

TANTALUM-NIOBIUM INTERNATIONAL STUDY CENTER

PRESIDENT'S LETTER

Friends,

March has arrived and we start to look towards the Fifty-second General Assembly of the T.I.C. which will take place on Monday October 17th 2011. This will form part of the meeting to be held from Sunday October 16th to Wednesday October 19th, in Almaty, Kazakhstan, including a plant tour to the facility of Ulba Metallurgical Plant. This will be the first time that the T.I.C. has met in this part of the world and we are all very excited at the prospect. We thank NAC Kazatomprom and Ulba Metallurgical Plant in advance for their hosting of the meeting and plant tour.

The Executive Committee, along with the Technical Promotion Officer and the Secretary General, are busy developing what we are confident will be diverse and interesting technical and social programmes. Each year, the success of the technical programme depends very much on the quality and quantity of the papers submitted, through the commitment of our membership. Also, if you have any views on how we can continue to improve our Assemblies, or our Association in general, we would welcome your input.

We have also started work on the Fifty-third General Assembly, which is planned for Cape Town, South Africa - another first - in October 2012.

I would like to thank the various Working Groups which have done so much work 'behind the scenes' on behalf of the T.I.C. on the subjects of Supply Chain and Transport of Class 7 material. While challenges remain, I am confident that their efforts will be well rewarded with appropriate guidelines and regulations being developed. In addition, my thanks to those members who have embraced the iTSCi programme requirements and reporting procedures. An update on the Supply Chain Initiative can be found later in this Bulletin.

There is renewed vigour in the tantalum and niobium markets, which we hope will continue to blossom throughout the year. I hope that we will also start to see a re-growth in the membership which, as a result of the recent recession, has declined over the last couple of years.

Richard Burt
President

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FIFTY-SECOND GENERAL ASSEMBLY

The Fifty-second General Assembly and associated technical meeting of the Tantalum-Niobium International Study Center will be held in Almaty, Kazakhstan, from Sunday October 16th to Wednesday October 19th 2011. The venue will be the Rahat Palace Hotel, where a block booking of bedrooms is also being held.

The administration of the association will be carried out in the formal General Assembly on the morning of Monday October 17th, including election of applicants for membership and the appointment of the members of the Executive Committee. Technical presentations will follow, in two half-day sessions on Monday and Tuesday mornings, to allow delegates some spare time in the afternoons.

On Wednesday October 19th, a chartered flight will take delegates to Ust-Kamenogorsk, to visit the facility of Ulba Metallurgical Plant.

Concerning the social programme, a welcome reception will be hosted on Sunday October 16th, and all participants are warmly invited to a gala dinner on the evening of Monday October 17th. We are also preparing an interesting programme of sightseeing tours for those accompanying delegates.

An invitation will be sent to the nominated delegate of each member company in early July. Others who would like to attend should contact the T.I.C.

SUPPLY CHAIN INITIATIVE - AN UPDATE

The article in Bulletin 144, published in December, provided readers with the status of the various Supply Chain issues at that time. Much has happened since then, although much still needs to be achieved.

In terms of the iTSCi programme itself, a Business Plan and five year budget was developed and a Capital Funding call for a total of US\$16.5 million between now and 2014 was made to T.I.C. members and also to our downstream customers in January. In the last few days, an Executive Summary of the Plan has also been distributed, as obtaining this capital in the very near term is vital. We are pleased that our members buying material are participating in iTSCi by reporting exports and purchases, and paying the levy.

The EICC/GeSI 'Conflict Free Smelter' validation audits are in full swing. These audits require all Central African material to be tagged by April 1st, otherwise it will be regarded as non-compliant.

Various international bodies, including the OECD, the ICGLR and the UN Group of Experts have published their Supply Chain reports and all support iTSCi as a key part of Due Diligence. The Securities and Exchange Commission is expected to publish the regulations resulting from the Dodd-Frank Act mid April, and

we anticipate these will closely follow the principles set out in the OECD Guidelines.

In Central Africa itself, the mining suspension imposed last September on the three eastern Provinces of the DRC was lifted on March 10th, and a new Code of conduct agreed. Unfortunately, however, without iTSCi in place, there will be no legitimate production from there, and that in Katanga will stop prior to April 1st. Rwanda has published new Regulations, and they expect to have iTSCi tagging covering 80% of production by April 1st, although they, too, require additional donor funding to extend the roll-out to the artisanal sector (which covers much of tantalum production).

Will iTSCi wither, or will it proceed, and ensure legitimate Central African material is accepted in the marketplace? Without a capital infusion, unfortunately the former, so the 'crunch-time' is upon us.

T.I.C. STATISTICS AND TRANSPORT PROJECT

This article is taken from the paper given by Mr Ulric Schwela, Technical Promotion Officer of the T.I.C., on October 5th 2010, as part of the Fifty-first General Assembly held on the shores of Lake Tahoe, Nevada, U.S.A.

STATISTICS

The first topic of this paper is the T.I.C. statistics, including:

- collection method
- overview of the latest figures compared to previous years

COLLECTION METHOD

The T.I.C. gathers data on the niobium and tantalum industries to show the main trends in niobium and tantalum production and consumption. These data are considered to cover the majority of the industry.

Key features of the statistics collection include:

- data come from T.I.C. members and a small number of non-member companies;
- for confidentiality, the data are reported directly to an independent collector (HLB Belgium);
- the independent collector provides the T.I.C. with an aggregate report;
- the T.I.C. issues the report to the members and reporting companies;
- the data rely on the good will and co-operation of the reporting companies.

Collection requests are issued quarterly, to facilitate a routine and timely response; results are then circulated as soon as available.

STATISTICS OVERVIEW

The statistics collected on production and trading of raw materials and shipments by processors over the past year are reviewed in comparison with the statistics for the previous six years.

