace special. The spacious, cathedral-style entrance is akin to the welcoming lobby of a hotel- not just a tube and turn right. The soft tone LED lighting combines for a fantastic flying environment. The overhead luggage bins are huge (4 roller boards can fit in one bin). The seats in both business class and coach are more comfortable and offer more legroom. The lavatories in coach offer more room than any other aircraft. The windows are substantially larger thereby offering outstanding views even when sitting in the center of the two aisle configuration. The electronic dimmer controls within the glass of the windows eliminates the clunky shades. There are rest quarters (the captain called them tree houses) located in the front for the pilots and in the aft for the flight attendants.



The most thrilling part of the tour was to actually sit in the cockpit. Here you can see Bob Hill, President of Solar Atmospheres of Western Pennsylvania sitting in the captain’s chair. Note- the HUD (heads up display) which is the bracket holding the transparent glass. This device provides the pilot with critical information without looking at his instrument panel. What a momentous day for Solar Atmospheres and the heat treating world!



Solar Atmospheres representatives (from L): William R. Jones, CEO, Mike Johnson, Tim Steber, Jamie Jones, Trevor Jones, Susan Generalovich, Captain Mike Bryan, Bob Sandora, Roger Jones, Kevin Bekelja, Robert Hill

ITA Board of Directors

ITA Welcomes New Board of Directors

The International Titanium Association (ITA) has tapped Donald E. Larsen Jr. of Alcoa-Howmet, and Edward A. Sobota, Jr. of TSI Titanium, as new members for its board of directors. They will be officially installed on Oct. 9 at the TITANIUM 2012 Conference in Atlanta, Georgia.



Donald Larsen is the plant manager of Ti-ingot for Alcoa-Howmet, which specializes in investment casting of superalloys, aluminum and titanium for aerospace engines and airframes and industrial gas-turbine engine components.



Edward Sobota, Jr. is president of TSI Titanium, which is involved in rolling, forging, heat treating, machining and finishing of titanium billets, bars, mill products and specialty shapes.

Sobota and Larsen will replace Frank L. Perryman, president and chief executive officer of Perryman Co., Houston, PA, and Dan Buwalda, a plant manager with Keywell LLC, Chicago, as their terms have expired on the ITA board.

The new slate of executive officers for the ITA's board of directors includes Brett S. Paddock of Titanium Industries Inc., president; Dawne S. Hickton of RTI International Metals Inc., vice president; James M. Buch of TIMET - Titanium Metals Corp., secretary/treasurer; and Michael G. Metz of VSMPO Tirus US, past president.

"I'm eager to take on the role of ITA president," Paddock said. "Although the past president, Mike Metz, is leaving big shoes to fill, I'm looking forward to working closely with the board and other new officers."

Paddock underlined near-term opportunities he will lead to support the ITA's growing membership. In March 2013 the ITA will host a new European conference in Hamburg, Germany. "This conference will bring the combined expertise of the leading executives of the ITA's member companies to Europe for the first time in 15 years, promote our growing international membership, as well as support the global footprint of many of our existing member companies," he said.

He also noted ITA initiatives to recruit a new generation

of talent for the titanium industry. As examples, Paddock pointed to the ITA Education Committee's Poster Session and Master's Dissertation contests, along with the science, technology, engineering and math (STEM) scholarship program.

"As our industry develops, it's increasingly important that we attract new talent," he said. "These young people will be the leaders of our industry and will shape the future of the products and markets so important to the success of our member companies."

Paddock praised the addition of Larsen and Sobota to the board. "Both of these gentlemen are well-respected executives within the industry and their organizations have a distinguished history with the ITA. Their knowledge and expertise will be invaluable as we continue to promote the growth of the titanium industry."

In addition to Larsen and Sobota, the ITA board will be composed of Lawrence D. Buhl III of Lawrence Holdings Inc.; Hunter R. Dalton, ATI Allvac; Markus Holz, ALD Vacuum Technologies; William B. Kent, Dynamet Inc.; James M. Nathan, Sims Metal Management, Aerospace; Jerry St. Clair, Vulcanium Metals Inc.; and Graham P. Walker, AMETEK - Reading Alloys. Jennifer Simpson is the ITA's executive director.

Perryman served as the chair of the ITA's 2012 nominating committee—a group that included Buwalda, Buch, Hickton and Walker.

The ITA will be seeking new board members beginning in 2014. The nominating committee is looking to interview enthusiastic candidates who provide leadership to support the global titanium industry. Time commitment involves attendance at a minimum of four board meetings per year. Active participation in the ITA's annual TITANIUM conference is strongly encouraged. Call the ITA at (303) 404-2221 or visit the association's Web site (www.titanium.org) for more information.



ITA Board of Directors



ITA President:
Brett S. Paddock
President & CEO
Titanium Industries, Incorporated



ITA Vice President:
Dawne S. Hickton
Vice Chair, President & CEO
RTI International Metals, Inc.



ITA Secretary/Treasurer:
James M. Buch
Vice President Commercial
TIMET, Titanium Metals Corporation



Past President:
Michael G. Metz
President, Tirus US
VSMPO Tirus US



ITA Director:
Lawrence D Buhl III
CEO
Lawrence Holdings



ITA Director:
Hunter R. Dalton
President, ATI Allvac
EVP, ATI Long Products



ITA Director:
Markus Holz
Managing Director
ALD Vacuum Technologies



ITA Director:
William B. Kent
Vice President Dynamet & CPP
Dynamet Incorporated



ITA Director:
Donald E. Larsen
Plant Manager
Alcoa-Howmet



ITA Director:
James M. Nathan
President
Sims Metal Management Aerospace



ITA Director:
Jerry St. Clair
President
Vulcanium Metals Incorporated



ITA Director:
Edward Sobota, Jr.
President
TSI Titanium



ITA Director:
Graham P. Walker
Vice President, Sales and Marketing
AMETEK - Reading Alloys

2012 Titanium Achievement Award Recipient



TITANIUM ACHIEVEMENT AWARD RECIPIENT:

Mr. Max P. Schlienger
President
Flight Rail Corporation

Max P. Schlienger, the retired president and owner of Retech Systems LLC, Ukiah, CA, is the recipient of the International Titanium Association's (ITA) 2012 Titanium Achievement Award.

The annual award recognizes exceptional career contributions to technology and applications in the titanium industry. James Goltz, president of Retech nominated Mr. Schlienger for the award and letters of endorsement were received by Leroy Leland, vice president of Sales at Retech; Howard Harker, retired vice president of Titanium Metals Corp. (TIMET), Dallas; and James Perryman Sr., chairman of Perryman Co., Houston, PA. The ITA will present the award to Mr. Schlienger at TITANIUM 2012, on October 8th at the Atlanta Hilton Hotel.

A 1950 graduate of Pennsylvania State University, Schlienger served in the Navy from 1945-46 and 1950-52. From 1952 to 1963 he worked at TIMET, Universal Cyclops Steel and Stauffer Metals/Fansteel Metallurgical Corp., holding positions such as project engineer, engineering manager and plant manager. In 1963 he founded Schlienger Engineering Co., in San Rafael, CA, which eventually became Retech.

Retech specializes in the design, development and construction of vacuum- and inert-atmosphere metallurgical processing equipment (Vacuum Arc Remelting; VAR), used for the melting, refining and casting of various high-performance industrial metals.

