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Nº 1

Economic Intelligence Report

THE SOVIET ASBESTOS INDUSTRY DURING THE SEVEN YEAR PLAN 1959-65



CIA/RR ER 62-41

December 1962

CENTRAL INTELLIGENCE AGENCY
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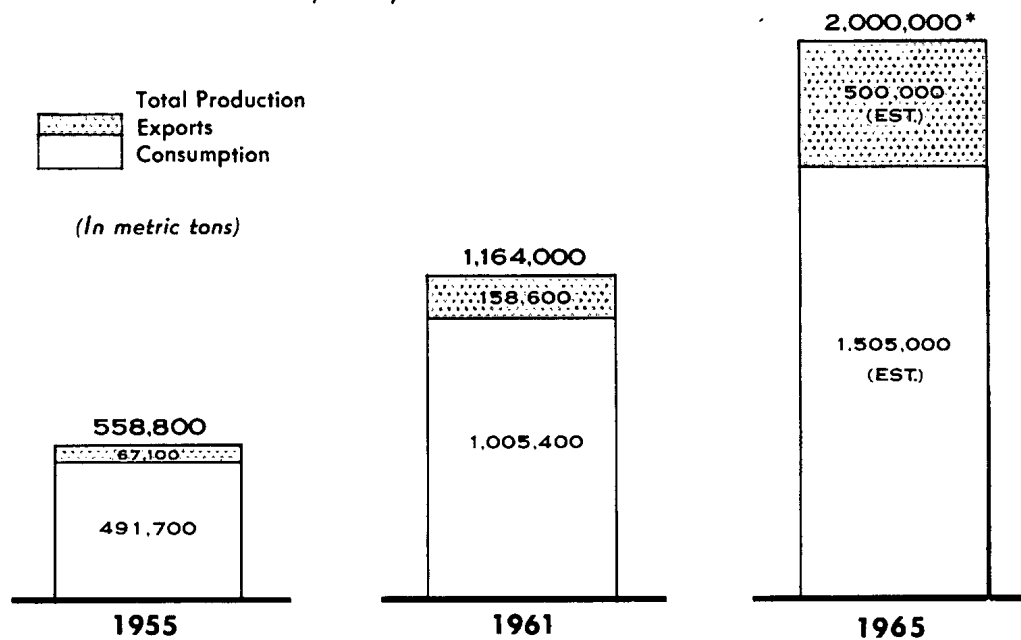
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THE SOVIET ASBESTOS INDUSTRY DURING THE SEVEN YEAR PLAN*
1959-65

Summary and Conclusions

By 1965 the exportable surplus of asbestos in the USSR will reach a total estimated at 500,000 tons,** more than three times the quantity exported in 1961 and about 7.5 times that exported in 1955 (see the accompanying chart). At the same time, the USSR probably will account for more than one-half of the world output of asbestos and will produce almost twice as much as the second largest producer, Canada.

USSR: Production and Distribution of Asbestos
1955, 1961, and 1965



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*Estimated data have been rounded.

* The estimates and conclusions in this report represent the best judgment of this Office as of 1 December 1962.

** Tonnages are given in metric tons throughout this report.

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The emergence of the USSR as the largest producer of asbestos in the world has been developing since 1950, when major expansion of the Soviet asbestos industry was begun. In each subsequent 5-year period, production of asbestos doubled, increasing from one-fourth of a million tons in 1950 to more than one-half of a million tons in 1955 and to 1 million tons in 1960. This rapid rate of growth will continue during the remaining years of the Seven Year Plan (1959-65), even though the Plan goal probably will be underfulfilled by a significant quantity. The goal of the Seven Year Plan for 1965 is 2.5 million tons of asbestos of all grades, or about three times output in 1958. In view of the current status of construction of new asbestos processing mills and the performance of Soviet construction in the industry in recent years, approximately 500,000 tons of new capacity planned to be in full operation in 1965 probably will not be completed by that year. Thus production in 1965 probably will be about 2 million tons, only 80 percent of the goal but about twice production in 1960.

