

T.I.C. Activities

The Eighteenth General Assembly was held in Brussels on October 26th in the Cercle Royal Gaulois. The meeting was chaired by Mr. Conrad Brown, President of the T.I.C.

The resignation of Cabot Berylco Inc. as member of the T.I.C. was accepted and then the Assembly elected one new member, Malaysian Smelting, the newly formed joint-venture of Malaysia Mining Co. and the Straits Trading Company. The membership, following this Assembly, numbers sixty-five.

Production statistics for the first two quarters of 1982 were distributed to the attending members. The data show that the production of tin slags continues at about the rate of 1981 but the production of concentrates has diminished. Figures were reported by twenty-two of the twenty-eight producers totalling 1,018,204 lb. of contained tantalum-oxide, 664,696 lb. in slag and 353,608 lb. in concentrates. Shipments, however, were depressed, totalling 766,376 lb., only 75 % of the production level.

The collection of processing statistics has begun but not all companies have yet reported. After discussion and a supporting legal opinion, it was decided that production data supplied by non-members of the T.I.C. could be incorporated with the data of members to provide a total which would include the entire tantalum community.

Mr. John Linden, Managing Director of Greenbushes Tin Ltd., of Perth, Western Australia, was elected to the Presidency for the coming year, succeeding Mr. Conrad Brown at the end of the current meeting. By vote of the Assembly, the by-laws were amended to expand the Executive Committee to eight members plus the President. The General Assembly then elected Mr. Ake Janson of Sandvik from Stockholm to be a new member. The other members of the Executive Committee were elected to a further term of office for the 1982-1983 year.

President's message

I look forward to serving as President of the T.I.C. for the coming twelve months and expect to build on the sound base established by my predecessors over the past nine years.

Times are difficult in the minerals and metals industries worldwide and this inevitably places some strain on member companies. Through the T.I.C., however, we provide a forum where some of the strain can be relieved and common problems discussed.

During the past seven years as a member of the T.I.C. I have had the opportunity to visit the operations, processing plants, manufacturing plants and research facilities of many member companies. The research and development facilities available to individual members are among the most modern in the world and a broad spectrum of high technology research is being carried out. Some of the results of this research activity can be seen in the various reports prepared by Ayers, Whitmore and Company for the T.I.C.

Capacitor grade powder has developed higher and higher CV ratings resulting in more efficient capacitors.

Tantalum carbide manufacturers continue to research powder metallurgy techniques to improve their product. Especially in the field of mixed carbides these efforts have also been highly successful. The Aerospace industry has researched single crystal technology for use in turbo blades. The metal manufacturers are constantly developing new processing techniques to make thinner foil, film and wire.

T.I.C. EIGHTEENTH GENERAL ASSEMBLY

The Eighteenth General Assembly of the Tantalum Producers International Study Center met at the Cercle Royal Gaulois, Brussels, Belgium, on Tuesday, October 26th 1982, chaired by Mr. Conrad Brown, President. 48 of the 64 member companies were represented at the meeting.

The General Assembly conducted the business of the T.I.C. including:

- The election of one new member;
- A review of the production statistics for the first two quarters of 1982;
- The increase of available places on the Executive Committee from seven to nine;
- Election of officers.

Mr. John Linden, Managing Director of Greenbushes Tin Ltd. of Perth, Western Australia, was elected President for the coming year. Mr. Ake Janson from Sandvik in Sweden was elected to a newly created seat on the Executive Committee.

After completion of the formal business of the Assembly, an address was made by Mr. Lucien Le Lièvre, Senior Partner of Coudert Brothers, in charge of their Brussels office, on "The United States anti-trust laws and the European Economic Community laws of competition: a comparison".

The Nineteenth General Assembly of the T.I.C. will be held from May 22nd to May 24th 1983 in Penang, Malaysia. The three south-east Asia tin smelters — the Thailand Smelting and Refining Co., Datuk Keramat Smelting and Malaysian Smelting Corporation — will be hosts for the meeting. A symposium will address the topic of tin slags as a tantalum raw material source.

For further details of the meeting or information on the T.I.C., please contact Mrs. J.A. Wickers, Secretary, Tantalum Producers International Study Center, 1, rue aux Laines, 1000 Brussels, Belgium.

All this research and development is good for the tantalum industry as it enhances tantalum in that particular application by making it more competitive.

Unfortunately however all this research and development is directed from the premise that tantalum is in short supply and therefore will be unavailable or relatively expensive. While this premise may have been true as little as three or four years ago, it has not been true for at least two years.