Goltz noted that Retech, under the guidance of Schlienger, was the first company to specialize in designing production equipment to suit the needs of titanium. He referred to

Schlienger as the "driving force" behind the development of three key elements: safety and electrode management systems for VARs; continuous-process, cold-hearth melting furnaces; and "Rototrode"® scrap consolidation.

"Most importantly, Max is primarily responsible for the development of plasma as a viable technology for melting titanium," Goltz wrote. "Without the use of plasma, the preparation of many of the complex alloys currently being favored by specialty (metals) users would simply not be possible. I'm honored to nominate Max Schlienger for the Titanium Achievement Award."

Max's contributions have always kept a focus on safety in his equipment designs. Today his pressure relief systems and patented X-Y electrode manipulator are a standard request on all new VAR furnace installations. The X-Y feature allows real-time electrode centering throughout the entire VAR melt, thus preventing arc contact with the water-cooled crucible.

Underlining Schlienger's focus on safety in the design of production equipment, Leland pointed out that pressure-relief systems originally pioneered by Schlienger, the patented X-Y electrode manipulator, are standard equipment on today's VAR furnace installations. "The X-Y feature allows real-time electrode centering throughout the entire VAR melt, thus preventing arc contact with the water-cooled crucible." "It has been an honor and a privilege to work alongside one of the true pioneers in the titanium industry," Leland said.

Harker lauded Schlienger as a leader in the design of specialized metals melting systems, including VAR, electron beam and plasma titanium hearth melt furnaces. "I've been a long-time customer and admirer of Max. He has made significant contributions to titanium melting technology."

Perryman, who recalled working with Schlienger more than 50 years ago, concurred with Harker, saying Schlienger's engineering and production capability "gave the titanium industry a source for melting equipment. He is well deserving of this award."

Schlienger holds 22 patents and in 1995 was tapped by the Small Business Administration as California's "Small Business Person of the Year." He went on to win the "US Small Business Person of the Year" award which was presented to Mr. Schlienger by President Bill Clinton in 1995.

2012 Titanium Applications Development Award Recipient



Lorenzini Snc Awarded the Titanium Applications Development Award For Innovative, Significant Achievement In The Science Of Equine Product Technology Marketing

Lorenzini SNC, an international supplier of titanium products to the medical/surgical and industrial tooling industries, is the winner of the 2012 International Titanium Association's (ITA) Titanium Applications Development Award. The company will be recognized at TITANIUM 2012, at the Hilton Atlanta in Georgia.

Based in Villafranca Padovana, Italy, Lorenzini was nominated for its innovative titanium horse bit, developed by the company's recently created Equestrian Division. Lucia Toson is principal of Lorenzini and Nick Abanera serves as export manager. The company will receive the top prize of \$20,000.

Smith-Garrity Ltd. Imports, Berryville, VA, the North American distributor for Lorenzini Equestrian products, nominated the Italian company for the sixth annual ITA award.

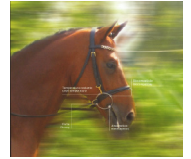
The prestigious award reflects the efforts of individuals and organizations in the global titanium industry that demonstrate significant achievement towards improving and expanding the use of titanium in all applications. Last year Synthes Spine Inc., a West Chester, PA-based unit of Synthes International, was the recipient of the award for its Vertical Expandable Prosthetic Titanium Rib.

Earlier this year Smith-Garrity began marketing the Lorenzini horse bits, which exploit "titanium's inherent antibacterial, non-toxic, lightweight properties. The bits are available in various custom models and feature a choice of sizes and anodized colors," according to Robert Smith, managing director of Smith-Garrity and recently appointed international marketing director by Lorenzini.

Smith said the bits "combine the natural, beneficial characteristics of pure titanium with the beauty and elegance of European craftsmanship. Lorenzini titanium

products mark a significant achievement in the science of equine product technology." Lorenzini also produces titanium stirrups.

In a testimonial provided by Smith, Stephen Bradley, a member of the 2008 U.S. Olympic Equestrian Team, said the titanium bits were "beneficial on quite a few of my young horses that get strong in the jaw. This bit relaxed their jaws and they stayed focused. Compared with traditional bits, the lightness and negative ions (of the titanium bit) made a difference in performance."



Other contenders for this year's award encompassed a diverse field of titanium innovations including a medical disc providing an alternative to spinal fusion; the development of a titanium alloy and coatings that upgrade performance of gas-turbine engines; a titanium powder-metal process for producing near-net-shape commercial aerospace components; and the development of a titanium assault rifle for military use just a name a few. Brett Paddock, President & CEO of Titanium Industries, Incorporated and current ITA Grant Committee chair, added "the TAD award represents one of the key missions of the ITA, which is to promote new uses for titanium. The grant committee reviewed many significant nominees this year which indicates the award is reaching more innovators helping to lead application development within our industry".

The \$20,000 prize will be awarded to Nick Abanera, Export Manager for Lorenzini SNC, at the TITANIUM 2012 Conference on October 9, 2012.

ITA Accepting 2013 Nominations

The ITA is seeking nominations for the 2013 Titanium Achievement Award Recipient. Members may nominate an individual within the titanium industry who has exhibited outstanding qualities of leadership, and has been responsible for accomplishments that positively impact the titanium community.

2013 Titanium Applications Development Award

The ITA is seeking nominations for an individual, group of individuals or organization within the titanium industry who has shown significant achievement towards improving and expanding the use of titanium.

Complete details for both awards can be downloaded directly from the ITA website at www.titanium.org.

2012 Scholarship Recipients

The International Titanium Association (ITA) has selected the winners of its scholarship program. This year's winners include: Timothy Biederman, University of Northern Iowa, Cedar Falls, IA (major: manufacturing technology); Renda Quan, Northwestern University, Evanston, IL (materials science); Robert Reid, University of Illinois at Urbana-Champ, Champaign, IL (aerospace engineering); and Adam Restifo, Youngstown State University, Youngstown, OH (mechanical engineering).

Bluewater Thermal Solutions, Greenville, SC; Dynamet Inc., Washington, PA; RTI International Metals Inc., Pittsburgh, PA; and Titanium Industries Inc., Rockaway, NJ, are the sponsors of the ITA scholarship program.

Each year up to four \$2,500 scholarships are offered by the ITA for full-time study, supporting students majoring in STEM academic fields at an accredited institution. The program is administered by Scholarship Management Services®, Saint Peter, MN, a division of Scholarship America®, which is the nation's largest designer and manager of scholarship and tuition reimbursement programs for corporations, foundations, associations and individuals.

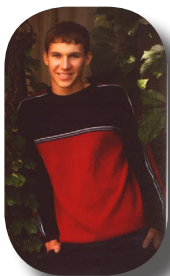
Nominations for next year's scholarships will be accepted starting Nov. 1, 2012 to March 29, 2013. Nomination forms and additional information are available on the ITA website at www.titanium.org. In addition, the 2013 nomination forms will be handed out during TITANIUM 2012,

The ITA 2013 scholarship program will be made available to full-time STEM undergraduate students as well. Students can apply from an accredited non-profit public or private two-year or four-year college, university or vocational-technical school in the United States for the entire academic year.

The ITA, a non-profit trade association established in 1984, grants scholarships without regard to race, color, creed, religion, sexual orientation, age, gender, disability or national origin. To be eligible for the program, scholarship applicants must meet all of the following criteria:

- Be a current college or university sophomore or junior or the international equivalent, majoring in engineering or technology with a concentration in one of the following areas: aerospace; metallurgy or material science; mechanical engineering; industrial engineering; quality assurance; or manufacturing
- Plan to enroll in full-time undergraduate study at an accredited college or university for the entire upcoming academic year
- Have a minimum grade-point average of 3.0 on a 4.0 scale or its equivalent
- Be nominated by an employee of an ITA member company in good standing at the time of the nomination.

