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FOREIGN TRADE AND PRODUCTION

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INTRODUCTION

A few words must be said about the purpose of this second and considerably enlarged edition of the handbook Zahranicni obchod a vyroba. The first edition of this handbook was published by the State Publishing House for Political Literature on the eve of our second Five-Year Plan and was intended to promote a proper understanding of the purposes and significance of Czechoslovak foreign trade in building socialism in our homeland. It was published for workers in production engaged in filling foreign-trade orders and for officials of the party, the ROH [Revolutionary Trade Union Movement], and the CSM [Czechoslovak Union of Youth] in order to help them in their propaganda work in the broadest sense of the word. The authors attempted to explain the basic questions associated with our foreign trade, to offer arguments for visual and personal agitation, and to point out the shortcomings whose elimination requires the initiative of the workers and the direction of socialist competition. The authors based this on their experience that the core of goal achievement is a proper and convincing explanation of the importance and feasability of goals, seeing to it that goals are understood, and arousing interest in their fulfillment. This they attempted to do principally among the workers in production plants fulfilling export orders.

The year which has passed since the first edition of this publication has shown convincingly what an important and growing role foreign trade plays in our foreign policy and in our national economy.

In cooperation with the Soviet Union and the people's democracies of Europe and Asia we are now entering another stage, the planned division of labor, based on coordination of long-range economic plans, industrial cooperation, and production specialization.

The countries of the democratic camp have taken as their common goal to produce not only more but at lower cost and with greater labor productivity. This goal can be achieved by better organization of cooperation, the division of goals according to specialization of production, and well-developed collaboration, so that conditions will be created for the most economically efficient utilization of the raw materials, natural conditions, production capacity, and the level of development of the forces of production in developing the economy of all the lands of the democratic camp. This goal, which can without exaggeration be called historic, requires us to develop all forms of economic cooperation. Of course in this program foreign trade occupies a leading position as the most important tool in the division of labor within the democratic camp, since it is the agent of mutual exchange of machinery, equipment, and other industrial products as well as raw materials and food. In this connection the goals of foreign trade rise continually and enhance its importance.

At the same time the overall international development, under the influence of the peace policies of the socialist camp and of the successful efforts of numerous lands beyond the sea to free themselves from their former political and economic dependence on the imperialist powers, is directed toward the formation of more favorable conditions for the peaceful coexistence and competition of two different social and economic systems -- socialism and capitalism.

Entrepreneurial circles in the capitalist countries and, under their direct influence, even the governments of these countries, are becoming increasingly aware of the uselessness of all attempts at economic discrimination against the countries of the peace camp, which they attempted under pressure from the aggressive

American policy of the Atlantic Pact, and they understand that it is in their own interests to renew broader political, cultural, and economic contacts with the east. Here, too, increased tasks fall to foreign trade, both in collaboration with the countries fighting for political and economic independence and in establishing and expanding trade with the capitalist states which have decided to end the cold war and develop trade on the basis of mutual advantage and equality of both partners.

Under these conditions foreign trade can become a very effective means for spreading the idea of peaceful collaboration and competition among countries with different political and economic systems. We are glad to undertake such competition because foreign trade presents one opportunity for demonstrating the superiority of the socialist means of production over the capitalist.

From this standpoint we can best see the importance of a further development of foreign trade and the necessity of taking all possible measures to increase exports. It would be extremely short-sighted to believe that by exporting we are depriving our internal market of goods which we ourselves might consume. Whoever grieves over exported Jawas or Spartaks should see the enormous quantities of imported raw materials which our factories process daily, and the quantities of imported foods which we consume daily. Without imports we could not fulfill the goals which we have outlined for ourselves in the second Five-Year Plan and these imports would be impossible without the exports whereby we obtain the necessary foreign exchange.

In order to develop exports to the scope required by imports we must generally improve our work both in the foreign-trade apparatus itself and in the factories working for export, and thus ultimately in their mutual liaison.

The year which has passed since the first edition of this handbook has given us a great deal of new experience and information on our export success which is a great encouragement for further work; we have also learned of many shortcomings which must be systematically eliminated in order that we may draw from our success and fulfill the new goals which we face.

In view of the increasing significance of foreign trade in the second Five-Year Plan the authors have decided to consider these new goals and experiences and prepare a second edition of the handbook, substantially expanded and supplemented with new information and ideas. We present it to the workers in production who are working for export, and to those in foreign trade, as a guide in their work. As in the first edition we are now convinced that the larger the number of workers, party officials, and mass-organization officials who master the information contained in it, the greater will be their success in exports and imports, for the entire national economy, for further increasing the living standard, for the good name of the Czechoslovak people abroad, and for consolidating peace throughout the world.

CHAPTER I

BASIC FEATURES OF CZECHOSLOVAK FOREIGN TRADE

Czechoslovak foreign trade, like all important branches of our national economy, is nationalized and incorporated as an important element in the economic system of the People's Democratic Republic. In the spirit of the basic economic law of socialism our state uses foreign trade for the construction and development of industrial and agricultural production and for meeting the growing needs of society. Alongside our own domestic sources it is an important supplementary source of means for increasing production and better supplying the population with the means of consumption.

The new role and structure of foreign trade in our economy had to be fought for. Until 1948 imports were 70 percent, and exports were 38 percent in the hands of private firms which used foreign trade for their own enrichment and thus injured the interests of the state. Shortly after February, as a result of reactionary "management" of foreign trade, we had a negative balance of almost 5 billion crowns. In the next ration period there was no meat and a large number of important raw materials were lacking. At the same time the capitalist merchants had robbed the republic of billions in foreign exchange which they deposited in foreign banks. Victorious February opened the path for a solution in this sector as well, and thus nationalized industry could be supplemented by the state foreign-trade monopoly which is a necessary condition of the existence and development of our economy.

What Is the Foreign-Trade Monopoly?

Foreign trade in Czechoslovakia is a monopoly of the socialist state. The foreign-trade monopoly is concentrated in the hands of a special state organ, the Ministry of Foreign Trade. Foreign trade is subordinated to the goals of socialist construction and

operates according to the foreign-trade plan, which is an inseparable part of the economic plan. The functions of the foreign-trade monopoly are:

1. To assure the economic independence of the country.

2. To be a tool of economic cooperation with the USSR and the people's democracies.

The monopoly protects our economy against the unfavorable effects of foreign capitalist countries -- the effects of discrimination and of the disastrous effects of economic depression which periodically seizes capitalist economies.

With the aid of the Soviet Union and thanks to the foreign-trade monopoly we have turned back the economic blockade which the imperialist states attempted to impose on us through their embargo policy, their prohibition of exports of many types of important goods to the countries of the democratic camp. The period of the cold war could not hold back the economic development of Czechoslovakia. Even the members of the so-called Randall Commission which investigated conditions for American commercial policies admitted that: "The control of trade between East and West has merely strengthened the independence of the East-European market of the economies of other countries (i.e., capitalist) by helping them to reveal their weaknesses and overcome them." Liaison between the democratic states has been further strengthened and expanded. Czechoslovak foreign trade has purposely transferred its main efforts to the world democratic market and thus has assured our economy independence of the capitalist world. It has thus erected a dam against the effects of depression which is inevitable in the capitalist world and which, precisely through foreign trade, spreads from country to country, as we ourselves experienced during the world economic depression before the Second World War.

The foreign-trade monopoly makes it possible for us to have uninterrupted internal economic development by foreseeing price fluctuations on the world market so that they cannot influence the results of activity of our commercial and production enterprises. The organizational separation of production from the foreign-trade monopoly provides production with a firm calculation base undisturbed by price movements abroad because foreign trade sells products at fixed prices.

The task of the Ministry of Foreign Trade as the supreme organ of the foreign-trade monopoly is to direct specialized foreign-trade enterprises, negotiate international trade agreements, control their fulfillment, and see to it that we are selling and buying on the most favorable markets, at the most favorable time, and under the most favorable conditions. The PZO's [Podniky zahranicniho obchodu -- Foreign-Trade Enterprises] like Technoexport, Ferromet, Kovo, Strojexport, Skloexport, and others, directly discharge planned export and import goals by commercial operations (i.e., purchase and sales).

The foreign-trade enterprises are independent economic units, legal persons, which operate in their own name and have their own financial economies.

Foreign trade is served by a number of other agencies, also directed by the Ministry; first place among these is occupied by international transportation and shipping, managed by the enterprises Metrans (overland transport) and Cechofracht (maritime transport). Important foreign-trade services are performed also by the Czechoslovak State Bank as the holder of the foreign-exchange monopoly in payment relations with other countries; the Research In-

stitute of Foreign Trade, and the Czechoslovak Chamber of Commerce. The enterprise Cedok was set up to handle the tourist trade.

Thanks to the monopoly and to the specialization of commercial activity our foreign-trade enterprises can enter world markets as very strong and desirable partners whose demands must be taken into consideration in a way completely different from formerly when each production enterprise or private merchant dealt independently without proper coordination or a unified line.

Naturally, with the rapid development of the Czechoslovak economy and with its direct effect on the goals and possibilities of foreign trade, there have been changes in the form of the monopoly and the methods of its application. The increased share of machinery in our exports has led to greater specialization of foreign-trade enterprises. The strengthening of our economy has been reflected also in the wording of newly concluded commercial agreements. The foreign-trade monopoly was created by our state for commercial relations with other countries; it is therefore natural that the monopoly must react quickly to changes in the international economic and political situation. Its principles, however, remain a valid part of our socialist regime. Therefore the monopoly must be continually strengthened and organizationally perfected in order that it may become a more effective tool in our development. We must see to it that in the organizational separation of the foreign-trade apparatus from production, which is associated with the foundation of the monopoly, the organization of the foreign-trade monopoly not lag behind the continually growing tasks which our growing economy places on it. On the other hand, however, the remaining economic groups, particularly production, must understand the function and mission of the monopoly and help it fulfill

the goals which are the more binding since their fulfillment is associated with the coordination of economic plans of the other countries in the socialist camp in basic questions of industrial and agricultural production and with the spread of the idea of peaceful collaboration and peaceful competition among nations.

Contemporary Goals of Czechoslovak Foreign Trade

The goals charged to our foreign trade by the requirements of industry, the industrialization of the people's democracies, and the increased requirements for imports of food and raw materials associated with the rise in living standard -- these are very demanding. They have led to an expansion of existing commercial relations and the development of new ones and their consolidation by agreement.

The development of our economy is creating very favorable conditions for the development of foreign trade. The results of foreign trade since 1948 have shown convincingly that the fast pace of development whereby the Czechoslovak economy achieved technical and economic independence of the capitalist countries has in turn made it possible for increased import requirements to be met by export of those goods which are needed in the world. The index figures showing the development of Czechoslovak foreign-trade turnover make it clear that between 1948 and 1955 the total volume increased by approximately 50 percent.

Indexes of Total Czechoslovak Foreign-Trade Turnover (1948 = 100)

Item	1949	1952	1953	1954	1955
Imports	105.4	128.5	129.0	136.9	154.5
Exports	107.1	116.1	131.9	133.5	156.2
Total	106.3	122.0	130.5	135.1	155.4

The total value of Czechoslovak foreign-trade turnover in 1955 exceeded 16 billion crowns.

The importance of foreign trade in the total economy is indicated by the fact that at the beginning of the Five-Year Plan Czechoslovakia exported approximately one-tenth of its industrial production. Foreign trade approaches the fulfillment of its current great tasks much better prepared than it has been for several years.

Fulfillment of the Five-Year Plan in decisive branches strengthened Czechoslovakia's position among world exporters. This position is based on very general and highly specialized industrial and agricultural production and on the continuing rise in its volume, variety, and quality. All the principal branches of industry are working in greater or lesser degree for export; these include primarily branches such as machinebuilding, metallurgy, the textile industry, ceramics, glass, footwear, chemicals, woodworking, paper, and sugar refining. Finished products make up approximately 80 percent of the value of our exports, which is more than it was before the second world war, when Czechoslovakia exported more than 5 percent of total world industrial exports of industrial production (not including the USSR) and when Czechoslovakia was among the 10 largest exporters.