The direction of research and development needs to be changed from the orientation of reduced usage in existing applications to one of new uses for the metal. It is difficult to see how this can be achieved as those members of the industry that have sophisticated research and development facilities generally have an interest in only a small section of the tantalum industry as a whole.

Every member of the tantalum industry would benefit by a growth in the market for tantalum products. The metal has unique properties and lends itself to new uses and applications. The members of the industry can commence the expansion programme by directing a proportion of research and development expenditure to be directed towards new product developments. The T.I.C. and its members can assist by providing the forum where some of the results from these new developments can be discussed.

I look forward to any further comment on this topic from member companies.

Best Regards,
JOHN LINDEN
PRESIDENT

1981 U.S. shipments of tantalum and Columbium products

Recently released data from the U.S. Bureau of Mines demonstrate emphatically the rapid decline of the tantalum market due to economic recession. The comparison from 1977 through 1981 follows (1,000 lb. units of tantalum and columbium):

Product	1977	1978	1979	1980	1981
TANTALUM					
Oxides and Salts	62.8	38.2	35.4	48.7	50.7
Alloy additive	12.2	4.4	23.7	8.1	—
Carbide	113.5	116.9	190.1	125.7	137.2
Powder and anodes	759.2	840.0	928.2	852.9	520.2
Ingot	8.0	7.2	6.6	23.0	7.1
Mill Products	292.4	321.9	365.2	318.8	196.7
Scrap	168.3	184.1	151.0	130.9	72.7
Other	2.0	2.1	—	1.7	—
Total	1,418.4	1,514.8	1,700.2	1,509.8	984.5
% Change	9.3	6.8	12.2	(11.2)	(34.8)
COLUMBIUM					
Compounds	872.4	1,611.0	1,627.8	1,066.6	632.2
Metal	189.3	223.7	329.5	344.7	260.5
Miscellaneous	16.6	12.5	64.2	18.5	20.5
Total	1,078.3	1,847.2	2,021.5	1,429.8	913.2
% Change	15.5	71.3	9.4	(29.3)	(36.1)

The total quantity of tantalum products shipped declined to the lowest level since 1975 (865,200 lb. contained Ta). For comparison, the decline from 1974 to 1975 was 48.5 % and the total decline from 1979 (the peak year) to 1981 has been only 42.1 %. The extreme sensitivity of the tantalum market to economic recession is probably greater than it is for most other metals. The U.S. shipments data certainly define very clearly the recessions of 1971, 1975 and 1981. There seems to be some significance, however, to the fact that the minimum shipment points in each recession are very close to the same amount, about 900,000 lb. Ta.

The apparent consumption in the United States, however, does not appear to have suffered as much as indicated above. U.S. processors have been large exporters. In just two export categories, powder and wrought products, exports from the U.S. decreased from 376,000 lb. in 1980 to only 138,000 lb. in

1981. The difference of 238,000 lb. amounts to 45 % of the decrease in the shipments of U.S. processors, obviously reflecting the economic recession in the countries to which exports are made. On the other hand, imports of tantalum metal products also dropped from 105,000 lb. in 1980 (excluding waste and scrap) to 31,000 lb. in 1981. From these data, the apparent U.S. consumption dropped 361,000 lb. from 1,239,000 lb. in 1980 to 878,000 lb. in 1981, a decrease of 29 %. It is possible that the actual consumption of tantalum end products suffered even less than indicated as it is generally believed that the end product producers reduced their material inventories significantly in 1981.

The largest individual product decrease in 1981 was in capacitor powder, declining 332,700 lb. from 1980. Of this, almost 50 % was decreased exports from 251,000 lb. to 97,000 lb. Imports of powder also declined from 68,000 lb. to 31,000 lb. These data show a net decline in apparent consumption of 31 %, considerably less than the 39 % decline in shipments. The 1981 drop in capacitor shipments in the U.S. was only 8.5 % (T.I.C. Study: "Explanation of Tantalum Market Behavior: 1980-1985"). Thus, the drop in tantalum powder consumption reflects both consumption of inventory and a greater use of higher capacitance-rated powders.

The small increase in carbide shipments does not necessarily reflect a strengthening of this market segment. Opinions have been ventured that this increase denotes a reduction in the use of secondary tantalum as lower prices of carbide made from virgin material have shifted the use by some producers of cemented carbide tools back to the historically-used materials in which they have more confidence.