An individual may nominate no more than three students per year. A parent may nominate a dependent if the parent is employed by an ITA member company. If selected as a recipient, the student will receive a U.S. \$2,500 scholarship award. Awards are not renewable, however students may reapply to the program each year that they meet eligibility requirements.



Timothy Biederman
University of Northern Iowa
Cedar Falls, Iowa
Manufacturing Technology



Renda Quan
Northwestern University
Evanston, Illinois
Materials Science



Robert Reid
University of Illinois at
Urbana-Champ
Champaign, Illinois
Aerospace Engineering



Adam Restifo
Youngstown State
University
Youngstown, Ohio
Mechanical Engineering

2012 New Members

Baoji Shenji Titanium Co., Ltd.

Baoji Shenji Titanium Co., Ltd is a leading supplier of titanium sheet and plate for the chemical industry as well as other industrial fields in China. Our operational concept has continuously focused on product quality and has been certified to ISO 9001.2008 Quality Management System. With more than a decade of experience in metal forming in China, we specialize in titanium sheet and plate producing with a capacity of 350 tons annually. Also we offer milling, turning, melting, forging and nickel based products and services to meet market and customers' demands.

Baoshan Iron & Steel Co., Ltd.



BAOSTEEL

Baosteel Group is the largest and most advanced integrated steel company in

China. Baosteel Special Materials Co., Ltd is a subsidiary company of Baosteel Group. Baosteel Special Materials Co., Ltd grew out of Shanghai No. 5 Steel Works, and started manufacturing of titanium alloys since 1968. The main titanium products include: ingot, slab, billet, bar, plate, coil, stock, isothermal forging and so on.

Dongfang High - New Metal Materials Co. Ltd

GTAP

Dongfang High - New Metal Materials Co. Ltd. Was established in 1996 in China.

The products are titanium and titanium alloy materials including ingots, bars, tubes, plate of titanium alloy and more. We supply master alloy for titanium alloy, such as V-Al alloy, Nb-Al alloy, Mo-Al alloy, Al-V-Mo alloy, Al-V-Sn-Cr alloy, etc. The company manufactures titanium products according to the standard of ASTM-B337, ASTM-B338, and ASTM-B861. It had obtained the certification ISO9001-2008 by LRQA. The manufacturing facility includes cold rolling mill, supersonic wave inspection equipment, eddy testing equipment, flattening equipment and more. The company currently has over 280 employees.

Element Materials Technology



element

Element is an established network of independent material testing laboratories located across Europe

and the United States of America. Element's strength lies in our commitment to the integrity of our test results, to on-time delivery, and to superior customer service. Element employs more than 1000 engineers, scientists and technicians, providing clients with a wide range of materials testing, failure analysis & consultancy, and product testing and qualification support. We support industry with destructive and nondestructive testing, metallic

and nonmetallic analysis, and many other materials and product quality services. Our experts partner with you to solve the unique challenges of your business, from the straight forward to the highly complex. Contact us at 1-888-786-7555 or visit www.element.com to learn more about Element support for your materials, products, and quality programs.



GeoCorp, Inc.

Direct manufacturer of thermocouples and thermocouple wire with product shipping in days-NOT WEEKS. In-house ISO 17025:2005 lab accredited

by NVLAP, lab code 200496-0, a United States Government entity administered by N.I.S.T. offers temperature calibration reports. All material meets the tightest quality requirements of BAC 5621K & AMS 2750 Rev.D

F. Colombo Srl



F. Colombo Srl is an Italian Company specialized in hot precision forging of metals by mechanical press. Our plants are located in the North of Italy close to Milan. With more than 70 years of activity, we have experience in forging alloys,

steel, titanium alloys and chromo-cobalt alloy for different fields such as biomedical, automotive, energy, packaging, and aerospace. Our product range includes orthopedic implants, connecting rods, wheel hubs, motorcycle levers, components of aircraft and ships. All productive processes are managed in-house: manufacturing tools, forging process, heat treatment, and machining. Every process step is monitored, verified and approved with an integrated manufacturing software system. F. Colombo is certified since 1996 with Lloyd's Register Quality in accordance to quality standard ISO 9001:2008. We believe our "know how" and technology offers you a manufacturer with excellent finishing and an accurate degree of tolerance.

Global Titanium Inc.



Global Titanium Inc.

Global Titanium's business is located in Detroit, Michigan.

They produce titanium metallurgical products that are mainly used as alloying additives in steel, stainless steel, and aluminum. Their primary product line is ferrotitanium, which is manufactured from various types of titanium scraps, by-products, and after off-grade titanium materials. They also produce some scrap products that are recycled into new titanium metal ingots and HDH titanium powder for alloying applications.

2012 New Members



GNB Corporation

GNB is company of technical experts serving other technical experts. We produce outstanding, innovative products that meet the most demanding applications in areas such as temperature extremes, large sizes, radiation levels, vacuum levels, vibration levels, and unique applications.



GSL, Inc.

From fire suppression systems to FR fabric and safety garments, GSL's products surpass industry standards and provide protection beyond compare. GSL's products protect employees in petrochem, electrical / power, steel and heavy equipment, and fire service. GSL's fire suppression products are 100% safe and non-toxic, enhancing both response and recovery time. Products include Spentex® and Firebane™, and solutions are for the following environments: Petrochem, Electrical/ Power, Molten Metal Applications, Fire Service and Military/ Government Services.



Invera

Invera is the largest metal industry software company that provides metal service center software and metal industry ERP software. For over two decades, we have been providing our customers with a unique and competitive edge with comprehensive, metal and steel industry-specific enterprise software systems (ERP) that maximizes profitability and productivity with minimum implementation costs and balance sheet risk. Our next generation metal software ERP product STRATIX, was developed based on our rich legacy of experience and product history in the metal business and addresses the global metal market.

Jiangsu Hongbao Group Import & Export



Jiangsu Hongbao Group Import & Export Co., Ltd., founded in 1991, is one of the backbone subordinate companies of Jiangsu Hongbao Group Co., Ltd. We gradually formed the wonderful diversified import and export business. Thus we maximally meet the needs of foreign guests and synchronously upgrade our competitiveness. We are highly in conjunction of capital management, manufacturing management as well as product management and stride forward to be the first-class domestic import-export company.



Latta Equipment Company Inc.

Latta offers industrial vacuums, material handling equipment, shipping supplies, and safety products to take you from raw materials through finished goods.

Whatever your level of industrial challenges, from tool crib to the production floor, from warehouse storage to the loading dock, we have your solution.

Management Company Special Economic Zone "Titanium Valley"

Special Economic Zone (SEZ) "Titanium Valley" is located in the territory of one of the most economically developed subjects of the Russian federation, the Sverdlovsk Region. The key economic industries in this territory include: Engineering industry, instrument engineering, aircraft industry, metal processing and mining enterprises related to it. The SEZ offers unique opportunities for manufacturers to place production. The companies investing in the SEZ get prepared sites with all the necessary utilities and exempted from customs duty on import of capital goods. The total area of the territory of a special economic zone "Titanium Valley" is more than 580 hectares. The main function of the Management Company SEZ "Titanium Valley".

