ITA Elects New Officers for 2003

ITA elected a new slate of officers to two-year terms at its Annual Meeting in Orlando, Florida this past October.

President:
Timothy G. Rupert,
President & CEO of
RTI International Metals, Inc.

Vice President:
Charles H. Entrekin,
Executive Vice President - Commercial
TIMET

Secretary/Treasurer:
Cliff Sickles,
General Manager of
Howmet Corporation

Appointed Board Directors:
Mark S. Kamon,
President of Dynamet Incorporated

James S. Paddock,
President, CEO Titanium Industries, Inc.

James T. Perryman, Sr.,
Managing Partner of Perryman Company

Edward F. Sobota, Sr.,
President of TechSpec, Incorporated

Thomas E. Williams,
President of Allvac an Allegheny
Technologies Incorporated Company

John P. Monahan,
President of VSMPO Tirus, U.S.

Sylvain Gehler,
Managing Director of
Specialty Metals Company

Questions – what do Bilbao’s Guggenheim museum, a Formula 1 racing car, a military strike fighter, a racing yacht and a Titanium visa card all have in common? Answer they all use titanium except for the credit card!

These and the other many varied uses of titanium were discussed in detail when 350 delegates from all over the globe met recently in sunny Orlando at the International Titanium Association’s 18th Annual Conference and Exhibition. The meeting provides an annual gathering of the clans of the titanium world to test the temperature of the market, discuss new developments, conclude business and, well let’s be honest here, have a good time.

The meeting kicked off early on Sunday with the 8th Annual Golf Classic Tournament, with the closest competition for the winning foursome including Mike Dagle, Zak Incorporated; Charles Pepka, Renton Coil & Spring Company; Gary Rothman, Trans World Alloys Company; and Steve Vonk, Press Forge Company. Other golf prizes were awarded that evening followed by the opening of the exhibition hall where over 40 companies displayed the whole spectrum of titanium uses and applications.

The general session was launched by the heavyweights of the titanium industry providing a review of current industry trends. Tim Rupert of RTI International Metals, Inc., J. Landis Martin of TIMET,
Tom Williams of Allvac, Markus Holz of Titania SpA and Toshihiko Takeda of the Japan Titanium Society all painted similar pictures of the industries state of health.

With the aerospace industry being the major consumer of titanium, the prognosis for titanium is inexorably linked to the cycles of demand for both military and commercial aircraft. The problems of the commercial airlines have been well highlighted and with forecasts pointing to a downturn in demand until 2005, titanium will not be immune to the chill wind blowing from Seattle and Toulouse. All was not doom and gloom; however, the feeling was that this will be a mild downturn compared to the last and that the outlook is for significant growth in the industry over the next ten years. Driving this growth will be the pick up in the commercial airline sector in the second half of the decade and a significant increase in military spending on new aircraft.

For many years the holy grail of the titanium industry has been to make in-roads into the automotive market. The car industry offers the prospect of increasing the size of the titanium market and, at the same time, breaking its reliance on the cyclical aerospace industry. Markus Holz called upon the industry not to just pay lip service to this but to significantly reduce its production costs and to think innovatively in order to achieve a significant breakthrough into this market.

One speaker from the Distribution Trends panel calling for innovation in the industry was Dan Schroeder of Western Titanium. In a presentation about the strategies that titanium distributors are adopting in a changing aerospace market he identified specialization and flexibility in supply and using e-commerce to cut costs in the supply chain as key strategies that would help distributors maintain and increase their business.

The Emerging Technologies in Titanium panel as well as the Welding panel discussed the new developments, future opportunities and challenges facing titanium. One of the key advantages of titanium is its high strength to weight ratio and this has led to an extremely wide range of applications. This was brought home by both the exhibition and presentations throughout the meeting. Among the aerospace speakers Ed Greenslet, from the ESG Aviation Services and The Airline Monitor provided his view and comments on the current airline industry’s transitions.