The structural reorganization of Czechoslovak industry is also reflected in foreign trade, where machinery occupies relatively a much stronger position (in 1955 it exceeded 40 percent) and where the volume of exports of other branches also increased substantially in absolute value. In addition to machinery and finished light-industry products, which we will discuss in more detail in another part of this publication, important Czechoslovak exports in 1955 included hops, malt, sugar, metallurgical products, lumber, round timber, cellulose, paper, chemicals, kaolin, antimony, etc.

Our exports now have a completely different purpose from that under the capitalist economy before the war. We are no longer interested in export profit or in placing unsalable "surplus" on foreign markets; we are interested rather in exporting goods to obtain funds for the necessary imports and so that we may also help the people's democracies and economically backward countries in their development.

Therefore we must not consider our exports as an end in themselves. The funds gained by exports are used for imports, production, investment construction, supplies, and thus to raise the living standard. It may thus be said that foreign trade serves us by effectively helping to develop the forces of production both in Czechoslovakia and in the fraternal democratic countries.

No less important than exports are the changes which construction and the raised living standard have brought about in the make-up of imports. Raw materials and semifinished products make up more than one-half of our imports. The main emphasis continues to be on raw materials for heavy industry -- iron ore, nonferrous metals, chemicals, and petroleum products -- but raw materials for light industry are also continually on the rise: cotton, wool, silk, raw hides, sisal, jute, rubber, etc. Greater consumer demand, which is an expression of the rising living standard, is seen also in greater imports of certain foods, particularly butter, meat, lard, fish, legumes, rice, tea, wines, coffee, cocoa, oranges, lemons, apples, figs, dates, almonds, spices, and quantities of industrial goods of mass consumption. Agriculture also places great demands on foreign trade since its rapid development requires fertilizers and fodders and certain special machines.

The main support of the Czechoslovak economy in providing for its needs is trade with the Soviet Union and the people's demo-

cracies. Their share in total foreign-trade turnover has risen continually in postwar years until it reached 75 percent in 1954, and it has resulted in increased independence and economic stability of the Czechoslovak economy.

Percentage Share of the USSR and the People's Democracies in Total Czechoslovak Foreign Trade

1947	1948	1949	1950	1951	1952	1954	1955
14	32	46	55	61	71	75	70

The significance of this development will be still more striking when we realize that this share has increased with the continual rise in the volume of foreign trade as is shown by the following indexes, in which 1948 = 100:

Volume of Foreign Trade between Czechoslovakia and the USSR and People's Democracies (1948 = 100)

	1948	1949	1950	1951	1952	1953	1954	1955
USSR	100	156.4	168.6	219.0	254.5	277.0	301.4	331.3
Albania	--	100.0	172.0	335.0	311.0	400.0	313.5	314.6
Bulgaria	100	141.3	130.8	135.4	150.7	214.5	228.8	255.8
Hungary	100	140.5	148.5	224.5	318.5	319.0	332.4	324.2
GDR	100	225.0	337.0	464.0	518.0	629.0	803.3	911.9
Poland	100	134.5	152.0	187.1	192.5	216.0	176.1	191.3
Rumania	100	147.8	114.0	135.0	146.6	260.0	156.5	154.8

The volume of trade with the Soviet Union has increased more than threefold since 1948, and with individual people's democracies between two and ten times.

Trade with the nations of the world democratic market represents a new and higher type of economic relations. Its basic idea is to achieve the most rapid possible common economic progress while respecting state sovereignty, mutual advantage, and equality of rights. Relations of straightforward cooperation and aid are an expression of proletarian internationalism binding together the

countries in which the working class has seized its power and is building the economic foundations of a socialist society.

The foreign-trade monopoly in the USSR and the people's democracies makes it possible to direct goods exchange toward accelerated development of the forces of production, the systematic increase in the well-being of the population, and consolidation of the economic and technical independence from capitalist countries. The make-up of imports and exports is therefore determined by economic and political goals during the given time period and not by the effort to force on the commercial partner things which he does not need, as occurs between capitalist states. For example, in the period immediately after the war Soviet deliveries made it possible to provide for necessary supplies to the population and to bring our factories back into operation rapidly, while later this aid helped to fulfill the demanding goals of the Five-Year Plan and in large part to raise the living standard of the workers.

The volume of goods exchanged is continually rising because production and consumption are increasing without cease.

Foreign trade also takes over another important function. It becomes a means of coordinating the economic plans of countries in the world market, and in a number of branches of industry makes possible the division of production programs and the maximum utilization of production capacity. It thus becomes a tool promoting the gradual socialist international division of labor.

The important role which the Soviet Union plays with respect to Czechoslovakia in this system of understanding and cooperation is projected in sharp detail by the fact that trade with the Soviet Union makes up more than one-third of Czechoslovak foreign-trade turnover.

Percentage Share of the USSR in Total Czechoslovak Foreign Trade

1937	1945	1946	1947	1948	1951	1952	1953	1954	1955
1	25	12	6	16	28	35	35	36	35

The Soviet Union sends Czechoslovakia food, industrial raw materials, and complicated production equipment. Unlike the post-war years, when deliveries of food predominated, there has been an increase in recent years primarily in machines and raw materials. In comparison with 1949 deliveries of iron ore have increased 2.3 times, pig iron 1.5 times, aluminum 3, cotton 1.5, and wheat 1.5 times. Of total imports the Soviet Union supplies Czechoslovakia with 80 percent of manganese ore, 70 percent of iron ore, 50 percent of copper, 80 percent of aluminum, 60 percent of petroleum, 80 percent of phosphates, and 80 percent of synthetic rubber, while the USSR also sends large quantities of zinc, lead, nickel, tin, ferromolybdenum ferrotungsten, and other metals and alloys. Effective aid in our construction and increasing production is provided by Soviet machinery whether bulldozers, dredges, mine equipment of all types, construction and highway machinery, or agricultural machines such as grain, beet, and potato combines, heavy tractors over 60 horsepower, grain driers, etc.

A substantial portion of Czechoslovak deliveries to the Soviet Union is made up by machinebuilding products, tugboats, Diesel-electric passenger ships, power trains, portal cranes, various machine tools, turret lathes, forging and pressing equipment, large Diesel engines, dredges, etc. The Soviet Union is at the same time an enormous market for Czechoslovak light industry.

While basing our construction on deliveries of raw material and machinery from the Soviet Union, we are simultaneously helping to transform previously agrarian or industrial-agrarian countries

-- Bulgaria, Albania, Hungary, Rumania, and China -- into countries with their own mature industry, and Czechoslovak deliveries are making an important contribution to the further construction of Poland and the German Democratic Republic.

The largest Polish cement plant, in Opole, is completely fitted out with Czechoslovak equipment, as are the coke ovens at the Kosciuszko factory and a number of electric power plants. Our industry has supplied modern equipment for Hungarian bauxite mines and aluminum production, for the chemical and food industries, and power equipment. Czechoslovakia has become, after the Soviet Union, the second largest supplier of machinery and equipment to Rumania, and is participating in that country's 10-year electrification plan by delivering large electric power plants. Our industry has also contributed to Bulgaria's industrial expansion, particularly by delivering equipment for electric power plants and cement plants. Czechoslovakia's share in the electrification and development of industry and transportation in Albania is also considerable. Year by year deliveries to the Chinese People's Republic also increase; as early as 1953 Czechoslovak trade with China comprised almost one-third of total Chinese trade with the democratic states. We are supplying China with metallurgical and machinebuilding products, and equipment for electric power plants, sugar factories, machine tools, telecommunications equipment, cranes, dredges, trucks, etc.

Experience with the progressing industrialization of the people's democracies shows beyond all doubt that fears that the advance in industrial production in these formerly agricultural countries would reduce their trade with industrial countries such as Czechoslovakia were vain. On the contrary, with the advance of

industrialization in the agricultural prople's democracies their trade with Czechoslovakia is also developing, and we also have increasingly vigorous exchange of goods with such a pronouncedly industrial country as the German Democratic Republic. In the practical execution of the principles of cooperation and specialization a firm foundation has been built here for exchange not only of raw materials and food but of machinery and other industrial products. Particularly as regards Czechoslovak deliveries of machinery we have a permanent market in the Soviet Union and the people's democracies. Whereas in 1948 supplies of machinery and equipment to these countries comprised 25.7 percent of all Czechoslovak exports, in later years this proportion increased regularly until it equaled 50.8 percent in 1953.

In 1953, however, the growing purchasing power required, in addition to exchange of machinery, equipment, raw materials, and food, the exchange of larger quantities of consumer goods. By the end of 1953 and throughout 1954 supplemental agreements were concluded with the Soviet Union and almost all the people's democracies concerning exchange of consumer goods in excess of the agreed quantities (quotas). For example, Poland, Hungary, Rumania, and Bulgaria delivered more agricultural products -- butter, cheese, vegetables, fruit -- in exchange for Czechoslovak motorcycles, bicycles, radio receivers, and sewing machines. The German Democratic Republic supplied photographic cameras and watches in exchange for Czechoslovak motorcycles, baby carriages, furniture, and decorative leather accessories.

All the evidence indicates therefore that the rapid rise in the living standard of the broad masses of the population presents ever new possibilities for exchange of goods. Our stores contain

more and more industrial consumer goods and food delivered by the countries of the world democratic market.

The nature of economic cooperation with the USSR and the people's democracies is best satisfied by long-term trade agreements which give a clear picture of further development and make it possible to incorporate foreign trade more closely into the system of economic plans. This results in the strictly binding nature of delivery and receipt quotas; it is for this reason that such emphasis is placed on the maintenance of delivery deadlines and demands for quality, since otherwise delays would occur in the construction of economically important installations and in the planned circulation of goods.

In addition to goods the Soviet Union and the people's democracies exchange technical documentation, drawings, calculations, and technological plans. They engage in extensive exchange of discoveries and improvement suggestions; visits of scientists and specialists are organized as well as technical training -- everything which can be called scientific and technical cooperation. In the capitalist world, of course, the law of competition creates completely different conditions: numerous production procedures and discoveries are stamped as commercial and production secrets and a profitable trade is carried on in the sale of patents and licenses. The goal of the people's democratic countries, however, is to raise the technical and organizational level of the national economy and of the entire peace camp.

In order to carry out the most extensive possible economic cooperation Czechoslovakia is a member of the Council of Economic Mutual Aid, which is built on the foundation of equal representation of the member countries and has the goal of organizing the exchange of economic experience, mutual technical aid, and aid in the delivery of raw materials, foods, machinery, etc.

At present the coordination of economic plans among the countries of the socialist camp is promoting mutual cooperation through the planned division of labor. This is shown clearly in our second Five-Year Plan, in which the machinebuilding sector emphasizes the development of important branches of heavy machinebuilding in association with the goals facing us in the development of the other people's democracies. At the same time in the second Five-Year Plan we can count on growing imports and aid from these countries. The industrial potential of the countries in the socialist camp, whose output equals 30 percent of world industrial production, will grow by 1960 to a total of 1,250 million tons of coal, 72 million tons of cast iron, 95 million tons of steel, and 470 billion kilowatt-hours of electric power.

Foreign Trade -- A Tool of Peaceful Collaboration with the Entire World

The situation in western Europe convinces us of the difficulty which we saved ourselves by entering upon the path to socialism. By accepting the so-called "aid" of the Marshall Plan these countries found themselves in great difficulties. Examples are a number of industries in France, particularly the consumer-goods industry, the aircraft industry, and film production. The result of this aid was unemployment, incomplete utilization of capacity, and the accumulation of goods in warehouses. Despite uncontrolled exploitation of the colonies Great Britain was forced to devaluate its currency, whose value dropped substantially. These examples show that without our orientation toward the democratic countries our construction and the associated rise in living standards of the Czechoslovak people would not have been possible. We can see very clearly that, next to our own efforts, economic coop-

eration among the countries of the socialist camp is the strongest support on which we can rely.

The postwar development of industry and the increased share of the Soviet Union and the people's democracies in Czechoslovak foreign trade, which resulted in Czechoslovakia's technical and economic independence of the capitalist countries, strengthened Czechoslovakia's position in economic contacts with the entire world. At every opportunity Czechoslovakia attempted to restore and expand these contacts and demonstrated an eagerness to apply the principles of true equality, mutual advantage, and non-discrimination in trading with the entire world. The main idea in all this was the conviction of the possibility of peaceful coexistence and competition between the two economic and political systems. This conviction was formulated clearly and officially by the government announcement of 15 September 1953, which stated: "The government of the Czechoslovak Republic will continue unceasingly in its efforts at peaceful coexistence of all nations regardless of differences in their social systems. We are of the opinion that an important tool in the development of peaceful relations is commercial contacts on the basis of mutual advantage. We continue to be of the opinion that the expansion of commercial relations with all countries regardless of social system is useful and desirable." If in recent years the volume of trade with certain capitalist countries has sometimes dropped, this is primarily because these countries came under pressure from the USA, gave in to the policy of embargo and discrimination, and thus abandoned the necessary basis of equality and mutual advantage.