The complete disappearance of additive alloy shipments in 1981, similarly, cannot be taken to indicate economic collapse of the high performance alloy producers. These melters of alloys have always used a proportion of prime scrap. During 1981, the excess scrap available from the previous peak years' consumption of metal products resulted in lower scrap prices, less than the price of alloy additive. Thus, consumption of tantalum continued without a demand for virgin material. But, as the excess prime scrap is consumed, there will be a return to the use of alloy additive, probably even in 1982.

As provided in previous years, an estimate of the source material usage can be made for 1981. The following data have been calculated to show the estimated consumption by U.S. processors of the tantalum and columbium contained in ores and slags (1,000 lb. units):

Year	Ta ₂ O ₅	Cb ₂ O ₅	Ta ₂ O ₅ : Cb ₂ O ₅
1977	1,910	1,720	1.10
1978	2,040	2,950	0.70
1979	2,260	3,220	0.70
1980	2,020	2,280	0.89
1981	1,320	1,455	0.91

The ratio of tantalum oxide to columbium oxide indicates the use of similar materials in 1981 to those used in 1980. The Bureau of Mines estimates that the imports of tantalum in tantalum materials were 580,000 lb. in 1981 (708,000 lb. Ta₂O₅). In addition, 1,850 tons of Cb-Ta synthetic concentrates were imported. These latter materials could have contained as much as 800,000 lb. Ta₂O₅ (at 21 % to 22 %). The sum of these two sources would indicate a balanced supply/consumption condition but the Bureau of Mines data do not include the import of tin slags. If such is added into the supply, it would indicate that a build-up of raw materials inventories occurred during the year, perhaps as much as 500,000 to 750,000 lb. Ta₂O₅.

In view of reported raw material inventories in the U.S. of 3,261,000 lb. Ta₂O₅ at the end of 1979 (1980 year end data not available), it can be concluded that raw material inventory at the end of 1981 was probably greater than 4,000,000 lb., a three year supply at present rates of consumption.

The Bureau of Mines release also provides some information of interest relative to the production of concentrates:

- The Tantalum Mining Corporation of Canada, at the Bernic Lake mine, in 1981 processed 152,000 tons of ore with an average content of 0.122 % plus 55,000 tons of tailings. The indicated recovery was 55 % to 60 % for the ore and 50 % for the tailings. Total production was 297,000 lb. contained Ta₂O₅.
- Nigerian mines produced 401 tons of columbite concentrates containing 59,000 lb. of tantalum oxide. The average content

is calculated to be about 7.4 %, almost identical to the grade produced in 1980 when 610 tons were produced containing 89,000 lb. Ta₂O₅.

- World production of concentrates contained 1,266,000 lb. Ta₂O₅, down 18.3 % from the peak production of 1980. As presented, these data indicate that the T.I.C. reported production in 1981 of 926,241 lb. Ta₂O₅ in concentrates covered only 73 % of the free world production. Since the Bureau of Mines data is given in pounds of tantalum contained instead of the conventional tantalum oxide contained, there is a possibility that some of the reporting from which the Bureau of Mines data is obtained was confused resulting in higher production than actually occurred.

Metallurgical Industries, Inc.

Metallurgical Industries, Inc., a recent new member of the T.I.C., is a pioneer in a newly developing segment of the tantalum industry. MI is a producer of secondary tantalum, having rejected capacitors and used cemented carbide cutting tools as its source of material. Its main plant and headquarters are located in Tinton Falls, New Jersey, about 35 miles due south of the center of New York City. There are also plants in Houston, Texas, and in Belgium.

Three major activities of MI are centered in three operating divisions :

1. The Refractory Metals Division engages in the zinc and Coldstream processing of sintered tungsten carbide-cobalt to powder as well as the refining of scrap tantalum capacitors.
2. The Wearsurfacing and Alloys Division in which MI manufactures iron, nickel and cobalt base alloy powders for use in wearsurfacing, filters and powder-metallurgy parts. The Division also manufactures plasma wearsurfacing equipment and operates facilities for wearsurfacing services.
3. The Petroleum and Mining Hardmetals Division, located in Houston, manufactures composite rod and tube metal and welding consumables which are used in the wearsurfacing of oil and mining tool components. In addition, this Division performs wearsurfacing services for the oil tool industry.

The Refractory Metals Division has had over twenty years' experience refining secondary cemented carbides using the Coldstream process, invented and developed by the company, and a proprietary zinc process method. The Division can now process nearly two million pounds per year of sintered carbide material into prealloyed powder. 40 % has been added to the capacity in 1982 through the installation of a third zinc processing facility. Coldstream S.A., the European licensee of MI, also plans to add additional equipment which will almost double its tungsten carbide-cobalt powder manufacturing capability.

