



## TANTALUM-NIOBIUM INTERNATIONAL STUDY CENTER

### PRESIDENT'S LETTER

Dear friends and members of the T.I.C.,

The last quarter of 2008 indicates a rather gloomy scenario to most of the supply chain of the tantalum and niobium industry. Despite such uncertain market conditions, the Forty-ninth General Assembly, held in Shanghai this past October, achieved a great success and was very well attended. I would like to take this opportunity to thank all those who contributed in organizing such an extraordinary event, and in particular our Secretary General, Emma Wickens, who was untiringly preparing the event and making the lives of the attendees a lot easier with her work.

Also, we would like to send our sincere thanks to Kemet Electronics Corporation and Ningxia Non-ferrous Metals Smelter for jointly hosting the Gala Dinner and to Kemet for organizing a rewarding plant tour to its facilities.

I could not let this opportunity go without sending warm thanks to Bill Young, on behalf of the T.I.C. and on my personal behalf, for his outstanding and rewarding service as member of the Executive Committee and as President of our association. We hope he will remain close to the industry and continue to let us drink from his knowledge and experience of the business.

Additionally, I would like to welcome the new Executive Committee members, Itamar Resende and John Crawley, to our team, as we are all sure they have much to contribute to our association.

Finally, certainly at this moment, no one can predict the extent of the impact of the crisis on the tantalum and niobium business. Our message is that we should continue to support our customers' needs and be creative in finding solutions where both sides can overcome together the stormy weather.

I send you all my Season's Greetings and wish you a happy New Year.

José Isildo de Vargas  
President

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### FORTY-NINTH GENERAL ASSEMBLY

The Tantalum-Niobium International Study Center held its annual conference in Shanghai, China, from October 19th to 22nd 2008, including the Forty-ninth General Assembly of the members.

On October 20th and 21st, technical presentations were given, in two half-day sessions. The paper presented by the T.I.C. Technical Promotion Officer is printed in this issue of the Bulletin, and some of the other papers will be published in future editions.

Delegates, guests and accompanying persons enjoyed a Welcome Reception on Sunday evening and a Gala Dinner, hosted jointly by Kemet Electronics Corporation and Ningxia Non-ferrous Metals Smelter, on Monday night. Acrobats, plate-spinners and face-changers added colourful entertainment to an enjoyable evening.

On Wednesday, Kemet welcomed delegates to a tour of its facility in Suzhou.

During the technical sessions, the accompanying persons enjoyed a sightseeing programme, including a walking tour of the old Shanghai and visits to a Confucian temple, the Urban Planning Exhibition Center and the Botanical Garden.

#### General Assembly

Five companies were elected as new members of the association. Their names and contact details are printed in the last section of this Bulletin, under 'Member company news'.

Mr José Isildo de Vargas was elected as President of the T.I.C. for the coming year, succeeding Mr William Young. Mr John Crawley and Mr Itamar Resende were elected to the Executive Committee. Mr Richard Burt, Mr Alan Ewart, Mr He Jilin, Mr William Millman, Dr Karlheinz Reichert, Mr David Reynolds, Mr Lawrence Stryker and Mr Barry Valder were re-elected to a further term of office. Mr William Young resigned from the Committee.

The General Assembly voted an amendment to the Charter of the association. Article 2 will now read:

'The registered headquarters shall be in the City of Brussels or any other place in Belgium as agreed by resolution of the Executive Committee. An extract of such resolution must be published in the Annexes to the Moniteur Belge. The T.I.C. now has its headquarters at Chaussée de Louvain 490, 1380 Lasne.'

#### Fiftieth General Assembly

The Fiftieth General Assembly is scheduled to take place on October 18th to 21st 2009, in Tallinn, Estonia, and will include a plant tour to AS Silmet.

Call for papers: please submit your proposals for papers for the technical sessions, before March 31st 2009.

## T.I.C. STATISTICS AND TRANSPORT PROJECT

*This article is taken from the paper given by Mr Ulric Schwela, Technical Promotion Officer of the Tantalum-Niobium International Study Center, on October 21st 2008, as part of the meeting in Shanghai.*

### STATISTICS

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

- collection method
- underlying principles
- overview of the latest figures compared to the past six years

#### COLLECTION METHOD

Statistics are collected to show the industry the main trends in niobium and tantalum production and consumption and are considered to cover the majority.

They contain data from members, not outside companies. For reasons of confidentiality the T.I.C. may not verify the data reported and has to rely on the reports being correct. Extra amounts can not be estimated or added in for any reason. Only the independent collector SFC Group may review the reports for obvious errors and carry out checks. With cooperation from all the members the statistics will be the best possible.

Requests are issued on a quarterly basis to facilitate a routine and timely response; results are circulated on a bi-annual basis. The confidentiality of the data is protected as each company reports its data directly to SFC Group; this company consolidates the data for each category before releasing a report to the T.I.C.

#### UNDERLYING PRINCIPLES

In a nutshell, the primary production captures the units of niobium and tantalum which are first introduced into the industry, while the processing captures the units circulating in the industry.

For the above reason the 'Raw materials: production and receipts by producers and traders' captures all production, regardless of whether it goes straight to stock or flows to downstream industry. This is also why recycled scrap and synthetic concentrates are excluded from these figures. Reporting by traders captures material being produced outside the T.I.C. statistics. Material received by traders from T.I.C. primary producers is not included in order to avoid double counting.

