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T.I.C.

TANTALUM-NIOBIUM INTERNATIONAL STUDY CENTER

PRESIDENT'S LETTER

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

The time for our next General Assembly scheduled this year for Cape Town, South Africa is approaching. We are all getting excited organizing what will be the first T.I.C. General Assembly ever to take place in an African country. Furthermore, the meeting will take the form of a Symposium, with an extended technical programme.

After the great success of our meeting in Kazakhstan last year, we are expecting that the event in South Africa will attract a large number of our members, but also many guests and related parties. In addition, it may also encourage companies leading new projects in tantalum and niobium on African soil to apply for membership of the T.I.C.

The Executive Committee members are engaged in identifying a good number of interesting papers to form the technical sessions, including some given by guest speakers. In early April, we shall all meet in Brussels, that is the Executive Committee together with the Technical Promotion Officer, the Supply Chain Officer and the Secretary General, to prepare the final programme for the forthcoming event. Social events and tours for accompanying persons are also being planned.

Please reserve the dates in your agenda and I look forward to seeing you all in Cape Town from October 7th to 10th.

José Isildo de Vargas
President

CONTENTS

FIFTY-THIRD GENERAL ASSEMBLY & SYMPOSIUM 2012 ON TANTALUM AND NIOBIUM

The Fifty-third General Assembly and associated technical meeting of the Tantalum-Niobium International Study Center will be held in Cape Town, South Africa, from Sunday October 7th to Wednesday October 10th 2012. This year, the event will take the form of a Symposium, with an extended technical programme. The Conference will be held at the Cape Town International Convention Centre (CTICC), whereas a block booking of bedrooms has been secured at the Westin hotel, just across the street.

© C T I C C

The Cape Town International Convention Centre

The administration of the association will be carried out in the formal General Assembly on the morning of Monday October 8th, including election of applicants for membership and the appointment of the members of the Executive Committee. Technical presentations will follow, extending until mid-afternoon on Monday and Tuesday and midday on Wednesday.

An exciting social programme is being prepared, including a welcome reception on Sunday October 7th, a gala dinner on the evening of Tuesday October 9th and a trip to the winelands, including lunch, on the afternoon of Wednesday October 10th. We are also organising sightseeing tours for those who are accompanying the 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.

T.I.C. STATISTICS UPDATE

Paper presented by Ulric Schwela, Technical Promotion Officer of the T.I.C., on October 18th 2011, as part of the Fifty-second General Assembly of the T.I.C., held in Almaty, Kazakhstan.

This paper covers how the T.I.C. statistics function, what reporting companies are required to do, diagrams showing where statistics are collected from and, finally, a review of the data for the years 2004 to 2011.

UNDERLYING PRINCIPLES

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, except for tantalum primary production from 2009 onwards due to the loss of statistics contributions from several key tantalum producers[1], as a result of their decision to leave the association at the time of the global financial crisis. Note that the T.I.C. reports the collated data submitted by its members without any adjustment, and only providing comment where appropriate, therefore the reader may in some instances be advised to consult alternative sources for non-member data.

Key features of the statistics collection include:

- data come from T.I.C. members only;
- for confidentiality, members report data 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 all the member companies;
- data accuracy relies on the good will and co-operation of the reporting companies.

Collection requests are issued quarterly, every January 1st, April 1st, July 1st and October 1st to facilitate a routine and timely response; results are then circulated as soon as available.

Statistics in an annualised form are also made available to non-members. Those of the latest year are only available to the T.I.C. members, those at least one year old may be purchased for a fee of EUR 500, while those at least two years old are available free of charge on request.

THE FUNCTIONS OF A REPORTING COMPANY

What does a reporting company do? It:

- reports by the deadline indicated on the form (January 20th, April 20th, July 20th or October 20th);
- checks the reporting rules and reporting company lists to determine which figures to report;
- completes the forms provided, even if all results are 'zero' (0);
- sends the forms directly to the independent collector.

Why are reports required if all the results are zero?
If the independent collector does not receive a report, all it knows is that the report is missing. It does not have a crystal ball; it cannot and should not guess that a missing report equals zero. Missing reports simply delay the whole collection process.

Why report by a deadline?
Delays in reporting are a disservice to the entire industry; companies are given up to three weeks to complete the forms. Those companies that report late hold up the final report for the rest of the membership. The T.I.C. is authorised to know which companies these are and informs the Executive Committee for further action.

Happily there has been a gradual improvement in the timely reporting of statistics by individual companies, which allows the aggregate collector report and, in turn, the T.I.C. report to be issued sooner. For 2011 Q2 this culminated in the speediest release of the T.I.C. statistics report for over five years. This is all thanks to the efforts of the reporting members.

For further information on how to report, companies are encouraged to contact the T.I.C. for any clarification and guidance.

MATERIAL FLOW DIAGRAMS

Put simply, "Primary production and traders' receipts" shows the units of niobium and tantalum in raw materials that are first *entering* the industry. Figures from "Processors" (receipts and/or shipments) show the units *circulating* in the industry.

Capacitor figures are essentially a sub-section of tantalum processor shipments, showing the receipts of the tantalum capacitor industry.

For this reason, the "Raw materials: production and receipts by producers and traders" includes *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 raw material production.

[1] These were **Cabot** (resigned in October 2008), owner of the Tanco mine in Canada; **Talison** (left the T.I.C. in February 2009), owner of the Greenbushes and Wodgina mines in Australia (now Global Advanced Metals, also owner of Cabot's Supermetals tantalum processing business (*i.e.* not including the Tanco mine) since August 2011); and **Noventa** (left the association in January 2010), owner of the Marropino mine in Mozambique.

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 materials; therefore processed materials held in stock are not reported until they are actually shipped and made available to the downstream industry.

NIOBIUM MATERIAL FLOW

The following diagram illustrates the types of companies in the niobium supply chain as grouped by the statistics process. The primary production of raw materials that is reported in the T.I.C. statistics is highlighted in yellow, while the processor shipments are highlighted in green. This indicates which figures companies should be including or excluding when reporting their statistics.

This flow sheet illustrates the three types of companies that report niobium statistics:

- Primary producer - Reports production on the form "Nb/Prd/Trd"
- Trader - Reports receipts on the form "Nb/Prd/Trd"
- Processor - Reports shipments on the form "Nb/Proc"

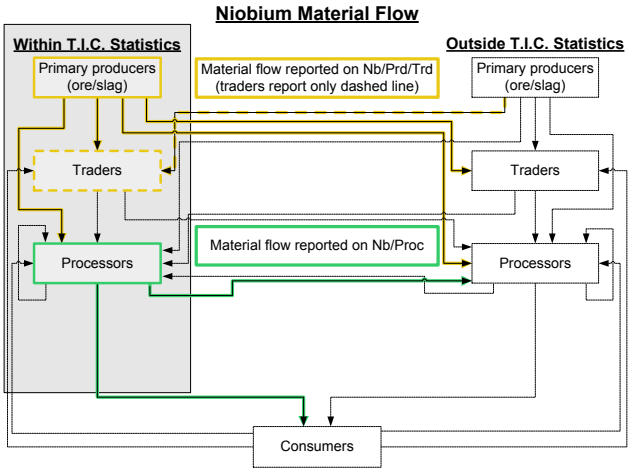

Figure 1 - Niobium Material Flow, Overview

Distinction is made between those companies within the T.I.C. statistics reporting system and those without, which influences whether data are reported or not. The following three flow sheets clarify the situation for each of the above three types of companies.

