

The Crucible

Women in Mining Interview

MMTA Warehousing Update



LETTER FROM NORTH AMERICA

Dear Members

From fierce snow on Friday, through a quite glorious weekend, to a temperature now nearing 50°F, once again New York doesn't seem to know what it is doing at the moment: hanging on to winter or creeping into spring. Oh well, I suppose we've got to live it by the day and just see what happens.

However, one person who seems to want to force the pace a little, especially on the trade front, is President Obama. Since I last wrote, not only have we had his inauguration on January 21, but also, a little over three weeks later, on February 12, his "State of the Union Address". For those in the UK, this is probably as close as we get, here in the US, to an equivalent of the annual "Queen's Speech", which, as I am sure you know, contains the government's legislative program for the year ahead.

In this year's address, the president informed us all that he was: "...*announcing that we will launch talks on a comprehensive Transatlantic Trade and Investment Partnership with the European Union – because trade that is free and fair across the Atlantic supports millions of good-paying American jobs.*" So, following his announcement, and wondering to myself what ramifications, if any, such a "partnership" might have for fellow MMTA members, I spoke to some of them both here and in the UK. Here are a few of our thoughts - both general and specific.

This is probably not a partnership that is going to be established with any speed. Not least, because the US and the EU are two *very* different animals, both legislatively and culturally. And, if nothing else, their progenitors could not have been more different! But, there again, the lure to both sides of an anticipated growth in trade between them of US\$120 billion within five years (according to the US Chamber of Commerce), and the addition of around US\$180 billion to EU-US gross domestic product, could, possibly, overcome many differences.

Specifically on the minor metals front, some of the most likely ramifications would, of course, involve existing tariffs for various minor metals. (I always think there is a somewhat cruel irony in the US International Trade Commission listing them in its "*Harmonized* Tariff Schedule of the United States" – the italics are mine!) Further "harmonization" or, indeed, the disappearance, of a bewildering plethora of tariffs may be no bad thing if it helps promote transparency in pricing, even though it may shut the door on certain trading opportunities. By way of illustration, one may, perhaps, venture to ask why, currently, there should be just a single tariff rate of 2% (8112.92.70) on vanadium (unwrought and powders), and yet, from what I can see, no fewer than *seven* different tariff rates for moly, including moly waste and scrap (8102.97.00) which is, actually, free.

And REACH? Probably unlikely to extend itself eponymously, should any deal eventually be struck. If nothing else, EU negotiators could find considerable difficulties persuading their US counterparts of the validity of its aim "*to enhance innovation and competitiveness of the EU chemicals industry*". Or, indeed, of any of the supposed "*benefits of the REACH system [that] will come gradually, as more and more substances are phased into REACH*".

Finally, and on a very different issue, my friends at Brown Brothers Harriman, a fellow MMTA member here in New York, suggested that such a partnership could have its advantages, particularly for asset-based lenders, if, for example, as a result, the UCC (Uniform Commercial Code) became even more influential *ex the USA*. Any resulting standardization in how, say, collateral is perfected or security interests are taken could only be a good thing. At present, in some European countries, it is not even possible to take a floating lien.

Anyway, fellow members, just a few light thoughts there.

With best wishes, as always, from New York, to MMTA members everywhere.

Tom Butcher, March 11th 2013 [Hard Assets Investor](#)

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DIARY DATES

- [Informal Dinner,](#)
London, UK,
15 May
- [Fundamentals of](#)
[Metallurgy Course,](#)
London, UK,
16 May
- [Informal Drinks,](#)
NY, USA, 26 June
- [Introduction to](#)
[Metallurgy Course,](#)
New York, USA,
27 June
- [MMTA's 40th](#)
[Anniversary](#)
[Dinner,](#)
Intercontinental
Hotel, London,
UK, 8 October
- [Site Visit—](#)
[Campine NV,](#)
Beerse, Belgium,
2 September
- [New York Dinner,](#)
Waterclub, New
York, USA,
12 December
- [Christmas Lunch,](#)
Pewterers' Hall,
London, UK,
18th December

SPONSORSHIP OPPORTUNITIES FOR 2013



Sponsoring an MMTA event is not just about one evening.

MMTA communications and marketing reach the inboxes of decision-makers and key influencers within the MMTA membership and outside it for the entire duration of the marketing of an event, as well as in post-event reviews.

Our new website also offers great opportunities for sponsors.

Take advantage of the MMTA's contacts and distribution channels by using us to help target your marketing activity within the minor metals sector.

MMTA sponsorship also offers the opportunity to work with a trusted partner over an extended period of time, maximising return on your financial investment.

This year, our flagship **40th Anniversary Dinner**, will take place at the InterContinental Hotel, Park Lane on 8th October.

We also have an exciting new venue—the Waterclub—for our **New York Dinner on 12th December**, and we will be returning to Pewterers' Hall on **18th December for the Xmas Lunch**.

