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Economic Intelligence Memorandum

THE NEW PROGRAM
FOR THE CONSTRUCTION EQUIPMENT INDUSTRY
IN THE USSR UNDER THE SEVEN YEAR PLAN (1959-65)



CIA/RR EM 60-24

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CENTRAL INTELLIGENCE AGENCY

Office of Research and Reports

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FOREWORD

This memorandum presents an analysis of changes in the goals of the Seven Year Plan (1959-65) for an important branch of machine building in the USSR, the construction equipment industry. The performance of this industry in supplying equipment to the construction industry will be an important determinant of the success of the ambitious Soviet plan for industrial and residential construction during the period 1959-65.

This memorandum has been coordinated within this Office but not with other USIB agencies.

- iii -

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CONTENTS

	<u>Page</u>
Summary and Conclusions	1
1. Shortcomings in the Industry	3
2. New Program	5

Appendix

Source References	9
-----------------------------	---

Table

Estimated Production of Selected Types of Construction Equipment in the USSR, 1959-65	8
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THE NEW PROGRAM FOR THE CONSTRUCTION EQUIPMENT INDUSTRY IN THE USSR
UNDER THE SEVEN YEAR PLAN (1959-65)*

Summary and Conclusions

In September 1960 the USSR announced the first considerable increase in goals of the Seven Year Plan (1959-65) for a major branch of the machine building sector. In a sweeping program of changes, the construction equipment industry was given an investment stimulus in the form of a supplementary allocation of 867 million rubles** and was directed to increase its output substantially during the remainder of the Seven Year Plan period. This striking announcement came on the heels of a year and a half of disappointing production performance. By the middle of the second year of the Seven Year Plan, the industry apparently was suffering from many shortcomings, among which were lack of sufficient plant capacity, insufficient capital investment, inadequate supply of the principal components purchased from suppliers, poor industrial management procedures, and inadequate specialization of plants.

The new plan objectives are to rectify these shortcomings, and if these objectives are achieved, the USSR probably will reach the long-desired goal of surpassing the US in output of construction equipment, at least for certain major items. Such an achievement also would place the USSR in a more favorable position insofar as achievement of an increased level of labor productivity and mechanization of construction are concerned. If the quantities are in excess of the requirements of the construction industry -- and it is possible that they may be -- the USSR also will be in position to supply substantial numbers of basic types of construction equipment to the underdeveloped countries in Africa and Asia. There are, however, many unresolved problems for both the construction and the construction equipment industries, not the least of which is the nagging continual short supply of spare parts. Unless the volume of output of spare parts is given an emphasis corresponding to that of the equipment itself, the achievement of the increased goals for the Seven Year Plan could be a hollow victory.

* The estimates and conclusions in this memorandum represent the best judgment of this Office as of 1 November 1960.

** Ruble values in this memorandum are assumed to be in constant Soviet Seven Year Plan prices and may be converted to US dollars at a rate of exchange of 4 rubles to US \$1. This rate does not necessarily reflect the value of rubles in terms of dollars for the construction equipment industry.

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1. Shortcomings in the Industry

The construction equipment industry of the USSR performed poorly during the first year of the Seven Year Plan. Production of excavators and motor graders, which ordinarily are reliable indicators for the industry, made only nominal increases above 1958 levels of production. Bulldozers, truck cranes, and tower cranes also reflected insignificant rates of growth. In 1960 the report on fulfillment of the first half of the year singled out production of excavators as being below plan. By the end of June, production had reached only 5,700 units (11,400 units at the annual rate), a far cry from the estimated year-end goal of 13,300 units.* Production of motor graders increased slightly during the first half of 1960, but on an annual basis such production represents an increase of only about 6 percent above production in 1959. 2/

For some time it has been evident that the industry was in trouble, but the cause was not readily discernible. There was no known significant volume of model changeovers that might account for the poor showing. In addition, the industry built several new plants and converted a number of others to production of construction equipment,** and some of the plants of the construction equipment industry were to be extensively remodeled or expanded.

The cause of the industry's troubles and what is to be done about these troubles have now come to light through an editorial in a recent issue of the trade journal Stroitel'noye i dorozhnoye mashinostroyeniye (Construction and Railroad Machine Building). 3/ The import of this article is expected to have far-reaching implications not only for this industry but also for the construction industry.

The editorial noted that the following ills were affecting the construction equipment industry:

- a. Plants have insufficient capacity.
- b. Inadequate investment in the industry is handicapping the growth of the industry and preventing the modernization of existing plants and construction of new ones. For example, the 1959 plan

* This estimate is based on the announced intention to produce 30 percent more excavators in 1960 than in 1959. 1/

The report on plan fulfillment for the first 9 months of 1960 also noted that production of excavators had failed to meet plan goals.

