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MEMORANDUM FOR: Mr. Theodore Tshu
Chairman, Operating Committee, ACEP
Bureau of International Commerce
Department of Commerce

SUBJECT: Transmittal of Study on Carbon Black

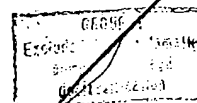
The attached study, Carbon Black Situation in the USSR and Eastern
European Communist Countries in 1966 and Outlook for 1970, is forwarded
in response to your request to of this Office.

Director
Economic Research

Attachment:
as stated

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14 July 1967

Carbon Black Situation in the USSR and Eastern European
Communist Countries in 1966 and Outlook for 1970

SUMMARY

The USSR and the Eastern European Communist countries have large and expanding requirements for carbon black. As in the Free World, these requirements stem largely from the manufacture of tires. It is estimated that such requirements in 1966 totaled about 635,000 tons and were met mainly by domestic production, estimated at about 625,000 tons. Imports from the Free World in 1966 are not known but probably represented less than 5 percent of total consumption. Imports in 1960 and 1965 amounted to about 20,000 and 21,000 tons, respectively, and presumably consisted of higher grade carbon blacks, such as the high abrasion furnace (HAF) and fast extrusion furnace (FEF) types, which are in short supply.

Prospects are that total output of carbon black will increase at about the same rate as requirements in 1967-70. Total requirements in 1970 are estimated at about 875,000 tons to 975,000 tons while output is expected to be about 930,000 tons. As in the past, the USSR will be the major producer and consumer, and probably will account for roughly four-fifths of these totals. Thus, Soviet output probably will be about 735,000 tons and requirements 700,000 to 800,000 tons in 1970. In the Eastern European Communist countries, output of carbon black in 1970 may amount to about 195,000 tons as against requirements of about 175,000 tons. Expansion of production in the Eastern European Communist countries and in the USSR, as well, presupposes some acquisitions of Free World facilities, including technology for production of higher quality blacks. Even with the acquisition of such equipment and the probable increases in domestic output, it seems unlikely that the USSR and the Eastern European Communist countries will suspend purchases of carbon black from the Free World. Requirements for advanced types of carbon black used in producing improved tires, including those made of stereorubber, are expected to exceed the available output of such blacks in 1970.

DISCUSSION

I. Situation in 1966

A. Requirements

Total requirements for carbon black in the USSR and the Eastern European Communist countries are estimated to have been about 635,000 tons

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in 1966. These requirements were estimated primarily from reported output of tires which together with other rubber articles probably account for 90 percent of consumption.

The USSR was by far the largest user of carbon black with requirements estimated at about 515,000 tons or four-fifths of the total in 1966. Estimated carbon black requirements in the USSR and the Eastern European Communist countries in 1966 are presented in Table 1.

Table 1

Carbon Black Requirements and Production in the USSR
and the Eastern European Communist Countries in 1966

Countries	Thousand Metric Tons	
	Production	Requirements
USSR	520	515
Eastern European Communist Countries	105	120
Rumania	38	21
Poland	25	26
Czechoslovakia	20	30
East Germany	21	33
Bulgaria	neg	4
Hungary	1	6
Total	625	635

B. Production

1. Quantity

Output of carbon black in 1966 amounted to an estimated 625,000 tons, only slightly less than the estimated requirements. Estimated production in the various Communist countries is shown in Table 1.

2. Types and Quality

In general, the Communist countries lag behind the US and the other major Free World countries in carbon black technology and, accordingly, in the quality and variety of carbon blacks produced. Much of the carbon black output in the USSR and the Eastern European Communist countries still

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loys the channel process as compared with the more efficient furnace process extensively employed by the US.