FLOW SHEET FOR A NIOBIUM PRIMARY PRODUCER

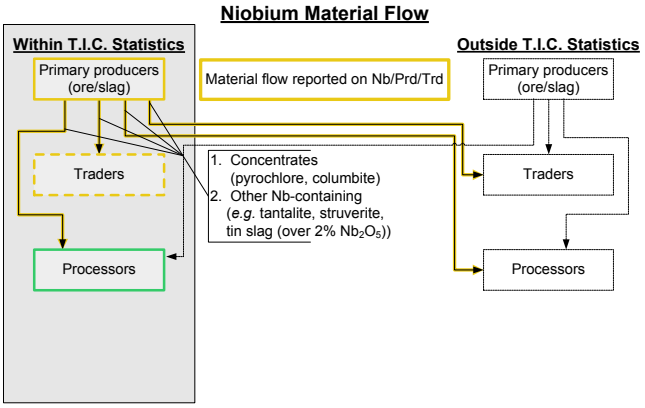

Figure 2 - Niobium Material Flow, Primary Producer

Note how a primary producer reports all material produced, regardless of its destination and even if it is going into stock. Items 1 and 2 are the two categories of material recorded for primary production.

FLOW SHEET FOR A NIOBIUM PRIMARY PRODUCTION TRADER

The role of the traders is to capture material being produced outside the T.I.C. statistics. Material received from T.I.C. primary producers is not included in order to avoid double counting.

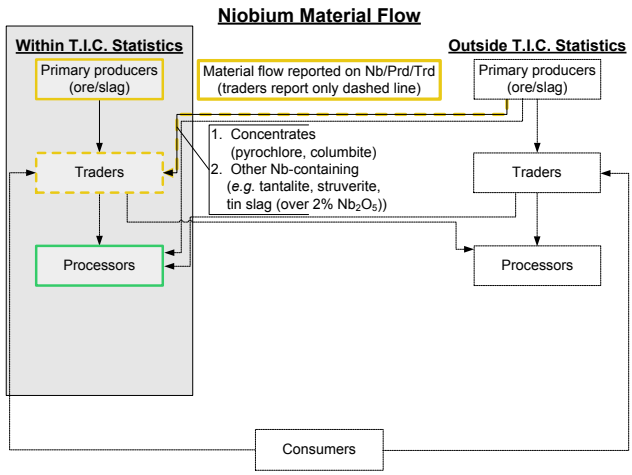

Figure 3 - Niobium Material Flow, Trader

FLOW SHEET FOR A NIOBIUM PROCESSOR

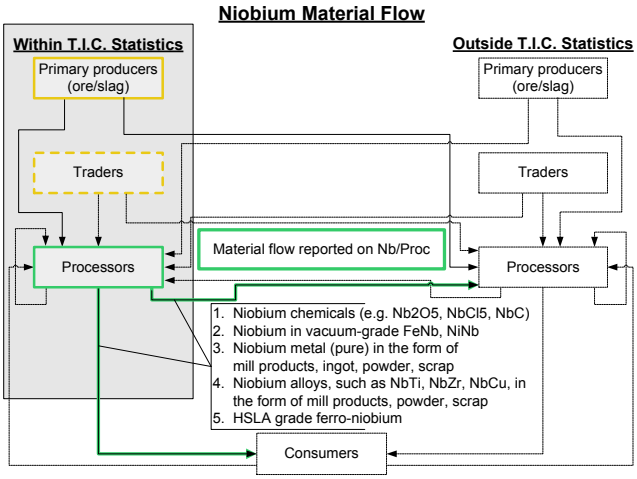

Figure 4 - Niobium Material Flow, Processor

Niobium processors simply report all their shipments, except for material going to other niobium processors within the T.I.C. statistics. Material held in stock is not reported until it is actually shipped. Items 1 to 5 are the categories of material recorded for niobium processor shipments.

TANTALUM MATERIAL FLOW

For tantalum the situation is essentially the same as for niobium, except for the addition of processors' receipts and capacitor producers' receipts. The following diagram illustrates the types of companies in the tantalum supply chain as grouped by the statistics process. The primary production of raw materials that is reported in the T.I.C. statistics is highlighted in yellow, while the processors' receipts are highlighted in blue and shipments in green. Capacitor producers' receipts are highlighted in orange. This shows which figures companies should be including or excluding when reporting their statistics.

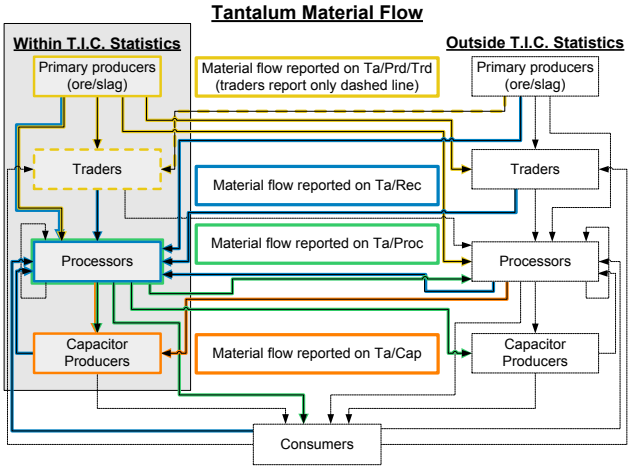

Figure 5 - Tantalum Material Flow, Overview

Tantalum presents a somewhat more complex schematic than niobium as there are four types of reporting company:

- Primary producer - Reports production on the form "Ta/Prd/Trd"
- Trader - Reports receipts on the form "Ta/Prd/Trd"
- Processor, uses two forms:
  - Reports receipts on the form "Ta/Rec"; and
  - Reports shipments on the form "Ta/Proc"
- Capacitor producer - Reports receipts on the form "Ta/Cap"

Just as for niobium, distinction is made between those companies within the T.I.C. statistics reporting system and those without.

FLOW SHEET FOR A TANTALUM PRIMARY PRODUCER

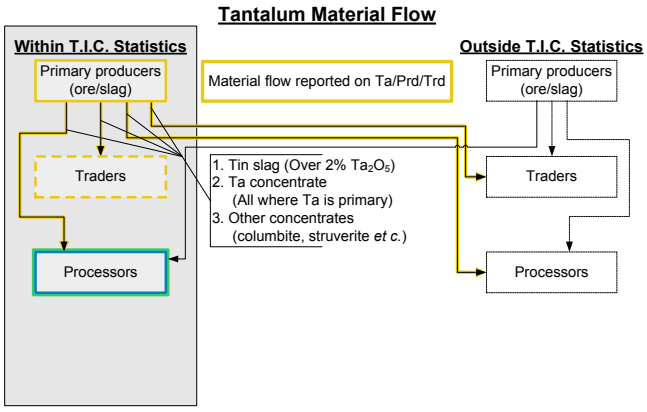

Figure 6 - Tantalum Material Flow, Primary Producer

As for niobium, a primary producer reports all material produced, regardless of its destination, even if it is going into stock. Items 1 to 3 are the three categories of material recorded for primary production.

FLOW SHEET FOR A TANTALUM PRIMARY PRODUCTION TRADER

The role of the traders is to capture material being produced outside the T.I.C. statistics. Material received from T.I.C. primary producers is not included in order to avoid double counting.