Details of specific sponsorship packages are available on request by contacting

maria@mmta.co.uk

HOW ELEVEN ZAMBIAN CHILDREN POLITELY CHANGED THE WORLD

Their names were - Tumpoka, Nchumunya, Rabecca, Gift, Enock, Benson, Sean, Margaret, Brenda, Godfrey and Amos. Eleven children of *Mine Basic School* in Mufulira between the ages of 13 yrs and 15 yrs, whose teacher, Godfridah Mwimbe (58 yrs), had signed them up for the British Council's *Climate Change Initiative*. Little did they know that The British Council in Lusaka had no more than £3000 to spend from their Sub-Saharan African fund for this initiative across the whole of Zambia.

After making contact, Godfridah put

Komo (62 yrs old at the time) who had worked for 26 years under ZCCM as 'charge bin operator' loading charges of 1000 mt copper concentrates to the now closed electric furnaces, but who lived in the poorest part of Kankoyo in the path of the sulphur emissions. He had TB and was living on 24000 Kwacha a month (about \$4.50). His house had no running water or electricity, so the children saved the refreshment money that came with the British Council grant to buy him two new corrugated iron roof-sheets (to replace the sulphur-corroded ones) and also bought

"Everywhere are to be seen examples of initiatives with maximum impact in the community"

forward the case that her group would be studying 'pollution from the mines'. Her group was duly accredited and Brenda (13 yrs old at the time) won a pan-Zambian competition to be made one of twelve 'Climate Change Ambassadors'.



British Council Calendar about the Climate Group showing Brenda from Mine Base as a Climate Change Ambassador

The children then went into their community to collect data. They interviewed the Town Clerk to ask questions about why the land to the West of the smelter was so bleached. They went to the hospitals to ask why medical waste was dumped on open ground with ordinary refuse. They tried to grow bananas, groundnuts, guava, avocado and oranges in their school yard to understand the effect of the polluted ground on plants. They identified a mine worker, Alick

him a small solar panel for light at night.

Their work was largely unknown to me when I visited the school in 2010, but I had experienced the impact of a sulphur cloud just a few moments before my arrival. I was in a taxi with two other English people, one of whom was the former Head Teacher of Bruton Primary School in Somerset, twinned with Mine Basic. All of us in the car gagged as the sulphur hit the back of our throats and for a few irrational moments believed we were being strangled. Entering their dimly-lit classroom I met all the children and, as a metal person, I promised that if they each wrote a letter to the mine owner (whose name I wrote on the blackboard) I would deliver them.



Two children standing in front of classrooms at Mine Primary School (formerly Mine Basic).

HOW ELEVEN ZAMBIAN CHILDREN POLITELY CHANGED THE WORLD—CONT'D...

That was early 2010, and on May 3rd I sent a letter – with their accompanying beautifully handwritten letters, to the owners. Theirs was a simple message: just to describe what it was like to live day-to-day with sulphur. It was a message that was not being heard locally because those in the community were ambivalent about the smelter – on the one hand they knew their health suffered, but on the other hand the mine and smelter gave work which supported, in one way or another, the 300,000 or so people who live in Mufulira and its environs.

I do not want to reiterate what has already been well told, and which most of you reading this story already know. Those letters, with evidence of stack emissions from AH Knight (Zambia) Ltd, proved the case. What has been unexpected, and which deserves to be trumpeted loudly, is the response.

On January 10th 2012 I attended a meeting at Glencore's offices in Zug where I was advised of Glencore's commitment to remove all sulphur emissions at Mopani by the end of 2013.



A brighter, cleaner future for school children at Mine Primary School.

Visiting Mufulira this month I can only report an entire transformation in relations between Glencore-owned Mopani and the town. Everywhere are to be seen examples of initiatives with maximum impact in the community. Since last year alone a Cervical Smear Clinic has opened at the mine-owned Malcolm Watson Hospital; a school is being built within the Mopani site to house and train over 300 students in engineering skills, either for use at Mopani or across the region; brand new clinics within the poorest areas of the community are to



Open area at Mine Primary where Mopani is due to start building a new school hall.

be seen everywhere; roads have been renewed and new ones built; new school rooms at one of the poorest schools have been finished since my visit last year, when I witnessed the headmaster of *Muleya Winter Basic* handing over the Parent Teachers Association's (PTA) costed plan. In a few weeks from now, I understand that at Mine Basic itself (now called Mine Primary), work will start on a new school hall. Apart from all this, I also know how much effect the spraying of houses to prevent malaria, as well as funding for anti-retroviral drugs, is helping to lower mortality rates.

But most important of all, is the item that will bring relief to the greatest number in their day-to-day lives – I was able to witness, courtesy of Mr Emmanuel Mutati (Chairman of Mopani), the massive engineering project that will for the first time in 80 years capture all sulphur emissions from copper production and allow people to breathe fresh air.

The investment, Glencore tells me, was \$145 mln. Whatever the figure, it is a substantial investment by any standards and, looked at in one other important way, nor is it a bad return on the British Council investment of £3000 or the polite letters of the Zambian children.

It is something to truly celebrate across our industry as proof that production of metals and good corporate practice can go hand in hand. It is proof too that we who work in this industry can be a powerful and independent conduit for change and good practice.