Up until 2008 the T.I.C. only reported results for the two six-month periods January-June (H1) and July-December (H2), except for capacitor producers' receipts where figures have always been reported quarterly. Beginning in 2009 the T.I.C. has been reporting all figures quarterly.

However, for comparability with previous years, the figures presented here still have to be shown in six month periods.

TANTALUM

PRIMARY PRODUCTION

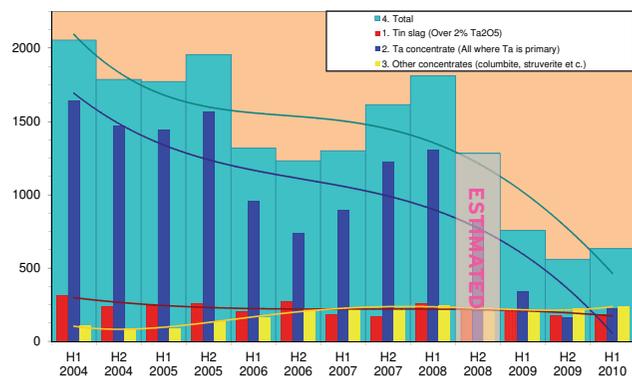


Figure 1: Tantalum primary production ('000 lb Ta₂O₅)

One of the companies that must report its figures before the results can be released failed to do so for the fourth quarter of 2008, hence no data is available for 2008 H2. The value shown in the graphs for 2008 H2 is an estimate. It has been assumed that the figures for that period lie half-way between 2008 H1 and 2009 H1. This assumption is believed to be conservative given that production cut-backs only began in the last month of that six-month period.

The most significant occurrence is that tantalum concentrate stopped being the primary source of tantalum in 2009 H2. As a proportion of total production, tantalum concentrate declined from 72% in 2008 to 45% in 2009 and accounted for only 35% of total production in 2010 H1. Tantalum is currently being obtained mainly as a secondary element from columbite (37%), and also from tin slag (28%).

This is due to the then three biggest tantalum mines closing in the period December 2008 to April 2009. The new major producers increased their production in 2010 to meet demand.

For the period July 2009-June 2010, the year-on-year change has seen a 42% drop in total production, mainly due to the 67% fall in tantalum concentrate. While tin slag also declined 20%, other concentrates have picked up 4%.

PROCESSORS' RECEIPTS

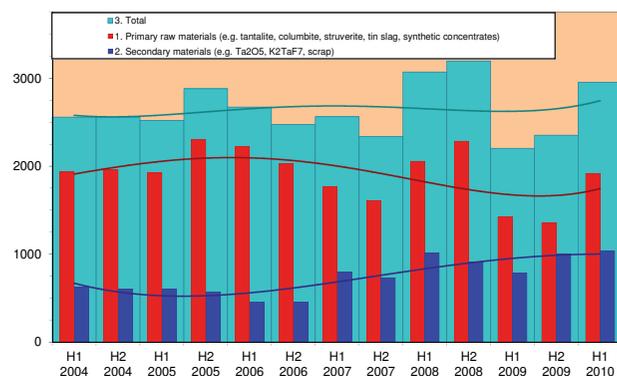


Figure 2: Tantalum processors' receipts ('000 lb Ta₂O₅)

Processors' receipts peaked in 2008 just as the global recession was about to bite, the following 2009 figures saw the lowest receipts since 2002. This has to an extent been reversed in the first half of 2010, with total receipts growing 26% and primary raw materials up 42%, albeit from the low point of 2009.

In concert with the primary production figures, primary raw materials account for a lower proportion of total receipts, although still 65%.

Year-on-year primary raw materials have declined 12% and secondary materials climbed 20%, to result in an overall dip of just 2% for the total receipts.

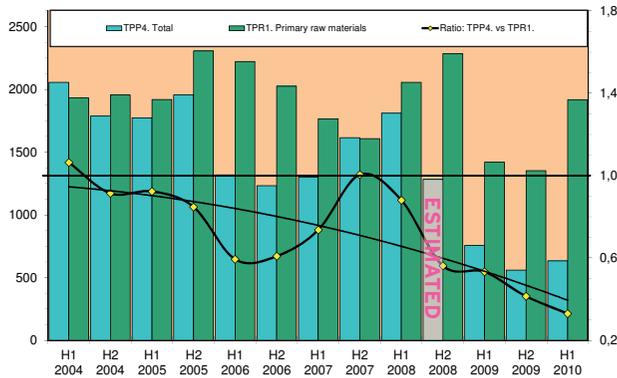


Figure 3: Tantalum total primary production versus processors' receipts of primary raw materials ('000 lb Ta₂O₅)

The 2006 Greenbushes mine closure resulted in a big dip in production, where total primary production only matched 59% of primary raw material receipts. By the end of 2007 this disparity had gone and production and receipts were at parity.

The 2008-2009 closure of the Wodgina, Marropino and Tanco mines resulted in a halving of total primary production which only provided for 56% of receipts in early 2009. Over the past year primary production has remained stable, while primary raw material receipts climbed 26% in the past six months, meaning that primary production now only accounts for 33% of receipts. Clearly production is entering the supply chain from outside the T.I.C. membership of which the T.I.C. has no information.

