

SECRET

SECURITY INFORMATION

25X1A

Chief, D/R
Attn: [REDACTED]
Chief, F/X

11 July 1952

Comments on "Report on Alloy Metals."

1. General:

- a. This is a very useful study and should be pursued.
- b. Greater development of the section on "Controls" could strengthen the paper.
- c. F/X comments on "East-West Trade" are to bring more recent COCOM data to the attention of the analyst in charge.

2. Section III, Controls, might incorporate the following:

- a. p. 2, last paragraph. "Molybdenum and molybdenum products are on..."

Comment: Specifically, molybdenum ores and concentrates, scrap, metal (including wire, ferromolybdenum, and alloys), compounds and cemented or sintered carbide are on I/L I. These same items are on Title I, Category II of the Battle Act.

- b. p. 2-3, (last paragraph on page 2, et seq.) "Apparently no upper limit..."

Comment: Tungsten is controlled in COCOM under paragraph 3(d) of COCOM Doc. #470. The 3(d) provision provides:

"Where the latest available information does not permit agreement on reasonably accurate and defensible quantitative limits, from a security viewpoint, the items will be controlled with full regard to their strategic importance, as revealed by discussion in COCOM, and in keeping with the principle that exports will be permitted only to the extent required in order to obtain imports from the Soviet Bloc which are essential to sustain the basic economy and thereby support the defense effort.

~~SECRET~~

SECURITY INFORMATION

-2-

"Exports of these items will not be permitted for the purpose of maintaining or developing export markets in the Soviet bloc or for similar purposes. Where trade agreements exist governing the exchange of goods between particular countries, exports of these items will not be permitted outside the framework of the trade agreements, except in the case of officially-approved barter or compensation arrangements."

There is no upper limit to exports under this provision and each country is the judge of the adequacy of the "quid pro quo" received. Each country reports monthly on exports of I/L II items, including tungsten.

c. p. 3, paragraph 1.

Comment: Spain, as a recipient of UN foreign aid, falls within the purview of the Battle Act. Tungsten is not one of the items on the Battle Act Lists. Spain has, however, signified her willingness to cooperate with the U.S. in this matter. Violations of Spanish controls, however, are not uncommon.

d. p. 3, paragraph 1.

Sweden is not a member of COCOM, and has an autonomous export control policy. In fact, however, Sweden has generally accepted the COCOM decisions as to what are "strategic goods." Sweden requires licenses for all exports I/L I items and holds quantities of I/L II items approved for export to past levels.

3. Section IV, p. 4, first paragraph under this section, et seq.

Comment: The following information is available from the COCOM reports of I/L II exports:

~~SECRET~~

~~SECRET~~
SECURITY INFORMATION

TABLE I

Total Value of I/L II Item 2667 Reported Exported from COCOM Countries to the Soviet Bloc in 1951

<u>Exporting Country</u>	<u>U.S. Dollars</u>
France	5,000
W. Germany	212,000
Netherlands	1,014,000
U.K.	2,000
Total	\$1,234,000

In the first 6 months of 1951, the following destination information is available:

TABLE II

Total Value of I/L II Item 2667 Reported Exported from Certain COCOM Countries to Certain Bloc Destinations in the first 6 months of 1951

<u>From</u>	(U.S. Dollars)						<u>Total</u>
	<u>Czech</u>	<u>Poland</u>	<u>To E. Ger.</u>	<u>Hungary</u>	<u>China</u>	<u>Rest of Bloc</u>	
W. Germany	210,000	51			36	0	210,093
Neth	17,229		2,437		570	0	20,236
U.K.	145	1,977		3		0	2,125
Total	227,380	2,028	2,437	3	606	0	232,454

~~SECRET~~

SECURITY INFORMATION

- 11 -

TABLE III

Composition of Netherland's Exports of
E/L II Item 2667 from July - Nov., 1951.