The Division has a capacity to reclaim about 20,000 to 30,000 pounds of scrap capacitors per month, current production running in excess of 20,000 lb. It handles both metal and epoxy cased devices as well as higher forms of tantalum. With this large capacity, turn-around time is very rapid.

Metallurgical Industries, Inc., long known by its former name, Metallurgical International, also publishes the well known monthly newsletter, "Metallurgical Metaletter", which has been distributed internationally for several years. This letter has focused on developments in the special metals field, both in terms of technology and business trends.

Tantalum production and shipments by members of the T.I.C.

All figures are quoted in lbs. Ta₂O₅ contained.

1982	Slags	Concentrates	Total
<i>Production</i>			
1st quarter	384,013	194,707	578,720
2nd quarter	280,683	158,801	439,484
	<u>664,696</u>	<u>353,508</u>	<u>1,018,204</u>

1982	Slags	Concentrates	Total
<i>Shipments</i>			
1st quarter	327,680	93,114	420,794
2nd quarter	254,919	90,663	345,582
	<u>582,599</u>	<u>183,777</u>	<u>766,376</u>

Note : 22 of 28 companies which were requested to report figures for the first two quarters of 1982 have responded.

Tantalum and Columbium supply and demand outlook

In late 1980, the National Materials Advisory Board, a unit of the Commission on Engineering and Technical Systems of the National Research Council, formed a panel of experts to assess the capability of United States industry to meet current and anticipated future demand for columbium and tantalum. This panel, designated "The Panel on Tantalum and Columbium Supply and Demand Outlook", published the Final Report of their findings in July 1982. This report responds to the request made to the Panel to provide an independent appraisal of the overall industrial posture of these strategic and critical materials in order to add to the continuously upgraded data base compiled by involved agencies of the United States Government.

The following summary represents the major findings of the Panel :

Conclusions :

1. World consumption of tantalum today is about 2.5 million lb. per year and has been growing at about 8 % per year. Growth is expected to slow to about 4 % per year, primarily because of conservation resulting from recent high prices.
2. The United States consumes about 1.5 million lb. of tantalum per year and depends completely upon imports for its tantalum minerals. U.S. military and aerospace usage represents about 25 % of the nation's tantalum consumption.
3. World mine production and new investment for tantalum to some degree has been slowed because of the cyclical nature of the industry and historically depressed prices. Some of this reluctance to invest apparently has been due to the presence of the U.S. national stockpile and its past releases of materials at times of rising prices.
4. The shortfall in supply has been made up by costly recovery of tantalum from low-grade old tin slag. The shortfall led to extraordinarily high prices in a recent period of peak demand.
5. The national stockpile currently contains about 2.4 million lb. of tantalum materials some of which may be technically obsolete. The new goal is 7.16 million lb., which is about 20 times the 1980 U.S. military and aerospace consumption.
6. Stockpiling of the lowest form of the material to avoid technological obsolescence dictates that tantalum concentrate be the stockpile form; K-salt would be acceptable if a stockpile rotation programme is in operation.
7. U.S. industrial inventories are estimated to be about 3.5 million lb. of tantalum-containing materials, or about 2.3 times annual industrial consumption.
8. Normal market requirements can be met by existing domestic processing capacity, but processing the existing national stockpile into industrially usable form in three years would require twice the existing capacity.
9. Proven ore reserves, tin slags and projected mining activity appear able to provide enough tantalum to meet expected world demand for at least seven to ten years. These sources are not adequate, however, to supply materials to fill the new stockpile goal without a major disruption of the market unless the acquisition time is extended over 10 to 20 years.
10. Identified resources that are likely to be exploited in the future will be of moderately lower grade than those now being worked on.
11. There are huge lower-grade resources of tantalum, e.g. in Egypt, but exploiting these will require longer lead-times, large investments, a more stable market for development and possibly some governmental assistance.

12. The partial concentration of supply in south-east Asia, coupled with the political instability of that region, poses enough of a risk of supply contingencies to warrant taking protective measures.