PROCESSORS' SHIPMENTS

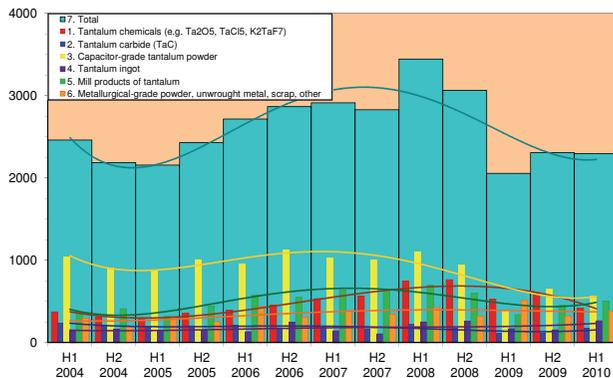


Figure 4: Tantalum processors' shipments ('000 lb Ta)

A year ago tantalum chemicals had overtaken capacitor-grade tantalum powder as the main product shipped by processors. This proved to only be momentary although capacitor-grade tantalum powder is now only barely ahead at 24% of total shipments, followed by mill products at 22%. Next are tantalum chemicals at 18%, metallurgical-grade powder at 17% and tantalum ingot at 12%, with the niche product being tantalum carbide at 7% of the total.

Year-on-year changes show a modest rise in mill products of 3% while tantalum carbide has seen no change. Tantalum ingot has dipped slightly down 2%, followed by capacitor-grade tantalum powder losing 9%. The biggest change has been the 22% drop in tantalum chemicals, giving an overall decline of 10% in processor shipments to a level comparable to 2004/2005.

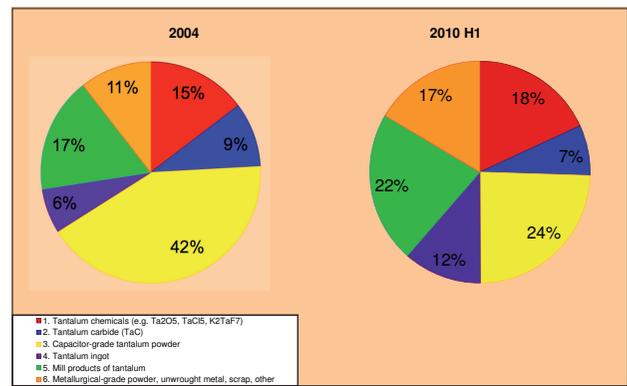


Figure 5: Tantalum processors' shipments in 2004 and 2010 H1

While the total processor shipments of today are the same as in 2004, the make-up has clearly changed with both capacitor-grade tantalum powder and tantalum carbide providing a smaller share. The difference has primarily been taken up by tantalum ingot, metallurgical powder and mill products, and, to a lesser extent, by tantalum chemicals.

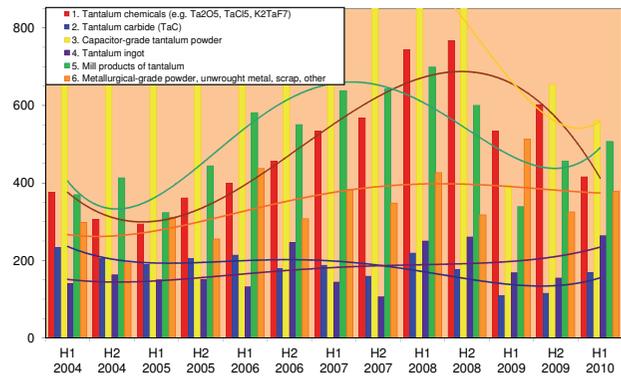


Figure 6: Tantalum processors' shipments - different scale ('000 lb Ta)

That the capacitor-grade powder shipments are no longer the preponderant tantalum product can be seen in the above graph, as capacitor powder is now of the same order of magnitude as the other products and no longer off the scale.

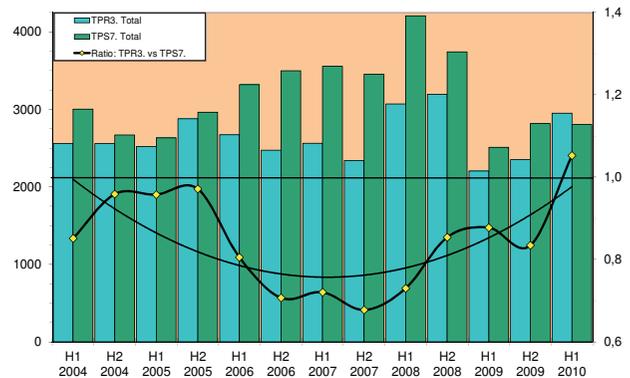


Figure 7: Tantalum processors' receipts versus processors' shipments ('000 lb Ta₂O₅)

2010 H1 was the first time since 2002 that processor receipts exceeded shipments. Over the 2003-2009 period, 36.000.000 lb Ta₂O₅ have been received compared to 43.400.000 lb Ta₂O₅ shipped, confirming that stocks must necessarily have been put to use. The increase in receipts would suggest that these stocks are no longer sufficient.

CAPACITOR PRODUCERS' RECEIPTS

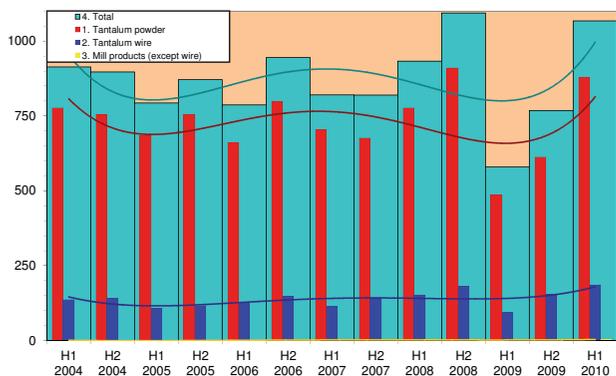


Figure 8: Tantalum capacitor producers' receipts ('000 lb Ta)

A year ago, the capacitor producers' receipts of capacitor-grade tantalum powder had fallen by half. Since then, there has been a rapid recovery and levels are nearly back at the peak figure of 2008 H2.