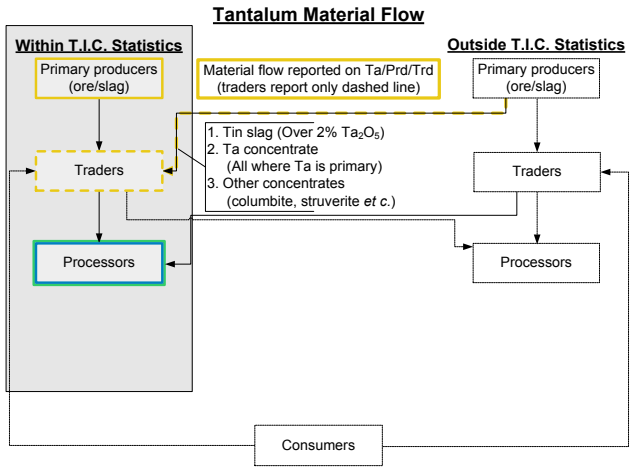

Figure 7 - Tantalum Material Flow, Trader

FLOW SHEET FOR A TANTALUM PROCESSOR'S RECEIPTS

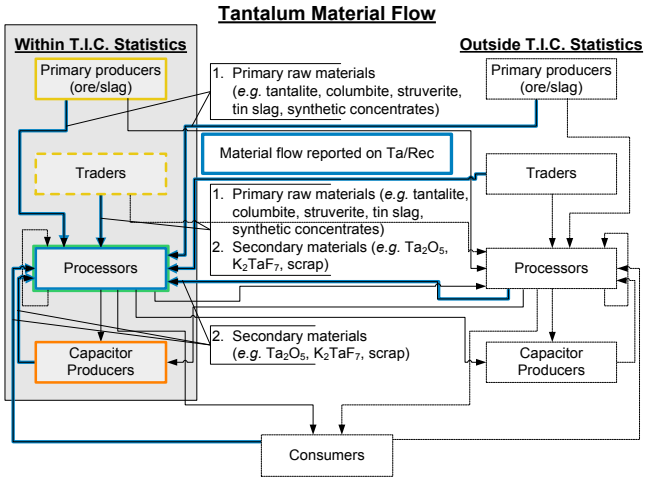

Figure 8 - Tantalum Material Flow, Processor Receipts

Tantalum processors report both their receipts and their shipments, except for material received from or going to other tantalum processors within the T.I.C. statistics. Items 1 and 2 are the two categories of material recorded for processors' receipts; note that category 2 is not expected from primary producers, just as category 1 is not expected from downstream users.

FLOW SHEET FOR A TANTALUM PROCESSOR'S SHIPMENTS

Tantalum processors report both their receipts and their shipments, except for material received from or going to other tantalum processors within the T.I.C. statistics. As for niobium, material held in stock is not reported until it is actually shipped. Items 1 to 6 are the six categories of material recorded for processors' shipments; note that category 3 is only expected to be delivered to capacitor producers, while categories 1, 2, 4 and 6 are not expected to be taken up by capacitor producers.

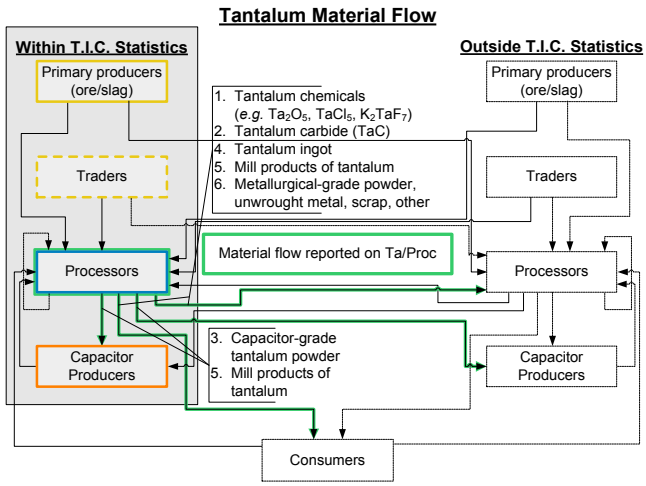

Figure 9 - Tantalum Material Flow, Processor Shipments

FLOW SHEET FOR A TANTALUM CAPACITOR PRODUCER'S RECEIPTS

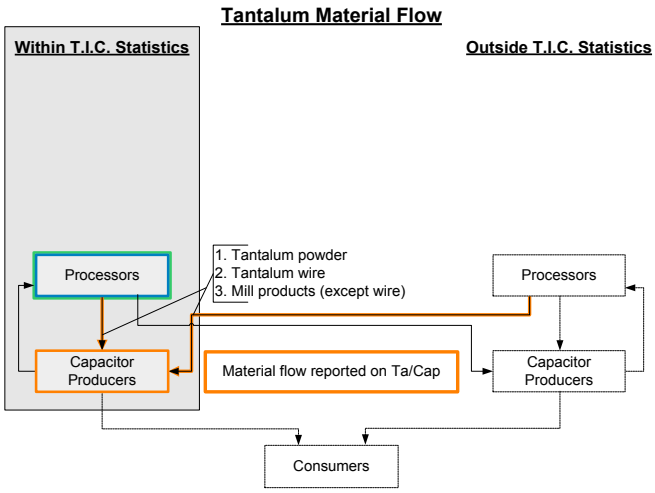

Figure 10 - Tantalum Material Flow, Capacitor Producer Receipts

Tantalum capacitor producers simply report all their receipts, regardless of origin. Items 1 to 3 are the three categories of material recorded for capacitor producers' receipts. Category 1 corresponds to category 3 of processor shipments except that it also includes production from non-members, while categories 2 and 3 form part of category 5 of processor shipments plus receipts from non-members.

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 here in comparison with the statistics collected since 2004.

Up until the end of 2008 the T.I.C. reported results for the two six-month periods January-June and July-December, except for capacitor producers' receipts where figures have always been reported quarterly. Since 2009 the T.I.C. has been reporting all figures quarterly to its members. For comparability with pre-2009 figures the graphs show points at half-yearly intervals.

TANTALUM

PRIMARY PRODUCTION

As noted earlier, the tantalum primary production figures were affected[2] by the resignation of several major producers at the time of the global financial crisis: Cabot in October 2008, owner of the Tanco mine in Canada; Talison in February 2009, owner of the Greenbushes and Wodgina mines in Australia; and Noventa in January 2010, owner of the Marropino mine in Mozambique. It is understood that these companies' mines were closed soon after, although Marropino re-opened in early 2011 and Wodgina operated for a seven month period in late 2011.

The drop in tantalum concentrate in 2006 was due to the closure of the Greenbushes mine in Australia, with production capacity subsequently being taken up by other producers.

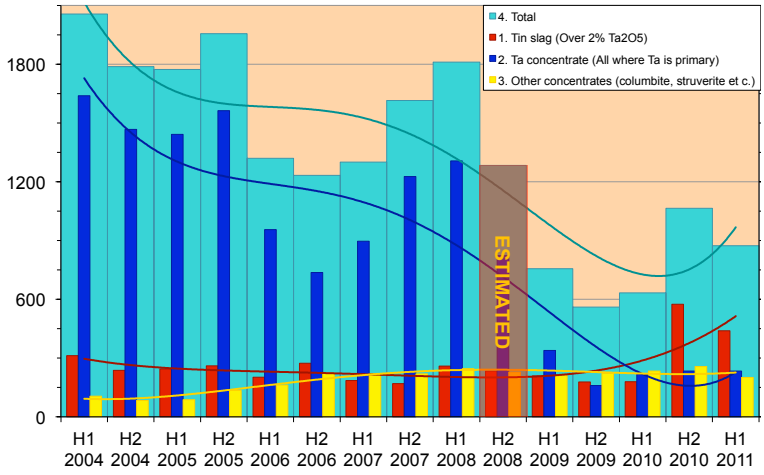

Figure 11 - Tantalum primary production ('000 lb Ta_2O_5 contained)

Tantalum concentrate stopped appearing to be the primary source of tantalum in 2009 H2. As a proportion of total production, tantalum concentrate declined from 72% in 2008 H1 immediately prior to the global economic crisis impacting the tantalum industry, to a low of just 22% in 2010 H2 and recovering somewhat to 27% in 2011 H1. The proportion for tin slag and other concentrates has increased correspondingly.

