

19702

CIA HISTORICAL REVIEW PROGRAM  
RELEASE AS SANITIZED  
13000

~~SECRET~~

ECONOMIC INTELLIGENCE MEMORANDUM

TRENDS IN CONSTRUCTION AND IMPORTS  
OF NEW MARITIME SHIPS  
BY THE SINO-SOVIET BLOC  
1956-60

88888

CIA/RR EM 60-4

31 March 1960

~~WARNING~~

~~This material contains information affecting  
the National Defense of the United States  
within the meaning of the espionage laws,  
Title 18, USC, Secs. 793 and 794, the trans-  
mission or revelation of which in any manner  
to an unauthorized person is prohibited by law.~~

CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

~~SECRET~~

~~S-E-C-R-E-T~~

FOREWORD

This memorandum presents estimates for 1956-60 of the aggregate volume of construction of ships in the Sino-Soviet Bloc and of imports of new maritime ships by the Bloc. The data contained in the memorandum will aid in research identified by the Economic Intelligence Committee (EIC) as a priority research deficiency. The detailed nature of the information, which would have involved numerous source references for each of many estimates, makes the inclusion of source references infeasible, but source documentation for the estimates is available in the files of this Office.

~~S-E-C-R-E-T~~

~~SECRET~~

CONTENTS

	<u>Page</u>
Summary and Conclusions . . . . .	1
1. Introduction . . . . .	3
2. Shipbuilding for the Sino-Soviet Bloc in Non-Bloc Countries . . . . .	3
3. Shipbuilding in the Sino-Soviet Bloc . . . . .	5
a. Individual Countries . . . . .	5
b. Total Sino-Soviet Bloc . . . . .	6
4. Total New Construction and Imports by the Sino-Soviet Bloc . . . . .	9
5. Types of New Ships Acquired by the Sino-Soviet Bloc . . . . .	10

Appendix

Statistical Tables . . . . .	11
------------------------------	----

Tables

1. Estimated Imports of New Maritime Ships by the Sino-Soviet Bloc from Non-Bloc Countries, by Recipient, 1956-60 . . . . .	12
2. Estimated Imports of New Maritime Ships by the Sino-Soviet Bloc from Non-Bloc Countries, by Type of Ship, 1956-60 . . . . .	13
3. Summary of Estimated Imports of New Maritime Ships by the Sino-Soviet Bloc from Non-Bloc Countries, 1956-60 . . . . .	14
4. Estimated Completions of Maritime Ships by the Sino-Soviet Bloc, 1956-60 . . . . .	15
5. Summary of Estimated Completions of Maritime Ships by the Sino-Soviet Bloc, by Type of Ship and by Builder, 1956-60 . . . . .	20

~~SECRET~~

~~SECRET~~

Page

6. Summary of Estimated Completions of Maritime Ships by the Sino-Soviet Bloc, by Type of Ship, 1956-60 . . . . .	22
7. Estimated New Construction of Maritime Ships Retained or Exported by the Sino-Soviet Bloc, 1956-60 . . . . .	23
8. Summary of Estimated Imports of New Maritime Ships by the Sino-Soviet Bloc from Bloc Countries, 1956-60 . . . . .	25
9. Summary of Estimated New Construction and Imports of New Maritime Ships by the Sino-Soviet Bloc from All Sources, 1956-60 . . . . .	26

Charts

Following Page

Figure 1. Sino-Soviet Bloc: Estimated Imports of New Maritime Ships from Non-Bloc Countries, by Recipient, 1956-60 . . . . .

4

Figure 2. Sino-Soviet Bloc: Estimated Imports of New Maritime Ships from Non-Bloc Countries, by Type of Ship, 1956-60 . . . . .

4

Figure 3. Sino-Soviet Bloc: Estimated Total Shipbuilding, by Type of Ship, 1956-60 . . . . .

10

Figure 4. Sino-Soviet Bloc: Estimated Total New Ship Construction and Imports of New Maritime Ships from All Sources, 1956-60 . . . . .

10

~~SECRET~~

~~S-E-C-R-E-T~~

TRENDS IN CONSTRUCTION AND IMPORTS OF NEW MARITIME SHIPS  
BY THE SINO-SOVIET BLOC\*  
1956-60

Summary and Conclusions

During 1956-60 the Sino-Soviet Bloc will have constructed for domestic use an estimated total of 212 maritime ships\*\* amounting to about 1.1 million GRT and will have imported an estimated total of 318 amounting to about 1,117,000 GRT. Thus an estimated total of 530 ships amounting to about 2,270,000 GRT will have been added to the maritime fleets of the Bloc by the end of the period. Compared with the total size of the fleets of the Bloc, these new ships represent a substantial increase, averaging about 13 percent annually in terms of gross register tonnage.

Among non-Bloc countries, Finland is the leading exporter of maritime ships to the Sino-Soviet Bloc. It is estimated that Finland during 1956-60 will have delivered to the Bloc 51 ships totaling about 168,000 GRT. Of this total, it is expected that 46 ships amounting to 154,000 GRT will have been delivered to the USSR. Yugoslavia, which delivered its first maritime ship to the Bloc in 1958, will emerge by the

\* The estimates and conclusions in this memorandum represent the best judgment of this Office as of 1 February 1960. Throughout this memorandum, data used for 1959 are preliminary, and those for 1960 have been estimated on the basis of plans, announcements, and knowledge of the shipbuilding industry of the Bloc.

\*\* Unless otherwise indicated, the term ships as used in this memorandum refers only to new maritime ships of more than 1,000 gross register tons (GRT). (Gross register tonnage is a measure whereby the entire internal cubic capacity of the ship is expressed in register tons -- 100 cubic feet per ton. Not included in the measurement are certain spaces such as peak tanks and other tanks of water ballast, open forecastle, bridge and poop, hatchway excess, certain light and air spaces, anchor gear, steering gear, wheelhouse, galley, cabins for passengers, and other minor spaces specified by law.) Miscellaneous maritime ships such as harbor tugs, barges, floating cranes, and dredges are excluded. Also excluded are naval ships, inland ships, and small fishing craft. Included, however, have been certain basic maritime ships such as auxiliaries, submarine tenders, and range instrumentation ships that have been constructed in the Satellites and converted to naval use.

~~S-E-C-R-E-T~~

~~S-E-C-R-E-T~~

the end of 1960 as the second most important non-Bloc exporter in terms of gross register tonnage. At that time, Yugoslavia will have completed for the Bloc 11 ships totaling about 94,000 GRT. Other non-Bloc exporters to the Bloc during 1956-60 are expected to rank in terms of gross register tonnage as follows:

<u>Exporter</u>	<u>Number of Ships</u>	<u>Thousand GRT</u>
West Germany	24	79.3
Denmark	14	47.4
France	6	31.0
Netherlands	4	26.0
Belgium	9	23.3
Japan	3	17.9
Sweden	4	16.7

Over-all statistics on construction and imports of maritime ships by the Sino-Soviet Bloc indicate the following apparent trends: (1) following decreases in imports in 1956-58, an increasing amount of gross register tonnage to be imported by the USSR from non-Bloc countries in 1959-60, possibly as part of the Soviet Seven Year Plan (1959-65), in which it was announced that the maritime fleet would be doubled; (2) a buildup of the Polish and Chinese Communist shipbuilding industries, with Poland nearing the level of output of maritime ships by the USSR in 1960; (3) construction in the USSR of larger cargo ships and tankers with turbine propulsion instead of diesel propulsion; (4) entrance of Yugoslavia into the shipbuilding business as a supplier of maritime ships to the Bloc; and (5) the beginning of construction of maritime ships in Bulgaria and Rumania.