The effect of the shortfall in production presumably will be a reduction in the quantity of asbestos that the USSR will have available for export, as it is unlikely the USSR would restrict domestic consumption appreciably in favor of larger exports. Because planned production of asbestos-cement shingles and pipe, the major end uses for consumers of asbestos in the Soviet economy, will require about 960,000 tons of asbestos in 1965 and because other consumers will require about 545,000 tons, approximately 500,000 tons of the estimated 2 million tons of asbestos that will be produced in 1965 will be available for export. Of this amount, approximately 100,000 tons may be allocated to the European Satellites, and 400,000 tons could then be exported to the West, primarily to Western Europe.

Soviet exports of this magnitude to the West in 1965 should earn the equivalent of approximately US \$55 million. Probably more significant, however, is the potential effect on the Western producers, particularly Canada, which have supplied the European market in the past. Soviet exports of 400,000 tons of asbestos could displace all or nearly all Western asbestos on the European market and necessitate extensive readjustments in the asbestos industries of these nations.

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I. Introduction

Chrysotile asbestos,* which constitutes about 95 percent of the total world production of asbestos of all varieties and practically all of Soviet production, is a fibrous mineral whose unique properties, particularly resistance to heat and friction, make it essential to a number of applications. Asbestos generally occurs in irregular veins scattered throughout rock masses and is mined in huge open-pit or underground workings. The fibers are separated from the rock and sorted into groups, according to length, in mills located near the mines. The longer fibers are shipped to textile plants, where they are fiberized further and prepared in special machines and then spun into yarn and woven into textile products -- primarily fireproof cloth -- that are used in fire-fighting and industrial applications where protection from heat and flame are essential. Shorter fibers are used in automotive brake linings and clutch facings, steam packings, gaskets, and electrical wiring insulation. Low-grade, very short fibers are mixed with cement as a binder in asbestos-cement products such as building shingles, pipe, and boiler and roofing cements. The lowest grades are used in molded plastics; in fillers; and, mixed with other materials, in the manufacture of flooring materials.

Fibers obtained from different deposits vary in the ease with which they may be fiberized. This condition has considerable practical importance because an asbestos that is difficult to fiberize may require such intense milling to reduce the fibers to desirable fineness that they may be broken into short lengths. Milling processes and equipment also play an important part in preservation of fiber length, and great care normally is exercised during milling in order that a minimum of fiber breakage occurs. In spite of all precautions, however, much fiber breakage does occur during processing, and, long, high-grade fiber generally is in short supply throughout the world.

Although many countries of the world produce asbestos, only Canada, the USSR, the Union of South Africa, and the Federation of Rhodesia and Nyasaland produce significant quantities. For many years, the annual output of Canada far exceeded production of any other country in the world including the USSR. Since 1950, however, Soviet output has

* A second kind of asbestos, the amphibole group, includes anthophyllite, tremolite, amosite, and crocidolite. The uses of anthophyllite and tremolite are few and unimportant, and very little of either variety enters international trade. Amosite and crocidolite occur mainly in Africa. Both have important uses for which chrysotile is a possible but not entirely satisfactory substitute.

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expanded at such a rapid rate that the USSR has overtaken Canada as the leading world producer and now accounts for more than two-fifths of the world production. As discussed in the following sections of this report, the USSR probably will dominate this field to an even greater degree by 1965. The relative magnitude of production of the USSR, Canada, and all other producing countries is shown in Table 1.

Table 1

World Production of Asbestos
1950, 1955, 1960, and 1962

Year	Thousand Metric Tons				Soviet Production as a Percent of World Production
	World	USSR <u>a/</u>	Canada <u>b/</u>	Other <u>b/</u>	
1950	1,451	244	794	413	17
1955	1,914	559	965	390	29
1960	2,659	1,064	1,015	580	40
1962	2,844	1,244	1,000 <u>c/</u>	600 <u>c/</u>	44

a. For the methodology, see Table 2, p. 5, below, and source 1/.

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c. Estimated.