Recommendations :

1. The new national stockpile goal of 7.16 million lb. of contained tantalum should be reviewed in the light of the present and anticipated consumption rates and the possible effect of the stockpile on the activities of the mining community.
2. Tantalum for the stockpile should be purchased with a minimum disturbance of the marketplace while encouraging an adequate long term supply.
3. Tantalum should be stockpiled as mineral concentrate, either directly from the mine or as upgraded tin slags, to avoid obsolescence or degradation of intermediate products.
4. To enhance tantalum availability for significant stockpile purchases in a shorter time frame, the United States should consider providing direct aid to hasten development of additional sources such as in Egypt and Zaire, e.g. low interest loans and guaranteed purchases or floor price support.
5. Government and military procurement policies should be revised to emphasize longer-range purchase commitments. This action would help ensure stability of supply.
6. The United States Government should take steps, additional to stockpiling, to encourage the development of new sources of tantalum, especially domestic sources.
7. Military and aerospace users of tantalum should increase their range of choices of alternative materials by :
Undertaking adequate programmes to qualify jet-engine alloys that contain alternative materials less critical than tantalum.
Establishing the ability to make high-reliability tantalum capacitors that meet military specifications using higher capacitor-voltage product per gram of tantalum (CV/g) powders.
Examining and revising specifications to include types of capacitors that use materials less critical than tantalum.

CONCERNS IN SUPPLY AND DEMAND

From a worldwide point of view, the major concern about tantalum has been that, for the past ten years, consumption of the metal has exceeded current production in the form of raw materials. The difference has been made up from old inventories, primarily of tin slag piles where the slag contains tantalum. While these slag piles are very substantial and still contain much tantalum, obviously they will not last indefinitely.

The concern, therefore, has been to encourage exploration and development of new sources of raw material. Investment in exploration and mine development is discouraged by the uncertainty of return on investment in view of the considerable variation in demand and price from year to year. The recent rise in price had the effect of increasing supply and encouraging mine development. But then raw material prices dropped in mid-1981 and it remains to be seen how much new mine development will be discouraged.

The United States shares these worldwide concerns, but has two concerns in addition. First, there is no mining of tantalum raw materials in the United States. Second, the upgrading of lowgrade tin slags to an artificial concentrate is essentially done in the Federal Republic of Germany. The United States has very limited capacity for this upgrading.

An extensive chapter, "Industry Profile", offers the following summation :

"The present world tantalum supply should be adequate through 1990. Before then, however, decisions on the development of relatively low-grade ore bodies will have to be made. At this time, it appears that those reserves will have to be developed in the 1990's, although a number of events may negate that need. Such events would include a significant decline in demand during the 1980's, or discovery and development of higher-grade deposits.

The over-all conclusion is that tantalum will continue to be used in limited quantity and will remain in rather tight supply. However, if present levels of exploration and development are maintained, adequate raw material will be available."

Another extensive chapter, "Processing", also provides conclusions and recommendations, some of which are :

1. The tantalum processing and tantalum capacitor industries are committed to maintaining sufficient production capacity to meet demand.
2. At present, the primary facilities for upgrading low-grade tin slags and ores are in the Federal Republic of Germany. Development of the technology and then the capability for processing in the United States could be useful in an emergency.
3. The use of higher-capacitance tantalum powder in all types of tantalum capacitors is necessary to reduce the component size. The present high-reliability capacitors are not designed to use the high-capacitance powders.
4. Consideration should be given to enlarge the U.S. Bureau of Mines programme in tantalum to include the development of an efficient process for upgrading low-content tantalum materials.
5. Suggestions should be sought for investigative programmes : (1) making high-reliability capacitors using high CV/g tantalum powders, and (2) examining military capacitor specifications to revise them to include other types of capacitors that use less critical materials.

Subsequent chapters of the Report analyse the demand and supply expectations to the year 2000. This has been summarized in two tables of data :

Estimated and Projected Demand for Tantalum *
(million lb. of recoverable tantalum in concentrates and other source materials)

	1978	1980	1990	2000
Electronics	0.8	1.0	1.3	1.6
Cemented carbide	0.2	0.2	0.3	0.4
Mill products	0.1	0.1	0.2	0.3
Alloy element	—	0.1	0.2	0.3
U.S. Total	1.1	1.5	2.1	2.6
Rest of world	0.4	0.8	1.4	2.0
World Total	1.5	2.3	3.5	4.6

* Includes the Centrally Planned Economy Countries on a net basis only (small net importer).

Estimated and Projected World Capacity for the Production of Crude Tantalum Materials
(million lb. tantalum content)

	1980	1990	2000
Canada	0.3	0.2	0.1
Brazil	0.2	0.3	0.3
Africa	0.6	0.7	0.9
South-east Asia	1.3	1.3	1.3
Australia	0.2	0.3	0.4
Other	0.1	0.2	0.4
Total	2.7	3.0	3.4

If the "normally expected" expansion of capacity is compared with the growth in tantalum requirements, a progressively more serious shortfall is evident. Even allowing for overestimation of requirements and underestimation of growth in capacity, it seems evident that balance will not be achieved with the price trend that has been assumed. The adjustment, as prices rise quite rapidly, will probably come in demand, mostly by way of more rapid replacement of tantalum by other types of capacitors. Inventory drawdown is another possible adjustment, at least for the near term. Also likely is a marked step-up in the development of new tantalite-columbite mine projects, but they will be stymied for some time, particularly by the political and infrastructural problems in Africa. These adjustments are not likely to be sufficient to overcome the constraints imposed on the tin-related part of the tantalum supply by the lethargically growing world market for tin and the exhaustion of old tin slags.