MetSuisse Distribution AG

MetSuisse stands for the needs of the medical and watch industry in the desired precise quality. The manufacture of unique time pieces has a long history in Switzerland. This high precision industry was the fundament of the Swiss medical implant industry with many major companies producing in Switzerland. We are the first metal distribution company specialized in the medical industry, and operating strictly according to ISO 13485 (medical) and the GDP standards valid for pharmaceuticals (besides ISO 9001). Having over 10 years of experience in the metal industry, we supply the medical and watch industry in Switzerland and internationally. Currently, we are specialized in mainly titanium. CoCrMo, medical stainless and tungsten alloys. However, you can gladly contact us with any of your metal sourcing requests. We work with dedicated partners in Europe, Japan and the US.



Quest Alloys & Metals, Inc.

QUEST METALS Quest provides recycling and reclaim of carbide end mills, drills and carbide inserts.

As well as carbide sludges, grindings and tungsten spray powders.

2012 New Members

Roche Engineering



A company of consulting engineers specialized in engineering-construction Roche Ltd, Consulting Group is a skilled and devoted multidisciplinary team with no other objective in mind than the success of your projects. We are one of the top Canadian engineering-construction firms, with an international network of experts in all engineering and consulting fields.

Russamer Lab LLC



Russamer Lab specializes in consulting and licensing the metal finishing technologies to mostly medical implant companies. The innovative technologies include – Acid free nitinol electropolishing, nitinol gold plating, titanium electropolishing, Plasma titanium electropolishing, titanium anodizing, titanium blackening, plating on titanium, “green” electropolishing of stainless steel of all types, gel technologies. Among the main achievements: fully automated line for titanium disposable eye surgery needles electropolishing; 24 hours continuous nitinol wire electropolishing line; nitinol stents acid free electropolishing production line. From small lab equipment – to fully automated production lines, with personnel training and ongoing technical support.

Schuler Incorporated



Schuler is the global leader of innovative metal forming systems and technologies. We supply turnkey systems for superplastic forming, isothermal forging and thermoforming.

Sector3 Appraisals, Inc.



Sector3 helps companies and lenders decipher the underlying value of raw materials, metals, chemicals, plastics, and commodity inventory and machinery and equipment. We are successful because we: - Specialize in the metals, chemicals, plastics, and commodity markets - Offer extensive metals, chemicals, and plastics valuation experience - Believe customer service is a long-term objective

Sierra Alloys Company

Manufacture and supply forged and rolled products in Titanium alloys, nickel-cobalt base alloys, precipitation hardened stainless and high alloy steels from small rectangular and round bar to large section size open die forged bar and stock.

TiMax International LLC



ARC supplies coolants specifically formulated for machining superalloys and titanium alloys. ARC then works closely with customers to further customize coolants to optimize specific processes. ARC's custom coolants deliver significant cost savings and process improvements, including increased tool life and throughput. ARC's proprietary recycling process delivers the unique benefit of continuously recycling water-based metalworking fluids. The benefits are reduced new chemical purchase (50 percent average), and reduced process variation due to maintaining metalworking fluid quality at a consistently high level. TiMax provides customers safe and responsible titanium swarf recycling in a new state-of-the-art facility.

Wowtech Titanium Co., Ltd



Wowtech Titanium Co., Ltd. is a leading stockist and trader for CP and alloyed Titanium products as well as Nickel-based alloys products in China. As a Det Norske Veritas and Bureau Veritas certified ISO9001:2008 company, we supply above standard products to our customers with short lead time and competitive prices. As a Bureau Veritas certified AS9120-B company, we provide top quality materials to our customers in aerospace and military industry with professional service and guaranteed satisfaction. Relying on our well-established sourcing network and proficiency as well as a set of strict quality control system, we are able to provide top quality products to our customers. We equip ourselves with the most efficient and unique service tools. We are committed to being your one-stop shop for Titanium products!

ZIROM S.A.



ZIROM SA is a company specialized in manufacturing of high quality titanium and titanium alloy ingots in accordance with different quality international standards (e.g. ASTM, AMS, ISO) by VAR and EBCH melting technology, using as raw material titanium sponge or scrap. The company has the capability for remelting of Ti and Zr scrap into ingots by VAR and EBCH melting technology. In 2012 the company will start the production of EBCH melted slabs. In 2014 the new forging shop project will be finished and new products like forged bar, billet or slabs will be offered for the customers.



TITANIUM EUROPE2013

March 5-7 | Hamburg, Germany



TITANIUM

EUROPE 2013

PRELIMINARY ITINERARY

Location:

Grand Elysée Hotel Hamburg

Rothenbaumchaussee 10
20148 Hamburg
www.titanium.org

Tuesday, 5th March

Full Day Fundamentals of Titanium Workshop
Exhibition Set Up
Evening Reception

Wednesday, 6th March

Breakfast
World Titanium Industry Demand Trends
World Titanium Industry Supply Trends
Lunch / Exhibition / Networking Time
Keynote Address: Airbus Market Outlook –
Mark Jeffrey Pearman Wright, Head of
Corporate & Investor Marketing, Airbus
Production & Market Trend General Sessions
Evening Reception / Networking Time

Thursday, 7th March

Meet the Speakers Breakfast
Exhibition Tear Down
Bus Transportation to Airbus Plant Tour*

*available only to the first 300 registered attendees



Keynote Address: Airbus Market Outlook

Mark Jeffrey Pearman Wright

Head of Corporate & Investor Marketing, Airbus Marketing Division

Mark joined Airbus in 1990 in the Customer Marketing Department and now heads the Corporate & Investor Marketing department responsible for the marketing to the aircraft investment and finance community, including leasing companies and appraisers.

Following initial experience gained marketing to airlines in Europe and North America, Mark joined the Leasing Markets Division and was promoted to Sales and Marketing Director, leading successful sales campaigns with Boullioun, CIT, GATX and ILFC. He was promoted to Head of Sales and Marketing for all leasing companies, a position he held for four years prior to his return to head the newly created Leasing & Investor Marketing team. His responsibilities have recently been expanded as head of a larger Corporate and Investor Marketing department. Mark currently serves on the Board of ISTAT.

World Industry Demand Trends



Military Airframe and Land Based Applications

Hunter Dalton

Executive Vice President, ATI Long Products,
and President, ATI Allvac



Jet Engines

James M. Buch

Executive Vice President, Commercial –
TIMET, Titanium Metals Corporation



Commercial Aerospace Airframes

Dawne S. Hickton

Vice Chairman, Chief Executive Officer, and President –
RTI International Metals, Inc.



Overview of Russian Market for Titanium Mill Products

Michael G. Metz

President – VSMPO Tirus US



Outlook of Titanium Industry in China

Wuzhuang Zou

President – Baoji Titanium Industry Co., Ltd



Outlook for Japan Titanium Industry

Shozo Nishizawa

President –
OSAKA Titanium technologies Co., Ltd.



Industrial Markets

Gilles Dussart

Chief Operating Officer –
VALTIMET



World Industry Demand Overview

Dr. Markus Holz

ALD Vacuum Technologies Inc.

Supplemental Presentations Include:

Raw Materials / World Supply Trends
Production & Market Trend Presentations
Other Manufacturing Topics

TITANIUM 2013 Las Vegas Exhibition Space Available



**October 6-9 • Caesar's Palace
Las Vegas, Nevada**

TITANIUM 2013 Exhibition Space Now Available

With word of mouth, vendor space has been getting popular and is available right now, so don't miss your chance to connect with colleagues to let them know just who you are and what you can do for them!