Year-on-year the tantalum powder has increased 7%, wire 24% and the mill products category, albeit a small proportion, has nearly doubled. Overall receipts are up 10%.

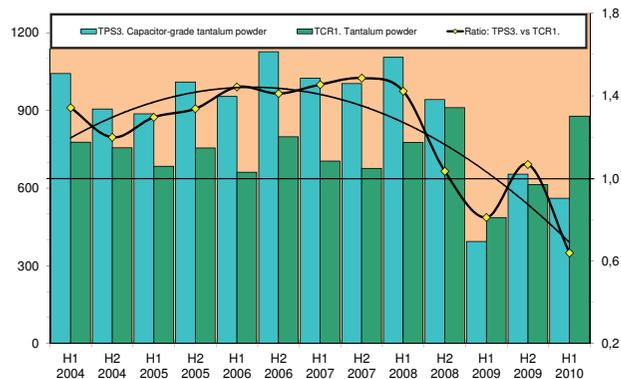


Figure 9: Tantalum processors' shipments of capacitor-grade powder versus capacitor producers' receipts of tantalum powder ('000 lb Ta)

Up until 2008 there had been a steadily growing surplus of processors' shipments of capacitor-grade tantalum powder, compared with the capacitor producers' receipts of the same. In 2008 H2 this stable situation changed dramatically and processors' powder shipments have been fluctuating around the parity mark with capacitor producers' powder receipts.

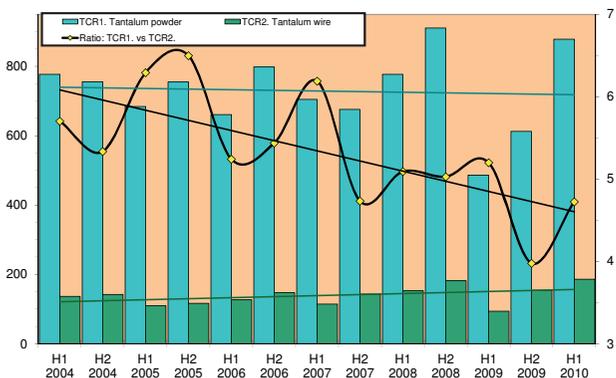


Figure 10: Tantalum capacitor producers' receipts: powder versus wire ('000 lb Ta)

Last year, a zero-growth trend-line was observed for powder receipts over the previous six years. This six-year trend still continues despite the recent recovery of powder receipts. Wire

receipts however show an increase and the ratio of powder to wire continues the long term decreasing trend, in line with the diminishing capacitor form factor.

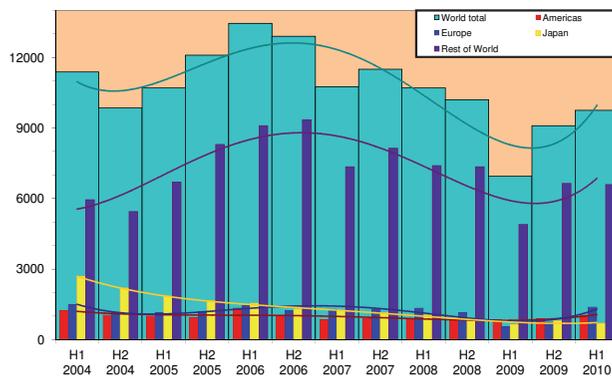


Figure 11: Tantalum capacitor consumption (estimated), by world region (millions of units)

As with capacitor producers' receipts, tantalum capacitor consumption has shown good recovery compared to a year ago. Year-on-year comparison shows Europe has recovered the most with 27%, followed by the Americas with 15%. The 'Rest of the World' recovered 8% while Japan has seen no change. Overall the capacitor consumption has gained 10%.

NIOBIUM

PRIMARY PRODUCTION

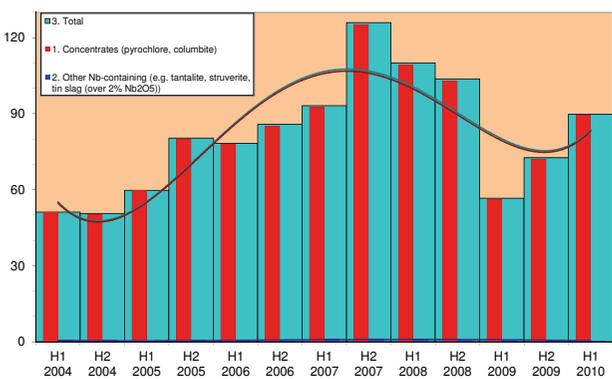


Figure 12: Niobium primary production ('000 000 lb Nb₂O₅)

The economic crisis hit the niobium industry earlier than the tantalum industry, as evidenced by the decline already in 2008 H1 and lasting until 2009 H1. Major producer CBMM's projected expansion plans for 2008 had to be put on hold until demand recovered. This recovery has now taken place over the past year.

Year-on-year the primary niobium raw materials have only increased 2%, although if the low point of 2009 H1 is taken as a starting point there have been two solid six-monthly increases of 29% and 24%.