The 'Processors' raw material receipts' and 'Processors' product shipments' show the material that is entering and/or leaving the processing industry at that particular time. Rules are in place to prevent double-counting between reporting companies, therefore material moving within the processing industry is excluded. Note also that it is processors' shipments which are reported, not production, unlike the raw material category; therefore processed materials held in stock are not reported until they are actually shipped and made available to the downstream industry.

Tantalum capacitor producers are also asked to report. They simply report all their receipts, regardless of origin.

#### STATISTICS OVERVIEW

The statistics collected from T.I.C. member companies 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.

## TANTALUM

The data collected for tantalum are considered to cover the vast majority of material in the industry.

#### PRIMARY PRODUCTION

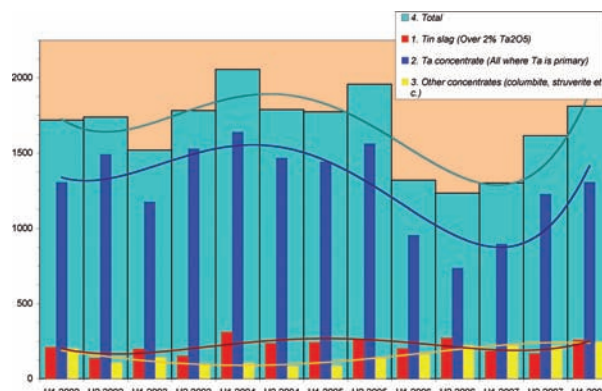


Figure 1: Tantalum primary production ('000 lb Ta<sub>2</sub>O<sub>5</sub> contained)

The closure of the Greenbushes mine impacted on the primary tantalum concentrate production figure for 2006, producing a dip. Overall production figures are now back at the levels of 2002 or 2003. Tantalum concentrates have provided on average 77% of the total, fluctuating between 60% and 86%.

#### PROCESSORS' RECEIPTS

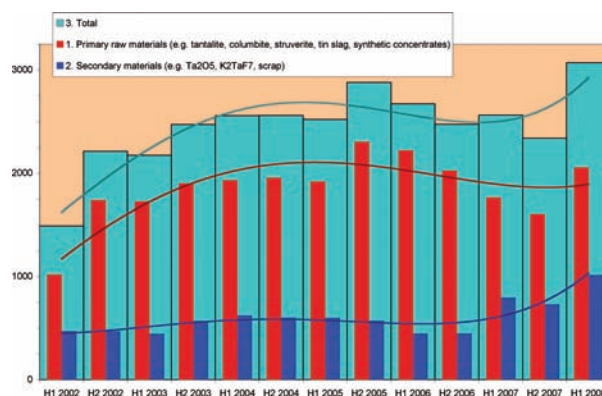


Figure 2: Tantalum processors' receipts ('000 lb Ta<sub>2</sub>O<sub>5</sub> contained)

Following the high levels of 2001, the receipts for 2002 were a low point which then lifted and levelled off through 2003-2007. Figures have recently increased to the highest value since 2001. Primary raw materials have provided on average 76% of the total, running at a high of 82% through 2005-2006 and dropping to 68% through 2007-2008. Overall annualised total receipts are up 23% on five years earlier.

The drop in receipts of 2002 is once again evident in figure 3, here clearly resulting in surplus production. This surplus balanced itself out, until the production dip of 2006, and balance has now been restored once again. This can also be seen in the production to receipts ratio, which has remained essentially level over five years up just 0.4%, whereas from the momentary position of supply deficit in 2006 the ratio has recovered by 40%.

It is also worth noting that total primary production does not include synthetic concentrates, whereas processors' receipts of primary raw materials do. Therefore, even if all primary production appeared simultaneously in processors' receipts, the

latter would always report a greater volume. In other words, the processors' receipts include other material in addition to that reported in primary production.

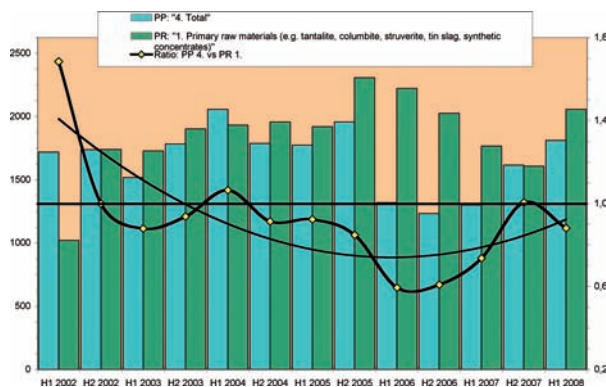


Figure 3: Tantalum total primary production versus processors' receipts of primary raw materials ('000 lb  $Ta_2O_5$  contained)

## PROCESSORS' SHIPMENTS

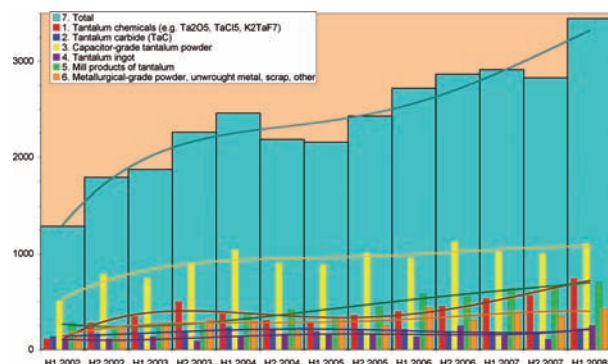


Figure 4: Tantalum processors' shipments ('000 lb Ta contained)

Total shipments are at a record level, the highest ever in the history of tantalum. The annualised increase over five years earlier is 71%, over one year earlier it is 8.6%. The main contributors to this increase are:

- Mill products : up 900 000 lb Ta (200%) over five years earlier
- Chemicals : up 690 000 lb Ta (110%) over five years earlier
- Capacitor powder: up 570 000 lb Ta (37%) over five years earlier

The significance of the above is that while capacitor powder shipments are increasing, the proportion within processor shipments has dropped to 32%, the lowest for over seven years. Clearly other demands are driving the overall growth of tantalum shipments.