In recent years there has been a growing economic necessity on the part of the capitalist states to trade with the countries of the world democratic market, including Czechoslovakia. This fact

resulted in a percentage increase in Czechoslovak trade with a number of countries in 1955 in comparison with 1954 as follows:

Argentina	262.4	Denmark	78.0
Brazil	174.5	France	109.3
Uruguay	108.3	Norway	119.3
Indonesia	177.8	Greece	135.6
Burma	661.9	Iceland	104.1

At the end of 1955 Czechoslovakia maintained commercial relations with more than 80 capitalist countries and had trade agreements with more than 30 capitalist states; in recent years these agreements have proved themselves as an effective tool in the development of commercial relations.

Economic relations with the economically underdeveloped countries have developed particularly favorably in recent years. The economically underdeveloped countries are, for the monopolies of the imperialist powers, one of the principal sources of maximum profit; such exploitation creates relations based on force and the power of the strong over the weak. The countries of the socialist camp do not require foreign territory; they recognize the necessity of helping the underdeveloped countries to develop their national industrial production and other branches of the national economy by expanding foreign trade with them and extending technical aid to them on the basis of equal rights and mutual advantage. Such commercial relations strengthen the efforts of the underdeveloped countries toward economic and political independence. The increase in exports of machines to these countries, characteristic of Czechoslovak foreign trade in recent years, is in harmony with the interests of these countries in industrialising and mechanising agriculture.

Between 1953 and 1955 alone total trade turnover with these countries increased by approximately 140 percent. In 1956 this trade will equal almost 40 percent of our total trade with non-socialist states and during the second Five-Year Plan its share will continue to rise.

The economically underdeveloped countries produce a number of raw materials, foods, and fodders which we import. It is in our interest to purchase these goods directly from the producers and eliminate the middle man who makes purchasing more expensive. Direct deliveries also reduce the dependence of these countries on imperialist monopolies. The fact that Czechoslovakia imports primarily raw materials and food from these countries does not mean that we consider their orientation toward the production of a few raw materials as unchanging and the only satisfactory one. Czechoslovakia is well aware of the unfavorable effects which oscillations in price and sales of a few export products can have. We therefore follow understandingly the efforts of the economically underdeveloped countries to increase the variety of their products and to build up their own industry, and we are prepared to share in this process with our own exports. The capitalist monopolies have done everything in their power to hinder the industrial development of these countries. Czechoslovak deliveries of machinery, equipment, and entire installations represent, on the contrary, a recognition of the rights of each country to maximum economic development; our exports respect the interests of domestic productim and are accompanied in growing measure with skilled technical aid, technicians, assembly workers, technical-service centers, skilled supervision, etc.

The previous scope of commercial relations with the capitalist countries has never achieved the maximum possible or desirable

level. Czechoslovakia has realistic possibilities of continuing the path already embarked upon and expanding its trade with the entire world because this corresponds to the basic requirements of its economy. Therefore Czechoslovakia supports the idea of the Soviet government that the proposed all-Europe treaty of collective security in Europe include an article on collaboration in the economic sphere according to which the participants in the treaty would be obliged to take measures directed toward the development of trade and other economic contacts among the nations.

Czechoslovakia has also supported the Soviet proposal for working out an all-Europe treaty of economic cooperation which was presented at the April 1956 meeting of the UN Economic Commission for Europe and which contained a proposal for expanding contacts among the countries of eastern and western Europe and a proposal for united efforts of the European countries in the field of peaceful utilization of atomic energy.

We stand squarely behind N. S. Khrushchev's statement at the XXth Congress of the Communist Party of the Soviet Union, in which he stated that trade has a great role to play in expanding the basis for effective cooperation among countries and that, unlike the slogan of the North Atlantic Bloc "Let us arm" we proclaim the slogan "Let us trade."

The Central Committeeof the Communist Party of Czechoslovakia, which met on 29 and 30 March 1956, outlined the following principles for the foreign policy of our country:

1. To carry out, in firm alliance and friendship with the Soviet Union and the other democratic countries, a policy of peaceful coexistence of countries with different social systems.

2. To further strengthen political and economic collaboration with the countries of the socialist camp.

3. To develop and consolidate economic and political cooperation with the Federative People's Republic of Yugoslavia.

4. To develop economic cooperation and mutual trade with all countries on an equal basis, particularly extending economic and technical aid to the underdeveloped countries which are attempting to strengthen their national independence.

The broad development of all-round contact and cooperation among countries is an important basis for creating an atmosphere of mutual confidence and permanent peace. Czechoslovak foreign trade is attempting with all its strength to achieve this great goal.

CHAPTER II

FOREIGN TRADE IN PRE-MUNICH CZECHOSLOVAKIA

In order to make still clearer how our present foreign trade, built on the basis of a socialist monopoly, differs in all its form and content from Czechoslovak foreign trade before the war, we must discuss imports and exports in Czechoslovakia before Munich.

Foreign trade in pre-Munich Czechoslovakia was capitalist trade. This means that it was governed by the basic economic law of contemporary capitalism -- the race for maximum profit. It had all the typical features of the imperialist stage of capitalism and was thus distinguished not only by chaos but also by the fact that individual sectors were ruled by capitalist monopoly. It was marked also by mutual competition of capitalist groups and profound conflict among them as well as by the export of capital. The export of capital resulted both in the penetration of our economy by foreign capital and by the great effort to export our own capital to economically weaker countries.

In addition to these features, common to all capitalist countries in the stage of imperialism, prewar Czechoslovak foreign trade had several features of its own resulting from the historic development of our state. We must discuss all these features in somewhat more detail because the entire reorientation of foreign trade and its apparatus which we undertook gradually after the liberation results from the effort to free ourselves of all unhealthy and injurious features associated with its capitalist foundation.

Before the first World War the Czech Provinces were the industrial heart of all of Austria-Hungary. In our land lived only about 25 percent of the total population of the Austro-Hungarian monarchy, but in this area was concentrated about 60-70 percent of

its total industrial production. After the breakdown of the monarchy there remained in Czechoslovakia 75 percent of the cotton spinning mills, 90 percent of the cotton weaving mills, 85 percent of the wool spinning and weaving mills, 80 percent of hat production, 43 percent of the cellulose plants, 52 percent of the paper plants, about one-half the production capacity of iron works, and the overwhelming majority of food-industry production capacity. The industrial production capacity which remained on our territory far exceeded the capacity of the domestic market to absorb industrial products. On the other hand our country was unable to supply raw materials for industry. The capitalists and entrepreneurs were interested only in their own profits and their economic power, and national independence concerned them only to the extent that it directly served their interests. Therefore they made no effort to change the economic structure of the country. This is the basis of the unusually large economic significance of foreign trade in the pre-Munich republic. Prewar Czechoslovakia was obliged to export a considerable portion of its industrial products and some of its agricultural products in order to acquire some of the necessary funds for purchases of food, industrial raw materials, and various machinery and production equipment. This great dependence of the entire economy on foreign trade was, of course, an extremely unhealthy phenomenon.

The Prewar Make-Up of Exports

The structure of foreign trade in the pre-Munich republic resulted from the composition of the national economy, principally, of course, of industry. The main emphasis in production was in light industry and in the food industry. In 1930, of all persons active in production, 54.5 percent worked in consumer-goods indus-

try. This necessarily had its effect on the composition of products which Czechoslovak industry could offer on foreign markets.

In 1929, of the total value of Czechoslovak exports, 50.8 percent were represented by consumer goods of which 33.1 percent fell to textiles, 6.7 percent to glass, and 11 percent to other consumer goods (particularly leather products) not including foods. Exports of machinery represented a relatively small item since they were only 4.5 percent of the total value of exports. Exports consisted primarily of machinery for the food industry, certain special metallurgical products, etc. The remaining portion of exports consisted of raw materials, food, and sometimes even live animals. In exports of agricultural products an important role was already played by traditional exports of Czechoslovak sugar, hops, and malt. Sugar exports totaled as much as 10 percent of the total value of all exports in certain years.

The Prewar Make-Up of Imports

The structure of imports resulted from the requirements of the capitalist economy. Like all foreign trade its structure was determined by the profit motive of the ruling capitalist groups. In 1929, of the total value of imports, 19.3 percent was live animals and food, 48.9 percent raw materials, and 31.5 percent finished industrial products (including machines). As regards food the largest items were fruit, fats, edible oils, pigs, and, in certain periods, wheat and other agricultural products. Among industrial raw materials the principal role was played by imports of cotton, wool, mineral oils, tobacco, hides, and iron ore. Among finished industrial products the main items were electrical machinery and instruments, chemical products, silk yarn, etc. The composition of our imports and exports was thus extremely unfavorable in a number of respects. A considerable proportion of our exports

comprised luxury products which were extremely difficult to sell during periods of economic depression and which people were most ready to give up during times of difficulty. The vulnerability of our foreign trade was most sharply felt during the years of the world economic depression.

Development of Czechoslovak Foreign Trade before the Second World War

In the first 10 years of independence Czechoslovak foreign trade developed rather rapidly and our trade balance represented usually between 20 and 30 percent of the total value of our industrial and agricultural production.

All Czechoslovak foreign trade was more or less oriented toward the capitalist world. Fluctuations on capitalist markets affected the development and volume of our foreign trade.

The world economic depression, which in 1929 seized all capitalist countries, was felt particularly sharply in Czechoslovak foreign trade. Toward the end of that year the largest capitalist countries, particularly the USA, experienced catastrophic drops in sales affected by the low purchasing power of the working masses of the population, prices fell on the exchanges, and a crisis broke out which spread like wildfire. Individual capitalist countries attempted to protect the sales of domestic goods by setting up customs and other barriers to the importation of foreign goods. Czechoslovak exports were also seriously affected by this. The crisis destroyed our economy as well, built as it was on capitalist foundations.

The consequences of the depression were more serious because the inimical policy of the Czechoslovak bourgeoisie toward the Soviet Union was reflected also in the economic field. Trade with the Soviet Union was small in scope. In 1933 only 2.2 percent of

all our imports were from the Soviet Union, and only 1.3 percent of all Czechoslovak exports went to the Soviet Union. Economic contacts, like everything else from the country of victorious socialism, ran into all possible obstacles. Not even the constantly growing volume of Soviet orders, which might have provided employment for the enterprises threatened with depression, had any effect on Czechoslovak foreign trade. The hatred of the Czechoslovak bourgeoisie toward the Soviet Union thus worsened the Czechoslovak economic situation and was ultimately turned against the bourgeoisie itself, even though the principal burden of the crisis was shifted to the backs of the workers.

Between 1929 and 1936 the volume of Czechoslovak exports, expressed in millions of prewar crowns, varied as follows:

1928 [sic]	20,497	1933	5,855
1930	17,472	1934	7,280
1931	13,119	1935	7,418
1932	7,343	1936	8,014

During the world economic depression Czechoslovak exports dropped to 28.5 percent of the 1929 level, while exports from other capitalist countries dropped on the average "only" to 34 percent. This shows that Czechoslovak foreign trade, and our economy in general, was affected by the depression still more severaly than that of other capitalist countries. Nor did our foreign trade fully recover from this blow even in the later years of improving markets. By 1936 Czechoslovak exports had not yet reached even 50 percent of the 1929 level.

Naturally the drop in exports also considerably reduced import possibilities. These were furthermore affected by the internal economic situation, by depression, unemployment, low purchasing power of the working masses of the population, and thus low-

level consumption. In 1929 Czechoslovakia imported goods worth 19,962 million crowns; this figure dropped in 1933 to 5,831 million crowns, and in 1936 was on the same low level -- 7,903 million crowns.