If the tin slag figures are taken as absolute numbers instead of relative proportions, they indicate a current production level double that of the average for 2004-2009. Other concentrates are at the same level as the average for 2007-2010, which is double that of 2004-2005.

[2] It was not possible to release the results for the period 2008 H2 due to the independent collector SFC Group not receiving the data for 2008 Q4 from the company Talison. The release conditions for the statistics report prevented the release without this company's data.

PROCESSORS' RECEIPTS

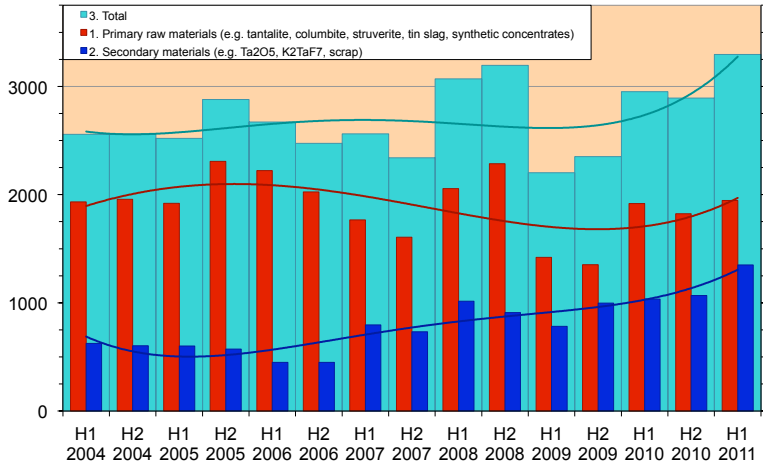

Figure 12 - Tantalum processor receipts ('000 lb Ta_2O_5 contained)

Unlike the primary production figures, the processors' receipts were not affected by the withdrawal of Talison and Noventa. However the withdrawal of Cabot in the fourth quarter of 2008, coupled with the impact of the global recession, resulted in 2009 showing the lowest receipts since 2002.

It is also interesting to note that primary raw materials accounted for an average 74% of total receipts during 2004-2008, but a markedly lower average of 62% from 2009 onwards. This is partly due to a growth in secondary materials of 12% compared with 0.6% for primary raw materials, in terms of average annualised figure over the past two years.

The latest year-on-year change saw primary raw materials increasing 15% and secondary materials by 19%, for an overall increase of 17% in total receipts.

When comparing the total tantalum primary production against the processors' receipts of raw materials we see that nearly the entire time since 2004, there has been an apparent deficit in production compared to receipts, which could be attributed to processors receiving material from outside the primary production, either from (a) non-members or (b) in the form of synthetic concentrates, a material not reported in primary production but reported in primary receipts; the average deficit of 20% for the period 2004-2008 was probably due to a combination of these two factors. The deficit was particularly prominent following the 2006 closure of the Greenbushes mine in Australia, with balance briefly restored in late 2007.

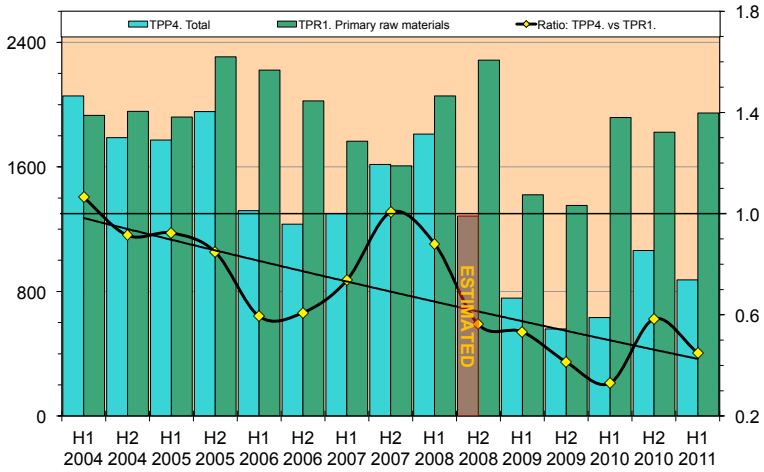

Figure 13 - Tantalum total primary production *versus* processors' receipts of primary raw materials ('000 lb Ta_2O_5 contained)

Releases of mineral concentrates from the U.S. Defense Logistics Agency (DLA) took place up until the stocks were exhausted[3] in 2006; those purchased by traders would have been reported in primary production and by processors in receipts and should therefore be a neutral factor, those purchased directly by processors would appear as a 'deficit' in primary production.

Despite the temporary closures of the Australian Wodgina mine in 2008, followed by the Canadian Tanco mine and Mozambican Marropino mine in 2009, a new higher imbalance averaging about 50% from 2008 H2 through 2011 has appeared, suggesting a higher proportion of production being received by processors that is not being reported in the primary production; using the above data as a guide, this could be of the order of 400-500'000 lb per half year. The primary production reached a low point of 33% of processor receipts in early 2010.

[3] The final lot of tantalum material available for sale in 2007 was tantalum carbide.

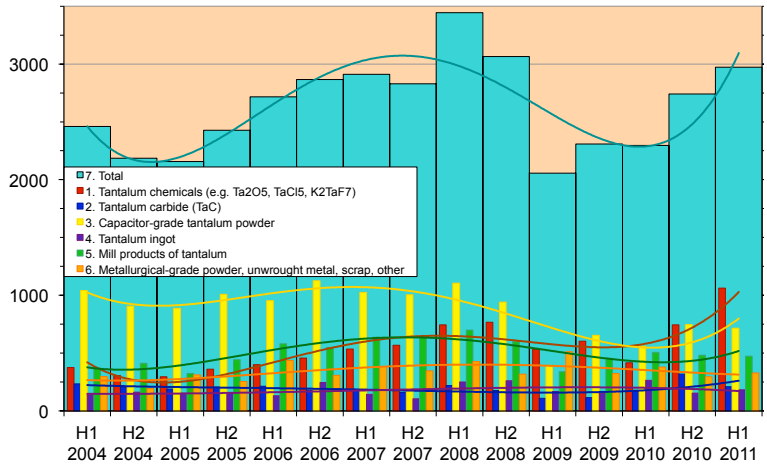

Figure 14 - Tantalum processors' shipments ('000 lb Ta contained)

Tantalum chemicals are now the biggest category of processor shipments with 36% of the total, followed by capacitor-grade tantalum powder at 24%. The remainder is made up of mill products at 16%, metallurgical-grade powder at 11%, carbide at 7% and tantalum ingot at 6%.