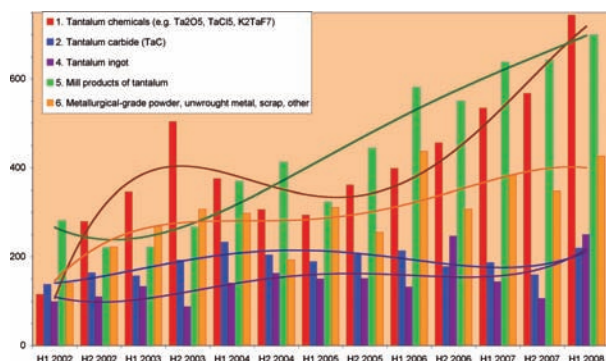


Figure 5: Tantalum processors' shipments of products other than capacitor-grade powder ('000 lb Ta contained)

In relative terms, tantalum chemicals have shown the steepest recent increase, annualised shipments being up 31% on two years earlier, 32% on the previous year alone. The proportion is now 22% of the total.

Mill products also show an increase, with annualised shipments up 14% on two years earlier, 13% on the previous year. They now account for 20% of the total. Finally the 'Metallurgical-grade powder, unwrought metal, scrap, other' category is up only 3.3% on two years earlier, but 12% on the previous year, with the proportion now being 12% of the total.

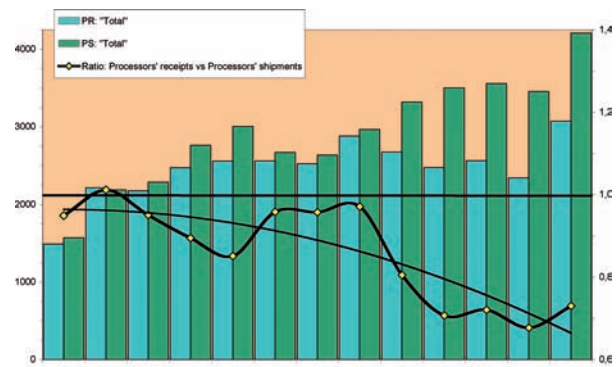


Figure 6: Tantalum processors' receipts versus processors' shipments ('000 lb  $Ta_2O_5$  contained)

Processor shipments have exceeded receipts for the past six years, with the dip in receipts of 2006 due to the changes to the Sons of Gwalia contracts and the closure of the Greenbushes mine, coinciding with an increase in processor shipments. Over the 2002-2008 period, 32 000 000 lb of  $Ta_2O_5$  have been received compared to 38 000 000 lb  $Ta_2O_5$  shipped, indicating that stocks are still being run down.

## CAPACITOR PRODUCERS' RECEIPTS

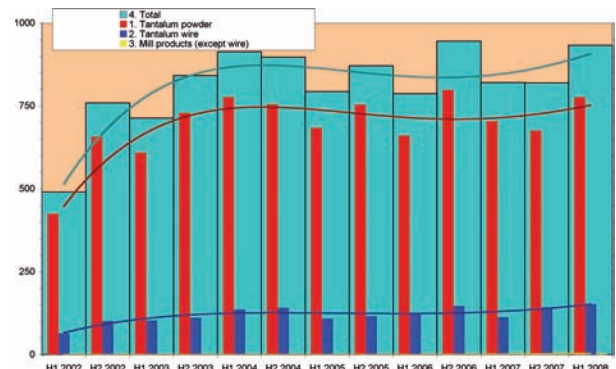


Figure 7: Tantalum capacitor producers' receipts ('000 lb Ta contained)

The total annualised receipts are up 19% on five years earlier, although only 0.1% on two years earlier. The same figures for capacitor powder are 15% and -0.9% respectively, while for wire these are 44% and 5.0%.

Figure 8 shows that processors' shipments of capacitor powder have consistently exceeded receipts by capacitor producers for the past six years, and increasingly so. From an excess of 20% in 2002, the excess is now 40%, indicating increased activity among the capacitor producers which are not included in the T.I.C. statistics.