New maritime ships of less than 1,000 GRT are a minor part of the ships constructed or imported by the Sino-Soviet Bloc. Bloc construction of these ships during 1956-60 is estimated at about 60,000 GRT, and Bloc imports are estimated at about 15,000 GRT.

~~S-E-C-R-E-T~~

1. Introduction

The significant growth in the various maritime fleets of the Sino-Soviet Bloc because of imports of ships from non-Bloc countries and because of construction of new ships within the Bloc has necessitated a reappraisal of these imports and new construction during 1956-60. In most cases the countries and the types of ships concerned have received ample publicity, and some total annual data were obtained from publications of Lloyd's of London.

2. Shipbuilding for the Sino-Soviet Bloc in Non-Bloc Countries

Since the close of World War II the USSR has imported new maritime ships from various non-Bloc countries. During 1946-55 the USSR imported about 234,000 GRT of ships classified as cargo, tanker, passenger, and other,\* the chief exporting country being Finland. In this period the contributing exporting nations ranked as follows:

<u>Exporter</u>	<u>Thousands GRT</u>
Finland	113.6
Netherlands	36.7
Belgium	24.9
Sweden	19.7
Denmark	18.0
UK	10.6
Italy	7.0
West Germany	3.8
Total	234.3

Soviet imports of maritime ships from non-Bloc countries during 1956-60 are estimated at about 358,000 GRT, an increase of about 124,000 GRT, or about 50 percent, in this 5-year period compared with the previous 10-year period. Imports from outside the Bloc by other countries of the Sino-Soviet Bloc (Poland, Communist China, and Czechoslovakia) are estimated at 136,000 GRT, making a total of about

\* The classification other includes such ships as an atomic icebreaker, railroad car ferries, icebreakers, whale factory ships, fish factory trawlers, herring factories, research ships, and other ships that operate with the maritime fleet (especially of the USSR); that do not fit into the categories of cargo, tanker, and passenger ships; and that in certain cases probably are part of the fishing fleet. (See 5, p. 10, below.)

~~S-E-C-R-E-T~~

~~S-E-C-R-E-T~~

494,000 GRT of new maritime ships that will have been imported from outside the Bloc during 1956-60. Finland again is expected to rank as the chief exporter to the USSR, ranking with other countries as follows:

<u>Exporter</u>	<u>Number of Ships</u>	<u>Thousand GRT</u>
Finland	46	154.3
West Germany	22	63.5
Denmark	13	43.2
France	6	31.0
Netherlands	4	26.0
Belgium	9	23.3
Japan	2	9.9
Sweden	4	6.7
Total	106	357.9

Imports by Communist China and the European Satellites from non-Bloc countries during 1956-60 are estimated as follows:

<u>Exporter</u>	<u>Number of Ships</u>	<u>Thousand GRT</u>
Yugoslavia	11	94.3
West Germany	2	15.8
Finland	5	13.5
Japan	1	8.0
Denmark	1	4.2
Total	20	135.8

For a graph of estimated imports of maritime ships by the Sino-Soviet Bloc from non-Bloc countries during 1956-60, showing the number of ships that each Bloc country will receive, see Figure 1.\* For a chart of estimated imports by the Bloc from non-Bloc countries during 1956-60, showing the type of maritime ships involved, see Figure 2.\* A detailed statistical account of estimated Bloc imports during 1956-60 is shown by recipient in Table 1\*\* and by type of ship in Table 2.\*\*\* A brief tabular summary of the estimated gross register tonnage imported by the Bloc from non-Bloc countries during 1956-60 is shown in Table 3.\*\*\*\*

\* Following p. v.4.

\*\* Appendix A, p. 12, below.

\*\*\* Appendix A, p. 13, below.

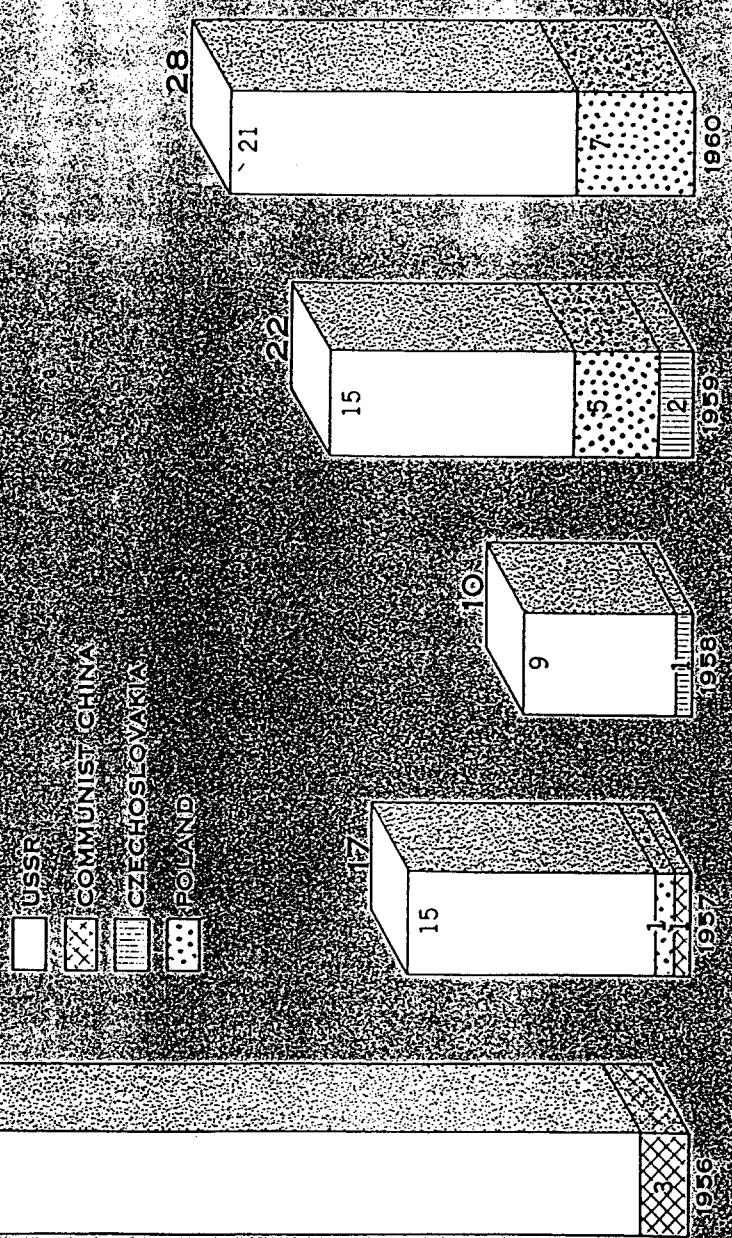
\*\*\*\* Appendix A, p. 14, below.