Bernie Wire made a presentation on how he has used Titanium as an art medium for many years. Joining him in the exhibition were Spectore Corporation and Absolute Titanium Design showing a wide range of Titanium jewelry and consumer products – it was noticeable that they were some of the most heavily visited booths at the exhibition with delegates and their partners indulging in some serious retail therapy!

Jonathon Landell a master flute maker introduced us to the Titanium flute, which combined lightness in weight with a powerful sound. Eiichi Imai who had over the last ten years single handedly built “Titan Lady” a yacht built out of titanium. On a similar yachting theme Cary Veith of TIMET spoke of his company’s involvement with the One World Challenge a Seattle based yachting team and how Titanium is supporting their efforts to bring the America’s Cup back to the USA.

A highlight of the meeting was the 2002 Titanium Achievement Awards luncheon where Rodney Boyer of Boeing, Kazuyasu Kitaoka of the Japan Titanium Society and Richard Sandquist of Axel Johnson Metals were all honored for their contribution to the Titanium industry. Keynote speaker was Art Price, Lockheed Martin Aeronautics Company discussing the Joint Strike Fighter Program.

The proceedings were rounded off by a tropical style gala reception hosted by Allegheny Technologies Incorporated and held in the hotel’s Palm Gardens. Attendees enjoyed Dr. Cardoo and the steel band playing in the background. Peering through the palm trees we could see the rides at Universal Studios, based on marvel comics’ Dr. Doom and the Incredible Hulk. If memory serves me correctly marvel comics also featured a character called Titanium Man who had vast superhuman strength, the ability to fly and was equipped with a powerful weapons system, maybe he should be invited to speak at next years meeting in Monterey!

Metal-Pages provides a news and information resource for the non-ferrous metals industry including Titanium. For more information contact Nigel Tunna Managing Director by telephone +44 207-357-8238, by e-mail at Nigel@metal-pages.com or visit our website at www.metal-pages.com
Activities of the 18th Annual Conference

ITC Announces 2002 Titanium Achievement Awards

The International Titanium Association (ITA) presented the 2002 Titanium Achievement Awards during the Annual Luncheon at the 18th Annual Conference and Exhibition. ITA established the Titanium Achievement Awards to recognize exceptional contributions to the advancement of titanium applications and technology. Each award recipient must demonstrate outstanding achievement in his or her field and must be recognizable as benefiting the titanium industry at large.

The 2002 Award winners include:

Mr. Rodney R. Boyer, Boeing Commercial Airplane Group; Mr. Kazuyasu Kitaoka, now retired from the Japan Titanium Society and Mr. Richard A. Sandquist, now retired from Axel Johnson Metals, Incorporated.

Mr. Boyer received his award for development and expertise associated with new uses and applications for titanium alloys in airframes. (Tim Rupert, ITA President, presenting the Achievement award to Mr. Boyer)

Mr. Kitaoka is recognized for his leadership in forging a bond between the Japan Titanium Society and the International Titanium Association. (Tim Rupert, ITA President, presenting the Achievement award to Mr. Kitaoka)

Mr. Sandquist received the award for his pioneering efforts in international titanium scrap procurement, processing, and recycling, leading to the development of the cold hearth melting industry. Unfortunately, due to health concerns Mr. Sandquist could not attend the Annual Luncheon. (Charles Entrekin, ITA Vice President, presented the Achievement award to Mr. Sandquist in September 2002.)

Nominations for the 2003 Titanium Achievement Awards are available for ITA members on the ITA web site located at www.titanium.org.
Conference Prize Winners

The ITA Conference & Exhibition offers attendees a variety of opportunities to win exciting prizes among them include...

### Exhibition Game Prizes

Winners of the Exhibition Game includes:

- **Dynamet Incorporated**
  - Dynamet polo shirt
  - Siegfried Sattelberger, GfE Metalle & Materialien GmbH

- **International Titanium Association**
  - “Ti” the Teddy Bear
  - Akihiro Adachi, Mitsui & Co. Ltd.