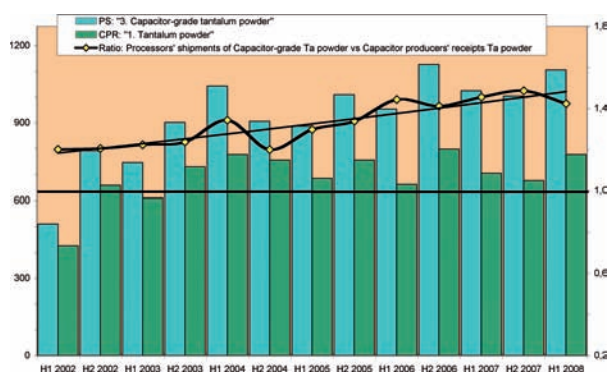


Figure 8: Tantalum processors' shipments of capacitor-grade powder versus capacitor producers' receipts of tantalum powder ('000 lb Ta contained)

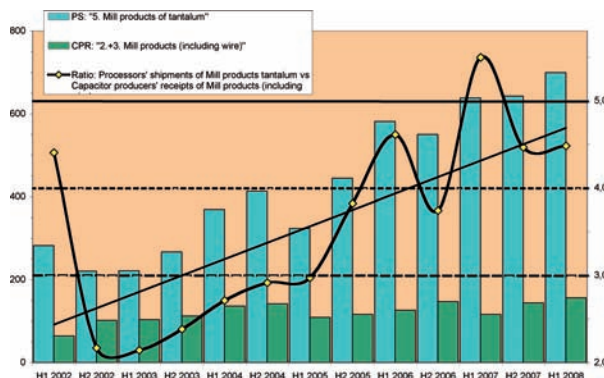


Figure 9: Tantalum processors' shipments of mill products versus capacitor producers' receipts of mill products (including wire) ('000 lb Ta contained)

The capacitor producers' receipts of mill products constitute a diminishing proportion of the processors' mill shipments and are now down to 22%. Other uses are therefore the driving factor behind the demand for mill products shown in figures 4 and 5.

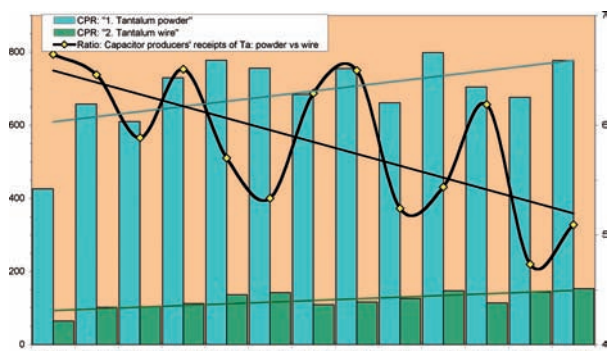


Figure 10: Tantalum capacitor producers' receipts, powder versus wire ('000 lb Ta contained)

The capacitor producers' receipts of powder and wire are both increasing, powder more than wire in absolute terms, however the rate of increase of wire is greater. Annualised receipts for wire and powder are up respectively 5.9% and 0.4% on three years ago. The result is that the powder to wire ratio continues to decrease along with the diminishing form factor of the capacitor.

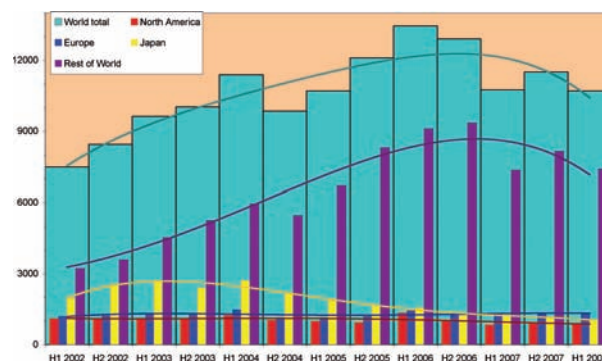


Figure 11: Tantalum capacitor consumption (estimated), by world region (millions of units)

There has been a recent drop in capacitor consumption, with the annualised total for the world being down by 9.7% on two years earlier, whereas on five years earlier it is still up by 23%. Every area is affected although Japan more so than others, dropping by 17% on two years earlier.

The 'Rest of World' now represents 70% of the total, being up 92% on five years earlier, albeit down 9.0% on two years earlier. The next biggest group is Europe with 12% of the total, up 3.9% on five years earlier, but down 1.2% on two years earlier.

## NIOBIUM

The data collected for niobium are considered to cover the vast majority of material in the industry.

### PRIMARY PRODUCTION

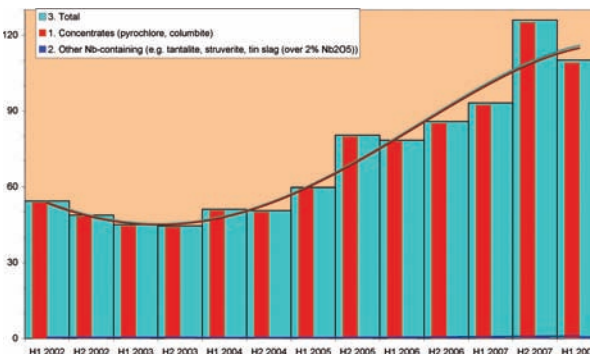


Figure 12: Niobium primary production ('000 000 lb Nb<sub>2</sub>O<sub>5</sub> contained)

Niobium production has continued to expand and is up 32% on the year before and 150% on five years earlier. The production expansion is designed to meet the increasing demand.