II. Production

A. Magnitude

Production of asbestos in the USSR has increased every year since 1950, when Soviet output of 244,000 tons constituted about 17 percent of the world production and was equal to about 31 percent of Canadian output. In 5 years, Soviet production increased almost 130 percent, to 559,000 tons in 1955, and in the following 5 years almost doubled again, rising to more than a million tons in 1960, when, for the first time, Soviet output exceeded Canadian production and constituted 40 percent of the total world output. Two years later, in 1962, Soviet production probably will have increased 200,000 additional tons to about 1,244,000 tons of asbestos of all grades. This level of

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output will exceed probable Canadian production by at least 200,000 tons and will make the USSR the largest producer of asbestos in the world. Production of asbestos in the USSR during 1955-62 and the goal of the Seven Year Plan (1959-65) for 1965 are shown in Table 2.

Table 2

Estimated Production of Asbestos in the USSR
1955-62 and 1965 Plan

Year	Metric Tons		
	Total	High and Medium Grades	Low Grades
1955 <u>a/</u>	558,800	408,500	150,300
1956 <u>a/</u>	699,800	501,800	198,000
1957 <u>a/</u>	800,700	574,900	225,800
1958 <u>b/</u>	865,000	630,000	235,000
1959 <u>c/</u>	963,000	693,000	270,000
1960 <u>d/</u>	1,064,000	769,000	295,000
1961 <u>e/</u>	1,164,000	841,000	323,000
1962 <u>f/</u>	1,244,000	921,000	323,000
1965 <u>g/</u>	2,500,000	2,000,000	500,000

- a. 3/
- b. 4/
- c. 5/

d. The total output in 1960 increased 23 percent above that in 1958. 6/ Output of high and medium grades and output of low grades are estimated to have constituted the same part of the total output in 1960 as they averaged in the preceding 5 years.

e. A new section of Mill at Asbest with a reported capacity of 100,000 metric tons began production late in 1960. 7/ Soviet output in 1961 is estimated to have exceeded output in 1960 by this quantity. 8/ Output of high and medium grades and output of low grades are estimated to have constituted the same part of the total output in 1961 as they averaged in the preceding 5 years.

f. Preliminary estimate. The first section of the Aktovrak Mill in the Tannu Tuva Autonomous Oblast began operating late in 1961. 9/ The capacity of the first section is estimated at 80,000 metric tons of medium-grade asbestos.

g. Seven Year Plan goal, 10/ which, it is estimated, will be underfulfilled by 500,000 tons.

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Under the Seven Year Plan the annual production of asbestos in the USSR is to increase to 2.5 million tons by 1965. The achievement of this goal requires an increase in production of 1,635,000 tons above production in 1958, which is to be accomplished by the construction and commissioning of five new plants with a total capacity of 1,435,000 tons and by increasing the capacity of existing plants a total of 200,000 tons. By the end of 1962 it is estimated that 380,000 tons will have been added to capacity in 1958, of which 180,000 tons will be from new construction and 200,000 tons from expansion of existing facilities, while approximately 1,255,000 tons of new capacity will still be under construction.

B. Location of Deposits

Before 1962, all production of asbestos in the USSR was carried on in the Urals Region in Sverdlovskaya Oblast.* More than 90 percent of Soviet output came from the Bashenovsk deposit near the town of Asbest, about 50 kilometers (km) northeast of the city of Sverdlovsk, and the remaining 10 percent came from a small deposit near the town of Alapayevsk, about 90 km north of Asbest. In spite of the tremendous quantities of ore that have been removed from the Bashenovsk deposit in past years, this deposit remains one of the largest in the world, and although its relative importance is declining, it will continue to be the principal source of asbestos in the USSR for the foreseeable future.

In the latter half of the 1950's, preparatory work was begun for the exploitation of three other deposits. The largest of these is located near the town of Dzhetygara in Kustanayskaya Oblast in Kazakh SSR. The other two, the Kiemi, which is about 50 km east of Orsk in Orenburgskaya Oblast, and the Aktovrak in the Tannu Tuva Autonomous Oblast, are smaller and presumably will play a lesser role in the Soviet asbestos industry. By 1965, if Plan goals are met, these three deposits will account for approximately 35 percent of the total Soviet production of asbestos, and the contribution of the Bashenovsk deposit will decline correspondingly from about 90 percent of the total output to 60 percent.