~~S-E-C-R-E-T~~

SECRET

**Figure 1**

### Sino-Soviet Bloc: Estimated Imports of New Maritime Ships from Non-Bloc Countries by Recipient, 1956-60



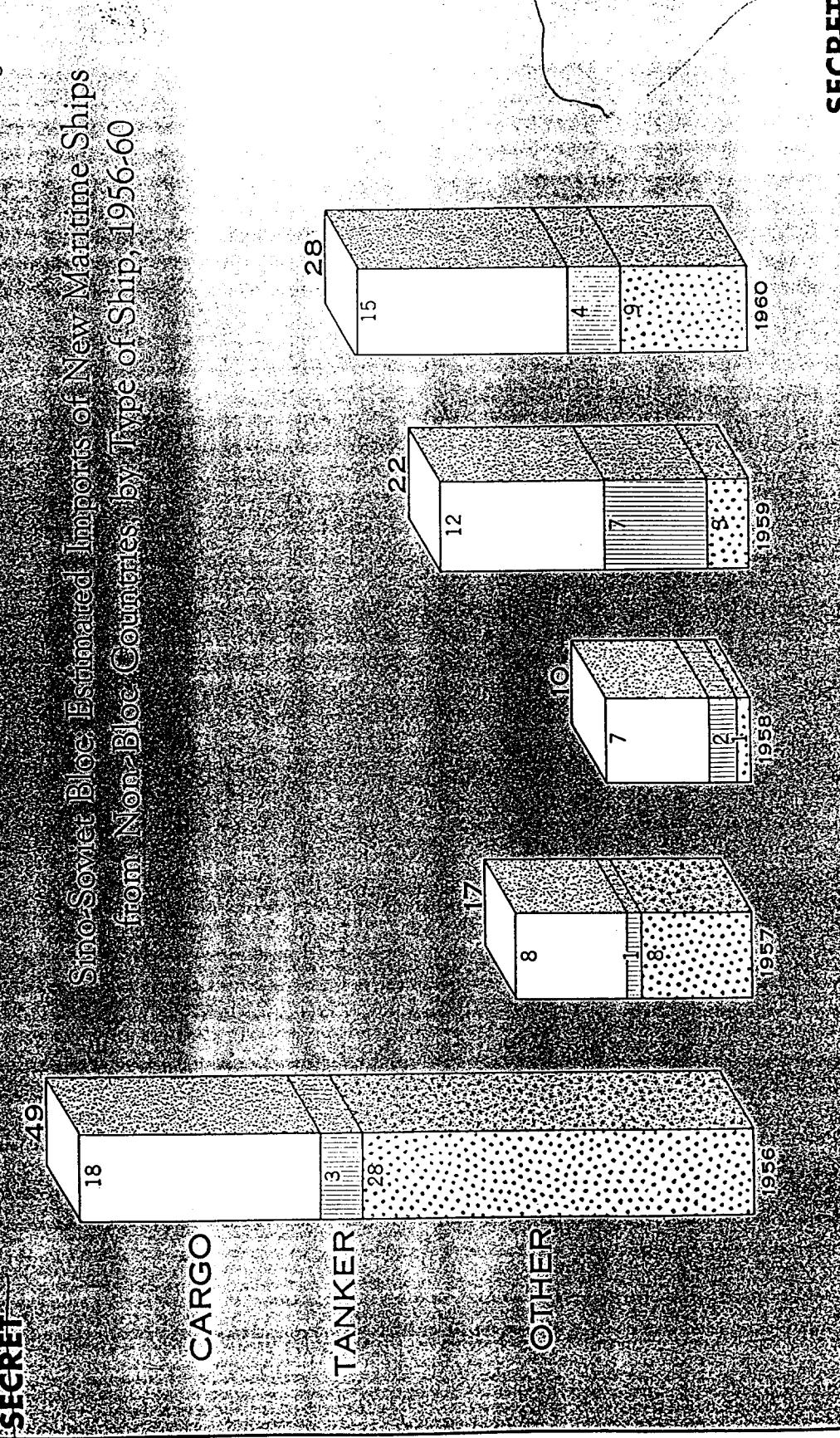
SFCP

**SECRET**

**SECRET**

Figure 2

Sino-Soviet Bloc Estimated Imports of New Maritime Ships  
from Non-Bloc Countries by Type of Ship, 1956-60



~~S-E-C-R-E-T~~

### 3. Shipbuilding in the Sino-Soviet Bloc

It is estimated that the Sino-Soviet Bloc completed about 550,000 GRT of new maritime ships during 1946-55. This tonnage is less than one-third of the estimate of the tonnage of construction by the Bloc during 1956-60. The main reasons for the comparably lesser tonnage during 1946-55 are that Bloc shipbuilding as a whole was not fully developed by the early 1950's and that the major Soviet shipyards were concentrating on construction of naval vessels.

#### a. Individual Countries

Construction by the USSR, the largest shipbuilding country of the Sino-Soviet Bloc, during 1956-60 is estimated at 132 maritime ships totaling about 754,000 GRT. Only two of these ships are for export to another Bloc country -- two tankers to East Germany in 1958, totaling about 16,500 GRT. The USSR also is the largest importer of ships from the other major shipbuilders in the Bloc. It is estimated that the USSR will have imported during 1956-60 more ships from the Satellites than it will have built for itself -- that is, 161 ships totaling about 569,000 GRT compared with domestic construction of 132 ships totaling about 754,000 GRT. The following tabulation shows the relative standing of Bloc exporters of maritime ships to the USSR during 1956-60:

<u>Exporter</u>	<u>Number of Ships</u>	<u>Thousand GRT</u>
Poland	166	299.1
East Germany	53	213.5
Hungary	39	47.9
Bulgaria	33	38.8
Total	161	569.3

The second largest shipbuilding country in the Sino-Soviet Bloc is Poland. Of an estimated total construction during 1956-60 of 135 ships of about 585,000 GRT, about 50 percent, or 66 ships from totaling almost 300,000 GRT, were scheduled for export to the USSR. About 25 percent of Polish construction is to be retained for the Polish merchant fleet -- 34 ships totaling about 165,000 GRT. Besides being the greatest contributor to the Soviet maritime fleet, Poland also has supplied 13 ships totaling about 46,000 GRT to Communist China and 2 ships totaling about 5,400 GRT to Albania. Poland also is constructing ships for some non-Bloc countries: by the end of 1960, Brazil, Indonesia, and Egypt are scheduled to receive 20 ships totaling about 70,000 GRT.

- S E C R E T -

East Germany, which ranks third in order of importance in shipbuilding in the Sino-Soviet Bloc, will have constructed during 1956-60 an estimated total of 84 ships amounting to about 340,000 GRT. Of this total, East German exports to the USSR are estimated at 53 ships amounting to about 214,000 GRT and representing 63 percent of East German construction; exports to other countries of the Bloc, at 7 ships totaling 29,000 GRT; and exports to non-Bloc countries, at 6 ships totaling about 11,000 GRT. Thus the amount retained for the East German maritime fleet would amount to 18 ships totaling about 87,000 GRT, or about 25 percent of construction.