Anthony Lipmann, Lipmann Walton & Co. Photos Kathryn Wheeler

NEW MMTA MEMBER

The MMTA would like to welcome its newest member.

KGHM Polska Miedz SA

<http://www.kghm.pl>

KGHM POLSKA MIEDŹ S.A.

KGHM SA is a company with over 50 years' experience in the mining and processing of copper ore.

The company was founded in 1961 with the mission of developing the single largest ore deposit in Europe, located in Lower Silesia and discovered four years earlier (in 1957).

KGHM, by exploring and processing copper ore, is one of the world leaders in the production of electrolytic copper and silver.

INTERVIEW WITH AMANDA VAN DYKE, CHAIR OF WOMEN IN MINING

WOMEN IN MINING



Emma Newman, MMTA Assistant General Manager, attended a recent Women in Mining (WIM) seminar, and felt that MMTA members would be interested in learning more about what WIM is involved in, as well as how MMTA and WIM members' interests may overlap. To this end, she spoke to Amanda van Dyke, Chair of [Women In Mining \(UK\)](#).

April 21, 2013

Metal Events Ltd has today won the Queen's Award for Enterprise for Outstanding Achievement in International Trade 2013; one of the highest accolades awarded for business success in the UK.

The London-based company, which develops and runs mining and metals events and conferences worldwide and is owned and managed by the original founders – Jill Fitzgibbon and Rachel Carnac, was awarded the accolade today (on the Queen's birthday) for its outstanding achievement in international trade. Overseas sales increased by 100% between the financial years ended December 2009 and December 2011.

"Rachel and I are extremely proud to have received this prestigious award which recognises our hard work in starting the business and growing it over the past decade," said Jill Fitzgibbon, joint managing director. "We are lucky to have worked with some fantastic suppliers and partners over the years, and would like to thank them for their support."

For more information, click [here](#).



Share your good news with the MMTA: contact: maria@mmta.co.uk

"Women in Mining (UK) is a professional organization, whose members are made up largely of women in the UK who work in a professional capacity in the mining industry. While we have a number of geologists and mining engineers, we also have lawyers, accountants, marketing and finance professionals specialized in the mining industry, among others. Given London's status as a centre of mining finance we actually have a large membership base of over 1000 women. Our aim is

"I love the mining industry, it is an international, truly global, fundamentals business that is exciting and important, supplying the raw materials the world needs"

to promote and progress the careers of women within the mining industry. We do this in a number of ways, we hold seminars to broaden and update our members in a number of areas in the mining industry, we contribute to the debate on women on boards in the UK via the publication of a research reports on the status of women in the global mining industry, we have networking events to provide a platform and place for women to get together, we support scholarships and an education committee that encourages and helps young women get involved in the mining industry, and last but not least, we have a website and a newsletter that serves as an information portal to keep women involved with the mining industry". As for how MMTA and WIM (UK) members' interests may overlap, Amanda thinks that "interest in metals, markets, and mining is of paramount interest to both sets of members; therefore there is natural affinity between both organisations".

I am interested to learn what route Amanda's career path has taken, and how she became involved in WIM. Amanda responds that she "was a professional gemmologist for a number of years and worked in diamond trading, before going back to school to get an MBA and a Masters in International Economics. Following that, I started working for an investment bank and seemed naturally drawn towards the mining sector, in which I very quickly specialized. When I moved to London I actually joined WIM (UK) as a means of meeting other people in the industry. From there on in it seemed to have a life of its own".

When we talk of mining, we talk of an industry which consumes a multitude of skills apart from the miners themselves - geologists, engineers, chemists, researchers, accountants, traders, managers etc. It is interesting to consider how a young woman can find out that this is an industry in which she could make her career path.

Amanda is very clear on this point: "If you are young female geologist, engineer, chemist, researcher, accountant, trader, manager, then mining IS a sector where you can make a career path, if you so choose. I am biased, I love the mining industry, it is an international, truly global, fundamentals business that is exciting and important, supplying the raw materials the world needs, and supporting global, as

INTERVIEW WITH AMANDA VAN DYKE, CHAIR OF WOMEN IN MINING, CONT'D...

well a local development. I know there is a place for women within it, I work with over a thousand of them!

I will admit there seem to be fewer women in mining than in most other industries, but that doesn't mean women aren't welcome, it just means that there is room for more of them. The reason that WIM (UK) exists is to encourage both industry and women to explore the option to a greater extent than it does at present, because we believe both the industry and women have a lot to offer each other".

I am interested in learning more about Amanda's thoughts on whether there are issues that women can address in the mining and metals industry that the other half of the species are failing to do. She replies that "women have been known to do a few things differently than men", and although stressing that these are generalizations which may not hold true on an individual basis, she makes reference to academic circles that study these types of phenomena where "it is generally accepted that certain differences between men women lead to different results in businesses. To name a few:

- better Emotional intelligence: which means they manage teams better, are better at motivating teams

- better Stakeholder management skills: so they can balance stakeholder needs better

- different risk awareness: women on a general basis assess risk differently than men and consider the longer term and wider ranging ramifications of any given risk at any given time.