<u>2667 Item</u>	<u>To</u>	<u>Quantity</u>	<u>US Dollar Value</u>
Tungsten	E. Ger.	760,100 meters	2,256
Wire	"	?	2,186
	Czecho	76 metric tons	8,755
	"	32.4 " "	3,871
	Poland	0.276 kg.	17
Tool Bits	Czecho	13 metric tons	10,703
Tungsten Acid	Czecho	105 " "	<u>967,105</u>
		Total	994,453

b. Data on the programming of US exports is available on both tungsten and molybdenum in E/L.

~~SECRET~~

~~SECRET~~
SECURITY INFORMATION

ATTACHMENT

REPORT ON ALLOY METALS

I. Introduction

This study is written in connection with the proposed denial program against Czechoslovakia. Its ultimate purpose is to select targets for denial which will most damage the Czech economy in the short run.

In practice, however, Czech trade cannot and should not be studied to the exclusion of all Soviet bloc trade. The same suppliers ship strategic goods to various Soviet bloc countries; reports often fail to state the country of destination within the bloc; and the Czechs could be supplied with strategic goods from the West via another bloc country. Therefore, this study considers the whole Soviet bloc with emphasis on Czechoslovakia.

only U.S.S.R. sufficient.

II. Production, Requirements and Uses

Several alloy metals are believed to be in short supply throughout the Soviet bloc - molybdenum, vanadium, zirconium, titanium and cobalt. Of these metals only molybdenum will be considered in this report, since there is virtually no available trade information on the others.

Estimates fail to show a shortage of tungsten if Chinese production is considered. Nevertheless, there is considerable evidence of east-west trade in that metal. This may be due to a below-normal Chinese production and/or a lack of processing facilities within the bloc. The latter is more likely since the Czechs recently tried (unsuccessfully) to have Chinese tungsten ore processed in Austria. In view of the above tungsten will be covered in this report along with molybdenum.

highly [unclear] of production in China

no reduction facilities in Czech and none contemplated.

~~SECRET~~

SECRET
SECURITY INFORMATION

It is probably safe to assume that the shortage of molybdenum and tungsten in Czechoslovakia is greater than in most other bloc countries. Production of these items are negligible and at the same time requirements are high due to the industrialized state of the Czech economy. They are included in practically every list of commodities in which Czechoslovakia is most deficient. In a recent directive sent to Czech procurement agents, molybdenum was mentioned along with cobalt as being the most pressing shortage. (1)

in steel
Tungsten and molybdenum are used in electrical and electronic equipment and as a steel alloy. *The lack of* Tungsten and molybdenum wire may be classified as serious bottlenecks in the production of electronic tubes. Although little information is available on Czech-Soviet trade, it is more than likely that most of the Czech manufactures which require tungsten and molybdenum are exported to the USSR and other satellites. *to a certain extent* Tungsten and molybdenum can be substituted for each other when used as alloys, but are normally not interchangeable in the electrical and electronics fields.

III Controls

Molybdenum and molybdenum products are on International List I and shipments to the bloc from all COCOM countries are thus embargoed. Alloys containing 5% or more tungsten are also subject to embargo. Tungsten metal and alloys (including ferro-tungsten but not steel alloys) and tungsten compounds are on International List II, and are thus subject to quantitative control. Apparently no upper limit or country

25X1Ayyyyyyyyy



SECRET

~~SECRET~~
SECURITY INFORMATION

-3-

quotas have been set by COCOM on exports of these items so far.

Wolframite, the principal ore of tungsten, is on neither list.

Spain is not a member of COCOM. However, Spanish Wolfram is exported only to the U. S. unless shipments are authorized by a UN control committee. In addition, end-use certificates are required for Wolfram exports. Sweden requires that export licenses be obtained for all strategic goods going to the bloc. Generally, List I items are not exported to the bloc and List II items are quantitatively controlled.

In addition to COCOM controls, these metals are allocated by the International Materials Conference (IMC). The entire western supply is allocated to western countries. In theory this would preclude shipment to the Soviet bloc.

