

CONFIDENTIAL

Chief, Materials Division

14 December 1955

Acting Chief, Nonferrous Metals and Minerals Branch

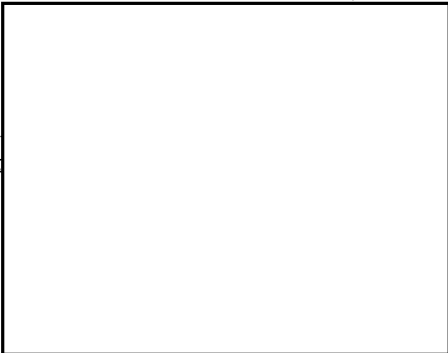
Current Status of Soviet Titanium

1. At CIA on 12 December 1955, titanium specialists in the US Government met informally for the following purposes:

a. To review the available fragmentary evidence of Soviet interest and performance in titanium metallurgy and application; and

b. To discuss the probable status of titanium in the USSR indicated by such information.

The attendance was as follows:



2. After reviewing and discussing the evidence, the group reached agreement on the following points:

a. The Soviet titanium industry in 1955 may have reached the advanced pilot-plant stage of development or small-scale commercial production.

b. Information available to date is too fragmentary on which to base a quantitative estimate of titanium production in the USSR.

c. Evidence of Soviet utilization of titanium metal and alloys in aircraft, other than in design or experimental stages, is lacking. The exception to this statement is the use of ferrotitanium in steel manufacture.

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SUBJECT: Current Status of Soviet Titanium

25X1 3. The details of the meeting have also been discussed with [redacted] 25X1
OEM and [redacted] OO/C. Minutes of the meeting are available in [redacted]
OEM/M/ [redacted] FILE.

25X1 [redacted] 25X1
OEM/M/ [redacted] (14 Dec 55)



CENTRAL INTELLIGENCE AGENCY

WASHINGTON 25, D. C.

OFFICE OF THE DIRECTOR

The Honorable James E. Murray
Chairman
Committee on Interior and Insular Affairs
United States Senate
Washington, D. C.

Dear Senator Murray:

This letter is in reply to your inquiry of 23 January 1956 regarding the production of titanium metal in the USSR and its Satellites. (I regret to say that the unclassified information we have on this subject is very limited.)

Although the USSR has a few deposits of rutile, the only commercially important titanium mineral used for making titanium metal, it has extensive deposits of ilmenite, a very low-grade source of titanium, in the Urals area. Other large ilmenite deposits have been discovered near Kirovsk on the Kola Peninsula and near Mariupol' in the Southern Ukraine. The Ural deposits are reported to contain 400 million tons of available ore. No important titanium deposits are known to have been discovered in any of its Satellites.

For several decades, titanium has been used by the Soviets in the manufacture of stainless steel, but only since 1952 has the Soviet press published articles on research in the development and use of titanium metal. It is quite likely that the Soviets have engaged in extensive titanium metal research and are using titanium as a high-speed, high-temperature metal. A recent United States press report states that the Soviets are producing up to 95,000 tons of titanium annually, but we have no information which would confirm this figure.

Although there is some indication of research on titanium metal being conducted in the European Satellites, ~~we have practically no knowledge of the degree of success attained.~~

We shall keep your interest in Soviet titanium developments in mind and, in the event new information becomes available, your office will be advised.

Sincerely,

Allen W. Dulles
Director

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DOCUMENT NO. _____
NO CHANGE IN CLASS.
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CLASS. CHANGED TO: TS S *0201*
NEXT REVIEW DATE: _____
AUTH: HQ 10-2
DATE: *2/2/81* REVIEWER: _____

ER 7-8412/a

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FEB 23 1956

ER

Honorable James H. Murray
Chairman
Committee on Interior and Insular Affairs
United States Senate
Washington, D. C.

Dear Senator Murray:

This letter is in reply to your inquiry of 23 January 1956 regarding the production of titanium metal in the USSR and its satellites.

Although the USSR has a few deposits of rutile, the only commercially important titanium mineral used for making titanium metal, it has extensive deposits of ilmenite, a very low-grade source of titanium, in the Uralis area. Other large ilmenite deposits have been discovered near Kirovsk on the Kola Peninsula and near Mariupol' in the Southern Ukraine. The Ural deposits are reported to contain 400 million tons of available ore. No important titanium deposits are known to have been discovered in any of its satellites.