Year-on-year changes show an overall increase of 24% in processor shipments to a level comparable to 2007, a little short of the peak year of 2008. In terms of quantity this is mainly driven by chemicals that have grown 77%, although carbides have shown the biggest individual increase with 85%. Capacitor powder grew 20%, while mill products held steady at -1% and metallurgical powder and ingots changed by -11% and -20% respectively.

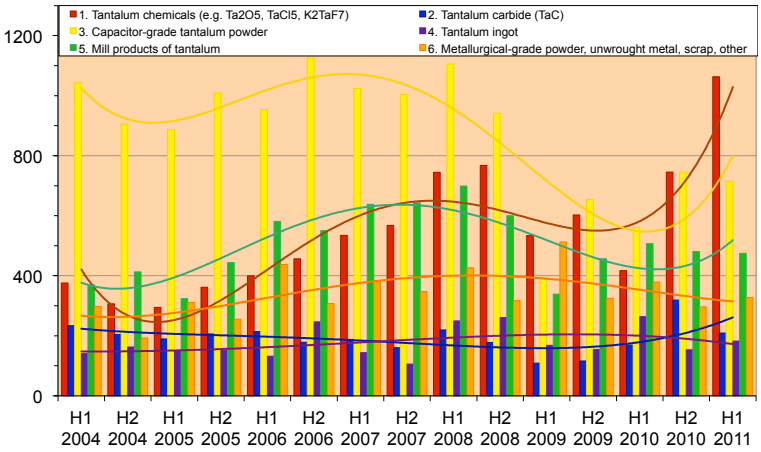

Figure 14-A - Tantalum processors' shipments, without the total ('000 lb Ta contained)

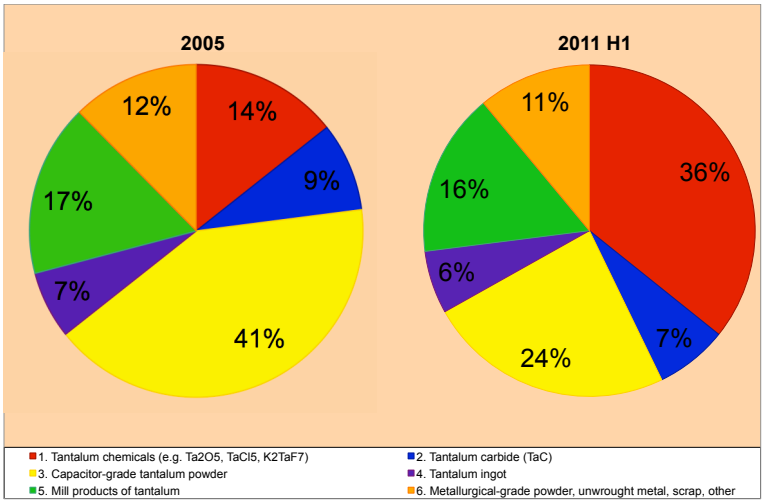

Figure 15 - Tantalum processors' shipments in 2005 *versus* 2011 H1

When comparing 2005 against 2011, we see big differences between the contribution made by capacitor grade powder and tantalum chemicals, with 41% and 14% respectively in 2005, compared to 24% and 36% respectively in 2011. The other categories have retained essentially the same proportions.

For almost the entire period from 2004, processor shipments have exceeded receipts as processors have been working down the large stocks accumulated as a result of the long term 'take-or-pay' contracts set up at the time of the dot com bubble around the year 2000. The one exception was early in 2010 when there was a 5% excess in receipts, indicating a combination of reducing stocks and anticipated demand for shipments which was then materialised in subsequent periods.

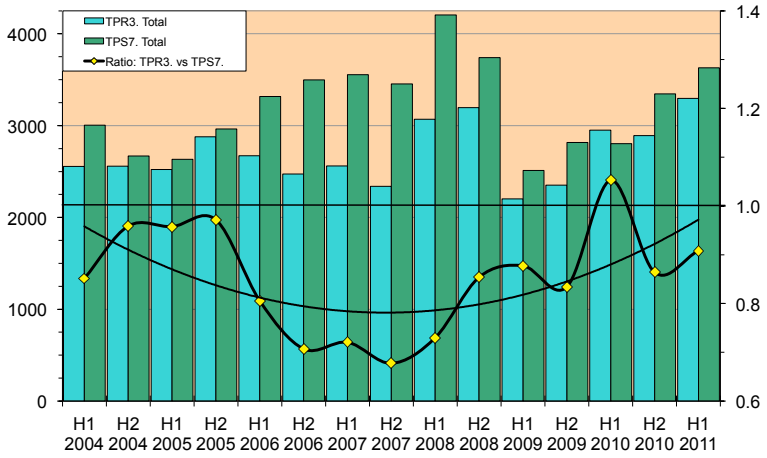

Figure 16 - Tantalum processors' receipts *versus* processors' shipments ('000 lb Ta_2O_5 contained)

CAPACITOR PRODUCERS' RECEIPTS

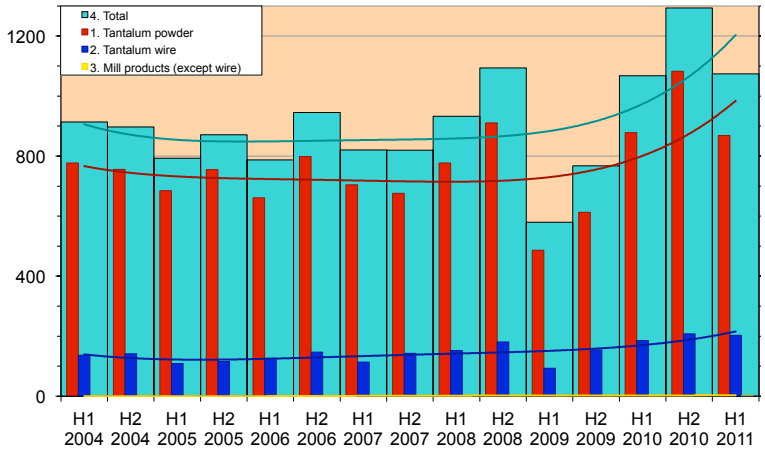

Figure 17 - Tantalum capacitor producers' receipts ('000 lb Ta contained)

Capacitor producers' receipts fell sharply in 2009 following the global financial crisis, then recovered steadily to an all-time high peak at the end of 2010 and are now currently at their second-highest level, similar to early 2010 and late 2008.

Year-on-year the tantalum powder and wire have increased 31% and 21% respectively over the past year, for an overall increase of 29%. Tantalum powder and wire account for an 80/20 split in receipts, while the mill products (except wire) category provides less than one per cent.

Capacitor powder shipments by processors versus receipts of powder by capacitor producers looked very stable up until 2008, with a surplus of nearly 40% that was believed to be due to shipments of powder to non-member capacitor producers. When, at the end of 2008, the processor Cabot chose to leave the T.I.C. demand simultaneously plummeted. Since then electronics demand recovered steadily during 2009-2010 and while the figures now give an impression of insufficient supply, account should still be made of non-member supply.