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PROCESSORS' SHIPMENTS

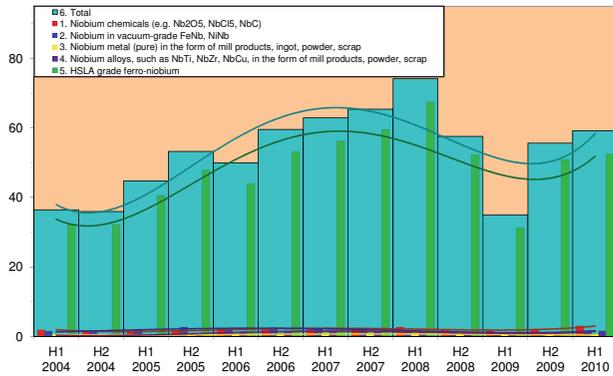


Figure 13: Niobium processors' shipments ('000 000 lb Nb)

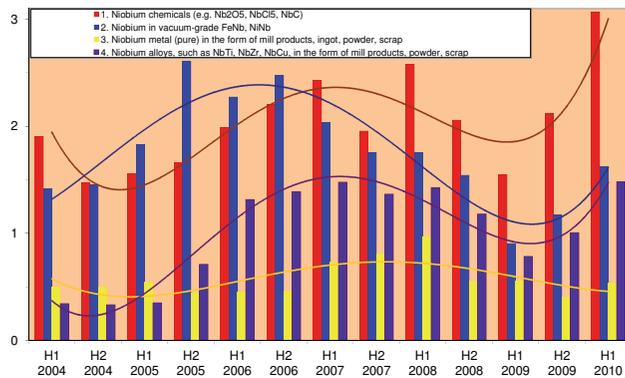


Figure 14: Niobium processors' shipments other than HSLA-grade ferro-niobium ('000 000 lb Nb)

Year-on-year most categories of niobium processors' shipments have seen an increase. The biggest increase has been for niobium chemicals, up 44%. Next are niobium alloys with 27% and HSLA ferro-niobium with 24%, followed by vacuum-grade niobium alloys, still with a healthy 14%. Only niobium metal has seen a decline, down 16%.

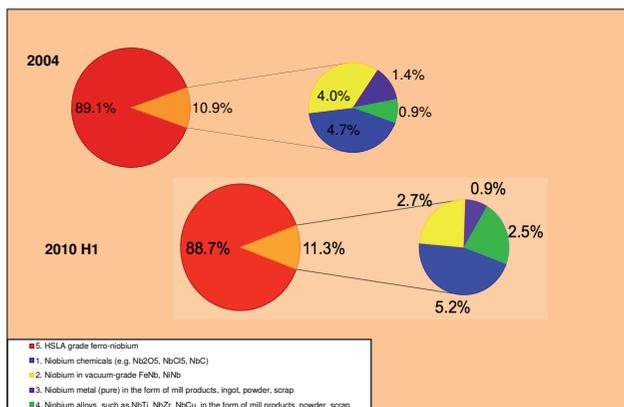


Figure 15: Niobium processors' shipments in 2004 and 2010 H1

Unlike tantalum, little has changed in the make-up of niobium processor shipments since 2004. HSLA ferro-niobium retains its commanding proportion of 89%, while the remaining 11% are the value added products, where the main change has been a reduction in vacuum-grade niobium alloys taken up by 'ordinary' niobium alloys with a near parity of 2.7% and 2.5% respectively.

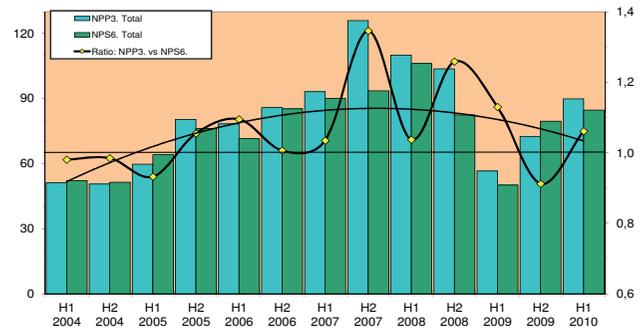


Figure 16: Niobium primary production versus processors' shipments ('000 000 lb Nb₂O₅)

While there has generally been a good correlation between supply and demand, production expansion overshoot expectations in 2007 H2 and resulted in a 35% oversupply after which production was scaled back. While there was a small deficit in 2009 H2 this was easily balanced in 2010 H1.

STATISTICS CONCLUSION

For tantalum primary production the closure of the three major tantalum concentrate mines in 2008-2009 continues to make itself felt despite the increased production from other mines, leaving production figures at 1996 levels. The past six months have seen a 13% recovery.

Tantalum processors' receipts have been relatively stable over the past six years, varying by +/- 19% from the average, compared with primary production (+/- 53%) and processors' shipments (+/- 26%). The current volume is nearly at 2008 levels, with 2010 H1 showing a remarkable increase of 26% over the previous six months, double the increase in tantalum production figures and resulting in production only meeting a third of the tantalum receipts.

Tantalum processors' shipments are at 2005 levels and with no change over six months earlier. The tantalum ingot category is at a record high and now accounts for 12% of the total shipments.

Tantalum capacitor producers' receipts are very close to the 2008 record levels again, with 2010 H1 and 2009 H2 showing consistent 39% and 32% six-monthly increases respectively.

Niobium primary production is back up to the 2007 H1 / 2006 H2 levels and continues to increase with two back-to-back six-monthly increases of 28% and 24%.

Niobium processors' shipments are also back up to 2006 H2 levels with 2010 H1 showing a modest increase of 6% on 2009 H2, while the latter jumped 59% from the previous six month period.

TRANSPORT PROJECT

The second topic of this paper is the transport project. Although based on the presentation made in October 2010, updates have been made to reflect the situation in March 2011. The T.I.C.'s work in the field of transport of radioactive materials can be broken down into nine different areas.

1. IAEA

The International Atomic Energy Agency (IAEA) is the United Nations (UN) agency with the mandate 'to accelerate and enlarge the contribution of atomic energy to peace, health and

prosperity throughout the world', including the authorisation 'to establish or adopt, ... standards of safety for protection of health and minimization of danger to life and property'. Therefore the IAEA is the highest authority tasked with radioactive material transport regulations. The T.I.C.'s co-operation with the IAEA aims to monitor the regulatory developments and where appropriate ensure that the revisions of the regulations take account of the conditions particular to the transport of Naturally Occurring Radioactive Material (NORM) such as tantalite, columbite and tin slag.