** One construction equipment plant, the Tashkent Excavator Plant, was converted to production of tractors.

~~C O N F I D E N T I A L~~

called for new capacity for production of 1,819 excavators, and instead capacity for only 1,319 excavators came into use. In other instances the scheduled modernization of existing plants was not completed.

c. There are insufficient numbers of research and development organizations.

d. Support from suppliers -- the products of the truck, tractor, electrical, instrument, and chemical industries -- is inadequate.

e. Industrial management and industrial specialization are inadequate, as reflected in the fact that many plants are burdened with production responsibility for small series and custom production of a large variety of items, and specialization in production of parts and components is lacking.

f. Sovnarkhozes (Councils of National Economy) in several instances are seriously hindering the growth of the construction equipment industry by inflicting on it responsibility for producing products for which the plants are not suited.

g. The output of the construction equipment industry is not adequate for the needs of the construction industry.

The references to inadequate capacity and insufficient capital investment are novel and a trifle puzzling. Several new plants have begun producing construction equipment, several more are being converted to production of construction equipment, and still others are being modernized to accommodate increased output. No previous indication had been given that planned or existing capacities were inadequate or that insufficient investment was responsible for the poor production performance in 1959 and the first half of 1960.

The criticism that the output of the construction equipment industry is not adequate for the needs of the construction industry is an interesting one. It is quite probable that the assortment of equipment is not as great as the construction industry desires, and certainly specific types of such equipment as pneumatic-tire rollers, self-propelled scrapers, and tower cranes of 3-ton to 5-ton capacity are known to be either unavailable or in short supply. Also, in recent years the ratio of basic units of construction equipment (excavators, bulldozers, mobile cranes, and scrapers) per 100 million rubles of basic construction has remained fairly constant. Because the volume of construction in 1959 and thus far in 1960 has been far

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greater than that provided for under the Seven Year Plan -- whereas the volume of output of the construction equipment industry has been increasing very slowly -- it is possible that the construction industry has become alarmed over the probability of a general shortage of construction equipment by 1965.

The complaints of lack of proper management and industrial specialization and improper utilization of existing capacity appear with a fair degree of frequency in the Soviet press.

2. New Program

To rectify the shortcomings that it has analyzed, the editorial in Stroitel'noye i dorozhnoye mashinostroyeniye announced the following sweeping program of changes for the construction equipment industry of the USSR:

a. An additional, supplementary capital investment outlay of 867 million rubles is being allocated for construction and modernization of plants of the construction equipment industry.

b. The specialization of the plants of the construction equipment industry will be strengthened, and subsequent changes in the specialization of these plants will be permitted only on approval from the Councils of Ministers of the Union-Republics and Gosplan, USSR. Because such permission will be needed, no plant or any part of a plant can be diverted to production of items that are not related to its area of specialization simply by an order from the sovnarkhoz.

c. For the remainder of the Seven Year Plan the goals for principal types of construction equipment have been significantly increased -- for example, in 1965, output of excavators will reach 24,400 units, of bulldozers 18,900 units, and of motor graders 10,000 units. During 1961-65, there will be manufactured, in addition to the original plan, 29,600 excavators, 15,000 bulldozers, 3,300 motor graders, 10,000 loaders, and many other machines.

d. New research and development facilities and organizations are to be established, and time limits are to be set for the date that they are to go into operation.

e. Greater standardization in design of parts and components is to be undertaken to promote interchangeability of parts not only within an equipment category -- for example, excavators -- but also when possible throughout the entire range of products of the construction equipment industry.

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f. There will be an increase in the types and sizes of machinery produced, but not at the expense of reduced volume of output for individual items. Also, wheeled roadbuilding equipment is to go into production during the period 1961-65.

The significance of the additional 867 million rubles in productive capacity for the construction equipment industry is difficult to determine, for no investment figures for this industry were previously revealed. When compared with the planned investment in the entire machine building sector for the Seven Year Plan of 118 billion rubles, the 867 million rubles represent slightly less than 1 percent. The amount, however, is believed to be sufficient to build 6 to 10 construction equipment plants of small to medium size.