Communist China, although a late entry in shipbuilding in the Sino-Soviet Bloc, will emerge as fourth when ranked by the total amount of gross register tonnage constructed by the end of 1960. During 1956-60, China is expected to have constructed 19 ships totaling about 91,000 GRT, none of which is slated for export. It is significant that China is the only major Bloc shipbuilder to retain all of its production.

Hungary will have constructed during 1956-60 an estimated total of 50 ships amounting to about 62,000 GRT and will rank fifth in importance in the Sino-Soviet Bloc, according to the amount of gross register tonnage constructed. About 78 percent of construction, 39 ships totaling nearly 48,000 GRT, is for the USSR. The only Bloc country that has received any ships from Hungary is Communist China, which received four ships totaling 4,800 GRT in 1956-57. Hungary is expected to retain about 15 percent of total construction, or seven ships totaling about 9,000 GRT.

Bulgaria began constructing ships for the USSR in 1959, and it is estimated that Bulgaria will have completed by the end of 1960 three ships totaling nearly 9,000 GRT for the USSR. Bulgaria also is scheduled to construct three ships of about 1,900 GRT each - one for Albania, one for Czechoslovakia, and one for North Korea. Bulgaria has retained two ships totaling almost 3,900 GRT for domestic use. According to the total tonnage to be produced, Bulgaria will rank sixth in shipbuilding in the Sino-Soviet Bloc by the end of 1960.

Rumania, the latest European Satellite to begin construction of maritime ships, is scheduled in 1960 to construct for retention two ships totaling 6,400 GRT.

b. Total Sino-Soviet Bloc

During 1956-60 the Sino-Soviet Bloc will have constructed an estimated total of 430 ships of all types amounting to about 2,

~~SECRET~~

1,858,000 GRT. On the basis of gross register tonnage constructed, individual countries are expected to rank as follows:

<u>Builder</u>	<u>Number of Ships</u>	<u>Thousand GRT</u>
USSR	132	754.1
Poland	135	585.4
East Germany	84	340.3
Communist China	19	91.3
Hungary	50	61.8
Bulgaria	8	18.5
Rumania	2	6.4
<b>Total</b>	<b>430</b>	<b>1,857.8</b>

These 430 ships may be categorized as follows:

<u>Type</u>	<u>Number of Ships</u>	<u>Thousand GRT</u>
Cargo	291	1,136.4
Tanker	62	389.5
Passenger	17	54.0
Other	60	277.9
<b>Total</b>	<b>430</b>	<b>1,857.8</b>

Exports of maritime ships by the Sino-Soviet Bloc during 1956-60 are estimated to be in the following order of magnitude:

<u>Exporter</u>	<u>Number of Ships</u>	<u>Thousand GRT</u>
USSR	101	421.0
Poland	66	253.7
East Germany	43	52.7
Hungary	6	14.7
Bulgaria	12	16.5
<b>Total</b>	<b>218</b>	<b>758.6</b>

- S-E-C-R-E-T -

These ships and tonnages are expected to be distributed as follows:

<u>Recipient</u>	<u>Number of Ships</u>	<u>Thousand GRT</u>
Sino-Soviet Bloc		
USSR	161	569.3
Communist China	21	64.3
East Germany	2	16.5
Czechoslovakia	2	8.4
Albania	3	7.3
Poland	1	6.5
Bulgaria	1	3.3
North Korea	1	1.9
Subtotal	<u>192</u>	<u>677.5</u>
Non-Bloc		
Brazil	12	45.6
Egypt	4	13.1
Indonesia	4	11.4
West Germany	4	7.3
Guatemala	2	3.6
Subtotal	<u>26</u>	<u>81.0</u>
Total	<u>218</u>	<u>758.6*</u>

In 1959 the Sino-Soviet Bloc began to complete larger ships than had been previously constructed. These ships were the 12,090-GRT Leninskiy Komsomol-class cargo ship and the 18,750-GRT Pekin-class tanker, both of which represent a change from diesel propulsion to turbine propulsion, and the 20,000-GRT Sovetskaya Ukraina-class whale factory ship, all constructed in the USSR. These ships also represented a change from diesel propulsion to turbine propulsion. In addition, the USSR completed the 13,000-GRT atomic icebreaker Lenin, the world's first maritime ship with nuclear propulsion. Communist China also completed its first 12,090-GRT Leap Forward-class cargo ship in 1959. This ship presumably belongs to the same class as the Soviet ship Leninskiy Komsomol and is the largest maritime ship ever constructed in China. On a smaller scale, Hungary, Bulgaria, and Rumania were scheduled to begin construction during 1956-60 of ships that in most cases were of a type and size that these Satellites had not previously constructed.

\* Total of unrounded data from Table 7, p. 23, below.

-S-E-C-R-E-T-

It is estimated that in the aggregate the Sino-Soviet Bloc will have constructed during 1956-60 about 57 different types of maritime ships. Of these types, it is believed that 25 represent cargo ships; 5, passenger ships; 6, tankers; and 11, other types. The total Bloc construction during the period, by type and number of ships, is shown in Figure 3,\* which indicates that the maritime shipbuilding effort in the Bloc will have been expended principally on cargo ships and tankers, with only about 18 percent of the total effort expended on passenger ships and other types. For complete data on Bloc construction of ships, see Tables 4, 5, and 6,\*\* and for Bloc imports from Bloc sources, see Tables 7 and 8.\*\*\*

There is evidence that the USSR has furnished technical assistance to Communist China in matters of shipbuilding, and it is probable that Soviet technical assistance also has been given to a lesser degree to some of the European Satellites.

#### 4. Total New Construction and Imports by the Sino-Soviet Bloc

It is estimated that the USSR will have added to its fleet during 1956-60 a total of 397 maritime ships amounting to about 1,665,000 GRT. This total includes ships that the USSR will construct itself, ships imported from Sino-Soviet Bloc sources, and ships imported from non-Bloc sources. A percentage breakdown of these three sources of ships, in terms of gross register tonnage, is as follows: 44 percent from Soviet construction (about 738,000 GRT), 34 percent from other Bloc sources (about 569,000 GRT); and 22 percent from non-Bloc sources (about 358,000 GRT).

Other countries of importance in shipbuilding in the Sino-Soviet Bloc are Poland, Communist China, and East Germany. It is estimated that these countries combined will have added to their fleets during 1956-60 a total of 112 ships amounting to about 537,000 GRT, or roughly one-third of the Soviet total. It is estimated that the remaining Satellites, all with relatively small fleets, will have added a total of 21 ships amounting to about 68,000 GRT.

The estimated combined size of the fleet of the Sino-Soviet Bloc during 1956-60 and the relation of newly constructed ships acquired

\* Following p. 10.

\*\* Appendix A, pp. 15, 20, and 22, respectively, below.

\*\*\* Appendix A, pp. 23 and 25, respectively, below.