C. Processing Mills

1. Urals

Before 1962, five mills at Asbest and one mill at Alapayevsk processed all of the asbestos produced in the USSR. The Alapayevsk mill and Mills [redacted] at Asbest are old mills that were built during the 1930's and since then have been reconstructed, modernized,

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and enlarged.* The current annual capacity of these three mills is approximately 645,000 tons. The three other mills at Asbest [redacted] [redacted] have a total capacity of 520,000 tons. Mill [redacted] (old) was completed in 1954 and has a capacity of 55,000 tons of high-grade and medium-grade fiber. Mill [redacted] (new) was completed late in 1960 or early in 1961 and has a capacity of 100,000 tons of low-grade fiber. Mill [redacted] went into operation in 1955 with an annual capacity of somewhat less than 200,000 tons. Since that time the capacity of Mill [redacted] has been increased to about 365,000 tons, making it the largest asbestos mill in the USSR at the present time.***

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50X1
50X1
50X1

Construction of Mill [redacted] was begun at Asbest in 1959. This mill, with a planned capacity of 450,000 tons, will be the largest mill in the Urals Region and the second largest in the USSR. Although no commissioning date has yet been announced, presumably completion and commissioning of the mill are intended during the Seven Year Plan, as the mill must be in full production in 1965 if the Plan goal is to be achieved.

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A mill is under construction at the Kiembi deposit, but little has been reported about its status except that construction is behind schedule. The estimated capacity of the mill when completed is 125,000 tons.

2. Kazakhstan and Central Asia

In 1958, construction was begun on the Dzhettygara mill, which will be the largest in the USSR with a capacity of about 600,000 tons. Completion of the mill by 1965 was planned, but delays in construction appear to have upset the schedule. [redacted] [redacted] the first section of the mill with a capacity of 200,000 tons will not begin production until 1963, 2 years later than originally planned.

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50X1

3. East Siberia

A mill is under construction at the site of the Aktovrak deposit in the Tannu Tuva Autonomous Oblast. The first section of

* Mills at Asbest are numbered consecutively. Mill [redacted] became obsolescent in the early 1950's and was torn down so that the asbestos deposit on which it stood could be exploited.

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** Mills [redacted] (new) share the same initial ore-processing facilities but otherwise are separate and independent plants. *** For a description of Soviet asbestos mills in greater detail, see Appendix A.

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the mill reportedly was completed and began operating late in 1961. Although the construction schedule has not been announced, work apparently is well enough advanced to justify the conclusion that the mill will be completed and in full operation at its capacity of 160,000 tons by 1965.

III. Consumption

The USSR is the largest consumer of asbestos in the world, with a level of consumption almost double that of the US, the only other nation consuming large quantities of asbestos. Soviet consumption of asbestos has increased rapidly during the postwar period to an estimated level in 1962 somewhat in excess of a million tons and probably will continue to increase during the remainder of the Seven Year Plan period. It is estimated that consumption of asbestos in 1965 will reach 1.5 million tons, which will constitute about one-half of the probable total world consumption.

The rapid increase in and the relatively high level of Soviet consumption of asbestos are the result primarily of the very extensive use of asbestos in the asbestos-cement building materials industry, which accounts for about 80 percent of the total Soviet consumption. 11/ Asbestos-cement shingles and pipe alone account for from 50 percent to 60 percent of the total asbestos consumed, and other asbestos-cement products account for 20 percent to 30 percent. The estimated quantity of asbestos consumed in asbestos-cement shingles and pipe and in other applications during 1955-62 and 1965 is shown in Table 3.*

IV. Exports

Soviet exports of asbestos have increased every year since 1955, from a total of 67,100 tons in 1955 to 158,600 tons in 1961. The increase of 136 percent in exports is slightly greater than the estimated increase in production of 108 percent, a trend that probably will continue through 1965. The pattern of exports has been fairly stable throughout the period, approximately one-third of the total sales going to the European Satellites and two-thirds to non-Bloc countries, mainly to countries in Western Europe.