In fact, however, IMC is far from effective in shutting off supplies to the Soviet bloc. The principal shortcoming is that IMC does not require end-use screening. Thus, while ores or concentrates may be consumed only in western plants, the resulting products may be sent to the Soviet bloc. In addition, we shall see that even the ores and concentrates of tungsten, at least, go directly to the bloc in spite of the allocation system.

Finally, one other measure of control should be cited which applies to molybdenum. The United States accounts for about 85% of the world production of molybdenum. The only other exporters of molybdenum under IMC are, Chile and Norway and the contribution of the latter is very small. Thus molybdenum ore output is highly concentrated and is relatively easy to control. Furthermore, U. S.

~~SECRET~~

SECRET
SECURITY INFORMATION

-4-

export controls are more rigidly enforced than are those of other nations. Tungsten, on the other hand, is produced in significant quantities in a large number of countries. Under EMC more than 12 nations export tungsten.

IV East-West Trade in Tungsten

It is extremely difficult to procure statistics on east-west trade in both tungsten and molybdenum. In most official reports they are buried within larger categories. The source which gives the best picture of legal trade is COCOM. Lately, commitments to the Soviet bloc which are submitted to the U. S. Government in connection with the Battle Act have served as another source.

For the period January-June 1951 there were no COCOM exports to the bloc of tungsten items which appear on International List I. For the same period the only significant exports of List II tungsten products to the bloc were 15.2 metric tons (\$210,000) from West Germany. There were also insignificant exports from the Netherlands and the UK.

Thus, we may assume that the Soviet bloc receives few legal exports of tungsten products from COCOM countries.

How then does the Soviet bloc, and especially Czechoslovakia, meet its requirements? The largest source is ~~probably~~ China which accounts for over one third of world production. Chinese tungsten for the most part ~~probably~~ reaches the European Soviet bloc in the form of ore and concentrates. The next most important source of tungsten is Spain. *(China's Tungsten also reaches people)*