These are just a few of the differences that can contribute to mining companies. But on a general level, all of the research and experience suggest that diverse teams: male, female, black, white, western, eastern, lead to better results and better managed companies, as well as better board oversight. The key is to make sure you have good men AND women in your business, that is the best way the mining and metals industry can address the issues".

Sadly, mining is an industry which members of the public often only hear about in a negative context e.g. pollution, suffering of local communities, the power of mining companies, which often appear arrogant and who often wield more power than the sovereign nations in which they operate. I wonder whether this is a fair

"The key is to make sure you have good men AND women in your business, that is the best way the mining and metals industry can address the issues".

picture and whether mining can ever be an equitable venture between the miner and the mined.

Amanda categorically replies "Of course it can!" She goes on to add that "there is an expression "if it bleeds it leads", and unfortunately when it comes to mining and the press that is very true. You don't see all the responsible miners, the communities that have been re-built and developed in both the developed and less developed world by mining. Mining is a primary industry, they say for every job on a mine, between 7-10 others are created outside the mine. Modern environmental impact assessments require all mines globally to assess and mitigate the environmental and social impact a mine has, and largely they do". Amanda qualifies this by saying "that doesn't mean they aren't creating big and often ugly holes in the ground, but on the other hand these holes are generally filled and returned to some sustainable state at the end of the mine life, and most mining acts globally require that be planned for in advance, and often also paid for in advance".

CHANGES TO REACH FEES ANNOUNCED BY ECHA

The fees payable to ECHA under REACH have been revised. Essentially, there will be further reductions for SMEs and increases for large (non-SME) companies.

This was discussed at a recent European meeting and the decision to decrease fees for SMEs is in response to the findings in the REACH review. It is estimated that the new fees will come into effect from the end of March.

SMEs should consider if they wish to delay their submissions and register after the new fees come into effect to benefit from the reductions.

Larger companies should consider if they wish to bring forward their submissions that would be due this year and register now before the increased fees come into effect.

This issue was raised by MMTA member, Tony Bayley of ABSCO in a previous edition of the Crucible.

For more information, click [here](#):

To read Tony Bayley's article, click [here](#):

MMTA'S
INTERNATIONAL
MINOR METALS
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SILVER SPONSORS



INTERVIEW CONT'D FROM PAGE 6 & 7

I am keen to learn how Cynthia Carroll, outgoing Chief Executive of Anglo American and one of the most prominent female leaders of a London Stock Exchange listed company, as well as one of the most prominent women in the metals industry, will be remembered and rated in history. She was allegedly responsible for changing the culture of Anglo, but during her time the company lost shareholder value. She was also a great supporter of *Women in Mining* and spoke at WIM events.

Amanda reflects that “she will be remembered as the first, and during her tenure, the only female CEO of a major global diversified miner; she was a trailblazer for women in our industry, for that I believe she will always be respected. She did a number of amazing things for Anglo: she took a very old, traditional business that was working in a very difficult part of the world and brought it up to modern international standards internally and externally. I think at least at Anglo they will always respect what she did for Anglo as a company. On the other hand, in terms of the loss of shareholder value, I think she will be lumped in with all of the other major diversified miners who followed a policy of expensive M&A that led to large capital expenditure blow-outs, and huge write-offs. Her actions in this regard were part of the prevailing trend in the mining industry, a trend shareholders were very unhappy with and that has led to all of the CEO’s in that group being replaced. I don’t think it had anything to do with her being a woman, rather more to do with a change in the prevailing trend in how mining companies should be managed”.

Amanda also believes that Cynthia Carroll’s role will have done good for the cause of aspiring women in mining and industry generally: “she was a big symbol for men and women, of what women in our industry are capable of”.

Moving on to the subject of the EITI (Extractive Industries Transparency Initiative) www.eiti.org, I am interested to learn whether Amanda sees their initiatives as positive or merely a nuisance, and she responds that she views this as a positive.

“More bureaucracy always has to be weighed as a cost/time vs benefit analysis, but in this respect I do personally believe that EITI is very important to our industry.”

Another aspect of the mining industry, and sadly not a positive one, is that mining is one of the least safe businesses in the world. As late as 1910 The Hulton Colliery, in Lancashire, England, claimed the lives of 344 miners. Such accidents are rare in the Western world today, but deaths from mining in other parts of the world are still high with many hundreds of deaths each year. I pose the question of whether Women in Mining has links with or reaches out to the families of miners in developing countries to lend support or give some advocacy to improve conditions. However, Amanda stresses that “safety in mining is a industry issues, not really a women’s issue, and it is beyond the scope of our organization to be able to effectively help and advocate with”. She notes, however, that WIM does “have a number of individual members, who either personally or with their companies, work within mining safety”, and thinks that “if anything, what we do as a group is share information with our membership about the importance of safety, as well as global differences in mining safety, in order to raise awareness”.

Finally, I ask Amanda what she thinks of the mining trade press, and whether The Mining Journal or other publications give a fair picture of the industry.