Although the annual Soviet exports of asbestos are not a major source of foreign exchange for the USSR, their total value has averaged approximately 20 million rubles** annually in recent years, and exports

* Table 3 follows on p. 9.

** Ruble values in this report are given in new rubles established by the Soviet currency reform of 1 January 1961. A nominal rate of exchange based on the gold content of the respective currencies is 0.90 ruble to US \$1. This rate, however, should not be interpreted as a precise ruble-dollar relationship that will yield an equivalent dollar value.

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Table 3

Estimated Consumption of Asbestos in the USSR a/
1955-62 and 1965

Year	Metric Tons			
	Asbestos Content of			
	Total	Asbestos-Cement Shingles	Asbestos-Cement Pipe	All Other
1955	491,700	208,300	36,400	247,000
1956	610,300	253,300	39,600	317,400
1957	697,300	301,400	42,000	353,900
1958	747,500	336,900	45,600	365,000
1959	834,400	364,500	48,900	421,000
1960	917,900	418,800	55,800	443,300
1961	1,005,400	475,900	65,000	464,500
1962	1,068,800	510,300 <u>b/</u>	73,500 <u>b/</u>	485,000
1965	1,505,000	840,000 <u>b/</u>	120,000 <u>b/</u>	545,000

- a. For the methodology, see Appendix B. Data are rounded to the nearest 100 metric tons.
 b. Estimate based on the planned production of asbestos-cement shingles and pipe.

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to non-Bloc countries have earned the equivalent of about US \$13 million annually. The value of asbestos as an export commodity is enhanced further by the apparently favorable cost structure of the Soviet asbestos industry relative to that of many other Soviet industries producing goods for export. This relative advantage probably accounts for the apparent Soviet decision to plan an exportable surplus of almost 1 million tons in 1965. Although the goal probably will not be met, annual Soviet exports of asbestos probably will continue to increase during most of the remainder of the 1960's, with a larger share of the total going to the Free World as exports increase enough to satisfy minimum Bloc requirements.

A. Non-Bloc

Soviet exports of asbestos to non-Bloc countries increased from 41,000 tons in 1955 to 101,000 tons in 1961. During the period, more than 90 percent of all exports to countries outside the Bloc were to countries in Western Europe. West Germany, France, and Belgium were the major buyers of Soviet asbestos, taking well over one-half of the total sold to non-Bloc countries. Other European buyers of significant quantities were Italy, Austria, Sweden, Denmark, and Finland. The total Soviet annual exports to the West and to Western Europe during 1955-61 are shown in Table 4.*

Consumption of asbestos by European non-Bloc countries apparently has increased rapidly enough to absorb Soviet exports without curtailing imports from Western producers. During 1955-61, European consumers increased their imports from Canada, the major supplier of asbestos to Western Europe, at the same time that they more than doubled their imports from the USSR. Nevertheless, there is little question that Western producers could have supplied the expanding European market easily and that Soviet exports, therefore, preempted a part of the market that otherwise would have been supplied by producing countries in the Free World.

B. Bloc

In 1961, Soviet exports of asbestos to the European Satellites were about 56,000 tons compared with about 24,000 tons sold to the European Satellites in 1955. During the period, Czechoslovakia bought more than one-third of the total imported by the Bloc, and East Germany, Poland, and Hungary combined bought about one-half. North Korea, whose purchases averaged better than 1,000 tons annually, was the only Bloc country outside Europe that bought asbestos from the USSR.

* Table 4 follows on p. 11.

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Table 4

Exports of Asbestos by the USSR a/
1955-61

<u>Year</u>	<u>Total</u>	<u>Metric Tons</u>		
		<u>To Non-Bloc Countries</u>		<u>To Bloc Countries</u>
		<u>Total</u>	<u>Of Which:</u>	
1955 <u>b/</u>	67,100	40,800	38,000	25,800
1956 <u>b/</u>	89,500	61,500	54,000	28,000
1957 <u>c/</u>	103,400	60,000	59,000	43,400
1958 <u>d/</u>	117,500	82,100	78,000	35,100
1959 <u>e/</u>	128,600	85,000	80,000	43,400
1960 <u>f/</u>	146,100	101,200	93,000	44,600
1961 <u>g/</u>	158,600	101,000	88,000	57,700

a. Soviet published trade statistics do not add to precise totals, presumably because of unrecorded exports of small quantities.