All applications are considered for assignment according to the priority point system and the date and time they are received to ITA. Your booth space will not be considered final until an ITA representative has contacted you.

Exhibit space entitles you to many benefits and services such as:

Quality Leads

More decision makers attend the ITA's TITANIUM Conference than any other meeting in the industry. These are the leads you want! These are the leads you keep!

Networking Opportunities

Everyone who's anyone will be there. Network with colleagues, customers and even competitors- building these relationships can help your business grow. With a three-day exhibit, the ITA offers unlimited opportunity to re-establish old contacts and generate new ones. Where else can you network with so many industry-specific professionals at one time?

The Right Partners

As the titanium conference to attend, this is the best attended titanium meeting in the world. We bring together a diverse group of organizations, each with their own

unique strengths, to produce the best event in the industry. Where else can you reach this level of diversity within this industry at one time?

International Appeal

For exhibitors with international aspirations, TITANIUM 2013 captures that audience. The conference continues to generate foreign registrations. Participants from over 23 countries attend the show.

Be a part of something bigger

More than a conference, TITANIUM 2013 is where industry comes together to network, learn, and grow. Participate in vital discussions like our industry keynotes and interactive general session panels, update your knowledge through expert-led sessions and expand your reach.

Bottom Line

There is no other exhibition and conference that specifically targets this industry. If you want name recognition in this industry, you must exhibit at this show. It is the single-most cost-effective means by which to generate visibility and income-producing leads for your company.

Location

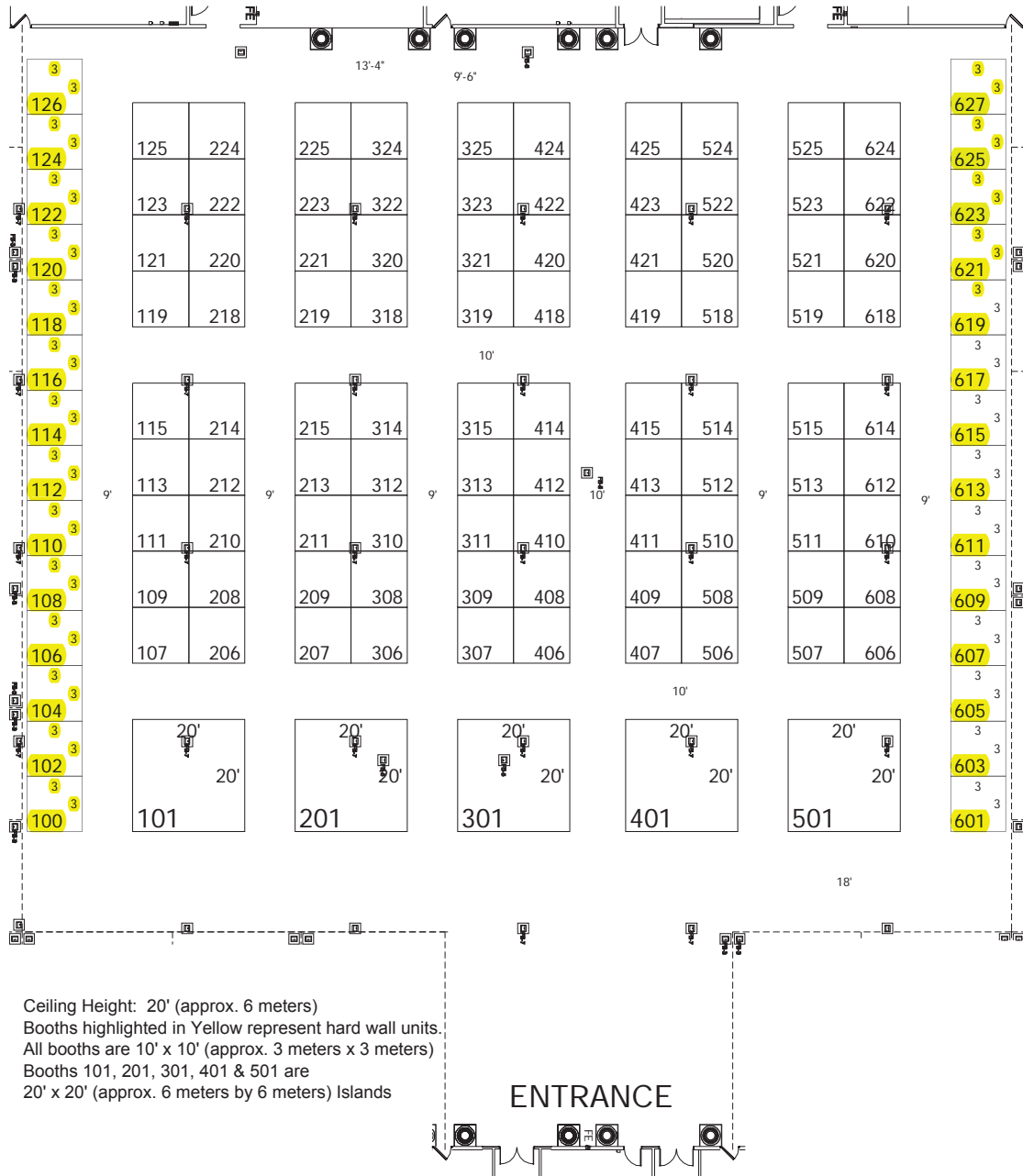
Caesars Palace
Las Vegas, Nevada

Where to sign up?

Visit the ITA website at www.titanium.org right now to download your exhibit booth application.



TITANIUM 2013 Las Vegas Exhibition Space Available



TITANIUM 2013

October 6-9 • Caesar's Palace
 Las Vegas, Nevada

ITA Member Rate: \$15/square foot for Hard Wall Units. Special Discount of \$12/ square foot for pipe/drape units. A Variety of booth sizes are available.

NON Member Rate: \$29/Square Foot for Hard Wall Units. \$26/square foot for pipe/ drape units. All paid exhibitors of TITANIUM 2013 will receive a Lead Retrieval unit for use in collecting booth visitor contact information.

**To download an exhibitor application visit the
 ITA website at www.titanium.org**

Fundamentals of Titanium Workshop



This comprehensive workshop has been presented all over the world and in several languages. This comprehensive workshop provides detailed information on the types, uses, and properties of common titanium alloys. You will gain an understanding of applied titanium metallurgy fundamentals.

Fundamentals of Titanium will prepare you to present and work effectively with job-related functions that involve titanium. You will receive a complete overview of titanium and a thorough grounding in its metallurgy, characteristics, properties and uses.

Both The Classroom and Internet Courses Cover the Following Topics:

- Introduction And History
- Characteristics Of Titanium
 - Raw Materials
 - Melting
 - Mill Products
- Alloys Heat Treatment
- Corrosion
- Designing With Titanium
 - Joining & Welding
 - Forming & Finishing
 - Cleaning
 - Safety
- Applications Review And Summary

The Online Course Fundamentals of Titanium will prepare you to present and work effectively with job-related functions that involve titanium. The comprehensive titanium tutorial is broken out into 15 sessions. Students will have 16 weeks to complete the course at their own pace and leisure.

The online workshop features streaming video of Seagle delivering his lectures along with a series of coordinated text, graphics, images, charts and footage of industrial operations. Students receive a certificate of completion from the International Titanium Association.