2. Regulations

IAEA: The IAEA regulations that govern transport are commonly known by the code TS-R-1 and the latest edition is 2009. They have in recent years undergone a biennial review, however, a 2011 edition has been skipped as there were not sufficient changes to warrant a new issue. Instead, work is underway to produce a revised 2013 edition. Accompanying the TS-R-1 regulations is the guidance material TS-G-1.1 (Rev. 1) from 2008. It is planned that future editions of TS-R-1 will be synchronised with revised editions of the guidance material. The TS-R-1 and TS-G-1.1 documents can be downloaded for free by following the links on www.iaea.org/publications/index.html.

United Nations: The IAEA regulations are only legally binding on the IAEA's own work. For everybody else, TS-R-1 is adopted by the UN in its broader 'Model Regulations' for all dangerous goods, commonly known as the 'orange book'. The UN Model Regulations are in turn incorporated by modal organisations e.g.:

- the International Maritime Organization (IMO) and its International Maritime Dangerous Goods (IMDG) Code
- the United Nations Economic Commission for Europe (UNECE) and its European Agreement Concerning the International Carriage of Dangerous Goods by Road (ADR), also applied voluntarily by a number of non-European countries and accompanied by related regulations for rail (RID) and inland waterways (ADN).

The ADR and IMDG documents are binding on consignors and consignees of radioactive material, with each document having additional requirements to TS-R-1 as appropriate to the mode of transport. The latest IMDG edition is 2010 and the regulations governing radioactive materials are derived from the 2005 edition of TS-R-1. IMDG comes into effect in 2012 or voluntarily in 2011 by decision of each country's national regulatory authority.

National: Finally, each country develops legislation to govern the transport of dangerous goods within its jurisdiction. This legislation is generally based on TS-R-1 and in ideal circumstances TS-R-1 is adopted wholesale with no modification. Unfortunately most countries find it necessary to modify the implementation of TS-R-1 in their legislation, rather than modifying their practices to meet the common international standard. This leads to numerous state variations that considerably increase the complexity of transporting goods, particularly by sea as each shipping route will call at multiple countries and therefore has to meet the requirements of all the countries along that route. These state variations are a major contributing factor to the issue of Delay and Denial of Shipment.

TRANSSC: The IAEA body that carries out the regulatory review is called TRANSSC, short for Transport Safety Standards Committee. It meets twice a year, attended by approximately 150 delegates from member states and international organisations, plus additional ad-hoc meetings. The membership is defined for three-year cycles and the 2008-2010 cycle has now ended. The T.I.C. has been attending TRANSSC meetings as an ad-hoc observer and is expecting to be invited to become a full non-governmental observer for the 2011-2013 cycle.

TRANSSC initiates review of the transport regulations and guidance material, by declaring a 120-day period for comment every one

or two years. Outside these periods, no comments are accepted. In 2010 one such period was declared for July-November and the T.I.C. submitted two comments on the TS-R-1 regulations, based on the findings of the Transport Study. These comments received an initial airing at the December TRANSSC meeting and were put forward for further discussion at a future date. TRANSSC members were invited to two further meetings at the beginning of February 2011, neither of which were scheduled to address the T.I.C. comments. Nevertheless the T.I.C. participated in the first of these two meetings that pioneered the use of the internet to operate 'virtually', without the need for travel to Vienna. TRANSSC is next scheduled to meet in plenary in June and the T.I.C. will attend this.

It was TRANSSC that approved the creation of a Coordinated Research Programme (CRP) on the appropriate regulation of NORM transport back in 2005, a CRP that the T.I.C. participated in as part of the Canadian authority's delegation.

IAEA NORM CRP: Coordinated Research Programmes (CRP) are a method by which the IAEA stimulates research into the peaceful uses of nuclear energy and makes the results freely available. When the CRP on the 'Appropriate Level of Regulatory Control for the Safe Transport of NORM' was proposed, proposals for studies were submitted by nine countries: Brazil, Canada, France, Germany, Iran, Israel, Romania, UK and USA, of which the Canadian proposal was actually a T.I.C. study begun in 2004 and then nearly completed. As non-governmental organisations can not submit studies directly, the Canadian authorities kindly agreed to submit that of the T.I.C.

The CRP held a preparatory meeting in November 2006 to examine the general background and each participant's proposal for research. CRPs normally meet three times and these were held in April 2007, February 2008, and November 2009. A final CRP report was drafted during 2010 and is now due to undergo review within the IAEA processes.

3. T.I.C. Transport Study

In 2004 the T.I.C. commissioned a study into the transport of tantalite and tin slag (collectively described as tantalum raw materials), which was completed in April 2007. The main objectives of this study were to determine the radiological characteristics of these materials and to evaluate the potential radiological exposures associated with normal transport and in the event of an accidental spill. The study was carried out by SENES Consultants Limited (SENES), with support from a number of T.I.C. member companies for the analysis and gamma radiation surveys. A copy of the full report is available upon request.

The key finding was that the current transport of tantalum raw materials is safe for transport workers and members of the public. Further, the report supports the application of a higher exemption value than that currently imposed by the IAEA regulations TS-R-1. On the basis of allowing for the possibility of other transport-related exposures from exempted materials, in order to derive a proposed future exemption level the annual dose constraint for transport of tantalum raw materials might be limited to a third of the internationally accepted dose limit of 1 mSv/y for non-radiation workers, leading to a potential dose constraint of 0.3 mSv/y. Based then on the conservative dose calculations in the report, a potential exemption value of 30 Bq/g (U-238 + Th-232) would result in doses unlikely to exceed 0.3 mSv/y to the most exposed transport workers; on this basis an exemption value of at least 30 Bq/g is considered appropriate for the transport of tantalum raw materials.