SECRET

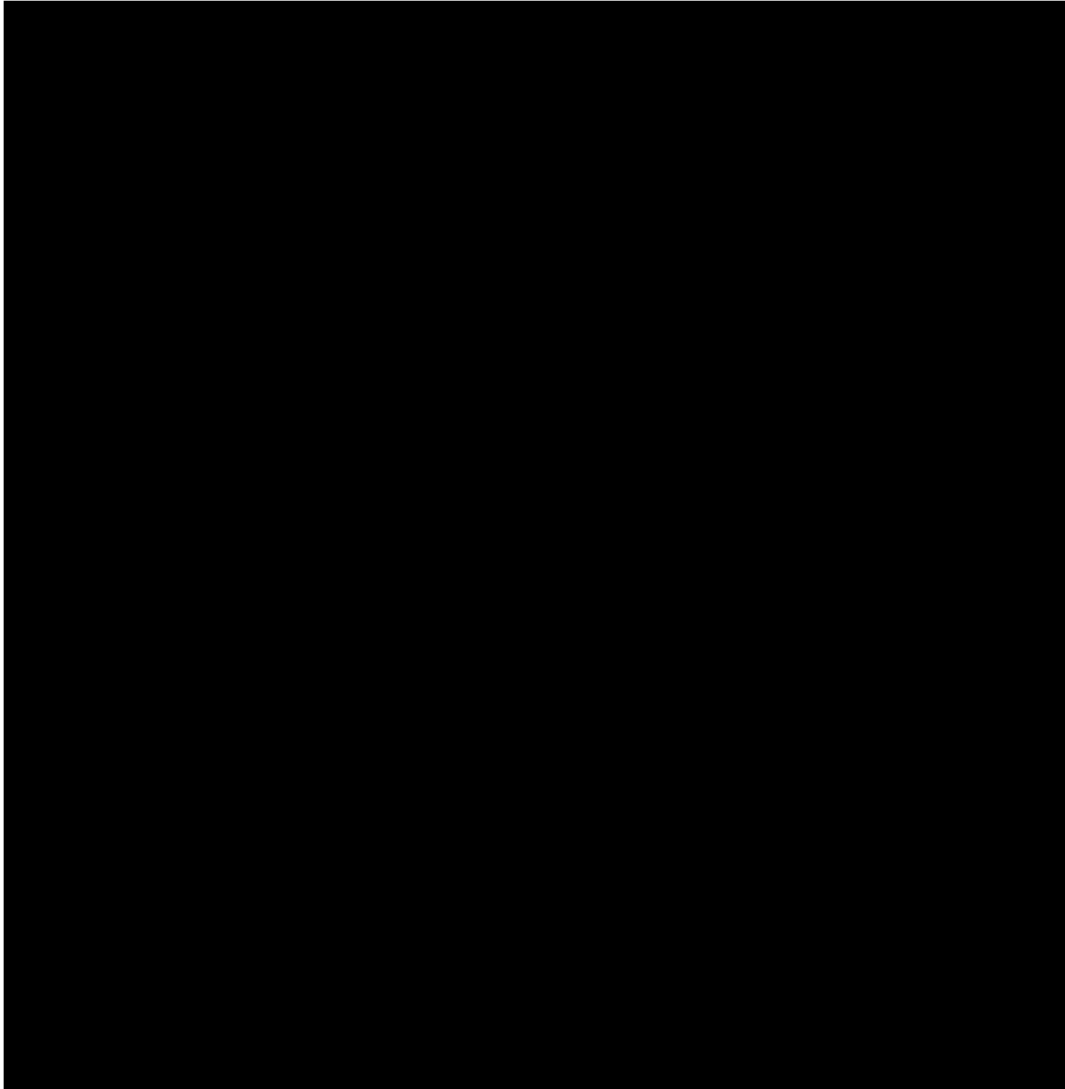
SECRET

SECURITY INFORMATION

The following reports indicate that Spain is supplying the

bloc:

25X1C



Thus, it is more than likely that the bloc is supplied from Spain, usually via Swiss intermediaries.

Reports indicate also that various other countries have supplied tungsten to the bloc:

1. Tungsten is procured by the Italian Communist Party for the Czech Legation in Rome

25X1C

25X1Cved Fo

SECRET

~~SECRET~~
SECURITY INFORMATION

2. In mid-1951 the Nederlandsche Metalburgische Bedrijven, NV of Arnhem, Netherlands contracted to supply 200 tons of mixed tin and tungsten concentrate to Metalimex, Prague.

25X1A

3. Ten tons of tungsten ore from Bolivia were shipped by Metallurgische Gesellschaft, A.G. of Zurich from Lisbon or Tangier to Antwerp or West Germany for possible transshipment to the bloc. The seller was A. de Beaumont of Lisbon

25X1A

4. 40 tons of tungsten from Bangkok were shipped to the USSR via Gothenburg

25X1A

Finally, special note should be taken of the shipment of tungsten products to the Soviet bloc, especially those used in the electrical and electronics industries. There are only a few plants in Europe which can produce these items. Available evidence indicates that these products are finding their way to the bloc through a few channels.

1. Of the 100 million meters of tungsten wire produced by Lumalampan AB (Sweden) in 1950 about 60% was shipped to the USSR
- These shipments are still made under a trade agreement. In addition, large quantities of processed tungsten in other forms are shipped to the bloc. Export licenses issued in January 1952 for tungsten alloy and tungsten metal amounted to about \$780,000!