Amanda responds: “I very much like the trade press, and subscribe to Mining Journal, as well as a number of other publications. Usually the trade press is very good. If anything, my issue is with the mainstream press, which proves regularly that it really doesn’t understand, nor occasionally seem to want to understand the mining industry, and very often paints mining in a very unfair light. I wish the trade press had better linkages with mainstream press so they could broaden their reach and bring fairer more balanced and educated critique to the industry and to the public as a whole”.

Emma Newman, Assistant General Manager, MMTA

THE MMTA IS 40 YEARS OLD THIS SUMMER



Do you have an MMTA story to tell?

If so, we want to hear it.

Please send your contributions for the next edition of the Crucible to maria@mmta.co.uk

As part of a process of enhancing and improving the value of MMTA membership, we have devised a short survey. Please help us to raise the value of your membership by completing the below short (2 minutes) survey.

<http://www.surveymonkey.com/s/YDLVYKG>



MEMBER LETTERS



Interested in Sailing?

Several MMTA members have indicated an interest in getting involved in the Little Britain Challenge sailing event between 12th and 15th September 2013, in Cowes, Isle of Wight, UK.

If you would be interested in joining them, please email maria@mmta.co.uk

This space is for MMTA members' letters. If there is a brief message you wish to communicate to the membership, please let us know.

NEW IN THE MEMBERS' AREA

The MMTA website members' area Resource Centre has recently been updated with the following documents:

- Surface Engineering for Corrosion Mitigation, NAMTEC
- Atradius Country Report—Greece
- Atradius Country Report-UK
- Atradius Market Monitor—Automotive/Transport
- Atradius Market Monitor—Construction
- Atradius Market Monitor—Steel, Metals & Mining
- Atradius—Trade Successfully with Indonesia

You will find these and other articles and reports by logging into the members' area Resource Centre www.mmta.co.uk

If you need to be resent your login details email emma@mmta.co.uk

ARMOURERS & BRASIER/TIN PLATE WORKERS ROLLS-ROYCE UNDERGRADUATE AWARDS



Rolls-Royce academic prizes are designed to recognise academic excellence in materials science and metallurgy at undergraduate level. The awards are across a number of universities with which Rolls-Royce already conducts post-graduate and post-doctoral research within a University Technology Centre (UTC), including Oxford, Cambridge, Imperial, Manchester, Birmingham and Swansea.

At the same time Rolls-Royce has enjoyed a relationship with Livery Companies, including the Armourers & Brasiers and the Tin Plate Workers Alias Wire Workers. Both Livery companies sponsor our prizes for aerospace and nuclear material applications respectively. They also sponsor student placements in industry as well as supporting a range of activities promoting materials,

metallurgy and engineering science across schools and universities. By working together as a group in this manner we are able to promote materials, metallurgy and engineering across a far wider audience than we would otherwise.

Dr Justin Burrows PhD CEng FIMechE

Project Manager - University Research

Rolls-Royce plc

MMTA EASTER INTERNSHIP

I have recently begun my internship in the London office of the Minor Metals Trade Association (MMTA). I, together with another 12 students from Birmingham, Cambridge, Imperial, Manchester, Oxford and Swansea Universities, was given the Rolls Royce - Armourers & Brasiers Award. Four students from Imperial and Manchester were given the Rolls Royce - Tin Plate Workers' Award.

I was awarded as one of "the top two performing first year undergraduate students" in 2012 in the Department of Materials at Imperial College, London.

The ceremony took place in the Lord Hives Conference Room, G-Wing, Rolls-Royce, Derby on February 7th 2013. We also heard a presentation about materials from Rolls-Royce. After the award ceremony, we visited their Learning and Development Centre and had a look at the exhibitions within the Heritage Facility there.

I have spent a total of three weeks with the MMTA and during that time, as well as learning about the Association, I have been writing a project on minor metals in superalloys.

Tiesheng Wang, MMTA Intern Easter 2013

The MMTA would like to thank those member companies who have kindly hosted Tiesheng during his time with us.

Tiesheng's project will be available to view in the members' area resource centre shortly.

A DAY IN THE LIFE OF.....

Gallium—a Bridge Connecting the Whole World

What is gallium?

With this question, more than ten years ago, I joined Beijing Jiya Semiconductor Material Co., Ltd (Beijing JiYa), and entered the world of the minor metal. Since then I have come to understand it.

Gallium is a silver-white and easily melting metal. In recent years, with the rapid development of modern science and technology, gallium is increasingly widely used in the semi-conductor communication, semi-conductor illumination (LED), solar cell, high-performance magnetic materials, medical equipment and other emerging industries, thus market demand for gallium is increasing greatly.

Beijing Jiya is the first in the world to apply hydrometallurgy to gallium extraction in the process of aluminum oxide production. Extract gallium when producing aluminum oxide, then put the other raw materials back into the aluminum oxide production line. After this, the quality of the aluminum oxide is improved, and at the same time emissions in the process of aluminum oxide production decrease relatively. So we say that is a kind of comprehensive utilization of natural resources. In recent years, this method has begun to spread in China, so that the supply of gallium has increased significantly to meet the growing market demand.