The permanent drop in Czechoslovak foreign trade was one consequence of the general crisis of capitalism and was accompanied by low-level utilization of industrial production capacity, high and permanent unemployment, low consumption by the population, and poor living conditions, as well as by other accompanying phenomena peculiar to the monopoly phase of capitalist development.

Capitalist Trade -- A Tool in the Race for Profits

Foreign trade in the pre-Munich republic thus not only failed to contribute to improved living conditions of the people, but actually worsened these conditions. This is not to blame foreign trade as a tool of the international exchange of goods, but rather the capitalist method of utilizing foreign trade for the accumulation of maximum profit. Foreign trade brought extraordinarily high profits to importers and exporters. We cannot obtain a precise picture of these profits because some remained deposited in foreign banks. The pre-Munich governments, furthermore, extended subsidies to exporters and producdrs when their profits were threatened by competition on foreign markets and lowered prices.

But that is only one side of the matter. Foreign trade served the capitalists also in that imports Of certain products were limited or that products were imported which we could obtain at home.

For example, imports of iron ore were increased while domestic mining was simultaneously decreased, although this led to a rise in unemployment. The quantity of iron ore mined in 1935 dropped to 51.5 percent of the 1926 level although imports of iron

ore dropped only to 76.8 percent of that level. Still more striking is the difference between mining and importation of manganese ores. The mining of manganese ore in 1935 was only 74.5 percent of the 1926 level while imports of manganese ore rose to 295 percent of the 1926 level. Domestic production of copper ore was stopped altogether and all domestic copper needs were met by imports. From the standpoint of the overall requirements of the Czechoslovak national economy, of the utilization of domestic ores, and of Czechoslovak employment, this was incorrect; it brought the capitalists enormous profits, however.

Similar profit motives were seen also in trading in agricultural products. Imports were limited, for instance, in cheap foreign wheat and wheat flour. In 1930, for example, 29,138 carloads of wheat and 18,989 carloads of wheat flour were imported, while in 1935 these figures dropped to 9,537 carloads of wheat and 78 carloads of wheat flour. This limitation on the importation of wheat was intended to maintain high domestic prices on wheat and other grains as well. This is because grains were produced for sale on large estates and kulak farms. The small and medium-sized farmess, on the other hand, derived most of their income from animal products which did not bring the farmers such advantageous prices. On the other hand, the capitalists, who were interested in exports, reduced expenses for workers' wages under the pressure of foreign competition. The starvation wages of the workers made it possible for them to compete with technically more advanced foeiign producers.

Our foreign trade showed a positive balance each year. This means that more goods were exported than imported. For example, between 1926 and 1931 the surplus, in millions of prewar crowns, went as follows:

1926	2,580	1929	511
1927	2,173	1930	1,759
1928	2,016	1931	1,348

Not until later years did this surplus drop. In addition to this surplus resulting from trading in goods, we also received income from railroad transport of foreign goods. In 1929 this equaled 572 million crowns, and 414 million crowns in 1930.

Czechoslovakia thus regularly exported more goods than it imported. This represented a certain actual loss for the national economy. Who profited from this loss? The surpluses of Czechoslovak foreign trade, repsenting billions of crowns, served both domestic capitalists, who transferred some of their profits to other countries, and foreign capitalists as well.

Foreign capital controlled a considerable portion of large Czechoslovak banks and outstanding industrial plants. Thus the Anglobanka was controlled by French and English capital, the Czech Union Bank by Belgian, French, and Swiss Capital, the Bank for Industry and Commerce also by French capital, etc. The large banks controlled about 80 percent of the 1,330 joint-stock societies in industry, so that foreign capital reached into all branches of Czechoslovak production. Some joint-stock societies had direct foreign-capital participation, such as the Mining and Metallurgical Society, the Skoda Works, etc.

Some of the capitalist profits wrung from the sweat of our working people thus belonged to foreign capitalists.

The sums involved represented hundreds of millions of crowns annually. For example, in 1929 foreign capitalists received 60 million crowns for the use of patents, 180 million crowns for dividends from joint-stock societies, 587 million crowns for interest on state, community, and private debts abroad, 72 million crowns to

amortize state and community debts abroad, 1,073 million crowns to amortize foreign debts of Czechoslovak industry and banks, etc. The surplus in exports over imports were used precisely in order to make up these items in foreign exchange.

All of these facts show that foreign trade and the financial transactions associated with it intensified the poverty of our workers who themselves bore the entire burden of double exploitation -- domestic and foreign.

In this connection it may be pointed out that even Czechoslovak groups strong in capital (the Skoda plant, the Zbrojovka, Bata) began to export capital and to set up foreign enterprises in economically weaker countries in those cases in which the exportation of capital was more profitable to them than direct exportation of goods. Our prewar foreign trade was thus not free even of this feature of the highest stage of capitalism.

The Role of Cartels

The monopolistic nature of the age of imperialism was shown very clearly in the effect of cartels in our foreign trade. In addition to a number of export and import cartel agreements and syndicates of domestic producers and merchants, among which the coal-importation syndicates were especially infamous, corrupting the governing political parties, Czechoslovak prewar foreign trade was affected and limited in the most varied ways by cartel agreements in which foreign enterprises and concerns were the partners of Czechoslovak firms. For example, in 1937 the cartel register, kept by the State Statistical Office, showed 130 cartel agreements with foreign contracting parties in a variety of countries, principally Germany and Austria. The purpose of these domestic and international agreements was to maintain prices on the highest possible

level and thus to assure maximum profits on the domestic and foreign market. International agreements extended primarily to products of the metallurgical, metalworking, and chemical industries.

In metallurgy and metalworking Czechoslovakia was represented in all the large international cartels, particularly the cartel of rolled raw-steel products (IREG), the central-European cartel for rolled steel, the international union for rolled wire, the international rail cartel (IMRA), the international cartel of wire products (IWECO), the international cable cartel, the international cartel of electric light bulbs, not to mention a number of smaller agreements. Of the large international cartels in which the Czechoslovak chemical industry participated one may mention the "Carbo-Norit-Union" cartel in Frankfurt am Main and Amsterdam for activated charcoal; the ferrosilicon syndicate, "Elpro", for chlorine and chlorine products and caustic potash; the international saccharin cartel; and cartel agreements concerning formic acid, sodium perborate, sodium peroxide, bismuth salts, benzoic acid, permanganate, citric acid, ferrocyanides, oxalic acid, carbide, borax, sodium chlorate, etc.

In addition to financial participation and cartel agreements, foreign monopoly organizations reached into our foreign trade also through patents and licenses. This is true particularly of electrical engineering, radio engineering, and ball bearings, in which foreign concerns demanded advantageous monopoly positions in our exports.

From the sketch which we have drawn of Czechoslovak prewar foreign trade it is clear that a thorough improvement of the situation absolutely required rebuilding its base, in addition to freeing our foreign trade, like the entire national economy, of all

capitalist parasites and particularly of the fetters with which foreign monopoly capital bound it. This goal was expressed clearly by Klement Gottwald in the preparations for our first Five-Year Plan. At a special meeting of the Central Planning Commission on 10 October 1947 he announced that "Czechoslovak industry must be reoriented, away from those branches in which before the war we were able to compete on world markets on the basis of starvation wages (as in the production of gloves, toys, etc, and in some cases in textile and glass production), toward those branches of industry for which we have a particularly favorable background making it possible to sell products on foreign markets. This is true of the metal industry, particularly heavy machinebuilding, and also the chemical industry " (Klement Gottwald, 1946-1948, published by Svoboda, 1949, page 240). In a later speech on 10 September 1950, in Karvina, Klement Gottwald said "In order for our economy to develop in the best possible manner and to bring our people success and a good life we must orient ourselves particularly toward that kind of production for which we have the best domestic raw materials and for which we also have a permanent market assured abroad... We can see that fewer imported raw materials are required for heavy industry than for light industry, for instance, for the leather-working and textile industries... As regards exports of our products we know that we will always find a market for the products of heavy industry, particularly in the people's democracies which require them for their construction" (Klement Gottwald, 1949-1950, published by the SNPL, 1953, page 266).

It was necessary to change the structure of our entire national economy, including foreign trade, and place it on a new foundation according to the needs of our planned socialist industrialization. It was necessary to build up an economy capable of

resisting all pressure and discrimination, which would be a positive element in the system of economic cooperation with the Soviet Union and the people's democracies of Europe and Asia.

It was therefore necessary to build up a powerful heavy industry, and alongside it to preserve and develop further all that was healthy, viable, and successful in the other branches of industry.

CHAPTER III

MACHINEBUILDING -- THE CORNERSTONE OF OUR FOREIGN TRADE

The problem of Czechoslovak foreign trade would not be grasped properly if we were not fully aware of the radical, absolutely revolutionary change which has occurred throughout our entire national economy by building up heavy industry and transferring the emphasis in industrial production to machinebuilding.

This buildup, directed toward the development principally of heavy machinebuilding, was a basic element in the first Five-Year Plan. It was intended primarily to promote our own socialist industrialization as well as the mechanization of agriculture, which was necessary for the transfer to large-scale agricultural production and the collectivization of agriculture. This buildup enhanced the capacity of our nation to defend itself. It was also important for foreign trade: it reduced our dependence on imports of machinery and equipment which we did not formerly produce and which made us open to discrimination, and it also gave our export a structural supplementation corresponding to its orientation toward further expanded economic cooperation with the Soviet Union and the people's democracies. These countries also need the most various kinds of machinery for developing their own industry, agriculture, and transportation, and therefore it was necessary to provide them primarily with the necessary machinery and industrial equipment.

These were the reasons why the buildup of our machinebuilding industry was the principal element in the first Five-Year Plan.

Expanding the Scope of Machinebuilding Production

In the first Five-Year Plan it was established that output of the metalworking industry between 1948 and 1953 would increase by 93 percent, i.e., double. The planned increase for this industry was the greatest of any industry. Nevertheless, in fulfilling

our first Five-Year Plan it was found that the planned increase could be not only achieved but far surpassed; the original goal was thus revised and the final result was that Czechoslovak machine-building production during the first Five-Year Plan increased by 224.8 percent. If we consider that even 1948 far exceeded the pre-war level and that production increased further in 1954 and 1955 -- considerably so in certain sectors -- we can see that at the beginning of our second Five-Year Plan our present machinebuilding production is about 4 times the prewar level.

At the same time it should be noted that even before the war in a number of respects we had a relatively advanced machinebuilding industry all of whose products made out well on foreign markets. Such plants as the Skoda Works in Plzen, the Ceskomoravska-Kolben-Danek, the Vitkovice Ironworks, and the three Brno machinebuilding plants (the First Brno, Kralovo Pole, and the Zbrojovka) in certain branches of machinebuilding stood up against the sharpest foreign competition and their products, thanks to the skill and ability of our workers and technicians, penetrated markets near and far. When we realize that the prewar scope of production of these large plants and of small machine-building plants has increased so that the industry now produces about 4 times as much as before the war, then only can we understand the size of the change which has been achieved. The high production level has been made possible by extensive investments, increasing the number of employees in this industry, and raising the productivity of their labor.

In the volume of its production machinebuilding is now far ahead of all other branches of industry whereas before the war it was surpassed by textiles, at that time the largest Czechoslovak industry. In 1953 the gross value of machinebuilding production

was 27.8 of total industrial production, while that of textiles was only 8.5 percent.

This volume of machinebuilding production lends our industry an expressly socialist character and strengthens our position on world markets.

In the new Five-Year Plan the total gross production of industry is to increase by 50 percent; of this total the output of the means of production is to increase by 57 percent and that of machinebuilding, as the leading element in industry, by 83 percent. By this production increase, which will be achieved in part by increasing the technical quality of machinery and equipment, we will bring about a substantial increase in the technical standards of all branches of the national economy, an improvement in the capacity of the nation to defend itself, and a great increase in our ability to export.

The Qualitative Reconstruction of Machinebuilding

The production increase equal to 4 times the prewar level, 24 new machinebuilding plants, more than 25 percent of total industrial production -- these are the crude figures showing the quantitative growth achieved in the Czecoslovak machinebuilding industry. This quantitative advance is associated with qualitative changes, no less important, concerning the structure of machinebuilding. The machinebuilding plants are producing every year not only considerably greater quantities of products but are turning out also ever better products and are expanding their production program.