- **Japan Titanium Society**
  - Anaodized titanium mug
  - Richard Leone, RTI International Metals Inc.

- **Metorex Inc.**
  - Element keypad, denim logo shirt, lanyard
  - Ryosuke Suzuki, Kyoto University

- **Plymouth Tube Company**
  - Golf club
  - Vicki Eudaly, Architectural Titanium

- **Reading Alloys Inc.**
  - Engraved logo-ed glass mug
  - Christian Hauler, Treibacher Industrie AG

- **Rome Metals Inc.**
  - Sleeve of golf balls, golf towel, tee, portfolio with keypad
  - Daniel Jammer, VSMPO Tirus GmbH

- **RTI International Metals, Inc.**
  - Titanium binoculars
  - Graylin Presbury, International Trade Administration

- **Spectore Corporation**
  - Titanium & gold bangle bracelet
  - Edward Newman, Keywell LLC Vac Air Division

- **Strohecker Incorporated**
  - Panasonic CD walkman
  - George Esseff, Jr., Supra Alloys Incorporated

- **TIMET**
  - ERC II Callaway Driver
  - Igor Krjenitski, Grandis Metals

- **Ti Sports LLC**
  - 1 complete set of titanium shafts for iron golf clubs
  - Shunji Kojima, Mitsui & Co. Ltd.

- **Solar Atmospheres Inc.**
  - Golf balls

- **Stratcor Performance Materials, Inc.**
  - 12 golf balls

### 8th Annual Golf Classic Prizes

#### Best Score - Foursome

Winners included:

- Steve Vonk, Press Forge Co.
- Mike Dagle, Zak Incorporated
- Charles Pepka, Renton Coil & Spring Company
- Gary Rothman, Trans World Alloys Company

- **Golf Award Baskets**
  - Sponsored by Reading Alloys Incorporated

#### Longest Drive Contest

**Winner:** Mark Kamon, Dynamet Inc.

**Prize:** Titanium Driver

- **Sponsored by RTI International Metals, Inc.**

#### Closest to the Pin

**Winner:** Tony Say, Titanium International

**Prize:** Arnold Palmer Luggage Set

- **Sponsored by TechSpec Incorporated**

### Grand Prize Winner

Toshihiko Saiki, Toho Titanium Company

Winner of either a tension setting ring placed with a choice of a ruby, sapphire, or cubic zirconia for the ladies or an avalon ring with gold pattern inlay for the men.

- **Sponsored by Absolute Titanium Design.**

### One Night Complimentary Stay during the 2003 Conference

**Winner:** Jennifer Iribarren, DLA/DNSC

- **Sponsored by Rome Metals Incorporated**

### Exhibition Game Prizes

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  - Golf balls

- **Stratcor Performance Materials, Inc.**
  - 12 golf balls
Call for Papers—Abstract Submission

Proposed Title: ____________________________________________________________

Have you presented or published this topic before?  Yes    No

If yes, please provide conference name and date: _______________________________________

Will you have a translator?  Please circle  Yes    No

Indicate which area your paper would fall under:

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<td>Metal Refining</td>
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<td>Automotive</td>
<td>Distribution</td>
<td>Mining</td>
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<td>Chemical Processing</td>
<td>Fabricating/Machining</td>
<td>Marine/Offshore</td>
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<td>Consumer Applications</td>
<td>Medical/Dental</td>
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<td>Other: ________________________________________________________________________</td>
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The ITA invites you to submit an abstract of a proposed paper in your area of expertise related to the titanium industry. Please provide a 200 word description of your paper to provide the speaker committee a brief overview of your paper. A detailed abstract may be submitted to ITA at the requested time:

______________________________________________________________________________________________
______________________________________________________________________________________________
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______________________________________________________________________________________________

Return form via fax to ITA at (303) 404-9111
Exhibition—Monterey Convention Center

Exhibition Filling Up Rapidly!