-S-E-C-R-E-T-

S-E-C-R-E-T

from non-Bloc countries to those constructed in the Bloc are shown in the following tabulation:

Year	Sino-Soviet Bloc Fleet (Thousand GRT)	Imports from Outside the Bloc		Construction in the Bloc	
		Thousand GRT	Percent of Fleet	Thousand GRT	Percent of Fleet
1956	2,947	141	5	254	9
1957	3,239	61	2	313	10
1958	3,543	37	1	314	9
1959	3,913	116	3	471	12
1960	4,417	139	3	425	10

It is apparent that, during 1956-60, the estimated number of newly constructed ships from both sources will have constituted only a small percentage, in terms of gross register tonnage, of the total Bloc fleet, imports from non-Bloc countries averaging 3 percent and new construction in the Bloc averaging 10 percent.

The estimated total Bloc additions of maritime ships from all sources, by source of ships, are shown in Figure 4.\* A complete statistical breakdown of total imports and retention by the Bloc countries is shown in Table 9.\*\*

#### 5. Types of New Ships Acquired by the Sino-Soviet Bloc Fleets

The types of ships scheduled for construction or import by the Sino-Soviet Bloc during 1956-60 cover a wide range. Basically, they have been grouped arbitrarily into four general classifications: cargo, tanker, passenger, and other. A categorization of ships scheduled to have been constructed in non-Bloc countries for the Bloc during 1956-60, by type, is shown in Table 2.\*\*\* This table shows that the USSR will have imported, in terms of number of ships, about 75 percent of the cargo ships, 70 percent of the tankers, and 100 percent of the ships listed as "other." The rest of the ships imported from non-Bloc countries will have been received by Poland, Communist China, and Czechoslovakia, with Poland receiving the largest number.

New maritime ships of less than 1,000 GRT constitute only a very small percentage of the ships constructed by the Sino-Soviet Bloc or imported from non-Bloc countries. During 1956-60 the total Bloc construction of these ships is estimated at about 60,000 GRT, and Bloc imports from non-Bloc countries are estimated at about 5,000 GRT.

\* Following p. 10.

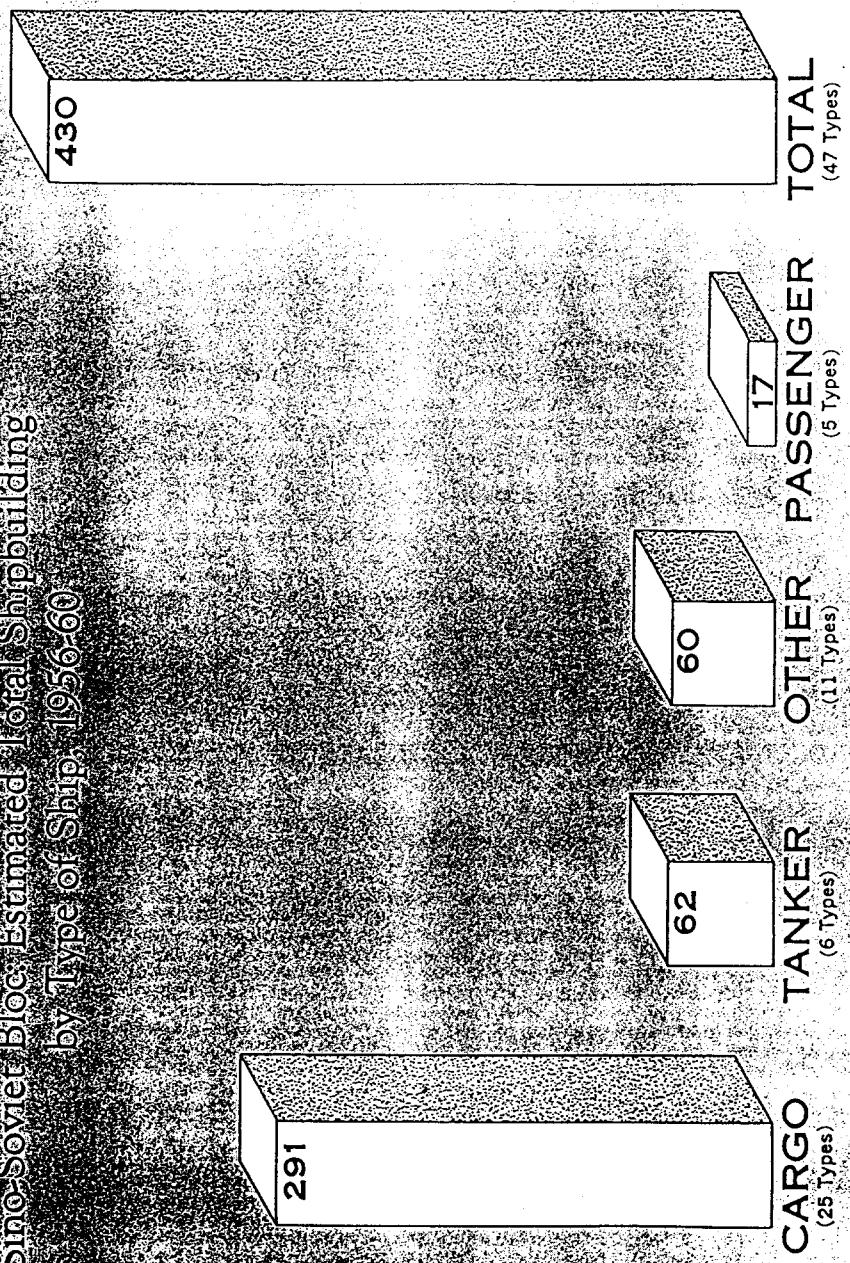
\*\* Appendix A, p. 26, below.

\*\*\* Appendix A, p. 13, below.