Even if, as has been pointed out already, we had in many respects a well-developed machinebuilding industry even before the war, large sectors of the field were nevertheless neglected and

some not represented at all. This was connected primarily with the influence of foreign monopolies on our prewar economy, which was still capitalist. Thus through the efforts of the Swedish concern SKF we did not have our own antifriction bearings and were condemned to import this key product. Similarly the patent monopoly of the foreign concerns Philips and Siemens impeded the development of our own electrical-engineering industry including radio engineering. Thus it represented a basic change in our machine-building industry when, with the technical aid of the Soviet Union, we built up our own production of antifriction bearings and developed our own electrical engineering to be one of the most important sectors of machinebuilding. The enormous problems encountered will be indicated by the fact that, for example, for our new bearings plants we were obliged to produce around 150 special machines, apparatus, and measuring instruments. In 1953 alone more than 50 new technological methods had to be solved in bearing production with continuing expansion of the production program (cf. Technicky pokrok v Gottwaldove petiletce -- Strojirenstvi [Technical Progress in the Gottwald Five-Year Plan -- Machinebuilding], SNTL, 1955, page 231).

Similarly in other branches, wherein we were formerly condemned completely or primarily to imports, we have built up our own production which has in large part become the basis of our new exports. This applies primarily to power engineering, equipment for the chemical industry, and rolling-mill equipment, but it is true also of machinery for the textile, rubber, and polygraphics industries, and the production of medical instruments and equipment, various electrical appliances and equipment, etc. At the same time we have of course continued to develop those branches of the in-

dustry in which we achieved success in exportation before the war -- in metalworking and woodworking machine tools, engines, various vehicles, precision mechanics, machinery for the food industry, and agricultural machines.

"Since the war Czechoslovakia has performed a miracle in machinebuilding. As a specialist I can say that nowhere in the world have I seen such a high-quality and extensive survey of machinebuilding products." Thus the development of our machinebuilding industry was characterized by Carlos Haydn, a Brazilian industrialist from Sao Paulo, one of the more than 2,000 foreign visitors to the first machinebuilding exhibition held in 1955 in Brno. At this exhibition, which had 4,000 exhibits and was attended by 850,000 people, including guests from 57 foreign countries, Czechoslovakia was shown to be a country in a leading position in international trade in machinery. In 1956, at the second machinebuilding exhibition in Brno, we will be able to see that the production and export development of our machinebuilding industry continues along with uninterrupted improvement in technology.

Technical Progress Achieved in Machinebuilding

For a general picture of the size achieved by the Czechoslovak machinebuilding industry it may be pointed out that we are today producing huge dredges (up to 1,200 tons in weight) which can transport and dump a thousand cubic meters per hour and replace the labor of several thousand workers. We are also making the most varied machinery for the coal industry, such as mine combines and locomotives, pneumatic and drilling machinery, and face-cutting machinery. We are building blast furnaces and systems of rolling equipment; machinery for scrubbing, grading, and dressing plants for coal and ores; large thermal and hydro electric power plants

equipped with extraordinarily high-capacity machinery; transformers up to 100,000 kilowatts' capacity; high-voltage instruments; fittings for high pressure and temperature, and instruments for automatic regulation of power and chemical equipment; large turbocompressors; equipment for processing petroleum; large and highly productive machine tools; high-frequency generators and machinery for heating, welding, and tempering, which reduce the time necessary for production procedures from hours to minutes and increase labor productivity from 10 to 100 times; automatic high-production welding equipment; machinery for a wide range of industries, etc.

As an example, it may be mentioned that in a single year, the last year of the Five-Year Plan, the following important technical work was completed in the machinebuilding industry: the largest press built in Czechoslovakia -- with a pressure of 12,000 tons, making it possible to process forgings weighing up to 200 tons. The first hydrogen-cooled turboalternator of 62.5 megawatts' capacity. The prototype of a series 499.0 electric locomotive for 3,000 volts, overhead supply, 4 traction motors of 2,400 kilowatts, and a maximum speed of 120 kilometers per hour. A prototype of a Diesel-electric series T 434 locomotive with a 700-horsepower Diesel engine. The largest lathe yet produced in Czechoslovakia, 3,150 millimeters in diameter x 15,000 millimeters, for working material up to 200 tons in weight. Mining equipment located in a mine tower 38 meters above grade, equipped with two Koepe machines 7 meters in diameter for a useful load of 12 tons and a cage speed of 20 meters per second. The prototype of a rectification column for separating liquid air into oxygen and nitrogen, 3,000 cubic meters' capacity per hour. The first vacuum dredge which in test operation gave a guaranteed output of 250 cubic meters per hour. A new Zetor 35 tractor, wheel- and caterpillar-type, with a spe-

cially high tractive force at the drawbar. A new 55-horsepower Š 1500 automobile engine, for civilian vehicles. The first television transmitter in Prague-Petrin, etc. (cf. Technicky pokrok v Gottwaldove petiletce -- Strojirenstvi [Technical Progress in the Gottwald Five-Year Plan -- Machinebuilding], SNTL, 1955, pages 14-16).

Technical Aid from the Soviet Union

The technical progress achieved by Czechoslovak machinebuilding is in large part due to the scientific and technical collaboration with the Soviet Union and to filling orders for complex machinery for the USSR in Czechoslovak plants according to Soviet documentation. In the periodical Strojirenska vyroba [Machinebuilding Production], No 11, 1955, the experiences gained in this collaboration in the V. I. Lenin Plants in Plzen are collected, showing clearly the importance of Soviet technical aid for the progress of Czechoslovak machinebuilding. For example, thanks to collaboration with the USSR it has been possible to carry out the development and construction of very heavy machine tools which were previously imported into Czechoslovakia. One machine of this type is the new S 3150-D 4 lathe with a diameter of 3,150 millimeters and bed lengths of 15,000, 20,000, and 25,000 millimeters. On the basis of documents supplied by the Soviet Union we have begun producing large globoid teeth for setting the rolls of block stands, and producing 17-roll levelers, whose operating precision is about 10 grades higher than that of watchmaking. Modern machines have also been produced for the cutting lines of broad-strip rolling mills, and manipulating equipment for block stands is being produced according to Soviet documents. Recuperation machines have been made for Soviet chemical plants, for the equipment used to purify hydrogen of carbon monoxide. These machines have made it possible for the V. I. Lenin Plants to become an important partner

of several plants throughout the world producing equipment for heavy chemistry. Among power-engineering equipment we may mention the manufacture of small 300-kilowatt DC turbine equipment, which has made it possible to develop the technology of turbine blades and enrich this technology by the addition of items previously unknown, such as, for example, drawing shaped parts, etc. Deliveries of steam turbines are very important for work on the standardization of these machines, while delivery of compensators, transformers, and other products has made it possible to lay the foundations for the easier solution of tasks of building the power base in Czechoslovakia.

The Prospect for Further Development

The second Five-Year Plan charges Czechoslovak machinebuilding, as the principal element in industrial expansion, with new tasks which must be discharged by further technical development. The organizational requirement for this is the establishment of three machinebuilding ministries, which was achieved by the end of 1955; the Ministry of Heavy Machine Building, the Ministry of Precision Machinebuilding, and the Ministry of the Automobile Industry and Agricultural Machinery.

One of the most important goals is providing for power-engineering construction by means of advanced machines. In delivering 85-megawatt hydro turbines and generators for the largest hydroelectric dam at Orlik, with a drop of 71.5 meters, and for the hydroelectric power plant at Lipno, all the machinery involved is of dimensions and capacities hitherto never produced in Czechoslovakia. At the same time we shall solve the problems associated with the construction of steam power plants with 100-megawatt units operating at 180 atmospheres and a temperature of 550 degrees Centigrade with steam boilers with capacities of 240 tons per hour.

The development of a new series of electric motors with higher efficiency, reduction in transformer losses, the design of electric power for mines, the shift to Diesel-electric locomotives, and the electrification of the railroad network -- these are electrical-engineering jobs which will require the development of machinebuilding technology.

More numerous and no less important will be the jobs of machinebuilding connected with the machinery and equipment used to mechanize heavy labor in all branches of industry. Improvement in mine equipment, delivery of ore- and coal-dressing plants, the construction of metallurgical equipment, particularly for rolling mills, and the redesign of a series of dredges are among these goals. Similar tasks are encountered in the construction of new chemical plants requiring the mastery of high-pressure catalytic synthetic processes, intensification of chemical processes by the use of high or low temperatures, and the transition to continuous processes of input, filtration, and drying. In the food industry, as in light industry, it will be necessary to perfect production technology by means of mechanical equipment and to expand production of equipment for factory transportation; in agricultural machinebuilding progress must be continued in the development of more elements lacking in the complex mechanization of plant and animal production. For the construction industry it will be necessary to develop and produce a broad variety of machinery and equipment to mechanize the production of building materials, the production of prefabricated elements, and construction itself, while machinery and equipment must be built to mechanize the construction and repair of highways and railroad lines.

Machinebuilding alone of course cannot be satisfied with the variety of machinery now produced for actual production purpo-

ses. The transition to more productive shaping, welding, and cutting machinery requires the development and production of very efficient construction, single-purpose, and special machinery equipped with special attachments and with highly automated operations.

This means that machinebuilding production itself, during the new Five-Year Plan, will undergo a profound technical improvement, the range of which is outlined in the theses concerning further technical development of Czechoslovak industry published in September 1955 by the Central Committee, KSC, and the government. These state primarily that, in the interest of further development and improvements in technical standards in machinebuilding, the following goals must be fulfilled:

1. To develop progressive technology primarily inareas of basic importance and in those which offer the best prospects; this includes power-engineering equipment, Diesel engines, mining and metallurgical equipment, chemical equipment, certain food-industry equipment, ships, locomotives, special freight cars, highway and construction machines, various equipment for mechanization, electric power engineering, shoemaking and textile machine, agricultural machines, tractors and motorcycles, mathematical and statistical machines, industrial electrical engineering, equipment for automation, and measuring and laboratory instruments.

2. As a priority goal we must provide for the development and production of high-quality cutting, forming, and foundry machines necessary for the introduction of progressive forms of continuous production in machinebuilding. These machines must be of a quality recognized throughout the world.

3. As regards the modernization of equipment in our own machinebuilding industry we must keep in mind imports of certain special machines and instruments and provide for the development and production of our own machinery and equipment as needed.

4. The technology of machinebuilding production will thus be raised by the transition to progressive forms of continuous production, particularly by the organization of places of work according to material, by the formation of shops with a closed production cycle, etc.

5. In the foundries and forges there will be a continuation of the mechanization of strenuous work and progressive methods in the production of semifinished products, such as precision casting and shell molding, "raw" casting, efficient "nalitkovani", machine shaping of large castings, precision forging, rotary forging, pressing, etc.

From this picture of development in the second Five-Year Plan, in which machinebuilding will be faced with such great tasks and will at the same time expand and perfect its production base, we can see the outlook for further decisive progress throughout machinebuilding technology. On the basis of the continual development of progressive technology Czechoslovak machinebuilding will be able in still greater measure to fulfill its mission in delivering machinery and complete factory equipment to countries in all parts of the world in order to help build up production and provide evidence of the technical progress of Czechoslovak machinebuilding. This will also strengthen the position of our machinebuilding in the export trade.

Modern machinebuilding technology is of course so varied that it is practically impossible to produce all types of machines,

nor is it desirable. For this reason we shall not only continue to import special machinery from the Soviet Union and certain people's democracies (the German Democratic Republic, Hungary, Poland) but we shall also gradually negotiate with them the coordination of production programs in order that machinebuilding production can be built up on the foundation of large production runs.

In 1956, for example, according to an agreement concluded on 6 February 1956, the import of machinery from the German Democratic Republic to Czechoslovakia will increase by 55 percent over the 1955 level. At the same time, however, the German Democratic Republic will triple imports of machines. The two partners will increase their imports of machinery while the division of labor between them will make it possible to intensify specialization and attempt serial production. We are thus not limiting imports of special machines which we do not produce ourselves; on the contrary, we are expanding just this type of import wherever it can help in our construction.

For purposes of our construction it is important to have our own production of machines for the most important industries so that machinebuilding can provide the necessary basis for our exports and so that in respect to machinery we will not be subject to the danger of discrimination as was the case when we were dependent on foreign monopoly concerns in certain key machine items and thus at their mercy. Our present machinebuilding industry is a secure foundation for our socialist industrialization and the mechanization of agriculture, and fully protects us against discrimination from abroad.