Some of the world’s top suppliers and manufacturers will display the latest products and technologies at the ITA Exhibition. Represent your organization by sponsoring an exhibit booth where you can present products, applications, or literature for delegates. The exhibit hall is an excellent opportunity for delegates to gather and network. It also hosts many of the ITA functions and other events such as breaks, luncheons and receptions. In addition, ITA hosts an interactive exhibition prize contest, designed to encourage delegates to visit every exhibitor booth. Spaces are limited and on a first come—first serve basis!

Currently, over 75% of the Exhibition Space is already sold for the 19th Annual Conference & Exhibition. Reserve your booth immediately!

Exhibit Space Rates:

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<th>Booth Size</th>
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<th>Non-Member</th>
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Registration rates after 4/1/03

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<td>10x20 booth</td>
<td>$599</td>
<td>$1,799</td>
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<tr>
<td>20x20 booth</td>
<td>$849</td>
<td>$2,499</td>
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</table>

To reserve your booth please complete this form and fax to ITA at (303) 404-9111.

Booth Preference:

Indicate the booth number in order of preference that you would like to reserve:

1st Choice ______ 2nd Choice _____ 3rd Choice _____

Send bill and information to:

Name: ____________________________

Company: __________________________

Address: __________________________

City, State, ZIP, Country: __________________________

Phone: ____________________________

Email Address: __________________________

Fax: ____________________________

What type of customer/industry would you like to visit your booth?

SPECIAL OPPORTUNITY… Pay nothing until January 1, 2003! Don’t wait—spaces go quickly. Options change daily so please check the website at www.titanium.org or call ITA to confirm your selection.
Inside the ITA

The Association Busy At Work For You

The ITA is exhibiting at the MD&M West 2003 and Corrosion 2003 Nace shows and would like to ask for your assistance as an ITA member! Member volunteers are needed to assist in manning the ITA booth to answer basic technical questions and hand out literature. As a member of the Association, you have a unique opportunity to serve the titanium industry by donating your time, as well as personally gaining the benefit of being able to network with potential customers and participate in the show.

ITA will provide volunteers with complimentary exhibition badges for the duration of the show. If you are interested in volunteering, please contact ITA at your earliest convenience to advise how many volunteers and the hours you would like to donate.

**Show Dates:**
Medical Design & Manufacturing West  
Booth #5497  
Anaheim, CA USA  February 18-21, 2003

Corrosion 2003, NACE  
Booth #216  
San Diego, CA USA  March 16 - 20, 2003

To volunteer contact Stacey Jorgensen at sjorgensen@titanium.org or call (303) 404-9400.

By attending these shows the ITA has the opportunity to represent the industry as a whole and continue to promote titanium usage.

**Benefits of volunteering include:**
- Network with potential customers
- Connect the public with using titanium by offering your time and expertise
- Complimentary exhibitor badge for the duration of the show
- Select future tradeshows for ITA involvement

Medical Design & Manufacturing West

The MD&M show is the world’s largest Medical OEM event. The show is an opportunity for contract manufacturing, packaging, sterilization and cleanroom equipment; medical electronics; IVD suppliers, assembly, manufacturing and CNC equipment, raw materials and plastics/disposables. The show covers over 150 leading suppliers of medical packaging equipment and supplies, small motors and motion controls, automation technology and medical software demonstrations.

**Corrosion 2003 Nace**

A professional technical society dedicated to protecting the environment, promoting public safety, and reducing the economic impact of corrosion by advancing the knowledge of corrosion engineering. Nace’s Corrosion 2003 is an opportunity for you to attend the world’s largest and most recognized event dedicated to solving corrosion problems. The NACEExpo 2003 show is dedicated to the field of corrosion control and prevention – over 6,000 attendees will stroll the floor looking to discuss future opportunities with titanium.