~~SECRET~~

2. Tungsten products for use in the electrical industry have been supplied to Czechoslovakia, East Germany, and Hungary by Comercio Trust of Vaduz, Liechtenstein. Two of the manufacturers are Metallwerke Plansee of Austria and W. C. Heraeus of Hanau, Germany. Shipments are routed via Switzerland and are handled by the forwarders Gondrand Freres and Jacky Maeder [REDACTED] 25X1A

3. Osram, a West Berlin firm, sold tungsten wire valued at about \$10,000 to USIA [REDACTED] 25X1A

4. Rilma of Zurich signed an agreement to deliver tungsten sheet metal and filament to East Germany [REDACTED] 25X1A

[REDACTED] 25X1C

Summarizing, there appear to be only two main channels for tungsten products. The Swedish - USSR channel is legal and is certainly the largest source of supply for the bloc. The second channel, Metallwerke Plansee and W. C. Heraeus to the satellites via Comercio Trust, is illegal and is next in importance to the Swedish channel. Two other suppliers are listed above, and there are probably a few other minor ones on which no information is available. In addition, many illegal shipments of steel products and machinery made with tungsten undoubtedly take place, thus alleviating the bloc's need for that metal.

~~SECRET~~
~~SECURITY INFORMATION~~

VI. East-West Trade in Molybdenum

Available information indicates that there are few trade channels for molybdenum. It also seems apparent that the Soviet bloc has been less successful in procuring molybdenum than it has in procuring tungsten. There are certainly very few legal exports to the bloc of molybdenum. For the period January-June 1951 there were no COCOM exports of molybdenum items which appear on International List I (this list includes all forms of molybdenum) Austria, not a member of COCOM, is currently committed to ship molybdenum products valued at \$35,000 to Poland. In addition Sweden is committed to supply Czechoslovakia and the USSR with molybdenum wire under a current trade agreement. The Swedes claim that this wire can be used only for electric light bulbs, and is therefore of no strategic importance. It is likely that no other legal exports of these items take place.

The Soviet bloc is therefore forced to import a significant portion of its molybdenum supplies illegally. The information available on this subject is listed below:

1. As with tungsten, large quantities of molybdenum products been shipped from Metallwerke Plansee and W. C. Heraeus to the satellites via Comercio Trust. The forwarders were again Gondrand Freres and Jacky Maeder [REDACTED]

25X1A

25X1A

2. Stefan Dobritza of Vienna supplied the Czechs with molybdenum wire through an unspecified Swiss colleague [REDACTED]

25X1A

~~SECRET~~

~~SECRET~~

3. Riluna of Zurich, an intermediary firm, signed an agreement to deliver molybdenum products to East Germany [REDACTED] 25X1A
4. Wadi A. Cuaik, official of the Mexican Ministry of Economics, was looking for suppliers of ferro-molybdenum (and other metals on behalf of the Czechs [REDACTED] 25X1A
5. Ambrosetti, a forwarder in Chiasso, shipped molybdenum (also vanadium and titanium) to General Transport, a notorious east-west trade forwarder. Destination was unknown [REDACTED] 25X1A
6. Metallimport Trust of Zurich offered USIA a small amount of chrome-molybdenum alloys [REDACTED] 25X1C
7. Molybdenum sheets from Metallwerke Plansee have been shipped to East Germany through the Zurich intermediary, Walter Hunziker. [REDACTED] 25X1A
8. [REDACTED] Tracont A.G. of Zurich is shipping molybdenum ore to a Belgian firm for processing and re-export to the bloc.

25X1A

In summary the above information shows that the bloc has obtained molybdenum and its products from several middlemen and from two producers illegally. Since the U. S. controls most of the West's supply of molybdenum ore, it is safe to assume (1) that little or no molybdenum ore finds its way to the bloc, and (2) that processed molybdenum going to the bloc is made from U. S. ore. There are only a few producers of molybdenum products in Europe. Of these only Metallwerke Plansee and W. C. Heraeus are known to have supplied the bloc. (Information on several manufacturing plants have been checked, but there is no evidence that they have exported to the bloc.) The main channel seems to go

~~SECRET~~

SECRET
SECURITY INFORMATION

products is known and there may be several others, including those listed above whose source of supply was unknown. Next to Commercio Trust the most important intermediary is probably Riluma.

SECRET