As the market continues to expand, every day at work I receive many letters and phone calls from all over the world inquiring about products and prices. Afterwards we will make a lot of explanations to the clients. Upon reaching agreement on all issues, a contract will be signed, then we will ship gallium to them in different places across the world accordingly.

As time passes, with the deepening of mutual understanding and trust,



Gallium: the metal that melts in your hands

we have become good friends with our clients. Some of them we have met, but for some others we have had no chance to meet until now. However, this does not have any adverse impact on our friendly ties and mutual trust. Now I'm repeating the same work and making new friends everyday. I'm glad I have the luck to enter this small metal business and be acquainted with so many people from the same field. Gallium is a bridge for me connecting the whole world.

Gallium is also the basic material of modern wireless communication. It is a large supply of gallium and other associated minor metals that enables people to efficiently use telecommunication tools like mobile phones and makes communication with relatives and friends thousands of miles away so fast and convenient.

Gallium, like many other minor metals, is a bridge via which people across the world can communicate with each other.

But we should remember that gallium is a type of natural resource. We should value it, protect and make full use of it in order to protect our common planet. It is the responsibility of each of us.

Lin Yanqing,
Beijing Jiya Semiconductor
Material Co., Ltd

DID YOU KNOW....

The MMTA executive team receives many hundreds of calls and emails a year enquiring about potential new business contacts. We refer enquirers to the MMTA Members' Directory, where they can search by metal or company.

Is your member listing up-to-date?

Please take a few minutes to check your website contact and other details to ensure they are as you would like to see them:

Are contacts current?

Do we have all the metals listed that you are involved in?

We are expanding our database to allow visitors to the site to search by ferro-alloys as well as pure metals.

Contact

emma@mmta.co.uk if you would like to make changes.

MMTA COURSES

FUNDAMENTALS OF METALLURGY COURSE

London, UK

16th May 2013



About this Course:

"An interesting and informative course, delivered at an easy pace"

Alstom Power Services

"This was an excellent course which some companies used in order to send younger members of staff for a widening of their metals knowledge, while others used it to brush up, or backfill, missing gaps. Creep, toughness tests, impact tests, ductile-brittle transition, fatigue, grain orientation, phases, crystal structures – much ground was covered and this was...highly worthwhile."

Anthony Lipmann, Lipmann Walton & Co

RUTHENIUM

"...an increase of 40% in the temperature that the turbine blades can withstand translates into a 1% improvement in fuel efficiency for commercial passenger jets ... [this] improvement allows airlines to cut their fuel expenditures by one million US dollars per plane annually. Improved fuel efficiency in commercial jets also contributes to reduced carbon dioxide emissions, which is crucial in environmental terms."

Dr Hiroshi Harada, Managing Director: NIMS' High Temperature Materials Center

With spikes in both demand (in the electronics sector) and price during 2006, and to a lesser degree in 2010/11, average demand for ruthenium is circa 27.6 mts/year.

Since its high point in 2006, ruthenium prices have decreased tenfold, from \$27,327 per kg to \$2,572 per kg.

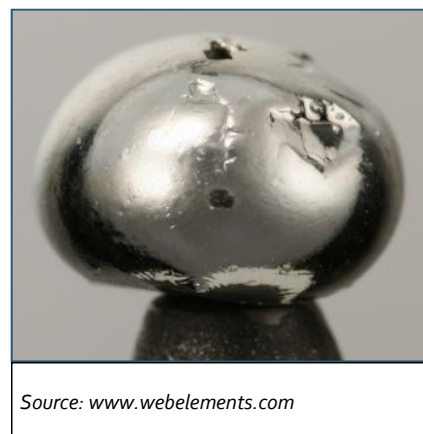
Current Applications:

Electronics

Ruthenium is widely used in Perpendicular Magnetic Recording (PMR), first innovated by IBM in 2001, which has since spread to almost all hard disk drives found in laptops and smart phones.

- Platinum group metal use in PMR technology is predicted to be stable until late 2014/early 2015, when Heat Assisted Magnetic Recording (HAMR) or Patterned Media technology may disrupt usage.
- The typical ruthenium layer is only 3 atoms thick. As hard disks continue to shrink in size, so too does the amount of ruthenium required for each.
- However, smart phone production is increasing, and the current worldwide total of 1 billion is predicted to have doubled within 3 years.

Ruthenium is also popularly used in thick film chip resistors which are



Source: www.webelements.com

found in the circuit boards of some computers.

Catalysts and Salt Water Chlorination

- The largest catalytic use of ruthenium is for olefin metathesis, wherein variants of the Grubbs' catalyst are extensively used.
- RuO₂-coated titanium is a 'dimensionally stable anode' (DSA), and is deployed for specific catalytic conditions, such as very high currents or UV-related concerns.
- A RuO DSA is commonly used in salt water chlorination, a means of producing clean water in swimming pools without the traditional caustic effects of chlorination. Salt water pools are steadily gaining market share.

What properties does ruthenium contribute to alloys?