For several decades, titanium has been used by the Soviets in the manufacture of stainless steel, but only since 1952 has the Soviet press published articles on research in the development and use of titanium metal. It is quite likely that the Soviets have engaged in extensive, titanium metal research and are using titanium as a high-speed, high-temperature metal. A recent United States press report states that the Soviets are producing up to 95,000 tons of titanium annually, but we have no information which would confirm this figure.

Although there is some indication of research on titanium metal being conducted in the European satellites, I regret to say that the unclassified information we have on this subject is very limited.

We shall keep your interest in Soviet titanium developments in mind and, in the event new information becomes available, your office will be advised.

Distribution:

- O&I - Addressee
- 2 - DCI
- 2 - DDI
- 1 - Leg. Counsel
- 1 - IG
- 2 - AD/RR 2 - D/M/RR
- 1 - Ch/E/RR

Sincerely,

Allen W. Dulles
Director

M/NF/RR _____:fws/2031 (31 Jan 56)
Rewritten: OAD/RR _____:amm/2817 (14 Feb 56)
Rewritten: O/DCI/F _____:am (16 Feb 56)

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~~You shall keep your interest in Soviet activities in mind, in the event new information becomes available, your office will be advised.~~

~~Sincerely,~~

**Allen W. Dulles
Director**

CONCURRENCES:

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Legislative Counsel

15 Feb

Date

25X1

LSPK

Inspector General

15 Feb

Date

25X1

Deputy Director/Intelligence

14 Feb

Date

25X1

Dis

CFig. - Addressees

- 12 - DCI**
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- 1 - I.G.**
- 2 - AD/ER**
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M/ER/ER: *12 Feb/2031 (31 Jan 56)*
Rewritten: **CAD/ER:** *14 Feb/2617 (14 Feb 56)*

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7-8412

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United States Senate

COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS

January 23, 1956

Dear Mr. Dulles,

If you have some non-classified information indicating the current rate of production of titanium sponge and titanium mill products in Russia and the satellite countries, I should appreciate having it, as my staff is working on a report on the titanium situation in 1956.

Sincerely yours,



James E. Murray
Chairman

The Honorable Allen Dulles
Director
Central Intelligence Agency
Washington, 25, D. C.

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14 FEB 1956

MEMORANDUM FOR: Deputy Director/Intelligence

SUBJECT: Letter on Titanium to Senator Murray

1. Attached is a rewrite of the titanium letter to Senator Murray.
2. ORR has been pursuing every lead relating to titanium in the Sino-Soviet Bloc. Two months ago, ORR and OSI personnel met with other titanium specialists in the U.S. Government and discussed the available intelligence material on the titanium industry in the USSR. The minutes of that meeting, which summarizes the status of our knowledge on this subject, are attached. No information that would alter these conclusions has been received since the meeting.
3. In the Satellites, East Germany in its Bitterfeld plant, succeeded in extracting about 75 tons of titanium from beach sands during 1955. Hungary has been investigating the possibility of extracting titanium from its large supplies of red mud, which is a by-product of manufacturing alumina from bauxite. These investigations have thus far been limited to laboratory investigations.
4. A recent issue of the American Metal Market, that of 27 January 1956, carried on page 3 an article headlined "Soviet Output of Titanium May Be Greater Than Ours." The article went on to say that "government officials said that there is substantial evidence available that Russian titanium production may be greater than our own, and may in fact reach a top figure of between 90,000 and 95,000 tons per year." We inquired through the Office of Operations who the Government officials were but had no success. In any case, considering that the U.S. produced only 7,200 tons of titanium metal in 1955 after investing millions of dollars in research and development, and having access to large quantities of rutile, and also considering that no evidence of application of titanium metal in the USSR has been found, we have to consider such a report as unfounded at this time.

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Assistant Director
Research and Reports

Enclosures:

1. Letter to Senator Murray
2. Minutes of Meeting



CENTRAL INTELLIGENCE AGENCY

WASHINGTON 25, D. C.

OFFICE OF THE DIRECTOR

The Honorable James E. Murray
Chairman
Committee on Interior and Insular Affairs
United States Senate
Washington, D. C.

Dear Senator Murray:

This letter is in reply to your inquiry of 23 January 1956 regarding the production of titanium in the USSR and its Satellites. I regret to say that we do not have any unclassified information on this subject.