4. General Conference

This annual meeting of the 151 Member States of the IAEA gathers Ministers and Regulators from around the world. The T.I.C. attended in September 2010 and gave a short presentation on the issue of delay and denial of shipment to a break-out meeting on security of supply, together with a delegate from the International

Source Suppliers and Producers Association (ISSPA). It was an excellent opportunity to meet the senior regulators from countries where delay and denial has been a problem. The General Conference is held every year and the T.I.C. intends to continue this useful attendance.

5. PATRAM 2010 and other Major Conferences

The triennial series of conferences on Packaging and Transport of Radioactive Materials (PATRAM) was attended by the T.I.C. in 2004 and 2007, however 2010 was scheduled for the same week as the T.I.C. General Assembly at Lake Tahoe. More space and time than ever was to be devoted to the issue of Delay and Denial of Shipment. At this time there is still no information available on how to obtain a copy of the proceedings, although the final programme including all abstracts can be downloaded from www.patram2010.org/P10Programme (see in particular sessions P1 and T27). The next PATRAM will take place in San Francisco on 18-23 August 2013.

The IAEA has announced a follow-up to the first IAEA Transport Conference that took place in Vienna in 2003 and attracted over 500 delegates. This second conference is set for 17-21 October 2011. As these dates overlap with the T.I.C.'s General Assembly in Almaty, the T.I.C. will not be able to attend all of this conference.

6. Delay and Denial of Shipment

International Steering Committee on Delay and Denial of Shipment (ISC-DOS)

In May 2006 the IAEA held a meeting to discuss the emerging issue of Delay and Denial of Shipment. This was attended by the T.I.C. where we supported and helped define the structure of the future ISC-DOS. It held its first meeting in November 2006, composed of a number of UN organisations, IAEA member states and industry associations, tasked with developing a co-ordinated international work plan. Since then meetings have been held once a year and the T.I.C. has always been in attendance.

The Committee is headed by a triumvirate of a Chair and two Deputy Chairs, selecting one each from a regulatory authority, a regional network and an industry organisation. Each year the incumbent Chair steps down and the two Deputy Chairs move up, making room for another Deputy Chair to be elected by the Committee. The IAEA Secretariat supports the work of the Committee and together, the Chairs and the Secretariat form the Management Team which holds monthly conference calls. At the last meeting in February 2010, the T.I.C. was invited to become Deputy Chair and is now part of the Management Team. Looking ahead, the T.I.C. will be responsible for chairing the Committee's work during 2012-2013; incidentally 2013 is the target year set by the IAEA by which time the issue of delay and denial should be reduced to a level handled regionally.

Regional Networks: Latin America, Mediterranean, Asia, Africa, Europe

To better handle the Committee's work, the work programme is subdivided regionally. The first Regional Network was set up in Latin America in 2007. Other Regional Networks were then formed in the following years. The Regional Networks facilitate the exchange of information and make it easier for people to attend meetings that are of relevance to them. It also allows for meetings to be held in languages other than English and to prepare translations of useful documents e.g. the delay/denial reporting form. Follow-up Regional Network workshops have been scheduled for 18-19 April in Vienna for the benefit of gathering all the regional groups under one roof.

Supporting both the Regional Networks and the ISC-DOS directly, are the National Focal Points (NFP) of which each country is to nominate one to address all issues related to DOS. To date 65 states have designated NFPs and a new letter is to be issued by the IAEA to re-nominate the NFPs and encourage those countries that haven't yet nominated one to do so. NFPs will be nominated with

a three-year mandate in order to assure states that this is not an indefinite commitment.

Although not a Regional Network workshop, a related meeting focusing on Training has been scheduled to take place in Panama in June. Interested parties may contact the T.I.C. or the IAEA Transport Unit for further details.

Denial Reports Database

Reports of transport difficulties have built up over time, demonstrating how the ability to cost-effectively transport radioactive materials is affected. In order to better understand this problem and be able to tackle the key causes, factual information is required. Shared among T.I.C. members is a wealth of experience in delays and denials: it can not be understated how important it is for the members to share their experience in order that a fuller picture can emerge. The ISC-DOS is a unique vehicle and opportunity for the T.I.C. members to help themselves; if insufficient information is received to resolve delay/denial, the industry will only have itself to blame. The Committee recognises that there is no accurate measure of the nature and extent of the problem. To this end the IMO led the way in March 2007 with the creation of a database for collecting information on delay and denial of shipment, which was later shared with the IAEA and ICAO (International Civil Aviation Organization) Secretariats. As of January 2011 it has recorded 228 reports. Of these, the T.I.C. has contributed nearly 60, of which 41 are still considered 'active'. Nevertheless it is believed that the true extent of denial is still hidden. This is partly because industry continues to find sub-optimal, costly and time consuming solutions to transport radioactive materials. In addition to economic and social consequences, alternative longer journeys add complexity and cost as well as a potentially increased safety risk.

A big thank you is due to all those who have submitted delay/denial reports to date. It is important that more reports for tantalum raw materials are received in order that the problems particular to our industry are taken seriously and that the details of the denials are kept up to date. Hence, members should continue to report all instances.

In September 2009 the NFPs were given access to the database in order that they could analyse and resolve the problems listed. Despite confidentiality agreements, there was concern by some parties over the control of commercially sensitive information. Therefore, in February 2010 access was again restricted to designated people from the IAEA, the ICAO and the IMO.

The ISC-DOS is preparing to notify the relevant Permanent Missions at the IAEA (the representatives of the Member States) of the denial issues in their countries that are of a regulatory nature. The aim is to bring attention to variations between national and international regulations and to seek a better understanding and justification for these variations, in order that improved regulatory harmonisation might be applied.