18th Annual Conference & Exhibition Proceedings Now Available on CD-ROM

The 18th Annual Titanium Conference proceedings held in Orlando, Florida on October 6-8, 2002 are now available. Order your copy today by visiting the publications section of ITA web site located at www.titanium.org.

The cost for the proceedings is:
- Members: $50.00 U.S.
- Non Members: $75.00 U.S

Please Note: 2002 Proceedings only available in CD-ROM format.
Technical Discussion Forum

Just when you thought the ITA web site couldn’t get any better, you discovered the ITA Technical Discussion Forum. The Technical Discussion Forum is an excellent opportunity to educate the general public on titanium. This Forum allows individuals to post questions or seek advice on applications involved with titanium.

The openness and transparency of technical information benefits industry at large, a public forum such as this will only be successful if individuals respond to the posted questions. ITA relies on membership to actively participate in assisting with technical questions. The next few editions of the newsletter will feature the most recent inquiries that need your help.

How to do I access the Technical Discussion Forum?
2. Click on the “Technical Support” tab from the navigation bar.
3. Click on Technical Discussion Forum.
4. The discussion forum is divided among many topics and areas of interest. Pick your area of expertise and enter your response.
5. Or, go to the bottom of the screen and click on “Getting Started”. This is a basic tutorial.

How do I respond to a question?
1. Click on the question.
2. In the “Add a Message” box, write your comments (No password is necessary).
3. Then click on the Preview/Post Message button.

Why should I participate?
ITA relies on membership to actively participate in assisting with technical questions. With the Technical Discussion Forum, you can check in and respond at your leisure. That is the beauty of this program! You never know what potential customer contacts you may find by answering the posted inquiries.

The Association is designed to educate people on titanium. Your participation in this program is greatly appreciated.

Recent Inquiries - Do you have a comment?

Applications: Technical resources for Titanium use in Structures
Does someone know where I might find (online if possible) information regarding loading and buckling of columns of titanium, for different sizes tubes. Also, are there elliptical shaped tubes available from any supplier from stock?

Cutting: Best Cutting Application
Tool Steel or Carbide for Grade 1 & 2
I have inherited a die with cuts made from M-2 tool steel to stamp Ti-G1-Gr1. The tool is a progressive die with small intricate cuts and forms. Please advise on what material would resist wear the longest without chipping. I feel there is a grade of carbide that will surpass the powdered tool steels.

Specifications: Best Replacement for 6Al-4V-ELI
I’m looking for the best possible titanium grade to replace use of gr23 (6al-4v-eli) titanium in titanium piercing jewelry and subdermal and transdermal implants (non-medical) I was told that the grade 23 equals to grade 5 is this true? I’m worried about the vanadium content and would like to find something suitable and more pure than gr 23.

Specifications: Seebeck Coefficient
Does anyone know the Seebeck Coefficient for titanium?

Calendar Of Events:

November 2002
12-14   5th International Conference on the Behavior of Materials in Machining, Chester, England
18-20   18th International Ferro-Alloys Conference, Monte Carlo, Monaco
18-20   International Body Engineering Conference and Exhibition, Detroit, MI USA

January 2003
14-16   Advanced Productivity Exposition, Orlando, FL USA.
20-22   The Super Show® 2003, Las Vegas, NV USA

February 2003
2-4     AMM Titanium Strategies 2003 Forum, Coronado, CA USA
18-21   Medical Design & Manufacturing West, Anaheim, CA USA
ITA Classified Ads

Business Opportunity:

Senior Executive (Titanium Metallurgist)
TalentCatch is an executive search firm conducting a search for a senior executive (Metallurgist) with 10-15 years of experience in titanium or reactive metals production for a funded startup venture. Knowledge of titanium material specifications, knowledge of titanium or reactive metals melting, casting, and mill processing. Overall knowledge of the titanium industry supply chain capabilities and characteristics. Responsibilities include providing key technical information regarding manufacturing and product capabilities of the titanium industry, assess the technical requirements of launching new powder based titanium product offerings, design and manage test qualification programs for new titanium product offerings. BS in Metallurgical Engineering required and MS preferred. Location Maryland. Compensation is $80-110K with 10% bonus plus relocation. Please submit detailed resume in Microsoft word format to mike@talentcatch.com