In the USSR, efforts have been made to increase output of furnace blacks and, though some progress has been made, shortages still persist. Carbon blacks in short supply in the USSR include high abrasion furnace (HAF) semi-reinforcing furnace (SRF), and fast extrusion furnace (FEF) types. The quality of Soviet carbon blacks has improved since 1959 but generally remains low in comparison with types of blacks produced by the US and other advanced Free World countries. In addition to the recurrent complaints regarding impurities, Soviet carbon black producers have experienced problems because of inadequate technology, poorly designed plants, and shortages of equipment. Difficulties in pelletizing carbon blacks apparently prompted the USSR to purchase a \$1.4 million pelletizing plant from Italy in 1966.

Rumania, the second largest producer, has a capability for producing the advanced types of furnace blacks such as FF (fine furnace), HAF (high abrasion furnace), ISAF (intermediate super abrasion furnace), SRF (semi-reinforcing furnace) and FEF carbon blacks. Most all of the foregoing, however, are produced in small amounts at a plant recently built by France in Pitesti. The other carbon black produced by Rumania is a channel type, known as MPC (medium processing channel). In contrast to the carbon blacks produced in other Communist countries, the quality of Rumanian blacks appears to be good. Analysis of a Rumanian semi-reinforcing black in 1960 indicated that its quality was comparable to that of US blacks.

Elsewhere in the Eastern European Communist countries, it is believed that carbon black output consists predominantly of channel blacks of relatively low quality.

C. Trade in Carbon Black

The USSR and the Eastern European Communist countries have been consistent net importers of carbon black from the Free World. Such imports, believed to consist largely of high grade blacks, were relatively stable in volume during 1960-1965. Imports were about 21,000 tons in 1965 and about 20,000 tons in 1960. Among the importing countries, however, significant changes have occurred, as indicated by the data in Table 2.

In the case of the USSR, where important additions to output of higher grade blacks have taken place since 1959, the volume of imports declined considerably from about 16,400 tons in 1960 to 5,000 tons in 1965. In the Eastern European Communist countries, however, the need for quality blacks resulted in a more than offsetting increase in imports from 3,300 tons in 1960 to about 16,000 in 1965.

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Table 2

Imports of Carbon Black from the Free World by the USSR and the Eastern European Communist Countries in 1960 and 1965

Country	Metric Tons	
	1960	1965
USSR	16,400	5,000
Czechoslovakia	1,300	7,500
Hungary	500	2,600
Bulgaria	900	1,800
Rumania		1,700
East Germany		1,100
Poland	600	1,000
Total	19,700	20,700

Major Free World suppliers in 1965 were, in order of importance, the Netherlands, France, the UK, Israel, Japan, and West Germany. Imports from the US in 1965 amounted to about 1,700 tons, with Czechoslovakia and Poland being the sole buyers.

Exports of carbon black to the Free World in 1965 were estimated at about 10,000 tons and presumably consisted of less advanced types. Major Free World importers were the Netherlands, Austria, the UK, and the UAR.

II. Outlook for 1970

A. Probable Requirements

It is estimated on the basis of projected output of tires that total requirements for carbon black in the USSR and the Eastern European Communist countries will range between 875,000 and 975,000 tons in 1970. As in the past, it is believed that roughly four-fifths of the total will

be needed by the USSR. Soviet carbon black requirements in 1970 are estimated to be about 700,000 - 800,000 tons. Requirements in Eastern European Communist countries probably will amount to about 175,000 tons per year in 1970. Estimated requirements by country in 1970 are presented in Table 3.

Table 3
Carbon Black Requirements and Production in the USSR
and the Eastern European Communist Countries in 1970

Countries	Thousand Metric Tons	
	Production	Requirements
USSR	735	700 - 800
Eastern European Communist Countries	195	176
Rumania	70	30
Poland	55	40
Czechoslovakia	25	45
East Germany	24	40
Bulgaria	20	12
Hungary	1	9
Total	930	876 - 976

Although it is not possible to delineate the quantities of carbon black by type that the Communist countries will require in 1970, it is apparent that plans calling for improvements in the quality of motor vehicle tires including greater use of stereorubber will result in relatively larger use of higher grade carbon blacks. Specifically, it is anticipated that requirements in 1970 will call for large increases in HAF, ISAF, and SAF types of carbon black.