Figure 3

~~SECRET~~

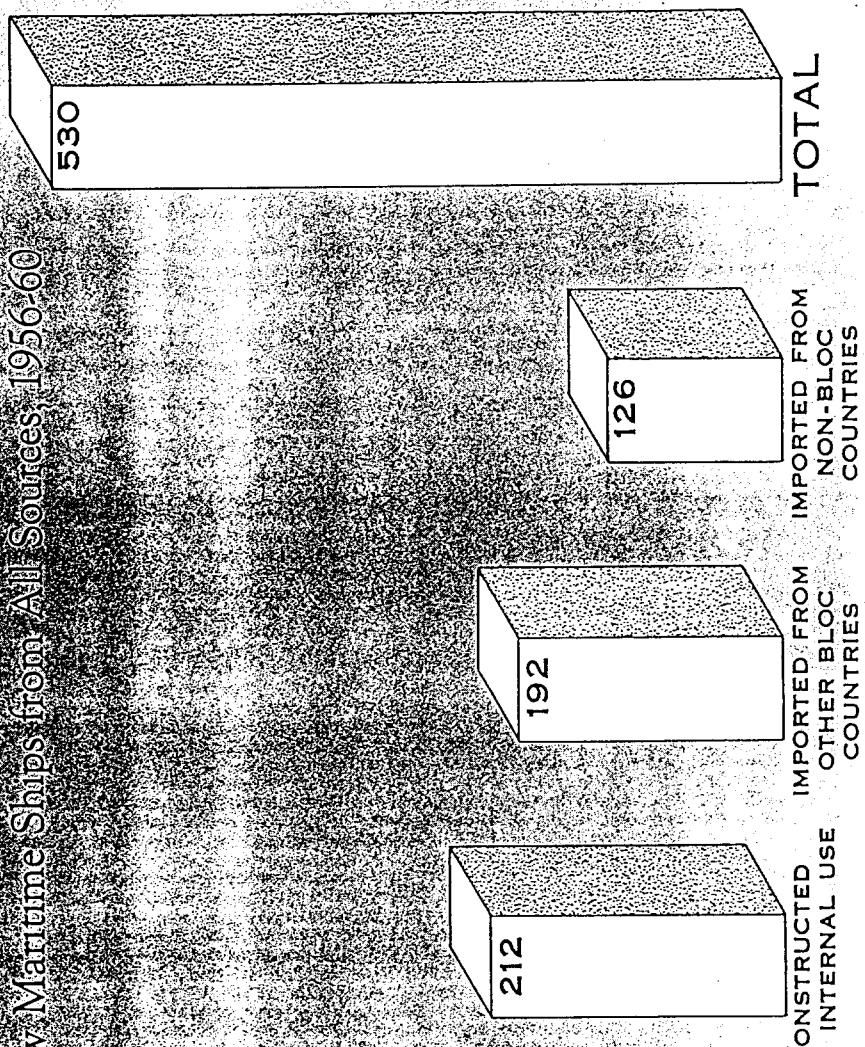
Sino-Soviet Bloc: Estimated Total Shipbuilding  
by Type of Ship: 1956-60

~~SECRET~~

~~SECRET~~

Figure 4.

Sino-Soviet Bloc Estimated Total New Construction and Imports  
of New Maritime Ships from All Sources 1956-60



~~S-E-C-R-E-T~~

APPENDIX

STATISTICAL TABLES

~~S-E-C-R-E-T~~

T-TESTS

Table 1

**Estimated Imports of New Maritime Ships by the Sino-Soviet Bloc  
from Non-Bloc Countries, by Recipient**

a. Subsequently delivered to Communist China.

12

卷之三

Table 2

Estimated Imports of New Maritime Ships by the Sino-Soviet Bloc  
from Non-Bloc Countries, by Type of Ship  
1956-60

Recipient and Type of Ship	1956			1957			1958			1959			1960			Total	
	Number of Ships	Gross Register Tons															
<b>USSR</b>																	
Cargo Tanker	16	57,519 a/	7	20,804	6	19,826	7	27,690	9	46,890	45	172,729 b/					
Other b/	2	6,000	28	69,450	8	34,740	1	6,610	5	16,500	3	9,900	12	39,040			
<b>Subtotal</b>	<b>46</b>	<b>132,969</b>	<b>35</b>	<b>25,544</b>	<b>2</b>	<b>20,246</b>	<b>15</b>	<b>25,280</b>	<b>21</b>	<b>81,880</b>	<b>106</b>	<b>146,150</b>					
<b>Poland</b>																	
Cargo Tanker			1	3,320 b/					4	25,700	6	41,900	10	67,600			
<b>Subtotal</b>			<b>1</b>	<b>3,320</b>					<b>1</b>	<b>13,268</b>	<b>1</b>	<b>13,268</b>	<b>3</b>	<b>29,856</b>			
<b>Communist China</b>																	
Cargo Tanker	2	4,600	1	2,300													
<b>Subtotal</b>	<b>2</b>	<b>4,600</b>	<b>1</b>	<b>2,300</b>													
<b>Czechoslovakia</b>																	
Cargo Tanker									1	6,800	1	8,000	2	14,800			
<b>Subtotal</b>									<b>1</b>	<b>6,800</b>	<b>2</b>	<b>21,339</b>	<b>1</b>	<b>13,339</b>			
<b>Total</b>	<b>49</b>	<b>140,869</b>	<b>37</b>	<b>61,164</b>	<b>10</b>	<b>27,046</b>	<b>22</b>	<b>215,587</b>	<b>28</b>	<b>139,048</b>	<b>106</b>	<b>28,139</b>	<b>3</b>	<b>28,139</b>			<b>493,714</b>

a. Including an icebreaker.

b. The 28 ships imported in 1956 comprised 14 refrigerated fish carriers totaling 33,750 gross register tons (GRT) and 14 fish factory trawlers totaling 35,700 GRT; the 8 ships in 1957 comprised 3 refrigerated fish carriers totaling 7,110 GRT, 2 fish factory trawlers totaling 5,100 GRT, and 3 icebreaker cargo ships totaling 22,500 GRT; the 1 ship in 1958 was a refrigerated fish carrier; the 3 ships in 1959 included 2 refrigerated fish carriers totaling 6,110 GRT; and the 9 ships in 1960 include 2 refrigerated fish carriers totaling 6,110 GRT.

c. Subsequently delivered to Communist China.

Table 3

~~S-E-C-R-E-T~~

**Summary of Estimated Imports of New Maritime Ships by the Sino-Soviet Bloc from Non-Bloc Countries  
1956-60**

<u>Recipient</u>	<u>1956</u>			<u>1957</u>			<u>1958</u>			<u>1959</u>			<u>1960</u>			<u>Total</u>	
	<u>Number of Ships</u>	<u>Gross Register Tons</u>															
USSR	46	132,969	15	55,544	9	30,246	15	55,280	21	83,880	106	357,919					
Poland			1	3,320			5	38,968	7	55,168	13	97,456					
Communist China	3	7,900	1	2,300							4	10,200					
Czechoslovakia					1	6,800	2	21,339				3	28,139				
<b>Total</b>	<b>42</b>	<b>140,869</b>	<b>17</b>	<b>61,164</b>	<b>10</b>	<b>37,046</b>	<b>22</b>	<b>115,587</b>	<b>28</b>	<b>139,048</b>	<b>126</b>	<b>493,774</b>					

Table 4

Estimated Completions of Maritime Ships by the Sino-Soviet Bloc  
1956-60

Cargo	Type and Builder	1956			1957			1958			1959			1960			Total
		Gross Register Tons per Ship	Number of Ships	Gross Register Tons	Number of Ships												
USSR																	
GDS class	5,494	3	16,482	3	16,482	4	20,868	3	15,651	3	15,651	6	32,964	6	32,964		
Atyubinsk class	5,217	3	15,651	7	36,519			3	36,270	3	36,270	20	104,310				
Leninets Komissar class	12,090																
Unknown class	4,750																
<sup>6</sup> Inzherener Belov class <sup>a/*</sup>	2,900																
Subtotal		6	32,133	10	53,001	4	20,868	6	21,291	10	65,371	36	223,224				
Poland																	
B-31 Donbas class	3,858	13	50,154	10	38,580	12	46,296	8	30,864	5	19,290	48	185,184				
B-32 Chulyum class	2,686	11	29,546	11	29,546	7	18,802	1	2,686								
B-54 Marceli Nowotko class	7,190	1	7,190	4	28,760	4	28,760	5	35,950	4	28,760	18	129,120				
B-59 Oliva class	2,965																
B-51 Unknown class	1,300																
B-54 Unknown class	4,200																
B-55 Krynicz class	3,687																
Subtotal		25	86,890	25	86,890	25	101,232	22	25,165	21	88,128	118	468,101				
Communist China																	
Leap Forward class	12,090																
Ho Ping No. 25 class	4,550																
Unknown class	1,300																
Subtotal																	

\* Footnote for Table 4 follows on p. 19.