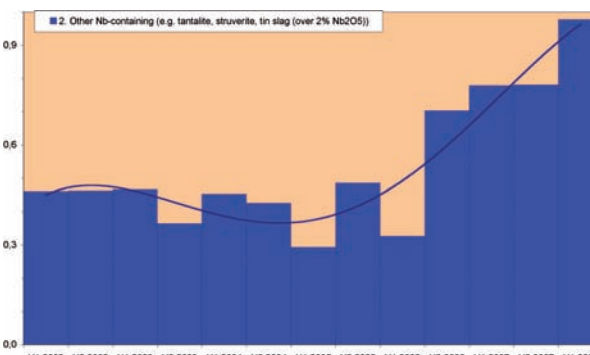


Figure 13: Niobium primary production from tantalite, struverite, tin slag (not including pyrochlore and columbite) ('000 000 lb Nb<sub>2</sub>O<sub>5</sub> contained)

Other niobium containing materials are also rising along with the main concentrates, 19% on the year before and 89% on five years earlier. However, they still only account for 0.9% of the total production.

## PROCESSORS' SHIPMENTS

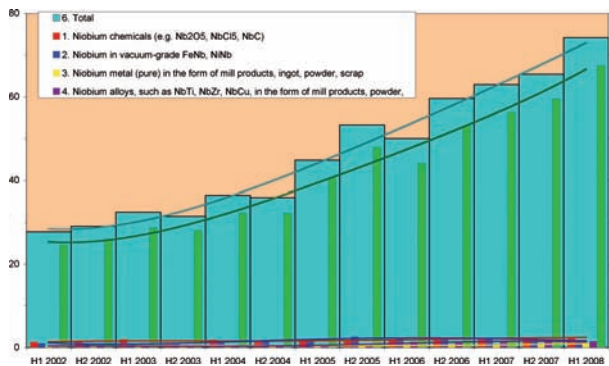


Figure 14: Niobium processors' shipments ('000 000 lb Nb contained)

As for tantalum, niobium processor shipments are at a record level, up 14% on the year before and 130% on five years earlier. The main contributor is naturally High Strength Low Alloy (HSLA) grade ferro-niobium, up 72 000 000 lb Nb or 130% on five years earlier, and 16% on the year before. The proportion of HSLA FeNb has increased to 91% of total niobium shipments, the highest for over seven years.

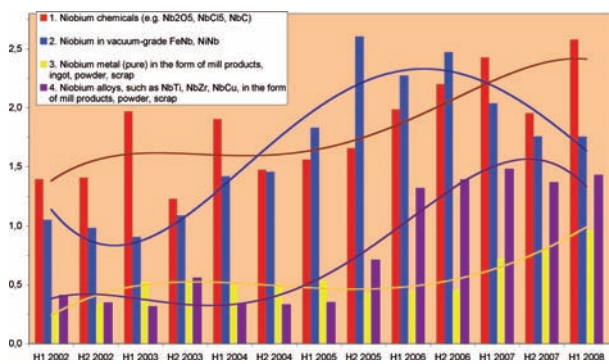


Figure 15: Niobium processors' shipments other than HSLA-grade ferro-niobium ('000 000 lb Nb contained)

In relative terms, niobium chemicals constitute the next biggest category, with annualised shipments being up 1 200 000 lb Nb or 34% on five years earlier, 9.9% on two years earlier. The proportion is now 3.3% of the total.

Vacuum-grade FeNb is next, with annualised shipments being up 1 600 000 lb Nb or 86% on five years earlier, down 17% on two years earlier. The proportion is now 2.6% of the total.

Finally the alloys NbTi, NbZr and NbCu form 2.0% of the total and are up 2 100 000 lb Nb, a spectacular 320% on five years earlier, 15% on two years earlier.

Comparing primary production to shipments in figure 16 shows that during 2003-2005 there was a small deficit, more than compensated as, overall, there is a surplus for the past six years as a whole. Compared to a year ago there is now a production excess of 20%.

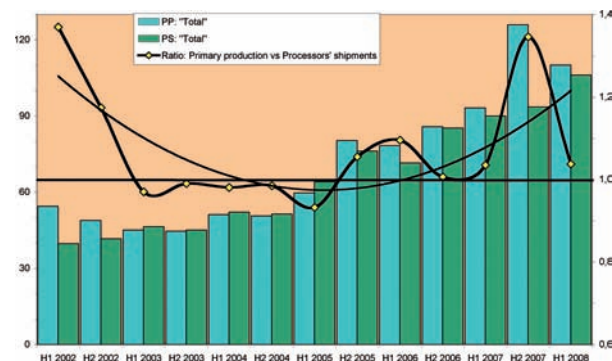


Figure 16: Niobium primary production versus processors' shipments ('000 000 lb Nb<sub>2</sub>O<sub>5</sub> contained)

## STATISTICS SUMMARY

Tantalum raw material production has recovered from the decrease observed in 2006 and is now back at the same level as in 2002 or 2003. Tantalum product shipments have increased sharply, reaching record levels, and applications continue to diversify, with tantalum chemicals and mill products gaining market shares.

Niobium raw material production is still following an upward trend, to keep pace with record product shipments, mainly in the form of HSLA-grade ferro-niobium.

## TRANSPORT PROJECT

### DELAYS AND DENIALS OF SHIPMENT

This problem has affected the tantalum industry for over six years now and was the original impetus for the formation of the T.I.C. Transport Committee. The efforts to resolve this problem are three-fold:

- Long-Term: working within the NORM CRP (Coordinated Research Programme on the Safety of Transport of Naturally Occurring Radioactive Material)
- Medium-Term: participating in the ISC-DOS (International Steering Committee on the Denial of Shipments of Radioactive Material)
- Short-Term: resolve individual cases on an ad-hoc basis, help the T.I.C. members directly

The T.I.C. Transport Committee holds a conference call every two months, plus a Committee meeting once a year in combination with the T.I.C. General Assembly, the first meeting being in Philadelphia in 2004. In recent months, the Technical Promotion Officer has met T.I.C. members who are not on the Committee to discuss their shipment problems.