- b. 12/
- c. 13/
- d. 14/
- e. 15/
- f. 16/
- g. 17/

Imports by the European Satellites of small quantities of high-grade Canadian asbestos tend to confirm reports of shortages of high-grade fiber in the European Satellites and to substantiate the estimate that the USSR does not produce enough high-grade spinning fiber to meet Bloc requirements. Imports of asbestos by the European Satellites from Canada in 1959 totaled about 1,600 tons of high-grade fiber; in 1960, about 60 percent of the 4,800 tons imported from Canada was high-grade fiber; and in 1961, more than 80 percent of the 2,200 tons imported from Canada was high-grade fiber.

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V. Prospects

A. Production

The production goal of the Seven Year Plan for 1965 for the Soviet asbestos industry is 2.5 million tons of asbestos of all grades. All of the additional capacity required to achieve the goal is under construction at the present time, but failure to maintain construction schedules, particularly those for the largest mills, makes it unlikely that the goal will be achieved on schedule. Considering the status of construction of the new mills as of mid-1962 and the performance of the construction organizations in recent years, a shortfall estimated at about 500,000 tons in 1965 seems probable. The status of the four asbestos mills under construction in 1962, the probable dates when the first sections of the mills will start production, and the estimated dates when capacity output will be achieved are shown in Table 5.

Table 5

Estimated Status of New Asbestos Mills Under Construction
 in the USSR in 1962

Mill	Start of Production			Full Capacity Production		Shortfall in 1965	Metric Tons
	Section	Capacity	Year	Capacity	Year		
Asbest Mill							
	1	200,000	1964	450,000	1967	250,000	50X1
Kiambi	1	60,000	1965	125,000	1966	65,000	
Dzhetygara	1	200,000	1963	600,000	1966-67	200,000	
	2	200,000	1965				
Aktovrak	1	80,000	1961	160,000	1963-64	0	

B. Exports

The shortfall in production in 1965 of about 500,000 tons probably will have a significant effect on plans for export of asbestos. Since domestic consumption in 1965 will reach a total estimated at 1.5 million tons,* about 500,000 tons probably will be available for export

* The quantity of asbestos that will be consumed by the domestic economy in 1965 is believed to be essentially independent of the success or failure of the Soviet asbestos industry [footnote continued on p. 13]

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in 1965 instead of 1 million tons that would have been available had the production goal been achieved. Although exports of 500,000 tons in 1965 are considerably less than is believed to have been called for under the Plan, this quantity nevertheless will be more than three times the magnitude of exports in 1961. Moreover, as the shortfall of 500,000 tons of capacity is brought into production after 1965, production presumably will increase considerably more rapidly than consumption, and the quantity of asbestos available for export probably will increase sharply above 500,000 tons.

Assuming that Soviet exports of asbestos to the Bloc countries in 1965 will increase to perhaps twice the level of 58,000 tons in 1961, approximately 400,000 tons, or about 4 times the level of Soviet exports to non-Bloc countries in 1961, will be available for export to the non-Bloc countries in 1965. This quantity is approximately equal to the part of the European market that was supplied by Western producers in 1961. Even though the market presumably will expand in the future, it is doubtful that it can expand enough to absorb the larger Soviet exports and still maintain the 1961 level of purchases from Western countries. It seems probable, therefore, that Soviet competition with Western producers for their share of the market will increase significantly during the 1960's, and a partial or even a total displacement of imports of asbestos produced by countries of the Free World could take place.

to meet its Plan goal for 1965. The assumption is implied, however, that all asbestos-consuming industries will achieve their production goals for 1965. Failure to do so would result in a larger quantity than 500,000 tons of asbestos being available for export.