QUANTITY TO BE STOCKPILED

The official stockpile goals have been changed substantially and rapidly over the past 20 years. The initial objective of 348,000 lb. Ta, established in 1944, was raised to 2,149,000 lb. by 1954. Then, with a change in strategic objectives, it was reduced as low as 313,000 lb. by 1973 after some ups and downs. The latest goal set by the Federal Emergency Management Agency (FEMA) is 7,160,000 lb. of contained tantalum metal, all in the form of tantalum minerals. The actual content of the stockpile at

present is 2,551,000 lb. in the form of minerals, 201,000 in the form of metal, and 29,000 of tantalum carbide.

FORM OF MATERIAL TO BE STOCKPILED

The only form of tantalum that will not become obsolete is mineral. However, more time would be needed to process it into usable products in an emergency. Some tantalum powder and ingot are already in the stockpile, but the general opinion is that this material is virtually useless because of the rapid advance of technology since the material was acquired. Since technology is still advancing rapidly, the same would happen again if attempts were made to store tantalum metal or carbide.

It has been suggested that some material could be stored as potassium fluotantalate but there are two objections: (1) the purity requirements change with time, and (2) potassium fluotantalate is subject to hydrolysis and would deteriorate. Rotation of the inventory could solve the problem. The panel, however, recommends that only minerals (both natural and tin slag concentrates) should be stockpiled.

METHOD OF ACQUIRING TANTALUM FOR THE STOCKPILE

The difference between the stockpile and the stockpile goal is about 4.5 million lb. of contained tantalum. Any attempt to acquire this amount in a short time would totally disrupt world markets.

One possible mechanism is for the GSA to set a shelf price high enough to encourage development of new mines but lower than the peak price of 1979-1980. A shelf price would permit GSA to buy only when the world tantalum industry is depressed but it would encourage development of new sources that would permit the stockpile goal to be reached more rapidly and ensure more stable markets. In either case, many years will be needed to meet the stockpile goal.

THE REPORT

The complete Report has 184 pages including the detailed stockpile acquisition specifications for tantalum and columbium source materials as well as various tantalum and columbium products. The Report can be identified as "Publication NMAB-391". Copies are for sale by inquiring to the National Technical Information Service, Springfield, VA 22151, U.S.A.

Competition

The following article is a précis of the address given by Mr Lucien Le Lièvre of Coudert Brothers: "The United States anti-trust laws and the European Economic Community laws of competition: a comparison".

When I was asked to attend this meeting as counsel, your Secretary sent me the collection of Bulletins that your association has been publishing. In the last Bulletin, which reported on the June 1982 meeting, I read that your President, Mr Conrad Brown, had said, "Needless to say all activities are to be conducted in an entirely proper and lawful manner".

This was not just idle talk, as your management had taken precautions to ensure that the conduct of the business of the association was proper. An opinion of one of my brother lawyers in New York, dated January 11th 1982, had concluded that the activities of the association were lawful. He had considered the United States anti-trust laws. However, the laws of the European Economic Community, the E.E.C., must also be considered and complied with.

The European Economic Community was formed by the Treaty of Rome. The Treaty contains two articles, Article 85 and Article 86, relevant to the subject we are discussing now. Article 85 (1) provides that competition should not be prevented, restricted or distorted. Article 86 prohibits abuses of dominant position. The Commission is in charge of enforcing those two articles. It has published regulations which, with individual decisions and the judgments of the Court of Justice, form what is called the rules of competition of the E.E.C.

The Commission sits in Brussels, but it does not make any difference whether the association is established in Brussels or in a non-E.E.C. country because the laws of the Treaty of Rome, just like those of the United States, are applicable to any persons or any

transactions which affect the commerce between the member-states within the Community or the commerce of import into the Community and export from it.

One of the consequences of a violation of United States law by a non-U.S. firm is that assets in the United States can be seized, or at the time of passing the Immigration you may be arrested. In the E.E.C. violations result in fines which may amount to hundreds of thousands of dollars, and we are talking about reality, not theory.