Sales Representative - Santa Fe Springs, CA
Name of Your Company: Titanium Industries, Inc.,
Contact Name: B. Paddock
Contact E-Mail: info@titanium.com
Description: Titanium Industries, Inc., the largest independent titanium distribution company in North America, is seeking an aggressive Sales Representative for our Santa Fe Springs, CA Service Center. The ideal candidate should have a college degree and several years of successful metal sales or related experience. Responsibilities include 50% inside sales and service and 50% of time making efficient, cost-effective sales calls on major existing and high potential accounts, forecasting and profitably selling the Company's products and services. Salary commensurate with experience plus a full benefits package. Please e-mail your resume with salary requirements to the attention of B. Paddock at info@titanium.com. No phone calls please. Please visit our website at www.titanium.com. EOE

Products For Sale:

Titanium Jewelry Available At Exclusive ITA Member Prices
Name of Your Company: Spectore Corporation
Contact Name: Andrea
Contact Phone: (954) 481-8422
Description: ITA member companies – Offer your employees an opportunity to purchase titanium jewelry direct from the world’s largest manufacturer. Products include rings, bracelets, earrings, necklaces and accessories, all made with titanium or titanium and 18K gold. Many styles with diamonds and other precious stones. Call today for details on how to obtain Spectore Titanium Jewelry Catalogs for your company. Visit the web site at www.spectore.com to view the extensive product line and make your selections. Contact us for pricing and availability. Please be sure to identify yourself as an ITA member for special pricing. Makes a great holiday perk.

Materials For Sale:

www.ti4sale.com
Largest Stock of Ti Materials on the Internet
Contact Name: Vasily Semeniuta
Contact Email: info@ti4sale.com
Description: For all your needs in Ti materials please visit new page www.ti4sale.com, where you can find largest stock of titanium materials currently published on the Internet.

Titanium In Stock
Name of Your Company: Trans World Alloys
Contact Name: Gary Rothman
Contact Email: grothman@twalloys.com
Description: We stock Ti Sheet, Plate, Bar and can forge your exact size from billets we have in stock. Competitive pricing and prompt service in 6-4, 6-2-4, 6-6-2, and other titanium alloys.

Ti-6-4 sheets in stock
Name of Your Company: affinity international, LLC
Contact Name: John
Contact Email: john1098@adelphia.net
Description: We have high quality titanium powder in stock as well as Ti-6Al-4V sheets AMS4911 in stock: Thickness as 0.032” 0.040” 0.050” 0.063” 0.080” 0.125” 0.250” 0.5”

Ti/Fe Alloy Powder & Pellets Available
Name of Your Company: International Minerals Limited
Contact Name: Flip Opperman
Contact Email: flip@imc-dem.com
Description: Have available TiO2/Fe2O3 granulated pellets/powder. Total tonnage available ± 20 000 000 mt. Shipments of between 45 000 - 500 000 mt per month.

Titanium Extruded Shapes
Name of Your Company: Plymouth Extruded Shapes
Contact Name: Sandy Winders
Contact Email: swinders@plymouth.com
Description: Plymouth Extruded Shapes, a member of the Plymouth Tube Company, manufacturers titanium and steel extruded shapes for numerous industries, including aerospace, transportation, heavy equipment and machinery, food and dairy, pulp and textile, architectural and medical industries. Call to find out how we can save you cost, labor and scrap.
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<th>Current Membership</th>
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<td>FAE S.A. Fabricación de aleaciones especiales</td>
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Founded in 1984 the International Titanium Association is a nonprofit networking trade association for the titanium industry. The primary focus of the Association is to promote the continued growth of the industry as well as educate the public on benefits and implementation of using titanium. Current membership includes 93 organizations.