Course offered in

English, Chinese, German, Russian Spanish



This is the only course of it's kind dedicated to titanium metal. Learn from one of the founding fathers in the titanium industry - Stanley Seagle. Mr. Seagle has been involved for 40 years in all aspects of titanium technology.



REGISTER ONLINE AT WWW.TITANIUM.ORG

Classified Ads

Material For Sale:

EXTENSIVE INVENTORY AVAILABLE

Titanium

- 6Al-4V**
bar, sheet, plate, welding products, forged billet
- 6Al-4V ELI**
bar, plate, welding products, forged billet
- 6Al-4V STA**
round bar
- 6Al-2Sn-4Zr-2Mo**
sheet, forged billet
- 10V-2Fe-3Al**
forged billet
- 6Al-6V-2Sn**
forged billet

Rolled Alloys' West Coast Service Center continues the Harvey Titanium tradition:
Providing superior quality, reliable service and exceptional products delivered on time!



CUSTOMIZED INTERMEDIATE PRODUCER
FORGING • ROLLING • EXTRUSION • HEAT TREATMENT • TESTING • FINISHING

ALL MAJOR AEROSPACE APPROVALS • AS 9100 AND ISO 9001

291 Coral Circle • El Segundo, CA 90245 • 1-800-321-0909 • www.rolledalloys.com


Rolled Alloys Providing superior quality, reliable service and exceptional products delivered on time.
Contact sales@rolledalloys.com or call (800) 521-0332.



Advanced Metals For Advanced Applications metals for the medical and watch industries - MetSuisse

Ti6Al4V, Ti6Al4V Eli, CP grade 1, 2 and 4 low and highC
CoCrMo, medical steel, tantalum and zirconium:

bars, wire, plate, sheet, high precision foils ISO 9001 and ISO 13485 certified company just first class sources:
www.metsuisse.com



California Titanium has great deals on **Titanium Bars**. Quick delivery time. We also supply titanium **sponge, wire, plate, pipe, and tube** according to your specifications.
Call or email for a quote today!
(310) 683-8004
sales@caltitanium.com

C.P. Titanium rod/wire, gr. 2 and gr. 3 FOR SALE
diam. 2 and 3 mm, rod of 1m each and on spools fully certified.
T.M.P.Titanium Mill Products Ltd., Sheffield

Fax +44 114 2302832, Tel. +44 114 2308855
www.timill.com
Email:paul@timill.com

Trans World Alloys makes & stocks any size Titanium Plate Grade 5
Material: Titanium Form: Plate Grade: 6AL 4V, Grade 5
Thickness: .250" – 4.0"
Available sizes: Cut to size or full plate or oversized
Certs: Mill Manufacture: Domestic
Specification: AMS 4911, MILT 9046, AMST 9046
Short lead time

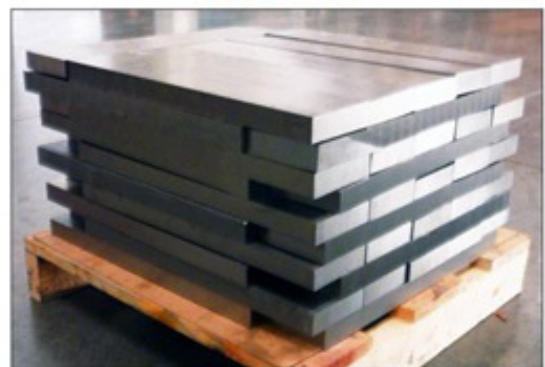
Trans World Alloys is a, full service ISO 9001:2008 & AS 9100 certified distributor of Titanium, aluminum and various other high-temperature alloys. We specialize in titanium 6-4, 6-6-2, 6-2-4-2, 15-3-3-3, 8-1-1, 8MN, and CP alloys in sheet, plate, bar, rod, tube and forgings. Our titanium forged-to-size billets, slabs and custom blocks can be made or cut to your specific size requirements. We also carry hard-to-find, extra-wide and extra-long sheet and plate. We offer value added services such as "Resale Consignment" and "Scrap Buy-Back" Programs.

Trans World Alloys
Address 249 E. Gardena Blvd. Gardena CA, 90248
Phone: +310-217-8777 Fax: 310-217-0066
Website: http://twalloys.com
Email: sales@twalloys.com



TITANIUM FLAT BAR

AMS 4928 IN STOCK
MIL T 9047



FROM .500" TO 3.5"
ANY WIDTH AND LENGTH CUT TO YOUR SIZE REQUIREMENTS

Please Contact Us For A Quote | twalloys.com

Trans World Alloys 249 E. Gardena Blvd Gardena CA 90248
Call: 310.217.8777 or 800.258.8180 Fax: 310.217.0066 Email: sales@twalloys.com

Classified Ads



Products of our company are mainly applied in electrochemical panels, equipment manufacturing, and titanium sheet for plate exchangers, titanium metal products and equipment and other fields. Production capacity: hot-rolled titanium rolls—5000t/year, cold-rolled titanium

rolls—12000t/year, titanium alloy—3000t/year. Main specifications: thickness: cold-rolled—0.2-3.0mm, hot-rolled—3-16mm; width: cold-rolled—1000-1350mm, hot-rolled—1000-1550mm; weight of each roll: max 10t; variety: Gr1, Gr2; TA0, TA1, TA2,TA9 etc.

Contact: Yunnan Titanium Industry Co., Ltd, Yunnan Province China email: yunti@ynkg.com

As ISO and PED Certified company, Jiangsu Hongbao Group Co., Ltd specializes in manufacturing titanium rod, tube, plate and wire. Our products are widely used in heat exchangers, petrol-chemical industry, aviation industry and sports appliances.

Our manufacturing capability as follows:

- 1. Titanium and its alloy tubes & Pipes ASME SB/ASTM B 861, 337, 338, Diameter: 6-159mm Thickness: 0.5-15mm Length: Maximum 16 meters.
- 2. Titanium and its alloy rods ASTM B 348, F 67 Diameter: 10-150mm
- 3. Titanium and its alloy sheets & plates ASTM B 265, F 67 Thickness: 0.7-50mm Width: <2500mm Length: <6000mm.
- 4. Titanium and its alloy wire according to ASTM B 863 Diameter: 0.4mm-10mm

David Dai
Jiangsu Hongbao Group Co. Ltd.
Phone: 86-512-58715259
Fax: 86-512-58715267
Email: foreigntrade@hongbao.com

Hailong Industry manufactures Seamless Titanium and Titanium Alloy tube and pipe as per SB338 and SB861, with the material of Gr.1, Gr.2, Gr.7, Gr.9, Gr.12, Nickel and Nickel Alloy tube and Pipe, Ni201, Monel400, Incoloy 600, 625, Inconel 800, 825, Stainless steel tube and pipe, duplex tube etc.. The company was ISO and PED certified by TUV.

Contact Information: www.hailongtitan.com
Tel: 0086-512-58986900,
Fax: 0086-512-58183187,
Email Address: hailonggood@163.com

Services:



T.I. is the global leader in performance metal solutions for the aerospace, medical, industrial and oil & gas markets. Holding the world's most complete inventory of performance metals across a global service center network, T.I. delivers supply chain solutions at all levels of sophistication and complexity. With a globally experienced and technically driven team, T.I. has been providing dependable, quality driven solutions to customers for over 40 years.