Machinery -- 40 Percent of Czechoslovak Exports

The enormous quantitative and qualitative change which planning has brought about in our machinebuilding since 1945 is natur-

ally reflected in our exports, in which machines have become the leading item, far surpassing the other branches of industry. The growth in the share of machinery in total Czechoslovak exports can be seen clearly from the following survey:

Item	1937	1948	1953
	[As a percent of total exports]		
Machinebuilding products	6.4	22.9	40.0
Consumer goods	36.8	34.0	15.0

It is clear from the table what a fundamental change has occurred in the structure of our exports. Whereas the proportion of machines in total exports has increased more than 6-fold since 1937 and by almost 50 percent [sic] since 1948, the proportion of consumer goods in total exports has fallen by more than half. Whereas before the war Czechoslovakia had a negative foreign-trade balance in machinery, the balance in this field is now positive. This positive foreign-trade balance in machinery was achieved as early as the last year of the Two-Year Plan, 1948, and the expansion of machinebuilding during the Five-Year Plan hrs further improved the trade balance in machinery.

Czechoslovakia's Trade Balance in Machinery (Millions of 1937 crowns)

Year	Exports	Imports	Net
1929	681.0	1,339.0	- 658
1937	811.0	982.0	- 171
1948	2,135.1	735.5	+1,381.6

The increased turnover in machines continued during the Five-Year Plan and subsequent years so that Czechoslovakia is now among the most important suppliers of machines and industrial equipment in world commerce, particularly in certain fields. We have achieved a leading position particularly in machine tools, Diesel engines, pumps, certain electrical-engineering equipment, shoemaking machinery, motorcycles, etc.

A characteristic of our exports of machinery is their variety, since they include machinery and instruments of all types, from precision measuring instruments to gigantic machines and equipment for entire industrial plants. In addition to machinery for industry and various vehicles we export also consumer goods such as radio receivers, sewing machines, and other products.

We send to the Soviet Union primarily products of heavy machinebuilding and complete equipment for entire plants, particularly for electric power plants. If the Soviet Union has outlined grandiose new goals for increased industrial production and construction in the sixth Five-Year Plan, we may take delight in the fact that we too are contributing to the realization of these goals by supplying various machinery and equipment. These exports are found in the great constructions of Communism and are contributing to the accelerated development of the Soviet mining, power, metallurgical, machinebuilding, chemical, textile, glass, leatherworking, and food industries -- of course on a much more modest scale than domestic Soviet industrial products.

No less important are deliveries of Czechoslovak machinery and industrial equipment to the people's democracies.

There is great interest in capitalist countries as well in Czechoslovak machinery, particularly in industrially underdeveloped countries which, with the aid of our machinery and equipment, can build up their own industry without the danger of bringing in foreign capital interests. In making deliveries to these countries we frequently are carrying out older traditions. For example, one quarter of all sugar factories in the world operate with equipment delivered, at least in part, by Czechoslovak factories.

Exportation of Investment Units

Of by far the greatest importance for our exports are products of heavy machinebuilding, including particularly exports of investment units, i.e., complete equipment for entire factories and electric power plants. These comprise gigantic units worth several hundred million crowns for a single complete outfit weighing many thousands of tons. For example, the mechanical and electrical equipment for a steam electric power plant of 4 times 200 megawatts' capacity weighs 14,000 tons and thus requires 1,400 freight cars to transport it. (Cf. Zahranicni obchod [Foreign Trade], No 11, 1953, article by J. A. Svoboda on the export of investment units).

Investment units must be produced and assembled so that they will meet the special requirements of the plant for which they are intended: they must be carefully "tailored." In producing this very complex equipment a number of factories participate, and their work must be properly coordinated by the chief supplier. For example, in supplying equipment for a ceramic plant in Egypt, for which the chief supplier was Keramostroj, in Blansko, 89 subcontractors participated. The production of investment units usually takes a year, and before production can be undertaken long preparatory and design work must be completed.

The very fact that Czechoslovakia is able to supply investment units on such a large scale that a special foreign-trade enterprise -- Technoexport -- has been set up for this purpose is the best evidence of the high technical level and potential of our heavy machinebuilding industry.

In a report to the IXth Congress of the Communist Party of Czechoslovakia, on 26 May 1949, Antonin Zapotocky, then Prime Minister, spoke of the importance of exports of Czechoslovak machinery:

"We cannot aim for capitalist profits, which are based on the exploitation of industrially underdeveloped countries and the effort to keep these countries underdeveloped as long as possible. We must support the development of industry in these countries and give them not only consumer goods but particularly machinery, factories, electric power plants, sugar factories, locomotives, etc. Therefore our alliance with the people's democracies is of such great importance. Against the capitalist intention of keeping their allies industrially backward and dependent, we intend to help them toward industrial development with the knowledge that this development will make our alliance more valuable and their consumption and the possibility of mutual exchange of goods with us will rise. If our foreign trade is to be thus oriented our production must be adapted to this orientation."

Therefore we have placed the main emphasis in our economy primarily on machinebuilding, and for this same reason we have altered the structure of our exports and are continuing in this development in the second Five-Year Plan. We believe at the same time that this development favors not only us but that by exporting machinery, which makes possible extensive imports to Czechoslovakia, we are also best serving our foreign-trade partners. And only this type of foreign trade from which both parties derive advantages is healthy and desirable and long lasting.

CHAPTER IV

THE EXPORT SUCCESS OF THE CZECHOSLOVAK MACHINEBUILDING AND METALLURGICAL INDUSTRIES

What better characterizes the export success of our industries than the fact that Czechoslovak products and the symbol "Made in Czechoslovakia" are found throughout the world? When the Czechoslovak engineers Hanzelka and Zikmund on their travels through three continents landed in the Argentine capital of Buenos Aires they were immediately greeted by a great advertisement covering the whole wall of a building on which they saw our traditional export trademark "Skoda", used in exporting not only automobiles but various machinebuilding products from the former Skoda Works (now called the V. I. Lenin Plant) in Plzen.

If this was a friendly greeting from Czechoslovakia in a faraway land it was not the only one. They encountered not only advertisements but very frequently finished products, results of the work of Czechoslovak workers and technicians. Most frequently they found Czechoslovak Jawa motorcycles, which are as widespread in Africa as in South and Central America; they also found passenger cars and trucks of Czechoslovak manufacture, on the fields they saw Sigma pumps and Zetor tractors, and they encountered various machinery and of course the people's opinion of it. They found that Czechoslovak products have a good reputation everywhere -- a reputation which was surely enhanced by the performance of their Tatra.

Before the war the Czechoslovak products best known abroad were food and those of light industry -- Czech glass, costume jewelry from Jablonec, Karlovy Vary porcelain, Zlin shoes, Plzen Prazdroj beer, and Prague ham. Today the products of our machinebuilding industry and our vehicles are becoming better and better

known. We exported some machines and complete equipment even before the war. But after the war, when our plans expanded production in the machinebuilding industry and broadened the production program, Czechoslovakia began supplying machinery, industrial equipment, and vehicles in a volume and variety never before seen. We have thus become one of the world's leading exporters of machinery.

We have mentioned the trademark "Skoda" in Argentina. After the war in the Argentine city of San Nicolas the largest distillery in the world was built, to produce 2,500 hectoliters of anhydrous alcohol daily. All its equipment was supplied from Czechoslovakia. In 1954 alone we sent 1,000 tractors to Argentina, raising the number of Zetor tractors sent from Czechoslovakia to that country in the last 4 years to more than 6,000.

Czechoslovakia Builds Factories throughout the World

Heavy machinebuilding is the foundation of our export industry. Even before the war we sent abroad various industrial equipment, primarily machinery for the food industry: sugar factories, distilleries, breweries, mills. Our machinebuilding plants set up in whole or in part about 500 beet- and cane-sugar factories throughout the world, and many inventions contributed toward their mechanization. In Czarist Russia more than 100 sugar factories were permanent customers of our machinebuilding plants.

In recent years we have sent complete sugar factories to several people's democracies, to Syria, to Iran (Turbat, Rezasheh [sic], Veramin), to Afghanistan (Baghlan), to India (Decean, Brihan Mahorashtra [both unidentified]), which in 1956 ordered equipment for 2 more sugar factories, to Uruguay (Paysandu), and now to China. The Soviet Union is also a permanent customer for our sugar-factory machinery.

One sugar factory which we sent to Iran, the refinery in Veramin, was appraised technically by representatives of the foreign factories with which we compete in placing sugar-factory equipment on world markets. Especially noteworthy however are the sugar factory and refinery delivered as part of a complete agricultural-industrial combine to the city of Homs in Syria, where the victorious February Plants of Hradec Kralove set up simultaneously a distillery, starch factory, glucose factory, and auxiliary operations.

The equipment for complete breweries and malting plants has been sent, for example, to the South African cities of New Lands, Salisbury, and Port Elisabeth, and to the Swedish cities of Hornsberg, Harberg, and Gavle. We also sent a brewery of 10,000 hectoliters' capacity to the above-mentioned city of Paysandu in Uruguay. The mill-machinery factories in Pardubice produce 140 types of mill machines and a large proportion of them is exported. There is particularly great interest in them in South America and the Near East.

To Gdynia in Poland we have sent equipment for extracting oil from oil seeds. In the Afghan capital city of Kabul the slaughterhouses have also been equipped with Czechoslovak equipment.

Alongside traditional exports of equipment for the food industry we have recently developed exports of complete equipment for a number of other industries. A leading position in this is occupied by exports of equipment for cement plants. We have sent them to Poland, Hungary, and Lebanon. The Swedish company Owland Cement in Dageman has received from us equipment for a cement plant with a daily capacity of 320 tons, and now, in 1956, we are arranging the construction of a cement plant in Afghanistan for which the chief supplier is the Prerov Machinebuilding Plants.

On 27 October 1948, at the former military parade ground in Prerov, the cornerstone was laid for a new machinebuilding plant. In 1951 production was begun here and 4 years later, in addition to 24 machinebuilding plants already built during the first Five-Year Plan, three railroad trains of 60 freightcars each left this plant carrying machinery and equipment for a cement plant which Czechoslovak technicians and skilled assembly workers are building at Jabal-us-Siraj, 80 kilometers from the capital of Afghanistan, Kabul, at an altitude of 1,600 meters above sea level. The machines from Prerov had to travel 6,000 kilometers through the Soviet Union, whence they traveled by truck over a pass 3,000 meters high. Camels were used for some of the transportation. And while this factory is being built, a clear indication of the aid which our new industry is extending to less developed countries in their industrialization, other orders were being received for the establishment of cement factories in Egypt and India. We are also sending Egypt equipment for a new ceramic factory.

One of the largest deliveries from Czechoslovakia to South America since the second world war had been the equipment for a grading plant and scrubbing plant for the large modern mine at Rio Turbio in the Argentine Province of Patagonia. The total weight of this equipment was 2,000 tons.

Czechoslovak plants supplied coke ovens for the Polish Kosciuszko metallurgical plant, roll stands for Soviet metallurgical plants, and very important equipment for Hungarian aluminum factories. India has also ordered equipment from us for two special machinebuilding plants.

No less remarkable are Czechoslovak deliveries for building up the chemical industry. The methyl-alcohol factory in Rio Ter-

cero in Argentina was built by our machinebuilding plants, as was the nitrogen plant at Köping in Sweden, and a number of plants for ammonia synthesis in the Soviet Union and certain people's democracies. We are now supplying a nitrogen plant to China while the Marshal Rybalko Plants in Decin are working on complete equipment for a plant to produce phenyl resin and superphosphate, also for China.

We are also supplying equipment for light-industry plants. In 1955 our export of investment units was expanded by the addition of textile-plant equipment. Technoexport sent to Turkey 240 looms and dressing machines and all auxiliary equipment.

Our machinery is found in Soviet plants producing shoes, and in the new Polish shoe combine in Nowy Targ. In Lebanon the Solica firm built a sneaker factory equipped exclusively with Czechoslovak machines. The most modern such delivery from the Precision Machinebuilding Plants in Gottwaldov is the equipment for a complete factory for rubber and leather shoes, built within the framework of the Egyptian industrialization program at the edge of the Nile delta in the province of Al Trahir [unidentified]. We obtained this order against particularly strong international competition, although the Bata firm in Alexandria did everything possible to make it difficult for us!