B. Possible Output in 1970

1. Quantity

It is estimated that output of carbon black in the USSR and the Eastern European Communist countries will amount to about 930,000 tons per year in 1970. As such, output would be roughly consistent with the mid-point of estimated requirements, or about 925,000 tons. It should be noted, however, that the estimates of output and requirements for 1970 entail a good deal of uncertainty. Estimates of carbon black output in 1970 by the USSR and the Eastern European Communist Countries are shown in Table 3.

C. Plans for Increased Output and Outlook for Imports in 1970

1. The USSR

Although 1970 plans for production of carbon black are not known, it is believed that they call for substantial increases with particular emphasis on higher grade blacks. As part of their efforts to create additional capacity, the Soviets are expected to draw on the Free World for facilities and technology. While such purchases from the Free World in 1961-66 were small (about \$6 million) and consisted largely of equipment, the Soviets are now believed to have considerable interest in acquiring plants from the Free World for the production of carbon black.

Despite the seeming balance between Soviet output and requirements in 1970, it is believed that the USSR will continue to purchase selected carbon blacks from the Free World.

2. Rumania

Rumania's goals for output of carbon black in 1970 are indefinite. Expanded output and planned additions to existing capacity, however, indicate that production by 1970 will amount to about 70,000 tons per year, as compared with output of 38,000 tons in 1966. The additional output, of about 32,000 tons, will be generated largely by the new plant at Pitesti which has a current capacity for production of 18,500 tons per year. Plans call for a doubling of this capacity, possibly by 1970, and in all probability the additional equipment will be purchased from France which supplied the initial plant at a cost of \$4.8 million.

With its 1970 requirements for carbon black estimated at about 30,000 tons per year and its production possibly around 70,000 tons per year, it seems apparent that Rumania will be a substantial net exporter of carbon black.

3. Poland

In line with its expanded requirements for an estimated 40,000 tons of carbon black in 1970, Poland reportedly is negotiating the purchase of a 30,000 ton per year plant from _____ of the US. Assuming that this plant is purchased and in operation by 1970, Poland will be the second largest producer of carbon black in Eastern Europe and will have a net export capability.

4. Czechoslovakia

No plans have been announced for production of carbon black in 1970, and there are no signs that Czechoslovakia plans to construct additional facilities for production of carbon black. Although the Czechs have expressed an interest in acquiring a carbon black plant from _____ there is no evidence that actual negotiations for purchase of such a facility from the US or any other Free World country have taken place.

Allowing for some improvements in existing output, it is estimated that Czechoslovakia will produce about 25,000 tons of carbon black and will have to import an additional 20,000 tons to meet its requirements in 1970.

5. Bulgaria

Bulgaria's plans for expanded output of motor vehicle tires, furthered by the purchase of a 1.2 million unit per year plant from France, suggest that moves also may be underway to create a carbon black industry. As evidence of the latter, Bulgaria has actively pursued negotiations with _____ Corporation of the US and, assuming US approval of licensing, probably will purchase the 20,000 tons per year, \$8 million facility. This plant will provide a spectrum of high quality furnace blacks in sufficient quantity to support all of Bulgaria's requirements, estimated at 12,000 tons per year, and permit exports to other Communist countries.

6. East Germany

East Germany is not known to have any plans for production of carbon black in 1970 and there is no evidence of new construction or negotiations for purchase of carbon black facilities. Although technical improvements in the existing two carbon black plants may result in increased output in 1970 of about 24,000 tons per year, East Germany will have to import roughly 40 percent of its requirements or about 16,000 tons of carbon black in that year.

7. Hungary

There are no known plans for Hungary to expand output of carbon black to meet the anticipated requirement for about 9,000 tons per year in 1970. Accordingly, Hungary will need to import on the order of 8,000 tons of carbon black in 1970.