The increased goals for production of construction equipment in 1965 represent the first announced major increase in the Seven Year Plan for the machine building sector and indicate the importance to the USSR of adequate quantities of the basic types of construction machinery. Because no 1965 production goals for such key items as excavators, bulldozers, and motor graders were given in the original goals of the Seven Year Plan, it is impossible to determine either the percent of increase that these new goals represent above production originally scheduled for 1965 or the changes in rates of growth required to meet the new goals. On the basis of other information, however, estimates have been made of the cumulative production of excavators, bulldozers, and motor graders as originally scheduled for the period 1959-65. 4/ Comparison of these estimates with the revised goals shows that the cumulative production of the three commodities for the Seven Year Plan period will increase 26 percent for excavators, 15 percent for bulldozers, and 11 percent for motor graders as follows: bulldozers from 96,900 to 111,900 units, excavators from 114,000 to 143,600 units, and motor graders from 29,700 to 33,000 units (see the table*).

The announced intention to produce 29,600 excavators, 15,000 bulldozers, and 3,300 motor graders in excess of the original plan goals raises the questions of where and when the new capacity will come into service. Unless a drastic increase in production of excavators and bulldozers is to be achieved in 1961 or 1962, it is unlikely that total production of these items during the remaining 5 years of the plan period could amount to the increase above the original plan that is supposed to be achieved. On the other hand, the newly announced 1965 production goal for motor graders, which is more than three times the current level of production, combined with the comparatively

* The table follows on p. 8.

- 6 -

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modest planned increase of 3,300 units in cumulative output for the period 1961-65 above the original plan, suggests that sharp increases in production of motor graders will not occur until the end of the plan period. It is hoped that there will be forthcoming additional information which will shed some light on these changes.

The decision to emphasize the importance of putting new research and development facilities into operation as soon as possible, to continue to stress standardization of parts and components, and to produce increased numbers of types and sizes of equipment without sacrificing large-volume production are all a restatement of earlier programs that are expected to have continued validity and importance in the production program of the industry.

An interesting and unannounced clue as to the reason for the timing of the editorial in Stroitel'noye i dorozhnoye mashinostroyeniye is believed to be the stress placed by the construction industry on prefulfillment of plan goals. The Seven Year Plan implies an annual increase of 7 percent in construction, whereas construction has actually been expanding at a rate of about 10 to 12 percent during the first 2 years of the plan period. The Seven Year Plan provided for the construction labor force to remain approximately at the level of 1958, and an increased volume of construction was to be realized almost exclusively from increased productivity of labor. In 1959, however, the labor force in construction work grew by 300,000 workers, an increase of more than 5 percent. This increase probably was necessitated by an inadequate assortment of available equipment, and the increased output of the construction industry has served only to aggravate the situation.

It is clear, however, that if the new output goals for construction equipment are realized, production of certain items in 1965 will exceed that of the US. For example, the USSR will be producing more than the US in motor graders and possibly in excavators and bulldozers. Nevertheless, from the point of view of the size, composition, and efficiency of the park of construction equipment, the USSR is not expected to be the equal of the US. It also is unlikely that production of spare parts will equal that of the US. The supply of spare parts for construction equipment has never been adequate in the USSR, and it may become critical unless some specific effort is made to increase output.

If the new goals of the Seven Year Plan are realized, the USSR should be able to supply the basic needs of its construction industry and may attempt to export substantial quantities to the underdeveloped countries in Africa and Asia.

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Table
Estimated Production of Selected Types of Construction Equipment in the USSR
1959-65

Category	Units		Cumulative Production 1959-65	1965 Production as a Percentage of 1958 Production	1959-65 Production as a Percentage of 1952-58 Production
	1959	1960			
Bulldozer	11,264	12,300	N.A. a/ 18,900	N.A. 172	174 201
Excavator	10,210	11,400	N.A. 24,400	N.A. 240	256 323
Motor grader	2,835	3,000	N.A. 10,000.	N.A. 376	360 400

a. When two figures are given for a particular period, the first figure represents the probable level of production according to original goals of the Seven Year Plan (1959-65) and the second figure the probable level of production under the revised goals for the Seven Year Plan.

APPENDIX

SOURCE REFERENCES

Evaluations, following the classification entry and designa-
"Eval.," have the following significance:

<u>Source of Information</u>	<u>Information</u>
Doc. - Documentary	1 - Confirmed by other source
A - Completely reliable	2 - Probably true
B - Usually reliable	3 - Possibly true
C - Fairly reliable	4 - Doubtful
D - Not usually reliable	5 - Probably false
E - Not reliable	6 - Cannot be judged
F - Cannot be judged	

Evaluations not otherwise designated are those appearing on
cited document; those designated "RR" are by the author of this
memorandum. No "RR" evaluation is given when the author agrees
with the evaluation on the cited document.

Except for CIA finished intelligence, all sources used in the
memorandum are evaluated RR 2.

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1. US Joint Publications Research Service. JPRS 2727 25 A
 - 2.

Ekonomicheskaya gazeta, 27 Jul 60, II.