From Burma we have received an order to set up a factory for bicycle tires and tubes, rubber shoes, and soles. The equipment for a tire-repair plant, exhibited at the fair in Djakarta, was sold to Indonesia.

We are sending the Soviet Union a leather-drying plant and equipment for producing plate glass. For this latter delivery the Finis Plants in Ledec and Sazavou have produced a complete automat-

ic line, and the Unicov Machinebuilding Plants have made bridge cranes equipped with special vacuum equipment for carrying plate glass weighing 650 kilograms.

The CKD Sokolov plants are sending Iran the equipment for ice-making plants. Another contract concluded with Iran concerns delivery of a plywood plant complete with electric power plant and other auxiliary equipment. To Vietnam we are also delivering equipment for a lumber combine, including sawmill and equipment for producing veneers and plywood. We have sent to Albania the equipment for a plant to produce pressed sheet made of shredded corncobs.

That is not all. It would be necessary to mention deliveries of equipment for a brickmaking plant to Korea, film laboratory to China, factories for enameled ware to Indonesia, and several other orders for complete equipment for industrial plants, the number of which is continually growing. At the same time it is particularly noteworthy that our design organizations are working for foreign customers. They have sent abroad designs for several dozen factories.

In the Service of Electrification

Construction of the power base is one of the key tasks of the socialist industrialization of the people's democracies. Czechoslovakia is second only to the Soviet Union in deliveries of equipment for hydro and thermal electric power plants which are being built in the European and Asiatic people's democracies.

The Polish electric power plants in Zabrze, Jaworzno, Stolkowa Wola, Miechowice, and Czechnice are equipped with machinery from Czechoslovak factories and were built with the aid of our assembly groups. All the mechanical equipment at the electric power plant in Inota was supplied by the CKD Stalingrad, CKD Dukla, and CKD Modrany. Half of the electric power plants newly built in

Bulgaria have been supplied with equipment from Czechoslovakia. This is true of the Republika steam power plant, the largest in the Balkans, as well as of the Pasarel power plant on the Iskar River. We supplied our heaviest machinery for the Mezdra, Petrovo, Rosica, Koprinka, Stara Zagora, and Aleko power plants.

We have extended similar aid to Rumania in building the large electric power constructions of socialism, including among others the construction of the large V. I. Lenin Electric Power Plant with a capacity of 210,000 kilowatts on the Bistrita River. We also supplied the mechanical equipment for the largest Albanian electric power plant.

It is a matter of pride to us that our deliveries are contributing to the electrification of China and to the restoration of the hydroelectric power plants which were destroyed by the war in Korea. In China these are particularly the electric power plants in Shanghai, Chapei, Nanking, and Nanding which have received large turbine equipment and other heavy machinery from Czechoslovakia. In 1956 the V. I. Lenin Plants and the CKD Stalingrad, which are competing with each other to accelerate deliveries, are sending Korea 200 transformers. In 1956 the First Brno Machine-building Plant, Klement Gottwald Plant, alone will send to China 30 steam turbines of 100,000,000 kilowatts' capacity in addition to 20 steam boilers.

Machinery supplied by Czechoslovakia is participating also in the further electrification of the Soviet Union, albeit on a scale which understandably cannot compare with that of Soviet machinery. On the construction of the largest electric power plant in the world, on the Angara River in Siberia, Czechoslovak distribution auxiliary electric power-plant equipment is performing well alongside dredges and other construction machinery sent by us. We

are also sending the Soviet Union heavy electric power plant equipment. For example, the Božena II turbine, sent in 1955 from Vysočany to the USSR, weighed 400 tons and required 40 freightcars for its transportation.

Deliveries of Czechoslovak power-plant machinery and equipment are, however, not confined to the democratic market; we are sending them also to capitalist countries. Our equipment has been used to supply Danish electric power plants in Aarhus, Skaerbaek, and Copenhagen, and we are sending similar equipment to expand the electric power plants in Surak (India) and Turkey, and in 1956, in competition with 40 other firms, we obtained a particularly remarkable contract to deliver equipment for three hydroelectric power plants, complete with transformer stations, to Iceland.

In connection with deliveries of complete equipment for electric power plants we must mention also Czechoslovak exports of "packaged power plants" and power trains.

So-called packaged power plants are a type of "pocket" electric power plant of 1,500 kilowatts capacity; these are used in places which the network does not reach and where the construction of a permanent electric power plant cannot be envisioned in the immediate fugure. They are composed of a steam turbine, generator, steam boiler, and auxiliary equipment. Because of the small weight their shipping, assembly, and disassembly are relatively easy. These portable power plants, adapted to operation in the tropics, are particularly sought after in India, Burma, Egypt, and China.

Czechoslovak electrical-engineering plants are also beginning to produce "suitcase" electric power plants with output sufficient for a single house or cabin. It is probable that interest will be expressed by other countries in this product as well.

The purpose of the power trains -- mobile electric power plants on rails -- is similar to that of the packaged power plants. In the democratic camp only Czechoslovakia, in addition to the Soviet Union, manufactures them, while in the capitalist countries only a few producers turn them out (the American General Electric and the Swiss concern Brown-Boveri). In Czechoslovakia they are produced by the national enterprise Tatra, in Kolin, with several sub-contractors from among the heavy machinebuilding plants. All equipment for a complete mobile electric power plant with capacity sufficient for a large city is installed in an 11-car train. This device, whose production was extremely difficult technically, has a great export future. We are supplying these trains primarily to the USSR.

Other Export Success of Heavy Machinebuilding

In addition to supplying complete equipment for a variety of industrial plants and electric power plants, the greatest export success of Czechoslovak heavymachinebuilding has been achieved in the heaviest machinery and equipment, frequently unique, and expertly designed.

Particularly large equipment and parts are manufactured by the machinebuilding plants and machinebuilding divisions of metallurgical plants for maritime ships -- heavy forgings for ship keels, shafts, ship screws, large Diesel engines, and other parts and equipment. For example, recently the V. I. Lenin Plants in Plzen have produced a large transmission box for a maritime ship designed to turn out 400 horsepower. It is to be used for a tanker and weighs 45 tons. By way of comparison it may be pointed out that the enormous 5-throw crankshaft exhibited at the Brno Machinebuilding Exhibition in 1955 weighed 16 tons.

The V. I. Lenin Plants in Plzen, applying traditional Skoda methods, export to 27 countries -- the USSR, China, the people's democracies, India, Syria, Pakistan, Indonesia, and Iran; exports include heavy electric power-plant machinery, trolleybuses, presses, transmission boxes, and spare parts for large machines. Among recent deliveries we may mention the gigantic 6,000-ton press for the USSR, 15 meters high and 6 meters wide, with a bed almost 50 meters long; packing presses for Poland and China; and manipulators up to 600 tons in weight. In 1956 the V. I. Lenin Plants are to turn out a large number of unique machines such as a 100,000-kilowatt hydrogencooled turbogenerator, a 95,000-kilovolt-amp hydrogenerator; a combustion turbine for a power train and for locomotive power, transformers and circuit breakers to operate at 400 kilovolts, turret lathes for handling parts 12.5 meters in diameter, modern horizontal lathes with pushbutton control, etc.

A leading position, alongside the V. I. Lenin Plants, is occupied by two Prague sister plants: the CKD Stalingrad and the CKD Sokolovo; the first of these produces primarily equipment for electric power plants, and for the coal, ore, and chemical industries; the other produces locomotives, motors, refrigeration equipment, and compressors. Some of the latter are so large that they could maintain the ice in three skating rinks. Their weight including motors reaches 400 tons, so that almost an entire train is required to transport such a machine.

The Brno Machinebuilding Plants -- the First Brno Machinebuilding Plants, and the Klement Gottwald Plant, the Gottwald Plants, the Kralovo Pole Machinebuilding Plants, the United Machinebuilding Plants and Foundries, and the Bohumir Smeral Plant -- export chemical equipment, bridge structures, railroad tank cars, turbines,

enormous presses, machinery for treating sheet metal and other heavy equipment.

The Hradec Kralove Victorious February Plants send various equipment for the power, chemical, and food industries, principally to the USSR and the people's democracies. For example, in a single year 1955 deliveries from these plants to the Soviet Union filled 1,800 freightcars. As examples of their products we may mention plate columns for the Soviet chemical industry, one of which, 56 meters long, weighs 100 tons. Into a long steel jacket are placed several dozen plates 2 meters in diameter. Production of this column consumed 25,000 screws and 2.5 kilometers of welding.

Another leading heavy machinebuilding plant is the Sverma Plants in Slany which export dredges, cranes, heavy equipment, and other machines. In the Swedish port of Malmo heavy loadsare removed from maritime ships by means of gigantic cranes -- cranes supplied by the Sverma Plants. In India, on the Damodar River, a dam was built under the direction of American engineers who, in competition for the best design, chose a stop-log crane (for automatic handling of dam stop logs) designed at the Sverma Plants. The only foreign supplier of briquetting equipment for sugar-beet chips to the Soviet Union is the Sverma Plants in Slany. Other successful export products of these plants are hydraulic truck cranes installed on the Tatra 111 chassis. They are exported to China, Vietnam, Korea, Burma, Holland, and Rumania.

The Zdar Machinebuilding Plants and Foundries, which were built during the first Five-Year Plan on the Bohemian-Moravian Upland, produced at the beginning of 1956 their largest machine to date -- a crank press for the Soviet Union. It weighs 100 tons and exerts a pressure of 1,500 tons.

Another plant, built during the first Five-Year Plan, is the Unicov Machinebuilding Plants whose exports have been distinguished primarily by cranes and heavy dredges. Portal cranes, higher than the Petrin observatory, as well as electric and steam dredges have been sent to the Soviet Union, China, and the other people's democracies, as well as to France, Scandinavia, and South America, a total of more than 20 countries. Just as cranes from Slany are operating at Malmo, cranes from Unicov are operating at Goteborg.

A machinebuilding plant in Moravia which is exporting is the Slovacko Machinebuilding Plants in Uhersky Brod which produce drilling machinery for oil and coal production. In the second Five-Year Plan we shall proceed to export these items to the people's democracies and the economically underdeveloped countries.

In Slovakia too several new machinebuilding plants have arisen which are now exporting their products. The machinebuilding plants in Piesko, in Banska Bystrica Kraj, are producing 1,000-ton plywood presses for Soviet woodworking plants. The Podpolianske Machinebuilding Plants in Detva, formerly one of the poorest parts of Slovakia, are producing principally dredges which are being exported with success. The East Slovak Machinebuilding Plants in Kosice are sending their enormous 30-ton pile drivers to the USSR, China, Hungary, Korea, Brazil, Yugoslavia, and several other countries.

Machinery for Various Branches of Industry

There is no important branch of industry for which we do not produce at least a few machines -- whether the woodworking, ceramics, construction, chemical, food, or cigarette industries, or transportation equipment or fire-fighting machinery. Keramostroj in Blansko, the Metalworking Plant in Chotebor, the Orlice Machine-

building Plants in Skuhrov, Transports in Chrudim, Stavrostroj in Bela pod Bezdezem, and many other small machinebuilding plants share in this growing export trade.

The Plant of the First Five-Year Plan in Milevsko may take pride in the numerous successes achieved in heavy pneumatic engineering. Enormous fans, driers, pneumatic transportation equipment, and electrofilters, produced in this plant, are operating not only in Czechoslovak plants but in a number of foreign countries such as China, Turkey, Lebanon, and Afghanistan.

Elevators supplied by Czechoslovakia are operating in Hungarian electric power plants and in Peking film studios, while our dumbwaiters are being used on steamers plying the Volga and the Don.

The national enterprise Alba in Horovice produces equipment for public feeding, for plants serving 200 to 10,000 persons. It is the only plant of its kind in Czechoslovakia and its products are encountered not only in our own factory kitchens but in the people's democracies and in South America.

For the polygraphic industry we produce and export printing machinery (in the Grafopress Plant in Cvikov), the Maxima papercutter, and the Zetaprint offset reproduction machine, a product of the Adamov Machinebuilding Plants. New orders keep pouring in for this machine -- from the South American republics, from China, the USSR, France, England, the Union of South Africa, and Australia.