### Long-Term: the NORM CRP

A 'CRP' is a mechanism by which the IAEA has a particular technical issue investigated in detail, where the findings can then be taken through the decision making process before any changes are made to regulations. The regulations relevant to T.I.C. members wanting to have Class 7 tantalum raw materials transported are the Regulations for the Safe Transport of Radioactive Material, better known by the code TS-R-1. This CRP was initiated with a meeting in November 2006 and subsequent meetings were held in April 2007 and February 2008. The final meeting should take place in November 2009 with a final report due in 2010.

The latest edition of TS-R-1 is dated 2007 and it was decided (by TRANSSC) in March this year that there will be no 2009 edition, therefore the CRP's timetable should dovetail with the review of the 2011 TS-R-1 edition. This 2011 edition will be the next

opportunity to have an influence on the regulations.

The aims of the T.I.C. in this long-term work are to:

- i. demonstrate the safety of Class 7 tantalum raw materials transported in accordance with the regulations
- ii. share the transport study findings in an appropriate scientific environment
- iii. encourage the amendment of the current transport exemption value from 10 Bq/g to a higher value more appropriate to the risk posed by these materials

The first two points have been achieved and it remains to achieve the third and most important point.

### Medium-Term: the ISC-DOS

As anecdotal evidence of transport difficulties built up over time, the IAEA was prompted to take more immediate action to resolve the problems of delay and denial of shipment of radioactive materials. After all, one of its fundamental goals is to promote the peaceful use of radioactive materials. The Steering Committee was duly set up in November 2006 to develop a strategy addressing this issue; it recognises that there is no accurate measure of the nature and extent of the issues and that the problem of denial and delay is affecting the ability to cost-effectively transport radioactive materials to where they are required. The Committee's work relies on the commitment of states and international organisations (such as the T.I.C.) to actively encourage the reporting of instances of delay and denial.

There is still a lack of agreement around the world about the extent of denial. This is partly because industry is in fact finding sub-optimal, costly and time consuming solutions to get their radioactive materials from one destination to another. This has economic and social consequences, for instance alternative routes and longer journeys add complexity and cost as well as a potential increased safety risk. This complexity has been shown to be a precursor to absolute denials of shipment. The ISC-DOS also recognises that regulators, industry and commercial carriers are all equal stakeholders; no one can be forced or coerced into doing something against their interests.

In order to better understand the detail of this problem and be able to tackle the key issues causing delay and denial, 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 provide accurate and detailed reports of their experience, in order that a fuller picture of this problem can emerge.

The ISC-DOS will however not be allowed by the IAEA to run indefinitely as a drain on its resources. It has a mandate to resolve this problem within a realistic time frame. If industry, including T.I.C. members, does not contribute to resolving this, then within a few years the ISC-DOS will be disbanded.

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.

At the first meeting of the ISC-DOS in November 2006, a comprehensive Action Plan was developed, based on six areas of work, which were detailed in Bulletin 132. The ISC-DOS has completed many of its actions and, as new ones are identified and allocated, the Action Plan is revised, constituting a living document. Some of these achievements are:

- **Awareness**
  - The denials database has been set up by the IMO together with the IAEA.
- **Communication**
  - Fact sheets on the uses of radioactive materials have been developed and distributed; these must continue to be distributed widely for information and education purposes.

The most important point is this:

The database requires reports from the industry (including T.I.C. member companies)!

### Regional Workshops: Rome, Beijing, Arusha, Antananarivo

To improve the targeted approach to the work of the ISC-DOS, a first regional meeting was held in Montevideo in July 2007. The success of this meeting led to further regional meetings, three of which were attended by members of the Transport Committee (see below for further details).

The benefit was to further spread the message of the transport problems experienced by the tantalum industry, as well as to meet the regional decision makers. This initial contact was reinforced by the creation of regional networks.

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

The above networks are now in place to facilitate the communication among interested parties and thus speed up the resolution of problems. Each network is expected to be led by a champion who will report to the main ISC-DOS meetings and promote an agenda suited to local requirements.

### Database results

A database for collecting information on delay/denial of shipment was agreed upon by the International Maritime Organisation in March 2007 and this was later adopted by ISC-DOS.

To date there are some 90 reports submitted to the ISC-DOS database. Only 5% of these are for tantalum raw materials.

### T.I.C. members must report instances of delay and denial

It is important that more delay/denial reports for tantalum raw materials are received in order that the problems particular to our industry are taken seriously.

The T.I.C. member companies must send their reports!

Members should report all instances (even as old as five years), in order that a suitable body of evidence can be obtained. Note also that for the purpose of delay and denial, the following are examples of situations which merit reporting:

- refusal by carrier to accept goods for carriage
- requirement for significant additional and onerous administration, including the need to produce any certificates which are not believed to be necessary, relevant or appropriate
- the quoting of exorbitant prices for carriage
- additional requirements imposed by ports of call or destination port, whether prior to booking carriage or during voyage
- unexpected demands by Customs or equivalent authorities en route, leading to short or long delays, impounding or fines
- requirements particular to a port or local authority, or unusual national requirements which are not common to other countries or international regulations, e.g. licences, permits
- any other external condition which has a significant impact on the cost, route, carrier availability or effort required to arrange carriage
- where an alternative routing has had to be found and utilised at significant additional cost or administration

### Short-Term: help T.I.C. members individually

When a problem can not wait but requires a solution within days or possibly weeks, there are several avenues of approach:

- contact the country's Competent Authority and explain the problem (obviously not appropriate if the problem is with the Competent Authority);
- advise the T.I.C. of the details of the case so that we may contact the relevant authority on your (and on the ISC-DOS's) behalf and investigate the requirements in comparison to the international regulations set by IAEA/IMO;



- complete a Delay/Denial of Shipment Form and submit this to the relevant authority or directly to the IAEA/IMO, or pass this completed form to the T.I.C. for us to follow up on your behalf.