Another reason for being careful is the sensitivity of the American members of your association to potentially illegal situations or activities; if the association appeared to fail to comply with all applicable rules, the American members would probably want to resign, or might be directed by the Board of Directors or the President of the company to resign. The same thing might happen for the European members, although their Boards of Directors are not yet as sensitive to those questions as the American members.

The problem comes from the fact that membership, even passive membership, in an association which is illegal is a violation of the law, and therefore you want to be sure that your association conducts itself well within the law. Even though you do not participate in anything which may be wrong, you may be held accountable for it.

What I have heard last night at the meeting of the Executive Committee and what I have heard today at the General Assembly, and the reading of the Bulletins and what I know of the association, give me reason to believe that everything is fine, but you must keep it this way.

There are three cardinal rules in an association:

First, all meetings must have an agenda, and the discussions at the meeting must follow the agenda;

Second, there must be minutes, which must be signed either by the secretary of the meeting or by the presiding officer, preferably both; those minutes must reflect exactly what took place;

The third rule is that there should be a lawyer attending the meetings so that, if the discussions stray into something which looks doubtful to the lawyer, he can stop the discussions.

The original source of the E.E.C. rules of competition is the United States anti-trust laws. This arises from the Blum-Byrnes Memorandum of Understanding of May 1946, which was an agreement between the governments of France and the United States on the settlement of war debts. The contract was favourable to France because most of the debts were forgiven, and the United States negotiators insisted on the inclusion of a promise by France to pass anti-trust laws as one of the conditions. This was the first agreement of this type, and every agreement made by the United States with European countries coming to Washington for borrowing included the same promise to promote competition laws. That is how the idea came to Europe.

Subsequently, Jean Monnet, who had represented the economic interests of France in the United States in and immediately after the war, became the moving force in the creation of the Common Market. He had been very much impressed by the U.S. anti-trust laws, and he had participated in the negotiation of the Memorandum of Understanding. He saw to it that the Treaty of Rome would contain Articles 85 and 86, provisions in compliance with this idea that competition was desirable and that free competition should be preserved.

A significant difference between the two systems is that, while in the United States you take your chance with an agreement, in the E.E.C. you can submit it for clearance. In the U.S., you ask your lawyers to study the law and the precedents, and to tell you if an agreement that you are contemplating or negotiating appears legal to them. It is almost impossible to go to an authority and ask for clearance. In the Common Market, agreements can be "notified" to the Commission for evaluation; after examination an agreement found lawful receives "negative clearance", meaning that changes are not required. An agreement not in compliance with Article 85 (1) is null and void.

In the United States there is a procedure called "business review" of proposed agreements by the Federal Trade Commission, but it is so complicated that nobody I know ever uses it: practically, you take your chance.

Another difference is that in the United States all "cartels" are bad, while in the E.E.C. there are bad cartels and there are good cartels.

In 1948, I had been in private practice in a large New York law-firm for about two years, doing a good deal of anti-trust work. I was

asked by the Commercial Counsellor of the French Embassy to go to Washington to give the viewpoint of a private practitioner to a delegation of the French government which had been invited by the American government to study the anti-trust laws and was in discussion with the Department of Justice. The result was that the legislation adopted by the French government included a distinction between bad and good cartels, it was recognised that agreements between competitors can be good. That distinction found its way into the E.E.C. rules of competition.

The problem, however, is to know which agreements are bad and which are good! There is incorporated in Article 85 of the Treaty of Rome a paragraph (3) which calls for the approval by the Commission of agreements which normally would infringe paragraph (1), on condition that the agreement must contribute to improving the production or distribution of goods or promote progress while allowing the consumers "a fair share".

Accordingly, you notify your agreement with the Commission and you ask for an exemption: the Commission reviews the purpose of the agreement — will it promote progress? Do the consumers get a fair share? If the answer is yes, then the Commission grants an exemption and the agreement is legal, even though it distorts competition. It is very important to know about this distinction from what happens in the United States. During the time after notification and request for an exemption and before a decision has come, the parties are not subject to fine.

Why is Article 85 (1) so important to trade associations? By definition, a trade association is a "concerted practice". You don't need an agreement (although here you have an agreement, your certificate of incorporation) but you also have by definition a concerted practice: your members gather at intervals and talk to each other, which is a concerted practice. However, what is prohibited is agreements and concerted practices which have as their object or effect the prevention, restriction or distortion of competition, and that is the touchstone of the problem.