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APPENDIX A

STATUS OF ASBESTOS MILLS IN THE USSR
1962

Mill	Location	Capacity of Mill (Metric Tons)	Remarks	
Urals				
Alapayevsk Mill	Alapayevsk Sverdlovskaya Oblast	100,000 (estimated)	Reconstruction completed in 1956 and capacity doubled. <u>18/</u>	
Asbest Mill	Asbest Sverdlovskaya Oblast	200,000	Capacity of 140,000 tons of high and medium grades and 60,000 tons of low grades. <u>19/</u>	50X1 50X1
Asbest Mill	Asbest Sverdlovskaya Oblast	345,000	Capacity of 245,000 tons of high and medium grades and 100,000 tons of low grades. <u>20/</u>	50X1
Asbest Mill (Old)	Asbest Sverdlovskaya Oblast	55,000	Went into production in September 1954. Capacity of 55,000 tons of high and medium grades only. <u>21/</u>	50X1
Asbest Mill (New)	Asbest Sverdlovskaya Oblast	100,000	New mill under construction in 1959. Production started late in 1960 or early in 1961. <u>22/</u> Capacity of 100,000 tons in 1961.	50X1
Asbest Mill	Asbest Sverdlovskaya Oblast	365,000	Went into operation in 1955. Since then has doubled capacity. Capacity in 1959 of 255,000 tons of high and medium grades and 110,000 tons of low grades. <u>23/</u>	50X1
Asbest Mill	Asbest Sverdlovskaya Oblast	450,000 (planned)	Construction begun in 1959. Capacity of 300,000 tons of high and medium grades and 150,000 tons of low grades. <u>24/</u> Not yet in production in 1962.	50X1

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Mill	Location	Capacity of Mill (Metric Tons)	Remarks
Urals (Continued)			
Kiembi Asbestos Combine	Orenburgskaya Oblast <input type="text"/>	125,000 (estimated)	Probably under construction in 1961. Completion date unknown. <u>25/</u>
Kazakhstan and Central Asia			
Dzhetygara Asbestos Combine	Dzhetygara Kazakh SSR <input type="text"/>	600,000 (planned)	Construction begun in 1958. First section with a capacity of 200,000 tons to begin production in 1963. <u>26/</u> According to initial plan capacity, output of 600,000 tons is to be attained in 1965, but construction apparently is 2 years behind schedule.
Aktovrak Asbestos Combine	Tannu Tuva Autonomous Oblast	160,000 (planned)	First section to begin operating in fourth quarter of 1961. Capacity of plant to be 160,000 tons. <u>27/</u>

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APPENDIX B

METHODOLOGY FOR TABLE 3

The USSR reports the annual output of asbestos-cement shingles and asbestos-cement pipe in standard units. Each unit of shingle contains an average of 0.14 kilograms of asbestos. 28/ Estimates of the quantity of asbestos consumed by the asbestos-cement shingle industry are made by multiplying the asbestos content of a standard shingle by the reported number of standard shingles produced each year. 29/

Estimates of the quantity of asbestos consumed by the asbestos-cement pipe industry are made by a similar process. Because 1 kilometer (km) of standard pipe contains approximately 3 tons of asbestos, 30/ the estimate of asbestos consumed by the asbestos-cement pipe industry is made by multiplying the asbestos content of 1 km of standard pipe by the reported number of kilometers of standard pipe produced each year. 31/

The quantity of asbestos used by consumers other than the asbestos-cement shingle and pipe industries probably approximates the residual of annual production less the quantity consumed by the shingle and pipe industries and the total quantity exported. The residual derived by this methodology for 1955-61 is shown as "All Other Consumption" in the table.

Estimates of consumption of asbestos by the asbestos-cement shingle and pipe industries in 1962 and 1965 are made by the same methodology employed for previous years except that figures on production of shingles and pipe are Plan figures.

The estimate of the quantity of asbestos that will be used in 1962 by consumers other than the shingle and pipe industries and shown as "All Other Consumption" in the table is based on the assumption that approximately the same average annual quantitative increase occurred in 1962 above 1961 as occurred in the 2 preceding years. The estimate of consumption by all other consumers in 1965 is based on the assumption that the average annual quantitative increase during 1963-65 remained the same as the average annual quantitative increase during 1960-62.

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