For information on which Competent Authorities should be contacted, the T.I.C. can provide a list including all countries, as provided by the IAEA.

The only way to obtain a solution is to have open dialogue between the interested parties (yourselves, the maritime carrier and the authorities) in order to discuss and resolve any special requirements.

## **SUMMARY OF MEETINGS, FROM OCTOBER 2007 TO OCTOBER 2008**

### **PATRAM, October 2007**

This conference on the Packaging and Transport of Radioactive Materials is held every three years and gathers the technical experts from the regulatory authorities and the specialist companies that provide transport services for Class 7 material. At the 2004 meeting, Dr Martin (H.C. Starck) gave a presentation which explained the problems experienced with transport in the tantalum industry. At the 2007 meeting, there was for the first time a whole section dedicated to the denial of shipment and the efforts that were being taken to resolve it. It is expected that this will have an even higher profile at the next meeting in 2010 which will take place in the U.K.

### **EAN-NORM, November 2007**

An initiative of the European Commission, this new group met for the first time to exchange information on best practice within the NORM industries, whether in mining, processing or land remediation. Further meetings are intended although not yet scheduled.

### **WNA TWG, January 2008**

The World Nuclear Association has its own Transport Working Group and this is also becoming aware of the transport problems. It has embarked on a communication campaign and invited other non-nuclear associations to participate in order to ensure that whatever message the WNA gives out, it does not clash with the other Class 7 transporting industries.

### **ISC-DOS, January 2008**

This annual meeting saw a significant change in how it is operated, with control becoming more balanced between industry and authorities. The working groups came up with new ideas for improving the database reporting method in the belief that if it is made easier it will encourage more reporting.

### **CRP NORM, February 2008**

The seven other participants presented their preliminary findings. Using standardised scenarios the results obtained were on a par. The problem remains to reconcile the data collected for very different situations and agree on what is realistic. A big issue is also to apply the recommendations from other regulatory bodies and agree on what is 'safe'.

### **TRANSSC, March 2008**

This meeting was the final one reviewing all proposed amendments for the 2009 edition of TS-R-1. In the event it was decided that although numerous, the amendments did not warrant the publication of a new edition and that the changes should be carried through to the revision for the 2011 edition.

### **WNA, April 2008**

A meeting was held to discuss the outcome of the WNA TWG's internal discussion on the communication campaign and on its proposed content and style. This campaign is continuing development and has attracted support from the IAEA. The T.I.C. continues to provide input into this work.

### **IAEA Regional Workshop Rome, May 2008**

First of the four regional meetings planned for 2008, this one gathered delegates from the entire Mediterranean basin. It was invaluable to establish contacts with the appropriate parties in the Italian and Spanish authorities which are the most relevant to the

tantalum transport chain. Contact was also established with the Maltese, Greek and other authorities as they may come in useful. A regional action plan was set up and a trio of French, Italian and Spanish delegates were selected as regional co-ordinators.

### **IAEA Regional Workshop Arusha, June 2008**

This meeting gathered delegates from the English speaking countries of Africa and Dr Martin (H.C. Starck) presented the T.I.C.'s problem with support from Mr De Franca (Noventa). This created another invaluable opportunity to establish ties with the appropriate people in authority, particularly for Tanzania and Kenya. The South African authority was selected as regional champion. Another meeting is scheduled for June 2009 and anybody from the T.I.C. who wishes to participate should apply at least three months in advance.

### **IAEA Regional Workshop Beijing, June 2008**

This meeting gathered delegates from Asia and Australasia. Mr O'Keefe (Talisson) presented the case for tantalum raw materials and the problems experienced in transport. A sizeable action plan was compiled for follow-up by the new network.

## **FUTURE ACTIVITIES**

### **ISC-DOS, January 2009**

Major points of discussion are expected to be:

- implementation of improved delay/denial reporting method;
- the outcome of the regional meetings and the way forward;
- the results from the database and which way these are pointing.

### **TRANSSC, March 2009**

Review of the 2011 edition of TS-R-1 with some discussion of other transport-related activities such as ISC-DOS and denial of shipment in general.

### **RadTrans conference, May 2009**

Part of this conference on transport of radioactive materials will focus on Low Specific Activity (LSA) materials and the justification for their definition, which includes tantalum raw materials.

### **TRANSSC, October 2009**

Continuation of the TS-R-1 review activity.

### **CRP NORM, November 2009**

Final meeting of the CRP where the various results will have to be reconciled and presented as a whole. Conclusions will be proposed and effort will be made to reach a consensus, failing which separate conclusions will have to be drawn to reflect any differing views. The T.I.C.'s aim is to promote the increase of the exemption level from 10 Bq/g to 30 Bq/g.