The development of supersonic aircraft has resulted in increased requirements for titanium metal in the Free World. Considering the progress of Soviet aviation in the past few years, it is quite likely that the Soviets have engaged in extensive titanium metal research and are using titanium as a high-speed, high-temperature metal. The extreme degree of secrecy covering information on titanium in the USSR may reflect the high strategic value placed on the metal by the Soviets rather than any technological lag or small scale production.

There is some evidence of experimental interest in titanium metal in several of the European Satellites. However, as is the case with the USSR, there are no unclassified data relating either to their production or to the degree of success in laboratory experimentation.

We shall keep your interest in Soviet titanium developments in mind and, in the event new information becomes available, your office will be advised.

Sincerely,

Allen W. Dulles
Director

The Honorable James E. Murray
Chairman
Committee on Interior and Insular Affairs
United States Senate
Washington, D. C.

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The development of supersonic aircraft has resulted in increased requirements for titanium metal in the Free World. Considering the progress of Soviet aviation in the past few years, it is quite likely that the Soviets have engaged in extensive titanium metal research and are using titanium as a high-speed, high-temperature metal. The extreme degree of secrecy covering information on titanium in the USSR may reflect the high strategic value placed on the metal by the Soviets rather than any technological lag or small scale production.

There is some evidence of experimental interest in titanium metal in several of the European Satellites. However, as is the case with the USSR, there are no unclassified data relating either to their production or to the degree of success in laboratory experimentation.

We shall keep your interest in Soviet titanium developments in mind and, in the event new information becomes available, your office will be advised.

Sincerely,

Allen W. Dallas
Director

CONCURRENCES:

Legislative Counsel

Deputy Director of Intelligence

Inspector General

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FEB 8 1956

STAT/NF/RR: [redacted]:fws/2031 (31 Jan 56)
Rewritten: O/DD/I:RAMoryJr:peb (7 Feb 56)

Distribution:

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- Ch/E/RR - 1
- D/M/RR - 2

Executive Security
7-8412/A

The Honorable James E. Murray
Chairman
Committee on Interior and Insular Affairs
United States Senate
Washington, D.C.

Dear Senator Murray:

This letter is in reply to your inquiry of 23 January 1956 regarding production of titanium in the USSR and its Satellites.

The increased need for Titanium metal in the Free World has kept pace with research and development in supersonic aircraft. Considering the progress of Soviet aviation in the past few years, it is quite likely that the Soviets have engaged in extensive titanium metal research and are using titanium as a high-speed, high-temperature metal as the U.S. is doing, although there is no clear evidence of this. The extreme degree of secrecy covering titanium information may reflect the highly strategic value placed on the metal by the Soviets, rather than any technological lag or small scale production.

There is some evidence of experimental interest in titanium metal in several of the European satellites. However, as is the case with the USSR, there are no unclassified data relating either to their production or to the degree of success in laboratory experimentation.

We shall keep your interest in Soviet titanium developments in mind and, in the event new information becomes available, your office will be advised.

Sincerely,

Allen W. Dulles
Director

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- 2 - DD/I
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CONCURRENCE:

Legislative Counsel

APPROVED: STAT

DD/I STAT

Inspector General

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/2031 (31 Jan 56)

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SENDER WILL CHECK CLASSIFICATION TOP AND BOTTOM

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1	MR. ROBERT AMORY		
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3			
4			
5			
6			

<input type="checkbox"/>	ACTION	<input type="checkbox"/>	DIRECT REPLY	<input type="checkbox"/>	PREPARE REPLY
<input type="checkbox"/>	APPROVAL	<input type="checkbox"/>	DISPATCH	<input type="checkbox"/>	RECOMMENDATION
<input type="checkbox"/>	COMMENT	<input type="checkbox"/>	FILE	<input type="checkbox"/>	RETURN
<input type="checkbox"/>	CONCURRENCE	<input type="checkbox"/>	INFORMATION	<input type="checkbox"/>	SIGNATURE

Remarks: The Director stated that he did not consider that the first sentence in the second paragraph of the attached memorandum makes sense. He pointed out that the "need" does not keep pace with anything.

DCI also questioned the propriety of our making any comment whatsoever on matters pertaining to U.S. production and use of titanium as this is not strictly within our bailiwick.

Will you please rewrite in accordance with DCI's wishes, the attached letter?

STAT

FOLD HERE TO RETURN TO SENDER

	NAME, ADDRESS AND PHONE NO.	DATE
	Assistant to the Director	7 Feb 56