Resources: fact sheets, IMO e-training package, communication toolbox, website

- Fact Sheets were developed early on and are available on request.
- Work on a dedicated website continues and the T.I.C. has been helping draft fresh material; some T.I.C. members have provided photographs which may be used to demonstrate the uses of tantalum.
- A free e-learning package for self-training in Class 7 transport has been made available by the IMO; register on www.class7elearning.com in order to use this.
- Further information and tools can be found on www-ns.iaea.org/tech-areas/radiation-safety/denial-of-shipment.asp?s=3, clicking on the link 'Tools for NFPs' under the heading 'Resources'.

In addition to the above resources, work continues on developing a Communication Campaign. Two meetings were scheduled

for January 2011 to develop a Communication Strategy and to develop a brochure aimed at carriers. The T.I.C. attended both meetings in order to ensure that the Communication Strategy and the Carrier Brochure would take account of the conditions particular to NORM. The Strategy includes an Action Plan with ambitious target dates that initially were met, however recent staff shortages at the IAEA made this pace difficult to maintain. Additionally, the recent disastrous events in Japan are understandably now the top priority at the IAEA and this is also affecting the work of the Transport Safety Unit, therefore the IAEA Secretariat's ability to progress other activities such as the Strategy will be curtailed for the time being. The Brochure was completed as a draft including concept, target audience, layout and content. This was being pushed through the various IAEA procedures for approval as a priority in order to meet an April target date, however as explained above this now has to wait.

Assisting members directly

Where a problem requires a quick solution there are several options:

- contact the Competent Authority in your country or the country where you have a problem; a list can be found at: www-ns.iaea.org/downloads/rw/transport-safety/transport-safety-nca-list.pdf
- if the above is not appropriate, contact the National Focal Point instead; a list can be found at: www-ns.iaea.org/downloads/rw/transport-safety/denial-shipments/national-focal-points-list.doc
- advise the T.I.C. of the issue so that we may contact the relevant authority on your behalf
- complete a Delay/Denial of Shipment Form and submit this to the relevant authority or to the T.I.C. for us to follow up on your behalf.

7. World Nuclear Association (WNA)

The WNA has a Transport Working Group (TWG) that meets three times a year and invites other industries to participate and share experiences, such as the T.I.C. and the European Lamp Companies Federation (ELCF). Despite the apparently great difference between these associations, the problems with transport are remarkably similar. The WNA maintains its own list of high priority issues to resolve and the T.I.C. has contributed a number of delay/denial issues to that list in order to co-ordinate our approach. The TWG meetings are held every January in London, every April at a changing location (e.g. 5-7 April 2011 in Chicago), while a third is held in conjunction with the WNA Symposium, back in London, in September. The WNA has led the work on a Communication Campaign and the T.I.C. has taken a great interest in this, providing feedback and additional material.

8. Promoting Transport

One idea put forward by the WNA has been to re-evaluate how we look at the issue we call 'delay and denial of shipment', suggesting instead that we should think of 'Promoting Transport'. After all, while negative news is more likely to hit the headlines, people are more likely to co-operate on positive issues and this is exactly what we aim to achieve: co-operation by authorities and carriers world-wide. To this end the tone of the Communication Campaign has become more positive and it expands on the beneficial uses of radioactive materials and why the transport is necessary. Initial feedback has shown this to have a positive effect, as those denying transport to radioactive materials often do not realise what beneficial uses are made of these materials, saving lives and improving our standard of living.

9. Meetings with a broader focus

EAN-NORM: This workshop acronym stands for European ALARA Network on NORM, covering all aspects of handling, processing, transport and waste disposal within the scope of the European Union and neighbouring countries. First held in Dresden in 2007, a second meeting took place in November 2009 where the T.I.C. presented a paper on NORM transport in general and tantalum raw materials in particular, which was very well received. Another

meeting in November 2010 focused on exposure scenarios and the T.I.C. presented more detailed information on the scenarios applied in the T.I.C. Transport Study. This again generated a great deal of interest and compared favourably with the scenarios and techniques applied in other industries. A further meeting is now scheduled for November 2011, in Hasselt, Belgium. It is expected to have a focus on the monitoring of NORM material during transport.

NORM VI: This conference took place in Marrakech in March 2010, the sixth in a series sponsored by the IAEA and focused on radiation protection in workplaces. This broad focus included all NORM work with the potential for increased exposure, including facility specific measurements, dose assessments and measures to reduce doses, both for workers and the public. The conference was heavily over-subscribed, however the T.I.C. was able to provide a summary of the Transport Study in a poster session which included the opportunity to provide a brief description during plenary. The T.I.C. was also asked to present a paper on the NORM CRP on behalf of the IAEA, as their delegate was not able to attend. The conference also proved to be a good opportunity to further discuss the NORM CRP work, as other delegates from that CRP were present.

MEMBER COMPANY NEWS

Firadec

Following the retirement of Mr René Terrien, Firadec has designated Mr Laurent Mangnan to represent the company within the T.I.C. He can be contacted at the following address: laurent.mangnan@sicsafco.com.

Hi-Temp Specialty Metals

Hi-Temp Specialty Metals has nominated a new delegate to the T.I.C., Mr Joseph Smokovich, replacing Mr Larry Stryker. He can be contacted on joesmokov@aol.com.

Mineração Taboca

Following the departure from the company of Ms Patricia Stumpf, Mineração Taboca has nominated Ms Luciana Pagnoncelli as delegate to the T.I.C. Her e-mail address is lpagnoncelli@mtaboca.com.br.

Mitsui Mining & Smelting Co Ltd

Mr Tomotaka Iwai is the new delegate to the T.I.C. for Mitsui Mining & Smelting Co Ltd, replacing Mr Hiroshi Yamamoto. His e-mail address is tiwai@mitsui-kinzoku.co.jp.

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