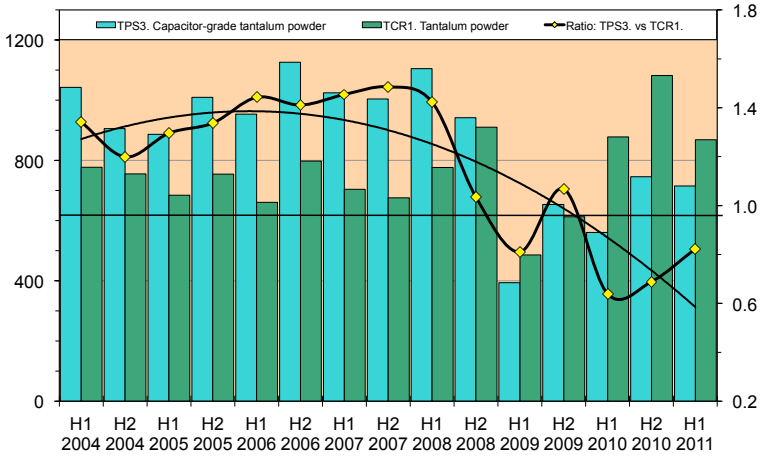

Figure 18 - Tantalum processors' shipments of capacitor-grade powder *versus* capacitor producers' receipts of tantalum powder ('000 lb Ta contained)

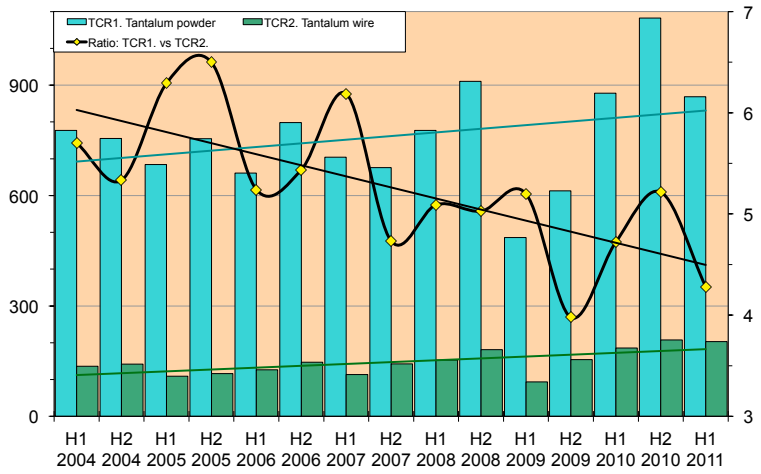

Figure 19 - Tantalum capacitor producers' receipts: powder *versus* wire ('000 lb Ta contained)

The relationship between powder and wire receipts has maintained a stable image over the years. While both powder and wire receipts have increased, wire receipts have increased at a faster rate and as a result the ratio of powder to wire has decreased, which is consistent with the continually shrinking size of capacitors.

Up until 2008 there was a clear decline in the amount of capacitor powder compared to the number of capacitors due to the decreasing form factor. The turmoil in capacitor powder production of the past two years has seen the ratio rise upwards, despite powder production being lower than normal. This would suggest that capacitor producers' receipts were either low up until 2008, or that since 2009 they are receiving more capacitor powder than is currently required.

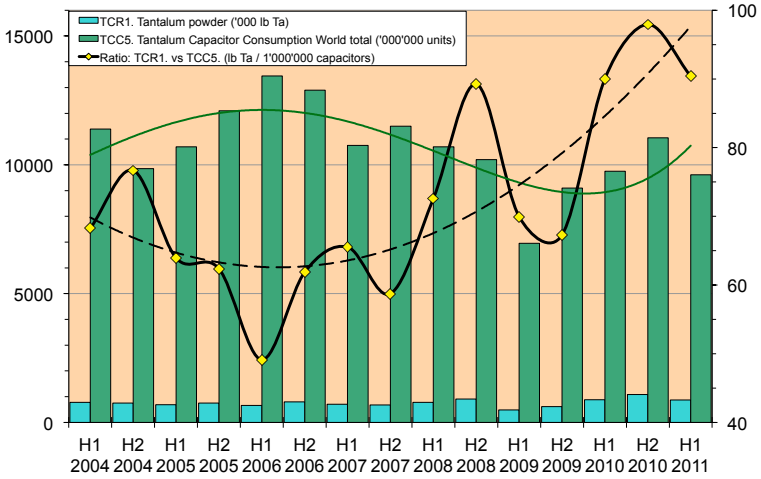

Figure 20 - Tantalum capacitor producers' receipts of tantalum powder *versus* estimated world total capacitor consumption (see legend for units employed)

NIOBIUM

PRIMARY PRODUCTION

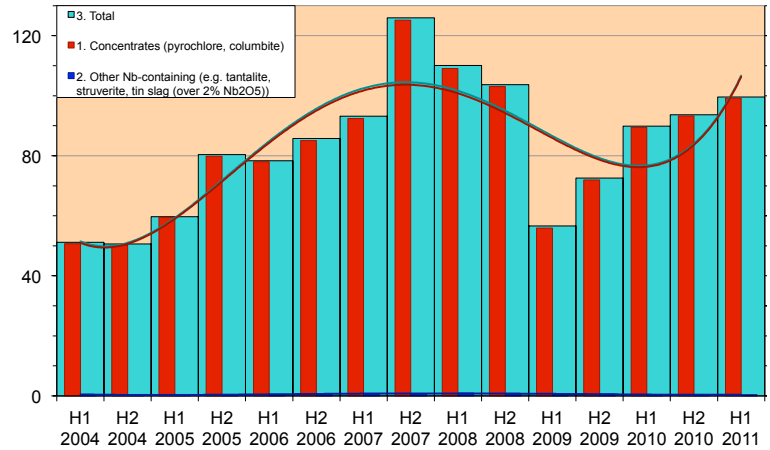

Figure 21 - Niobium primary production ('000'000 lb Nb_2O_5 contained)

Niobium primary production has seen a steady return to growth, with a 19% increase from 2009-2010 to 2010-2011. The primary concentrates pyrochlore and columbite continue to form 99% of the supply.

Secondary concentrates, i.e. niobium obtained as a by-product of other minerals such as tantalite or struverite, saw a change of -24% year-on-year but have a negligible impact on overall niobium production.

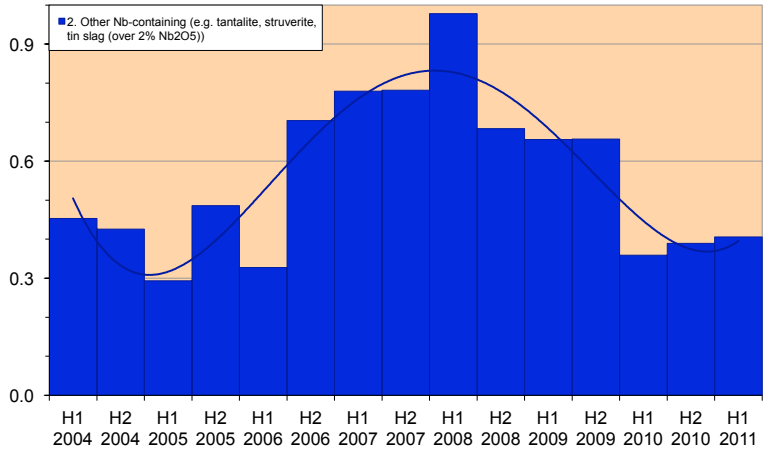

Figure 21-A - Niobium primary production, showing "Other Nb-containing" concentrates only ('000'000 lb Nb_2O_5 contained)