Our Service Capabilities:

JIT 24/7 Delivery; Custom Stocking Programs; Sawing; Waterjet Cutting; Precision Grinding; Trepanning; Shearing; ; Machining; Heat Treatment; Fabrication; Welding/Welding Instruction; Materials Testing; Custom Kitting;, Conversion Programs

Call your local representative for an immediate quote.
Corporate HQ : NJ Rockaway (+1) (973) 983-1185

North America

- CA - Santa Fe Springs (+1) (562) 906-8188
- CT -Tolland (+1) (860) 870-3939
- FL - Jacksonville (+1) (904) 288-8300
- IL - Aurora (+1) (630) 499-9140
- OH - Cleveland (+1) (216) 661-4610
- TX - Hillsboro (+1) (254) 580-2849
- WA - Seattle (+1) (206) 271-6555
- Canada - Montreal (+1) (514) 334-6727

South America: Brazil Sao Paulo - (+55) 11 2814 7509

Europe

- UK - Birmingham (+44) (0) 121 782 9708
- UK - Southampton (+44) (0) 2380 334 910
- Norway -Bergen (+47) 55 39 22 30

Asia

- China - Shanghai (+86) 21 6137 7837
- Taiwan -Taipei (+886) 2 2298 9668
- India - Bangalore (+91) 80 4125 0898

ONLINE TITANIUM AND SPECIALTY METALS
CLEARINGHOUSE – www.directalloys.com

Manufacturers now have access to a dedicated online clearinghouse for their excess prime certified titanium, superalloys,

Classified Ads

specialty steel and aluminum alloy mill products. Direct Alloys helps mills, forgers, machine shops, fabricators, distributors and end-users sell and locate forging stock, machining bar, wire, plate and sheet inventories. We provide the link between short term material supply and demand, saving purchasers and suppliers precious time, energy and capital resources.

Direct Alloys concentrates on premium materials, and represents the seller in transactions, providing a unique knowledge based service with over 25 years experience in the specialty metals industry. Our online database and advanced sales tools located at www.directalloys.com offer a dynamic value-added service for suppliers and consumers of high performance metals. Register for our free industry news email updates!

Direct Alloys LLC
 901 Broad Street, Utica, NY 13501
 Phone: 1-315-883-1991
 Fax: 1-315-292-1088
sales@directalloys.com * www.directalloys.com

Supply of Peeling and other Cold Finishing Equipment for Titanium Processing.

Danieli Centro Maskin, the cold finishing division of the multi-national DANIELI group, design and manufacture a wide range of equipment that cover the processes of peeling, drawing, cut to length, straightening, chamfering, packaging and all associated equipment. Enquiries for individual machines and/or complete cold finishing plants are welcome.

For USA enquiries contact Danieli Corporation USA (Bob Smith Tel: (724) 778 5448; r.smith@danielicorp.com). For all other enquiries contact Danieli headquarters in Italy (Kristiaan van Teutem, Tel: +39 04321957295; k.vanteutem@danieli.it)

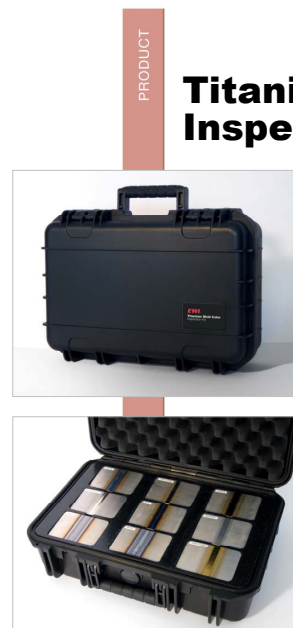
Equipment for Sale:

EWI's Titanium Weld Color Inspection Kit
 The Titanium Weld Color Inspection Kit from EWI provides

fabricators of titanium with a high quality, comprehensive tool for performing weld color inspection as part of their weld quality assurance process. The kit is considered the standard for visual inspection of titanium weldments across all industries, including defense, aerospace, chemical processing, and more.

- FEATURES:**
 Nine Titanium Weld Samples
 Nine Photo Cards
 Durable Carrying Case
 Titanium Weld Color Inspection Guide

To order contact: Randy Dull at 614.688.5095 or rdull@ewi.org, or Nick Kapustka at 614.688.5175 or nkapustka@ewi.org.



PRODUCT

Titanium Weld Color Inspection Kit

OVERVIEW

The Titanium Weld Color Inspection Kit from EWI provides fabricators of titanium with a high quality, comprehensive tool for performing weld color inspection as part of their weld quality assurance process. The kit is considered the standard for visual inspection of titanium weldments across all industries, including defense, aerospace, chemical processing, and more.

FEATURES

- **Nine Titanium Weld Samples** – Each of the nine sizeable weld samples in the kit exhibits a different weld color condition. Three acceptable and six rejectable weld colors are included, ranging from glossy silver to flakey white. All samples are created onsite by EWI's highly skilled engineers.
- **Nine Photo Cards** – The kit also includes a booklet of high quality images of each of the nine welding conditions along with a description of their color, acceptability, and disposition information as required by technical publication NAVSEA S9074-AR-GIB-010/248/278 titled *Requirements for Fabrication Welding and Inspection, and Casting Inspection and Repair for Machinery, Piping, and Pressure Vessels*.
- **Durable Carrying Case** – Contents of the kit are housed in a durable, custom-built case that holds and protects the samples while still keeping them visible. A sturdy handle on the case makes it easy to carry, and feet on the bottom allow it to stand upright.
- **Titanium Weld Color Inspection Guide** – The kit includes a 2-part illustrated guide for welders, welding inspectors, and welding engineers for color inspection training purposes. Part 1 of the guide covers detailed discussions of titanium welding technology and is intended for classroom training. Part 2 of the guide contains recommended shop procedures for weld inspection personnel.



HOW TO ORDER

For more information, or to order the EWI Titanium Weld Color Inspection Kit, contact Randy Dull at 614.688.5095 or rdull@ewi.org, or Nick Kapustka at 614.688.5175 or nkapustka@ewi.org.

Publishing disclaimer from the International Titanium Association (ITA): Information in this newsletter was produced and compiled by the ITA staff, based on press releases and statements from companies involved in the titanium industry. The ITA believes the information presented in this newsletter is timely and accurate. However the ITA DOES NOT endorse or guarantee the claims of any company listed in this publication. Also, as a matter of editorial policy, due to space limitation, items in the ITA newsletter typically do not include the extensive "forward-looking" statements, historical information or company overviews that were issued in the original press release. If there are any questions regarding the information in this newsletter, the ITA strongly suggests that readers contact the specific company for clarification.

Current Membership Includes the Following Companies

Thank you for your continued support. Every issue of the TITANIUM Update Newsletter will recognize members that have renewed their investment with the International Titanium Association.