### **PATRAM, October 2010**

See PATRAM 2007 for the nature of this meeting; in 2010 there will be greater emphasis on denial of shipment.

## **FINAL POINTS OF NOTE REGARDING DENIAL**

It appears the senior managements of maritime carriers do not object to Class 7 in principle, however they hide behind semantics (i.e. stating not a 'policy' but a 'refusal') and lay the blame on authorities and insurance companies. The various local/regional/national requirements which are in addition to the international regulations understandably discourage carriers from providing a shipping service. This makes it important that you, as a consignor, peel the proverbial onion of the denial problem and submit a report which details the root causes of the denial.

It is possible that some companies do not transport in accordance with regulations in order to get around the problems of transport. This is not a constructive policy. The T.I.C. calls on its members to operate transparently and in open dialogue with the carriers and authorities.

Member companies are always welcome to join the Transport Committee in order to share their experience and provide input on future activity.

## MEMBER COMPANY NEWS

### Resignations

The following resignations were announced at the Forty-ninth General Assembly:

Angus & Ross  
Sandvik Coromant  
Seco Tools

### New members

Five companies were elected to membership by the Forty-ninth General Assembly:

#### B.W. Minerals

Address of company: Suite 32, 44 Kings Park Avenue, West Perth, WA 6005, Australia  
Nominated delegate: Mr Wu Guiping  
Telephone no.: +61 8 6263 4416, Fax no.: +61 8 9485 2109  
e-mail address: bwminerals@westnet.com.au

#### Kivu Metals

Address of company: 110 Av. du Port, Quartier le Volcan, Goma, Nord Kivu, DRC  
Nominated delegate: Dr Robert Sussman  
Telephone no.: +1 410 377 4833  
e-mail address: tropdoc@hotmail.com

#### MAC Corporation

Address of company: 3F, No 3 Yoshida Bldg 3-13-4, Akasaka, Minato-ku, Tokyo 107-0052, Japan  
Nominated delegate: Mr Makoto Tonami  
Telephone no.: +81 3 5545 7117, Fax no.: +81 3 5545 7118  
e-mail address: trade@mac-corp.net  
Web site address: www.mac-corp.net

#### Metalink International

Address of company: 4th Floor Silk Mansion, 472 East Zhong Shan Road, Nanjing 21002, China  
Nominated delegate: Mr Ma Buyang  
Telephone no.: +86 25 8479 9888, Fax no.: +86 25 8479 8989  
e-mail address: metalink@metalink.com.cn  
Web site address: www.metalink.com.cn

#### White Solder

Address of company: Rua Peru 1752, Vila Mariana, Ribeirão Preto, SP, Brazil  
Nominated delegate: Mr Ricardo Torrente  
Telephone no.: +55 16 3512 5800, Fax no.: +55 16 3512 5801  
e-mail address: comex.tst@whitesolder.com.br  
Web site address: www.whitesolder.com.br

### Changes in member contact details

#### JSC Irtysh Chemical Metallurgic Plant

Mr Maksat Akhmetbek is the new nominated delegate to the T.I.C. for JSC Irtysh Chemical Metallurgic Plant, replacing Ms Lyazzat Toktagulova.

The company has also announced a change of address:  
Business Center "Nomad" 2/2 office, 10 Syganak Street,  
010000 Astana City, Republic of Kazakhstan

Telephone and fax no.: +7 7172 511 293  
e-mail address: info@ihmz.kz

#### H.C. Starck GmbH

The nominated delegate for H.C. Starck GmbH (Germany) is now Dr John van Put. He replaces Dr Karlheinz Reichert, who remains the delegate for H.C. Starck Ltd (Japan).

## News of member companies

### Talison Minerals

Talison Minerals announced on November 26th that it is suspending mining at the world's largest tantalum operation at Wodgina, Western Australia from early December 2008. The suspension of operations at Wodgina will result in an estimated 200 job losses, more than half of which will be contractors. During 2008, Wodgina has supplied more than 30 per cent of the world's tantalum. The company reports that its actions are driven by two factors. Most importantly, the recent global financial crisis has seen a severe downturn in worldwide demand for consumer electronics, resulting in lower demand for tantalum. As a consequence, Talison's customers have sufficient tantalum for the near future and have not needed to extend their current contracts. The second factor is a long-term and increasing trend to reduce material costs in the electronics supply chain. Talison has the capacity to produce 1.4 million pounds of tantalum oxide from Wodgina and 1.0 million pounds from Greenbushes, making it the world's largest primary producer of tantalum. The combined capacity of Wodgina and Greenbushes represents more than 50% of global tantalum demand. Tantalum production facilities at Greenbushes have been on care and maintenance for the past three years. Talison's lithium mining and processing operations at Greenbushes are unaffected.

### ATI Wah Chang

The following changes in the organization of ATI Wah Chang have recently been announced: Lynn Davis, President, ATI Wah Chang, has accepted a newly created position as Group President, ATI Primary Metals & Exotic Alloys. Mr Davis will relocate to the ATI Allvac facility, also in Albany, Oregon. Mr John Sims, formerly Vice President, Operations, ATI Allvac, Monroe, North Carolina, has been promoted to President of ATI Wah Chang.

## FORTY-NINTH GENERAL ASSEMBLY



The ladies, during the Gala Dinner / Courtesy of Buan Seng Hong and Siew Hwa Kuan



The ladies enjoying a sightseeing tour / Courtesy of Royce Gussack