PROCESSORS' SHIPMENTS

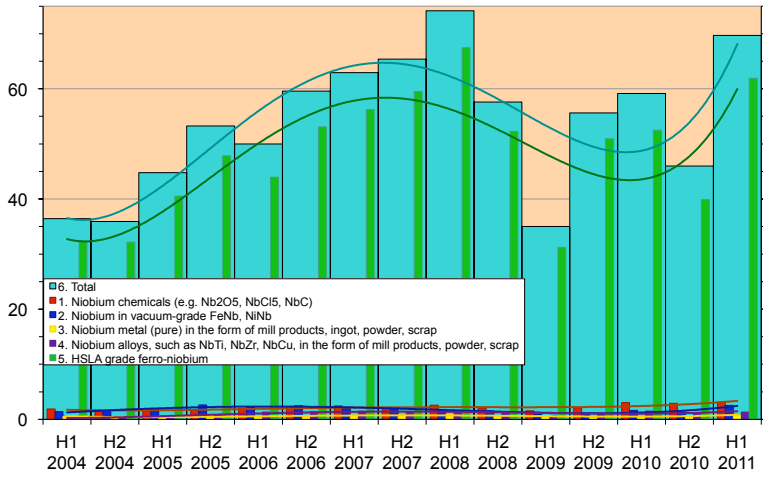

Figure 22 - Niobium processors' shipments ('000'000 lb Nb contained)

The lion's share of niobium processor shipments continues to be HSLA ferro-niobium with 88%, followed by niobium chemicals with 5%, vacuum-grade niobium master alloys with 4%, niobium alloys such as NbTi with 2% and finally pure niobium metal with 1%. A dip in ferro-niobium shipments in late 2010 resulted in a year-on-year difference of -2%, while overall niobium shipments just crept ahead with 1%, masking a 2011 first half total nearly as high as the record level of early 2008.

As for the other processor shipment categories, niobium chemicals have increased year-on-year by 17%, vacuum-grade ferro-niobium by 38% and pure niobium metal by 57%, whereas niobium alloys such as NbTi have seen a modest rise of 3% overall. All saw a dip in demand in late 2010 similar to HSLA ferro-niobium, except pure niobium metal which saw a steady rise every six month period. Again similarly to HSLA ferro-niobium all are at near-peak levels, except niobium chemicals which are at their highest level seen to date.

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 pure niobium metal has seen a decline, of a value of -16%.

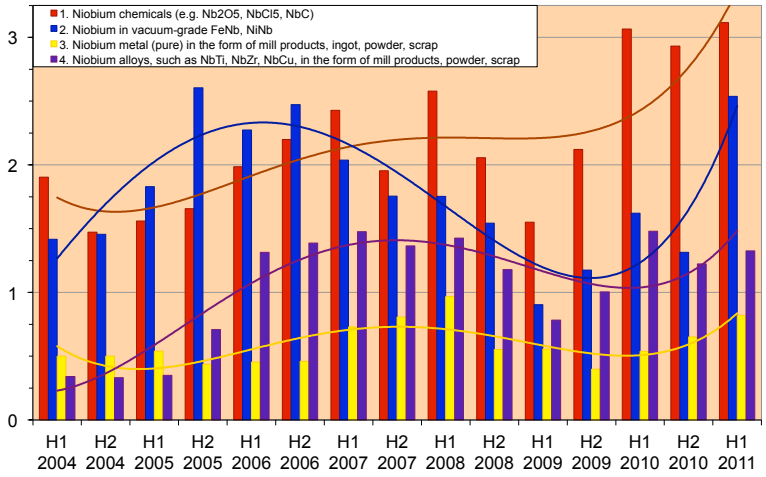

Figure 22-A - Niobium processors' shipments other than HSLA grade ferro-niobium ('000'000 lb Nb contained)

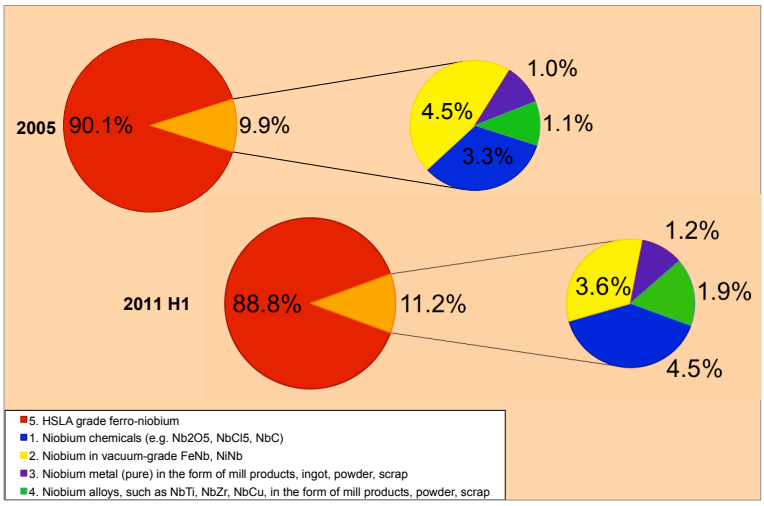

Figure 23 - Niobium processors' shipments in 2005 *versus* 2011 H1

The breakdown between categories has not changed significantly between 2005 and 2011, with HSLA ferro-niobium commanding around 90% of shipments, while niobium chemicals and niobium alloys have taken up a greater share mainly at the expense of vacuum-grade niobium master alloys which were at a peak in 2005-2006.

As there is no collection of niobium processors' receipts, here the primary production is compared directly with the processors' shipments. From a near balance in supply and demand during 2004-2006, rapid changes in demand in later years have made it more difficult to maintain a closely matched supply. Nevertheless there has generally been sufficient supply, with the lowest point in late 2009 having production just 9% below shipments, with a high peak instead of 42% over in late 2010.

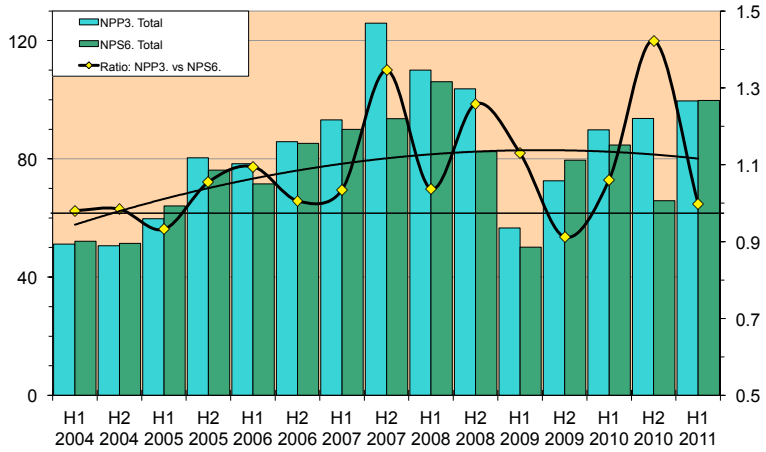

Figure 24 - Niobium primary production *versus* processors' shipments ('000'000 lb Nb_2O_5 contained)

STATISTICS CONCLUSION

The seemingly low tantalum primary production figures are comparable with the levels of 1998, a slight improvement on the figures of 2010 which were comparable to 1996. Note that while 2010 did not include data from Tanco or Wodgina, neither were those mines in operation at that time.

Tantalum processors' receipts are now comparable to 2008, a year which saw the second-highest levels and therefore makes 2011 the third-highest receipts to date. Despite the increase, primary production now accounts for 45% of receipts, up from a low point of 33% in 2010.

Tantalum processors' shipments are back up to the levels of 2007 which makes them nearly the second-highest to date, whereas last year shipments were languishing at the levels of 2005.