Table 4

Estimated Completions of Maritime Ships by the Sino-Soviet Bloc  
1956-60  
(Continued)

Type and Builder	Gross Register Tons per Ship	Number of Ships	Gross Register Tons	Number of Ships	Total								
											1956	1957	
<b>Cargo (Continued)</b>													
East Germany													
Kolomna class	3,258	7	22,806	4	13,032	5	16,290				16	52,128	
Andizhan class	3,358				6	20,148	8	26,864	8	26,864	22	73,876	
Frieden class	6,500	3	19,500	4	26,000	3	19,500	3	19,500	13	84,500		
Uglegul'ek class	5,628			3	16,884	5	28,140	5	28,140	13	73,164		
Dri class	1,816			1	1,816	2	3,632	3	5,148	6	10,896		
Subtotal		7	22,806	7	32,532	12	31,138	18	78,136	19	79,252	70	294,564
Hungary													
Tisza class	1,200	11	13,200	7	8,400	12	14,400	10	12,000		40	48,000	
Hasan class	1,300				1	1,300	1	1,300	4	5,200	6	7,800	
Unknown class	1,500								6,000		4	6,000	
Subtotal		11	13,200	1	8,400	13	15,700	11	13,300	8	11,200	20	63,800
Bulgaria													
Vaptsarov class	1,935					2	3,870	1	1,935	2	3,870	5	2,672
Romania													
Unknown class	3,200	49	155,029	49	180,812	61	227,358	61	261,647	2	6,400	2	6,400
Total									68	301,521	221	1,136,444	

- 16 -

~~S-E-C-B-E-T~~

~~S-E-R-E-T~~

Table 4

Estimated Completions of Maritime Ships by the Sino-Soviet Bloc  
 1956-60  
 (Continued)

Type and Builder	Gross Register Tons per Ship	Number of Ships	Gross Register Tons	Number of Ships	Total											
															Remarks	
<b>Passenger</b>																
USSR																
Zabkai'ye class	4,400	1	4,400	2	4,400			1	2,500	2	8,800					
Kirgizstan class	2,500										2,500					
<b>Subtotal</b>																
Poland																
B-450, unknown class	2,760															
Communist China																
Min Chu No.. 14 class	1,500															
East Germany																
Mikhail Kalinin class	4,700															
<b>Total</b>																
<b>Tanker</b>																
USSR																
Kazbek class	8,229	11	90,519	12	98,748	5	41,145	4	32,916	32	263,328					
Oleg Koshevay class <sup>a/</sup>	2,950	3	8,850	5	14,750	5	14,750	5	15,750	18	53,100					
<i>Including two ships delivered to the Soviet navy</i>																
<i>Combined sea-river type; including three ships probably modified as water carriers (about eight are the <u>Lutheer Pustosahkin</u> version)</i>																

~~S-E-R-E-T~~

Table 4  
 Estimated Completions of Maritime Ships by the Sino-Soviet Bloc  
 1956-60  
 (Continued)

Type and Builder	Tons per Ship	1956			1957			1958			1959			1960			Total	
		Gross Register Number of Ships	Register Number of Ships	Gross Tons	Gross Register Number of Ships	Register Number of Ships	Gross Tons	Gross Register Number of Ships	Register Number of Ships	Gross Tons	Gross Register Number of Ships	Register Number of Ships	Gross Tons	Gross Register Number of Ships	Register Number of Ships	Gross Tons	Remarks	
<b>Tanker (Continued)</b>																		
USSR																		
Pokin class	18,750	14	22,362	17	113,498	10	55,892	10	55,892	10	18,750	1	18,750	1	18,750	2	37,500	
Subtotal																		353,226
Poland																		
B-70, unknown class	12,600																	12,600
Communist China																		
Chien She class	3,300																	2,200
East Germany																		
Unknown class	1,400																	4,200
Bulgaria																		
Fedya Gubanov class S/	2,950																	8,850
Total	14	22,362	17	113,498	10	55,892	16	55,892	10	55,892	16	80,166	2	80,166	2	40,550	62	389,478

18

Table 4

Estimated Completions of Maritime Ships by the Sino-Soviet Bloc  
 1956-60  
 (Continued)

Type and Builder Other	1956			1957			1958			1959			1960			Total		
	Gross Register Tons per Ship	Number of Ships	Gross Register Tons	Number of Ships	Remarks													
URSS																		
Unknown class	4,500																	
Lenin	13,000																	
Sovetskaya Ukraina class	20,000																	
Mayakovskiy class	3,170																	
Unknown class	9,500																	
Subtotal																		
Poland																		
B-15, Czernyzevski class	2,600																	
B-62, Severodvinsk class	11,540																	
Subtotal																		
East Germany																		
Mikhail Lomonosov	3,897																	
Sassnitz	5,000																	
Unknown class	1,800																	
Bertold Brecht	1,300																	
Subtotal																		
Total																		

a. Intended for use on the Caspian Sea and adjoining inland waterways.

Table 5

Summary of Estimated Completions of Maritime Ships by the Sino-Soviet Bloc  
by Type of Ship and by Builder  
1956-60

Type and Builder	Number of Ships	1956		1957		1958		1959		1960		Total	
		Gross Register Tons	Number of Ships										
<b>Cargo</b>													
USSR	6	32,133	10	53,001	4	20,868	6	51,921	10	65,371	36	223,294	
Poland	25	86,890	25	96,886	25	101,232	22	95,165	21	88,128	18	468,301	
East Germany	7	22,866	7	32,532	19	81,138	18	78,136	19	79,552	70	294,564	
Communist China													
Hungary	11	13,200	7	8,400	13	4,550	3	21,190	6	46,670	10	72,410	
Bulgaria													
Romania													
Subtotal	49	155,029	49	190,819	64	227,358	61	261,647	68	301,521	221	1,136,444	
<b>Passenger</b>													
USSR			1	4,400	1	4,400				1	2,500	3	11,300
Poland					2	9,400				2	5,220	2	5,520
East Germany					2	3,000	2			2	9,400	6	28,200
Communist China												6	9,000
Subtotal			1	4,400	2	16,800	4	12,400	7	20,420	17		54,020
<b>Tanker</b>													
USSR	14	99,369	17	113,498	10	55,895	10	66,416	1	18,750	92	353,928	
Poland												1	12,600
East Germany												3	4,200
Communist China												3	3,300
Bulgaria												3	9,900
Subtotal	14	29,369	17	113,498	10	55,895	16	80,166	5	40,550	62	8,850	
													389,478