The addition of Ru allows the addition of a higher ruthenium content, without detriment to the alloy stability, thus indirectly increasing creep resistance, which provides more Gamma prime phase. Without such Ru additions, we see Tetragonally Close Packed phases (TCPs) forming at high Re contents, which are detrimental. Tests show that alloys containing ruthenium have improved creep properties, and therefore lasted longer without deformation.

The balance of elements within ruthenium-bearing superalloys is constantly being modified with respect to:

- Strength
- Hardness
- Oxidation resistance

RUTHENIUM CONT'D

All of these are vital factors for the longevity of the turbine blade, and consequently the final cost analysis.

The Future:

Present production of ruthenium is designed to meet the current demand of approximately 20-30 mts/year.

Supply to meet long-term demand from aerospace can be planned, in order to avoid shortages.

Ruthenium is technically proven in Sin-

gle Crystal superalloys, but has not as yet been commercialised, due to fears over the long-term availability of ruthenium, as well as the current lack of availability of long-term fixed price contracts for the metal.

Aerospace leaders are still investing in collaborative projects to create such alloys, which shows a continued desire to improve jet engine efficiency.

Anthony Lipmann, Lipmann Walton & Co Ltd

UPDATES TO THE MMTA'S ARBITRATION RULES



As part of our ongoing review process, the Mediation & Arbitration Committee has recently reviewed the MMTA's Arbitration Rules to address certain areas where the wording was less than clear.

At its most recent meeting on 12th March 2013, the Main Committee agreed a resolution to update the Arbitration Rules to:

- Clarify that parties are strongly advised, but not obliged to, attempt to settle the dispute through a conciliation or mediation procedure offered by the MMTA;
- Carry through changes that were approved in principle by the MMTA in 2007, but had not been carried through into the existing rules. These changes have now been carried through (Rule 2.1) so that it is clear that people with relevant experience, who are not members of the MMTA, can be appointed to the panel of arbitrators;
- Amend Rule 2.2 to reflect the above change, meaning that the Arbitration Committee be drawn from the MMTA membership rather than from the panel of arbitrators, which may contain non-MMTA members;
- Permit fees and deposits to be set by the Arbitration Committee and not the Main Committee (Rule 3.1);
- Rearrange the existing requirement that at least 1 arbitrator should be a member of the Chartered Institute of Arbitrators, moving it from the preamble to the Rules, where its status was unclear to paragraph 5.1;
- Make explicit the power to charge an administration charge, which has always happened in the past.

The Arbitration Committee was consulted on these changes prior to the Main Committee's approval of the proposed changes.

Donald Lambert, Chair, Mediation & Arbitration Committee

To view the full, updated Arbitration Rules, please click [here](#).

MMTA COURSES

INTRODUCTION TO METALLURGY COURSE

New York, USA

27th June 2013

Kindly sponsored by
Brown Brothers Harriman



Course Content

- Structure of metals and alloys
- Testing
- Metal and alloy selection
- Manufacturing routes
- Getting the properties right
- Mechanical testing
- Case studies
- Common engineering grades
- Standards
- Quality assessment

INFORMAL DINNER

15 MAY

LONDON, UK



Join MMTA members for an informal dinner on the 15th May. The dinner will take place a stone's throw from Bank underground and DLR station,
at

Browns Restaurant,
Old Jewry Street.

**Cost: £50 per person
(plus VAT)**

and will include a three course meal with wine followed by coffee.

This dinner is open to both attendees and non-attendees of the following day's Fundamentals of Metallurgy Course.

Sign up now.

Contact

emma@mmta.co.uk to book your place, or book and pay for your tickets online at

www.mmta.co.uk/events.

ATRADIUS AND THE ART OF TRADE CREDIT INSURANCE



At Atradius we are in a unique position. We hold data on over 100 million businesses around the globe, monitoring the risk of trading with them, day in day out. This is further enhanced by our people, acting as business's eyes and ears on the ground, in 160 locations around the globe. For any business taking on new customers, entering new markets or developing new product lines access to this kind of information can prove vital in this economic climate. Why? Because it enables them to take the risks they need in order to expand their businesses, but in a managed, responsible way.

So what does trade credit insurance actually do and what makes it good for business?

Trade credit insurance was founded by various governments after World War 1 to stimulate economies, offering exporters, in particular, a "safety net" when trading with new business partners where buyers sold goods and services under short term credit terms. Today, whether your business is domestic or international, an Atradius policy does roughly the same thing, offering three main types of support:

- Researching and monitoring new destinations or customers ("buyers") on behalf of businesses and keeping them informed of any changes in risk, as they occur.
- Paying out against a claim in the event that the buyer is unable to pay. This means we pay up to 90% of the monies owed (or 95% if the reason for non payment is a political cause of loss in the country of the insured buyer).
- Free debt collection, as an additional service included in our policies

We offer three main types of cover:

Insolvency - which covers your business in the event of a variety of scenarios, including client bankruptcy, appointment of administrator, suspension of payment, agreement to compensation, execution of a judgement, CVAs, legal protection from creditors, Chapter 11(USA) and Reglement Judiciaire (France)

Protracted default – when your due date of payment has not been met six months after the due date

And finally,

Political risk - which will protect your business through government moratoria, discharge of debt transfer, war, contract frustration, public buyer default, export licence cancellation and perhaps most importantly given our current climate, when a country can't or won't pay.