To a certain extent it must be recognised that competition is somehow distorted. If you didn't have your statistics you would each compete, perhaps, a little more or differently. However, the effect of that distortion is not (and I quote from the decisions) "appreciable". In order to be contrary to Article 85 (1) the agreement or concerted practice must have an appreciable effect on commerce, and my judgment, as well as that of my colleague in New York, is that the collection of statistics by your association does not have an appreciable effect on competition, because you do it right. That is, the data furnished are not given to any member of the association, they are given on a confidential basis to Price Waterhouse, who are charged with the duty of collating the information, digesting it into general statistics and giving it back to you in a form which is unrecognisable from the data which has been furnished by individual members. The essential characteristic is the use of an independent firm and the same is true of the Ayers report: Ayers is not giving you any information on the work of any particular member of the association, Ayers is giving you a judgment on the technique, on probable improvements, on the future of the industry as a whole.

In fact, the work of trade associations has been blessed by the Commission. In 1968 the Commission published a notice which said: "The Commission takes the view that the following agreements do not restrict competition: agreements having as their sole object an exchange of opinion or experience, joint market research, the joint carrying-out of comparative studies of enterprises or industries, the joint preparation of statistics and calculation models".

To summarise, the principal differences are that the E.E.C. recognises that agreements in restraint of trade may be valuable, which U.S. law does not; second, the E.E.C. will publish its views as to what it encourages, as it did for the trade associations. This notice which I have just read is something which would never happen in the United States because the Department of Justice and the F.T.C. tell you what is wrong with a project but they do not tell you what is right.

A few years ago I was counsel to the French government in connection with the merger of Honeywell-Bull with a French government owned computer company called C.I.I. Honeywell, always careful, wanted to submit the merger agreement to the U.S. Department of Justice, and the French government agreed but wished me to be present, as their lawyer. We explained the

transaction to the number-two man in the anti-trust division, and gave him a copy of the merger agreement, which was voluminous. About three weeks later I was asked to try to obtain a response, and the reply from the official at the Department of Justice was "We haven't started suit against Honeywell, have we? That is my answer"! That gives you a perfect idea of the kind of clearance you get from the United States government.

Conversely, the Commission may say yes or no or perhaps, but there can always be a discussion, and the possibility of getting negative clearance or an exemption (you always ask for both) gives you a great deal of safety. It has two real benefits: one is that you know where you stand, the other, until you hear from the Commission you are immune from prosecution.

But you must do exactly what the agreement reflects: if you do something different, not only is your conduct not immune but the fact that you have notified a false agreement makes you twice as guilty.

With respect to punishment, the fines in the United States are not as high by far as in the E.E.C., but there is jail, so that sometimes it is better to be subject to high fines, which are normally paid by the company, than jail for the executive who has been found personally guilty.

In the United States, what is known as "treble damages suits" are really the punishment for anti-trust violations. Any party aggrieved from such a violation has an action for damages equal to three times the amount of loss which has been suffered as a result of the transaction or conduct. In addition, lawsuits are so long and costly in the United States that many defendants find it better to settle rather than litigate to the end.

It is difficult to say that one system is better than the other, but I have great respect for the work of the E.E.C. Commission. First of all, the Treaty of Rome is (with exceptions) very well written, the result of years of experience of Jean Monnet and lawyers who came from the United States to work with him and advised the drafters of the Treaty of Rome. Of course they had the advantage that there was not a parliament to attach amendments, it was done by real professionals and very well done.

The Commission is very approachable. In our practice we know many of the officials in the Commission: we call them, we talk to them, we discuss current cases, very properly of course, but in a useful way. I find that officials are perhaps not as polarised as they are in the United States.

Another difference is that in the Commission the procedure is entirely written. As you know, in the United States all litigation is a battle of wits between lawyers and witnesses. Although there are briefs, the main element in lawsuits is testimony. At the Commission the proof is all written: inspectors come to the office of the corporation which is suspected of violating the law, they open drawers, look at files and take copies. It is not pleasant, but it really is not comparable, in my opinion, with being examined by a highly-trained prosecutor.

Then, up to now there has not been any section of the Bar in Europe specialising in plaintiff's cases, as there is in the United States, and the damage suits are only for compensation of the loss, not for three times the amount. I believe that it is better to be fighting with the Commission on questions of public policy than with lawyers who are out to make money for their clients and themselves.

I think you now have an idea of what an association which does not conduct itself properly in Europe can go through, and your Executive Committee does not want to run a risk. Therefore, that is why I have been asked to attend this meeting as counsel, and I am pleased to report that all went very well.

NEW MEMBERSHIP

The following company was elected to membership by the Eighteenth General Assembly:

Malaysia Smelting Corporation
27 Jalan Pantai,
P.O. Box 2,
Butterworth, Malaysia.