Capacitor producer receipts reached a new record level in late 2010 then dipped in early 2011 to a second-best.

Capacitor consumption has recovered to the levels of 2008, an improvement on the previous year which was at the low point of 2009.

Overall for tantalum the recent trends have all been rising consistently, except for capacitor receipts and consumption which have fluctuated recently.

The niobium primary production figures are climbing steadily and are on a par with the figures of late 2006, still a little below the peaks of 2007-2008.

Niobium processors' shipments are comparable with those of a year ago, which again are similar to 2006. There has been some fluctuation with the most recent figures being on the rise.

WHERE HAS ALL THE TANTALUM GONE?

Paraphrasing the powerful 1960s song doesn't quite work, as in reality, a review of the previous statistics paper would suggest that 'Where has all the tantalum come from?' would be better.

Until 2008, Mr Schwela's paper shows that producer shipments were on average about 20% below processor receipts: however they were probably not far out of balance, when synthetic concentrates and the DLA disposals are discounted. However, since 2008 the statistics show processor receipts far outstripping producer shipments. If the same apparent 'negative imbalance' of 20% due to synthetic concentrates continued after 2008 there remains an additional apparent negative imbalance of approximately ¾ to 1 million pounds per year.

It is accepted that three mining companies resigned from the T.I.C. during this period, but for much of the time they have either been closed, or producing well below nameplate levels: in addition much of that product would have been destined to a (now) non-member processor. Hence this is only a partial explanation. Certainly, during late 2008 and 2009 material was being shipped by non-members from Central and West Africa – but this has always been the case: based on industry watchers' estimates and what Government statistics are available, 'non-T.I.C. member' production probably is of the order of ½ million pounds per year. Even these quantities would nowhere near account for the imbalance, especially the massive imbalance reported in 2010 – the very year the above three mines were closed.

So what DOES account for the apparent imbalance? What is left? It is generally accepted that during the first half of the decade, production (due primarily to the take-or-pay contracts in place at the time) far outstripped demand, and as a result substantial inventories existed throughout the supply chain. Where indeed were these inventories – in whose warehouses were they? Were they indeed (rightly) reported as 'production', but as they had not reached the production lines at processors they were simply not recorded as 'receipts'?

It would certainly explain the figures – indeed taking the figures holistically, the imbalance between 'production' (including estimated non-member production) and receipts over a ten year period essentially disappears.

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A CONFLICT-FREE SUPPLY CHAIN – AN UPDATE

The various initiatives related to conflict-free supply chain management continue to evolve, and this report is a brief update from the paper published in issue 148 of the quarterly Bulletin.

It is over twelve months since the iTSCi programme was rolled out in Rwanda, followed a year ago by Katanga. In both regions, the Programme is now becoming well established. Baseline studies of close to 500 mine-sites have been carried out, and those mine sites that meet the criteria have been admitted into the Programme. In addition, Risk Assessments of all iTSCi Membership applicants have been finalised and the Secretariat will soon publish its membership list.

ITRI TIN SUPPLY CHAIN INITIATIVE

A key part of the Programme is incident reporting and mitigation: that issues ARE being discovered - some by the local miners themselves - and appropriate actions taken and accepted by all stakeholders is a good indication of the efficacy of the Programme. Indeed, one of the more important miners in Rwanda has been suspended from the Programme showing that the Programme does indeed have 'teeth'. Not only is the iTSCi Programme embraced by the in-region artisanal sector, it is a key part of such initiatives as 'Solutions for Hope' and 'Making Africa Work'. In addition, Intel, which recently announced that it will have a 'conflict-free' processor by 2013, relies on iTSCi for its in-region Chain of Custody.

The Programme commenced using the 'high-tech' approach of pencil and paper for data collection but we are now investigating electronic data gathering. Once this has been shown to be reliable (especially in areas of minimal infrastructure) and cost effective, and appropriate training has been carried out, this could be introduced in the future.

The Programme is ready to expand into other Provinces within the DRC. The DRC Government has recently invited iTSCi to commence in Maniema Province, which is essentially a 'conflict-free' Province. The issue that had held up iTSCi was the disposal of old (essentially tin) stocks: notwithstanding a plea from the UN Group of Experts (a special dispensation for these to enter the 'formal' Supply Chain through the iTSCi programme), the only avenue available was their sale to non-CFS Smelters – at approximately half the price that could have been realised by sale to CFS compliant Smelters. This substantial discount unfortunately severely impacted the income of the local miners: it is however a powerful indication of the 'value' of the iTSCi programme. Additionally, the ICGLR/DRC have published their first 'conflict-free mine' map for the Kivus – with eleven 'green' sites. iTSCi will prepare to expand into these mines in the Kivus as soon as start-up funding can be obtained.

At the 'downstream' end, a total of eleven tantalum Processors have now been designated as 'Conflict-Free Smelters' - to date, tantalum is the only one of the '3T' minerals to have smelters so designated.

Both the iTSCi and CFS Programme Managers accept that harmonization of the audits for the programmes is essential to reduce 'audit fatigue', and we are now close to reaching this goal.

The T.I.C. is represented on Working Groups at the OECD and also the US based Public-Private Alliance (PPA). With the former, the Guidelines are being 'road tested' and many T.I.C. members will have been asked to complete questionnaires, the results of

which will be presented at the May OECD meeting in Paris. The PPA will shortly be issuing 'Requests for Proposals' and expects to commence distribution of grants by early summer.

In terms of Government activities, the SEC Regulations related to Dodd-Frank 1502 are now not expected to be published for several more months. Other Governments including the EU and Canada are also considering legislation, and these are being monitored carefully.

Richard Burt
Supply Chain Officer
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MEMBER COMPANY NEWS

We would like to remind you that articles concerning T.I.C. members or the industry in general are posted regularly on the T.I.C. website in the section entitled 'News'.

CHANGES IN MEMBER CONTACT DETAILS

ABS Industrial Resources
ABS Industrial Resources has nominated Mr Craig Wilkes to represent the company within the T.I.C. He can be contacted on:
e-mail: craig@absgroup.co.uk

Globe Metals & Mining Ltd
The company has announced new contact details:

Physical Address: Level 1, Suite 2, 16 Ord Street, West Perth WA6005, Australia
Postal Address: PO Box 1811, West Perth WA6872, Australia
Tel.: +61 8 9327 0700, Fax: +61 8 9327 0798

Sanyo Electric Co., Ltd
As part of the consolidation between the two companies Panasonic and Sanyo, the offices of the capacitor division of Sanyo Electric Co., Ltd have moved from Osaka to Kyoto, where the headquarters of the capacitor business unit of Panasonic are located.

The new contact details for Mr Nishimoto, delegate to the T.I.C. for Sanyo Electric Co., are as follows:

Address: 25 Kowata-nishinaka, Uji City, Kyoto 611-8585, Japan
Tel.: +81 744 31 5818
e-mail: Nishimoto.hiroya@jp.panasonic.com

Wah Chang
Following the retirement of Mr Barry Valder, Wah Chang has designated Mr Tony Nelson to represent the company within the T.I.C. His contact details are:
Tel.: +1 541 967 6910
e-mail: tony.nelson@atimetals.com

Yichun Jin Yang Rare Metals Co., Ltd
The e-mail address of Mr Gui Xianyou, delegate to the T.I.C. for Yichun Jin Yang Rare Metal Co., has changed to 2524017863@qq.com. The company can equally be reached on ycjinyang@hotmail.com