There are also further benefits. Firstly, cost: trade credit insured businesses are viewed more favourably by banks and other lenders as their payments are secured, so although trade credit insurance works out at about 25 pence for every £100 of trade credit, it may prove to be an investment worth making.

We know sales managers who maintain that credit is their ultimate strategic weapon – and used well, that is exactly as it should be. Credit keeps things moving and is enormously helpful, particularly during tough times. But credit used unwisely can also be a time bomb. Without effective risk management and knowledge, a business which is issuing too much credit or, at the other end of the scale, using more credit than it can afford, could easily find itself in a very dangerous place. At Atradius we are fortunate – we have an accurate picture of the global trading climate at any moment. We pride ourselves on our friendly, professional service. If you would like to find out how we help businesses to trade, come and talk to us.

Mary Ravenscroft
[Atradius Credit Insurance](#)

LETTER FROM BRUSSELS



News at European level for rare metals is particularly rich this year, so this short review will give an overview of key regulatory issues which are at the forefront of the activities of the Beryllium Science and Technology Association (BeST) and which will hopefully also be of interest to other MMTA members.

On Health & Safety issues, the hot topics are substances of very high concern (SVHCs) - the European Commission (EC) has recently published its Roadmap for the identification of SVHCs (REACH candidate list). The first proposals from Member States have been received by ECHA and the public consultation has been open since 4th March. CoRAP 2013, the REACH Community Rolling Action Plan on Substance Evaluations, has been updated with the substances to be evaluated from 2013-2015 (the list includes aluminium sulphate, tin sulphate, Ag, Be, Zn phosphate, Ga and As). RoHS, the Directive on Restriction of certain Hazardous Substances in electrical and electronic equipment, is being reviewed by the Austrian Environment Agency, which is currently consulting on substances that may be added to Annex II, which contains the list of restricted substances, by July 2014.

From an industrial policy point of view, the EC Department for Enterprise and Industry (DG ENTR) launched its European Innovation Partnership (EIP) on Raw Materials, aimed at boosting innovation and increasing the availability of Raw Materials for Europe, with the purpose of developing the EU's high tech industry.

DG ENTR is also currently reviewing the EU list of Critical Materials before the end of 2013. As many members will be aware, the 2010 EC report on critical raw materials (CRM) identified 14 CRM on the basis of a methodology looking at supply risk, economic importance and environmental country risk. Raw materials are designated as being "critical" when the risks for supply shortage and their impact on the economy are higher, compared to other raw materials. New critical materials such as Re, Te, Hf, Sn and Se will be assessed and the selected consultants (Fraunhofer, Ruskins and Oakdene Hollins) will also review the methodology used in 2010.

BeST believes that early in the review process, the EU must take into account the best available information on socio-economic impact, and not focus solely on the hazard classification of substances, which is used as a basis for potential bans. The threat of disruption to the supply of rare metals, including beryllium, to the EU, and the global impact on trade is a real concern. If overly restrictive regulatory measures that do not embrace recent scientific data and proven industrial safety practices were to be applied, the likely result would be a loss of value added high-end technology jobs both now and in the future. There would also be a trickle-down effect, adversely impacting economic growth overall with serious consequences to the fragile economies of a number of member states.

Caroline Calvez,
Beryllium Science and Technology Association

Would you like to write a letter from your region or country, outlining social, economic or political issues of interest to the sector?

INFORMAL DRINKS

26 JUNE

NEW YORK, USA



**26th June 2013 from
6pm**

**The Fitzpatrick Grand
Central**

141 East 44th Street at
Lexington Avenue,
NY10017

If you are staying in New York and wish to book accommodation at the hotel, please contact them direct on:

Tel: +212 351 6800

Or Email:

reservations@fitzpatrickhotels.com

This is an informal drinks event; just take the opportunity to spend an early summer evening with fellow MMTA members and associates. Bar snacks will be provided.

To register your interest in this event, please email the executive team at:

executive@mmta.co.uk

***this is a cash bar event**

Community.



Keeping you connected—

- to the global minor metals community
- to who and what you need to know
- providing regular networking opportunities

Giving you peace of mind—

- MMTA approved warehouses
- trade regulations
- sampling standards
- mediation & arbitration service
- insurance task force

Promoting you—

- raise your company profile
- advertise your services and products
- take advantage of sponsorship opportunities
- get involved and have a voice

Always here for you—

- the MMTA executive team responded to hundreds of queries on a wide range of metals-related issues in 2012

Saving you time and money—

- free wi-fi members' meeting room and workspace in central London
- find what you want, when you want it—online resources and links on a wide range of minor metals related subjects all in one place
- substantial discounts for MMTA members on all business, social and educational events, including up to 40% discount on MMTA's International Minor Metals Conference

The MMTA promotes essential elements that add quality, safety and enjoyment to our lives.

The MMTA is the world's leading minor metals industry organisation.

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