20 + Years

Allegheny Technologies Incorporated
 ATI Allegheny Ludlum
 ATI Allvac
 ATI Ladish
 ATI Pacific Cast
 ATI Stellram
 ATI Wah Chang
 Dynamet Technology, Incorporated
 Monico Alloys, Incorporated
 Rolled Alloys
 RTI International Metals, Inc.
 Remmele Engineering, Inc
 RTI Advanced Forming, LTD
 RTI Claro
 RTI Energy Systems
 RTI Fabrication
 RTI Niles
 Lawrence Holdings, Inc.
 Alloy Metals Inc.
 Snappy Materials LLC
 Supra Alloys Incorporated
 TICO Titanium Incorporated
 TIMET, Titanium Metals Corporation
 Loterios SpA
 Titanium Fabrication Corporation
 Titanium Industries, Incorporated
 Global Metal Trading Norway AS
 Titanium Industries U.K. Limited
 Titanium Industries Asia Inc.
 Ulbrich Stainless Steels & Special Metals, Inc.
 United Titanium, Inc.
 Vulcanium Metals Incorporated

15 - 19 Years

Alcoa Power and Propulsion
 AMETEK - Reading Alloys
 BIBUS METALS AG
 Consarc Corporation
 Dynamet Incorporated
 Fort Wayne Metals
 Grandis Titanium
 HEMPEL SPECIAL METALS GmbH
 High Performance Tube, A Division of Valmet
 Keywell LLC
 Osaka Titanium Technologies CO., Ltd.
 Perryman Company
 President Company, Ltd.
 President Titanium Incorporated
 Retech Systems LLC
 Solar Atmospheres, Inc.
 Spemet Company Limited
 Sumitomo Corporation of America

Tibrasil Titano LTDA
 TIODIZE Company, Inc.
 Titanium Engineers, Inc.
 Toho Titanium Company, Ltd.
 Tricor Industrial, Inc.
 TSI Titanium
 VALTIMET
 VSMPO-AVISMA
 NF & M International Incorporated
 VSMPO - Tirus China Ltd.
 VSMPO TiRus GmbH
 VSMPO Tirus UK Ltd.
 VSMPO Titan Ukraine Ltd.
 VSMPO - Tirus, US

10 – 14 Years

Bodycote
 Cristal USA Inc DBA International Titanium Powder
 Evraz Stratcor, Inc.
 FAE SA Fabricacion de Aleaciones Especial
 GfE Metalle und Materialien GmbH
 Hi Tech Alloys
 Luxembourg Company of Metals and Alloys S.A.
 Plymouth Engineered Shapes
 Sandinox Comercio, Importação e Exportação
 Shanghai Huaxia Industry Co. Ltd.
 Sims Metal Management Aerospace
 Specialty Metals Company
 Spectore Corporation
 Strohecker Incorporated
 ThyssenKrupp VDM GmbH
 Titanium Finishing Company
 Trans World Alloys Company
 Wellmet International Inc
 Zak, Incorporated

5-9 Years

Accushape™ Inc.
 Aerodyne Alloys LLC
 AlloyWorks, LLC
 American Titanium Works LLC
 Avon Metals Ltd
 Bahco
 Baoji Titanium Industry Co., Ltd
 CEFIVAL
 Center for Advanced Mineral and Metallurgical Processing
 DGA/CTA
 Direct Alloys LLC
 ELG Utica Alloys, Inc.
 Form & Technik GmbH
 FRIGGI N.A. Inc.
 G&S Titanium, Inc.
 Goodrich Corporation - Landing Gear Division

Current Membership Includes the Following Companies

HORIE Corporation
 Independent Forgings & Alloys Ltd
 Jiangsu Hongbao Group Co., Ltd.
 KASTO Inc.
 Makino
 Medart, Inc.
 Nu-Tech Precision Metals
 Olympus Innov-x
 R J Enterprise, Inc
 Robert Zapp Werkstofftechnik GmbH
 Roskill Information Services
 S. Letvin & Son, Inc.
 Sandvik Materials Technology
 Schaffer Grinding Co., Inc.
 Service Steel Aerospace
 Specialty Metals Processing Inc.
 S-Tech Corp
 TechSolve Inc
 Thermo Scientific Niton Handheld XRF
 TIFAST s.r.l.
 TITAL GmbH
 United Alloys & Metals, Inc.
 Uniti Titanium
 Universal Alloys & Metals Ltd., incorp. TMP Titanium Mill Products
 Verichek Technical Services Inc.
 West Penn Testing Group Inc.
 Western Smelting & Metals, Inc.
 Westmoreland Mechanical Testing & Research, Inc.
 Xi'an Metals & Minerals Import & Export

1 – 5 Years

ACNIS International
 ADMA Products, Inc.
 Akrapovic d.d.
 ALD Vacuum Technologies Inc
 AMADA Machine Tools America, Inc.
 Architectural Titanium LLC
 Argex Mining Inc.
 Arnold Magnetic Technologies Rolled Products
 Baltic Titan Ltd.
 Baoji Ronghao Titanium Industry Co., Ltd.
 BioRTechnologies do Brasil
 Bluewater Thermal Solutions
 BRUKER
 CALIFORNIA TITANIUM, LLC
 Carver Machine Works, Inc.
 Chaoyang Jinda Titanium Co., Ltd.
 Chesapeake Industrial Cleaning Products,
 CSIR
 CSIRO, Titanium Technologies
 Dalian BHN Special Materials Ltd.
 Danieli Corporation
 Dat Quang Chu Lai Minerals Joint Stock Co
 DHL Drawback Services
 DKSH Switzerland Ltd
 EWI

Fluor Corporation
 FREDRICH KOCKS GmbH & Co KG
 GE Aviation
 GIE Media Inc. - Industrial Division
 Haynes International Inc.
 Hunan Xiangtuo Goldsky Titanium Metal Co.
 Industrial Metals International Ltd.
 J.L. Becker Company / C. I. Hayes
 KV-Titan Ltd.
 Latrobe Specialty Steel Company
 Materials & Electrochemical Research (MER) Corporation
 METALVALUE Ltd
 Metalysis Ltd.
 MetCon, LLC
 METRACO NV
 Mid-West Machine
 MoTiV Metals LLC
 nanoPrecision Products Inc
 Northern Illinois University
 Oak Ridge National Laboratory
 Parker, Messana & Assoc. Inc.
 Qinghai Supower Titanium Co., Ltd.
 Quad Engineering Inc
 Quebec Metallurgy Center
 Reactive Metals Studio, Inc.
 Realum Ind. Com. De Metais Puros E Ligas
 ReMelt Scientific Inc.
 Renton Coil Spring Company
 Rex Heat Treat
 Rock Island Arsenal
 Roll Forming Corporation
 Saigon Quynhon Mining Corporation
 SeaCast, Inc
 Solar Manufacturing, Inc.
 StarragHeckert, Incorporated
 Timesavers International B.V.
 TITANIUM Consulting & Trading S.r.l.
 Titanium International Group SRL
 Titanium Processing Center
 Titanium Products and Consulting, Inc.
 TLI Group Ltd.
 Tool Peaks Industries Ltd.
 Total Metal Recycling Inc.
 Trans-matic
 Trepanning Specialties, Inc
 Trulife
 TZ Minerals International Pty Ltd.
 Universal Technical Resource Services, Inc.
 University of Northern Iowa
 Vi-Cal Metals Inc
 WEBCO Industries
 Weber Metals Inc.
 Western Superconducting Technologies Co
 Yunnan Titanium Industry Co., Ltd

2012 New members featured on back cover!



2012 New Members

Baoji Shenji Titanium Co., Ltd.

Baosteel Special Materials Co., Ltd.

Dongfang High - New Metal Materials Co. Ltd

F. Colombo Srl

GeoCorp Inc.

Global Titanium Inc.

GNB Corporation

GSL, Inc.

Element Materials Technology

Invera Incorporated

Jiangsu Hongbao Group Import & Export

Latta Equipment Company Inc.

MetSuisse Distribution AG

Quest Alloys & Metals, Inc.

Roche Engineering

Russamer Lab LLC

Schuler Incorporated

Sector3 Appraisals

Sierra Alloys Company

Timax International LLC

Titanium Valley

Wowtech Titanium Ltd.

ZIROM S.A.