~~S-E-C-R-E-T~~

Table 5  
 Summary of Estimated Completions of Maritime Ships by the Sino-Soviet Bloc  
 by Type of Ship and by Builder  
 1956-60  
 (Continued)

Type and Builder	1956			1957			1958			1959			1960			Total
	Number of Ships	Gross Register Tons	Number of Ships													
Other																
USSR																
Poland																
East Germany																
Subtotal																
Total	63	<u>254,398</u>	68	<u>312,614</u>	88	<u>336,953</u>	106	<u>492,953</u>	105	<u>460,921</u>	140	<u>1,857,832</u>				

~~S-E-C-R-E-T~~

Table 6

Summary of Estimated Completions of Maritime Ships by the Sino-Soviet Bloc  
by Type of Ship  
\* 1956-60

Type	1956			1957			1958			1959			1960			Total	
	Number of Ships	Gross Register Tons															
Cargo	49	155,029	49	190,819	64	227,358	61	261,647	68	301,591	291	1,136,444					
Passenger			1	4,400	5	16,800	4	12,400	7	20,420	17	54,020					
Tanker	14	99,369	17	113,498	10	55,895	16	80,166	5	40,550	62	389,478					
Other			1	3,897	9	36,900	25	138,740	25	98,360	60	277,897					
Total	63	254,398	68	312,614	88	336,923	106	492,293	105	460,921	430	1,857,832					

~~S-E-C-R-E-T~~

Table 7

Estimated New Construction of Maritime Ships Retained or Exported  
by the Sino-Soviet Bloc  
1956-60

Builder	Recipient	1956			1957			1958			1959			1960			Total	
		Gross Register Tons	Number of Ships	Number of Ships	Gross Register Tons	Number of Ships	Number of Ships	Gross Register Tons	Number of Ships	Number of Ships	Gross Register Tons	Number of Ships	Number of Ships	Gross Register Tons	Number of Ships	Number of Ships	Gross Register Tons	
USSR																		
Retained																		
Exported	East Germany	20	131,502	28	170,899	21	90,065	-33	200,217	28	145,001	130	737,684	2	16,558			
Subtotal		20	<u>131,502</u>	28	<u>170,899</u>	23	<u>106,523</u>	33	<u>200,217</u>	28	<u>145,001</u>	132	<u>754,142</u>					
Poland																		
Retained																		
Exported	USSR	1	7,190	8	40,676	7	25,308	7	32,487	11	58,708	34	164,369					
	Communist China	17	58,554	12	38,092	11	56,784	14	90,146	12	55,480	66	299,056					
	Albania	7	21,146	5	18,118	1	7,190	1						46,154				
	Brazil													2,686	1		5,372	
	Indonesia													18,606	5	19,290	2	
	Egypt													13,088	4	11,450	12	45,612
																11,450	4	
																13,088	13,088	
Subtotal		25	<u>86,890</u>	25	<u>26,886</u>	26	<u>112,772</u>	27	<u>143,925</u>	32	<u>114,928</u>	132	<u>585,401</u>					
East Germany																		
Retained																		
Exported	USSR	7	22,806	3	16,258	3	19,500	8	30,000	4	20,800	18	86,558					
	Poland			1	10,413	12	49,690	16	66,204	15	64,404	53	213,217					
	Communist China			1	6,500	4	13,032							6,500		13,032		
	Bulgaria													6,500	1	3,258		
	Czechoslovakia													1,816	1	6,500	1	
	Guatemala													1,816	1	3,632	2	
	West Germany													5,448	3	7,264	4	
														22,836	22	20,652	84	
Subtotal		1	<u>22,806</u>	8	<u>36,429</u>	21	<u>20,538</u>	26	<u>22,836</u>	22	<u>20,652</u>	84	<u>340,261</u>					

~~S-E-C-R-E-T~~

Table 7

Estimated New Construction of Maritime Ships Retained or Exported  
by the Sino-Soviet Bloc  
1956-60  
(Continued)

Builder	Recipient	1956			1957			1958			1959			1960			Total		
		Gross Register Tons	Number of Ships																
Communist China																			
Retained																			
Hungary																			
Retained	USSR	1,200	1	1,200	1	1,300	1	1,300	1	4,100	3	9,100	7	4,100	3	9,100	7		
Exported	Communist China	9,600	4	4,800	12	14,400	10	12,000	5	7,100	4	47,900	4	4,800	4	47,900	4		
Subtotal		2,400	2	2,400															
Bulgaria																			
Retained	USSR																		
Exported	Albania																		
Czechoslovakia																			
North Korea																			
Subtotal																			
Rumania																			
Retained																			
Total		63	254,398	68	312,614	88	336,253	106	492,253	105	460,921	430	1,851,839	430	6,400	2	6,400	2	

- 24 -

~~SECRET~~

~~S-E-C-R-E-T~~

Table 8

Summary of Estimated Imports of New Maritime Ships by the Sino-Soviet Bloc from Bloc Countries  
1956-60

Recipient	1956			1957			1958			1959			1960			Total	
	Number of Ships	Gross Register Tons	Number of Ships	Total													
USSR	32	90,960	19	53,305	35	120,874	41	171,300	34	132,864	161	569,323					
Poland			1	6,500									1	6,500			
East Germany					2	16,458							2	16,458			
Communist China	9	23,546	7	20,518	5	20,222							21	64,286			
Bulgaria			1	3,258									1	3,258			
Albania					1	2,686	2	4,621					3	7,307			
Czechoslovakia					1	6,500							2	6,435			
North Korea													1	1,935			
Total	41	<u>114,506</u>	<u>28</u>	<u>83,581</u>	<u>44</u>	<u>166,740</u>	<u>43</u>	<u>175,221</u>	<u>36</u>	<u>136,754</u>	<u>192</u>	<u>677,502</u>					

- 25 -

~~S-E-C-R-E-T~~

~~S-E-C-R-E-T~~

Table 9

Summary of Estimated New Construction and Imports of New Maritime Ships  
by the Sino-Soviet Bloc from All Sources  
1956-60

Country	Construction for Internal Use			Imports from Non-Bloc Countries			Imports from Other Members of the Bloc			Total		
	Number of Ships	Thousand Gross Tons	Number Register of Ships	Thousand Gross Tons	Number Register of Ships	Number of Ships	Thousand Gross Tons	Number Register of Ships	Number of Ships	Thousand Gross Tons	Number Register of Ships	
USSR	130	737.7	106	357.9	161	569.3	397	1,664.9				
Poland	34	164.4	13	97.5	1	6.5	48	268.4				
East Germany	18	86.6			2	16.5	20	103.1				
Communist China	19	91.3	4	10.2	21	64.3	44	165.8				
Hungary	7	9.1					1	3.3	7	9.1		
Bulgaria	2	3.9							3	7.2		
Rumania	2	6.4							2	6.4		
Albania									3	7.3		
Czechoslovakia									5	36.5		
North Korea									1	1.9	1.9	
Total	212	<u>1,099.4</u>		<u>126</u>	<u>493.7</u>	<u>122</u>	<u>677.5</u>		<u>530</u>	<u>2,270.6</u>		

~~S-E-C-R-E-T~~

- 26 -