We have achieved first place in the entire world in the production of shoemaking machines, turned out in the Precision Machinebuilding Plant in Gottwaldov. We supply these machines not only to the Soviet Union and the people's democracies, but to capitalist countries as well. Shoemaking machinery requires careful design and precise, high-quality work since increasing demands are

always made on it. We are able to meet these demands: for example, a new heel-nailing machine can nail 2,000 heels per hour.

We have been able to achieve first place also in the production of textile machinery, which is a new branch of Czechoslovak machinebuilding. In the Moscow Textile Combine they call our automatic textile machines "intelligent machines" because they seem to require no attention. In the plant at Krasnyy Kholm they have doubled production.

The result of the planned construction and reconstruction of our machinebuilding industry is the expansion of the production program, not only by the addition of machinery for various branches of industry which we have previously produced, but by the addition of various parts and auxiliary equipment, some of which are of key significance. This is true particularly of ball and roller bearings, which we are now producing in Klasterec nad Ohri, Kysucke Nove Mesto, Hostivar, and elsewhere both for domestic consumption and for our growing export trade.

Our fittings plants also have great jobs to do. Their valves are used in Chinese electric power plants, Indian sugar factories, and the Soviet petroleum industry.

Among the Greatest Exporters of Machine Tools

"One has only to come and see the quality and arrangement of your machine tools, the largest of which are equipped with the latest technical advantages and have automatic control." Thus spoke V. Krishnan, deputy operational director of the G. K. Shell Firm, at the fair in New Delhi. Our machine tools are truly on a high technical level, and we are among the greatest exporters in the world. We produce about 400 types of machine tools, of which the most widespread trademarks are Skoda, TOS, and MAS.

The V. I. Lenin Plants in Plzen produce machine tools in a special division, and machine tools are also produced by the numerous TOS plants throughout Bohemia and Moravia, Kovosvit in Sezimovo Usti, the Precision Machinebuilding Plants in Gottwaldov and Hulin, the Jiri Dimitrov Plants in Blansko, and several Slovak plants. All these plants produce and export lathes, grinders, planes, turret lathes, vertical and radial drills, shapers, and other machine tools.

We cannot name all the machine tools which in recent years have achieved greatest export success. As an example we can mention the WD 250 horizontal borer produced by the V. I. Lenin Plants. It is 9 meters high and weighs 105 tons, and nevertheless its weigh is from 22 to 78 percent less than that of similar foreign products. At the same time its capacity is from 70 to 100 percent greater than that of foreign machinery. It operates with a precision of 0.02 millimeter.

Kovosvit, in Sezimovo Usti, has produced mammoth planers for China. One such machine measures 23 meters in length and weighs 200 tons. It is completely automatic. The transportation of such a machine requires about 15 freight cars. In 10 years following the war Kovosvit exported 8,000 machines. In 1955 it exported 1,240 and, in the first half of 1956, it had exported 800 according to plan.

Among the greatest successes of Czechoslovak machinebuilding is the production of large F 025 hob cutters, which have spread the fame of the TOS Plants in Celakovice, not only throughout many people's democracies, but in a number of industrially advanced west-European countries.

The plants which, during the Nazi occupation, produced bunkers have grown into the Machinebuilding plants of 9 May in Kuhre,

near Trencin. They are producing SUR lathes which are sent successfully to the USSR, Poland, Norway, Austria, and many countries beyond the seas.

The TOS Plants in Olomouc are exporting their milling machines to 24 European countries and 19 transoceanic lands.

The great interest shown in Czechoslovak machine tools throughout the world is best exemplified by the fact that the exporter of these machines, Strojexport, sent out 200 carloads of them in one month. In one week, for example, 57 carloads of them were sent to the German Federal Republic.

Our greatest joy, however, comes from the fact that those who use our machines appreciate them. Moscow lathe workers say, for example, of one of our universal lathes: "It's a really good machine. We thank the Czechoslovak workers and designers who put it together." Soviet milling-machine operator Aleksashenkov, who works with one of our copying milling machines, declares: "Punches made on this machine tool are soo good the fitter doesn't even need to touch them. This is a fine machine. The Czechoslovak machine builders deserve hearty thanks for it." Another worker, Ivan Nikitin, working on a line of Skoda machine tools, says: "Those are amazing machine tools. In comparison with other machies of the same type the Skoda machines are simpler in design, easier to control, and more reliable in operation. Only rarely do they break down and they turn out a lot of work."

Our machine tools are bringing good repute to Czechoslovak work throughout the world.

We Also Lead in Diesel Engines and Pumps

In exports of Diesel engines and pumps we also are in fifth place in world trade. Present-day production is 30 times as great as its peak before the war. Between 1956 and 1960 it is to increase by 58 percent according to plan.

Diesel engines are produced in several plants in Czechoslovakia. The largest Diesel engines for ships and large pumps are produced by the CKD Sokolov, and by the W. Pieck Machinebuilding Plants in Smichov. Engines of 2,000 horsepower drive ocean-going ships, but the factory is not satisfied with this and is preparing to produce 2,500-horsepower engines. Engines from the W. Pieck Machinebuilding Plants are also used to produce electricity in remote parts of China, Argentina, and Brazil and to drive dredges and pumps. In Mecca they produce lights which illuminate Mohammedan shrines, while in Cairo four 1,500-horsepower Skoda engines pump out the wastes of this Egyptian metropolis.

The workers in the experimental shop of the Sverma Plants in Brno assembled 4,000 very precise parts to make ship regulators for the Diesel engines produced by the W. Pieck Machinebuilding Plants. This combination was very successful. Soviet ships equipped with Diesel engines with this new regulator made the voyage from Leningrad to Vladivostok, 12,000 sailing hours, without a single breakdown.

In one month the factory in Plotiste n. L. exported engines to the Soviet Union, Poland, Portugal, Holland, Iran, Turkey, French North Africa, Argentina, and Brazil.

Three-fourths of the small engines trademarked Slavia, ranging from 5 to 30 horsepower, produced in Napajedle, are exported, largely overseas. Demand is so great that although the plant has undertaken general mechanization it is unable to handle all orders by itself and production has been extended to the Adamov Machinebuilding Plants and Horovice.

The national enterprise Sigma in Lutin, with branches in Hranice and Zabreh, which is collaborating closely with the Petr Bezruc Ironworks in Olomouc, is the largest producer of pumps in

Central Europe. Sigma pumps are helping to irrigate fields and plantations throughout the world. Particularly large aggregates have been delivered recently to Pakistan, Brazil, and Vietnam. The total output of the 50 aggregates sent to Pakistan equals the flow of the Vltava in summer.

Whereas Sigma pumps are driven by Diesel Engines, the Petr Bezruc Ironworks in Olomouc also produce manual pumps -- oscillating pumps -- which are used on ships and in agriculture. For example, Holland uses 12,000 of these annually for fishing ships, and Holland is only one of dozens of countries which use these pumps. With Orient-type pumps we meet, for example, a full 95 percent of Egypt's demand, and the situation is similar in other countries of the Near and Middle East.

New Success in the Export of Vehicles

The Czechoslovak transport-machinery industry, based on a good tradition, has recently achieved considerable outstanding success and the export of vehicles awaits further development.

In surveying this export success we can begin with the simplest means of transportation: we have exported 3,000 bicycles to Rumania, 4,000 to Vietnam, 3,000 children's bicycles to the USA, and 30,000 bicycles to Poland -- all from the Cheb Es-ka factories in 1955. "Es-Ka" is one of the Czechoslovak brands best known throughout the world, met with on all continents. The Velostadion bicycle, produced in Rakovnice, is known as a high-quality racing bicycle, while the Velamos Plants in Sobotin and Zlate Hory have had remarkable success in exporting bicycles and parts.

One of the greatest Czechoslovak achievements is in the export of motorcycles, representing about 20 percent of world trade in motorcycles. We thus are ahead of the motorcycle great powers

-- England, USA, France, and West Germany. Our Jawa-CZ motorcycles are sold in more than 100 countries. The latest addition to this list is the Solomon Islands. In the 250-cc class we supply 36 percent of world consumption. In a number of countries about 80 percent of all motorcycles in operation are Jawas. Our motorcycles are on sale in Finland, Holland, and the Union of South Africa. The Holland firm of Beers has, for example, taken 25,000 Jawa-CZ's.

Exports of Czechoslovak motorcycles are promoted by continuing competitive achievements. When, for example, in 1955 a Czechoslovak team won the silver cup for the third time in the International Six-Day Race, new orders immediately came in from Brazil, Finland, Switzerland, and Denmark. Jawas have done very well also in long-distance journeys. For example, in 1955 four Ceylonese journeyed from Ceylon to London on Jawa 350's. The 15,000-kilometer journey to Prague went off without a single difficulty. Between 1952 and 1955 a married couple, the McDonalds, from New Zealand, traveled around the world on Jawa 125's. They went over the trackless mountain wastes of Afghanistan, through the Syrian and Libyan deserts, across the Argentine pampas, over the Bolivian Altiplano, reaching altitudes of 5,000 meters above sea level and traveling a total of 60,000 kilometers through 40 countries.

In the Strakonice Plant they have already produced more than 300,000 motorcycles but even continual expansions of production are unable to keep pace with demand. Therefore in the second Five-Year Plan we shall undertake a substantial expansion of plant capacity, which will strengthen our export trade.

Like our motorcycles, our automobile and trucks have a good name abroad. When the Spartak-Skoda 440 appeared as a "miracle of the Frankfurt fair" in an exhibition depicting a lively street in

Vienna, the entire shipment was sold out within an hour. At the 1955 Brno Machinebuilding Exhibition 300 Skoda 440's were immediately ordered for Portugal.

When N. S. Krushchev spoke in praise of this vehicle at our exhibition in Moscow in 1955 he said: "I really like that car. We must come to an agreement with the countries in the socialist camp and, together with them, create the conditions for mass production of these cars. Not only cars, but other machines as well. Production on a broad-scale will make it possible to reduce the cost of production and thus increase the possibility of competing with the western world. To produce more, cheaper, and better -- that is our main task."

There is a great deal of truth in these words. It is not enough that the Skoda and other Czechoslovak cars are good; they must also meet the requirements of the world market with respect to price.

In the Koprivnice Tatra Plants they are now making a high-performance passenger car, the T 603, and the Tatra 111 trucks. The design of the convertible truck is so satisfactory that, following its example, within the framework of technical collaboration between the USSR and Czechoslovakia, trucks are being manufactured in the Soviet Union which are now working on the great constructions of Communism. Tatra trucks are exported to numerous countries, where they have proved themselves under the most difficult conditions. It is interesting to note the arrangements made for export to South Africa: there is not a single piece of wood in the entire truck, as protection against termites.

Like Tatras, Praga automobiles handle excellently in the most difficult terrain and even in the highest mountain regions of

Tibet. Another producer and successful exporter of trucks and buses is the national enterprise LIAZ with plants in Liberec, Rynovice, and Mnichovo Hradiste. Its Skoda 706 trucks are among the most successful Czechoslovak export articles. In 1955 Argentina alone bought about 800 of them at a cost of approximately 6,000,000 dollars.

Czechoslovak autobuses run on the streets of Bucharest and of Peking. The Pekinese call them Chekher -- Czechs. At the beginning of 1956 new types of streetcars appeared on the streets of Warsaw. They had been sent from Czechoslovakia. They are well known in Prague on lines Nos 4 and 17. Poland also buys trolleybuses from us, while Egypt buys autobuses.

We have already mentioned deliveries of tractors to Argentina. In 1955 we sent 2,000 tractors to Hungary, a country which also helps our agriculture by delivering combines. Some Chinese farms and machine and tractor stations are equipped exclusively with Czechoslovak tractors, while in Bulgaria our Zetors have proved themselves not only in agriculture but also in timber removal and other forest work. The situation is similar in dozens of other countries in Europe, America, Asia, and Africa to which the Sverma Plants in Brno and the ZPS [Precision Machinebuilding Plants?] in Lisen send tractors.

Tractor export combines the traditional export of agricultural machinery from several Agrostroj enterprises in Bohemia and Moravia. For example, the Agrostroj in Roudnice, through Motokov, is sending attachments, particularly plows, to 45 countries. Binders from Jicin are working on Austrian, Danish, and Belgian fields. Tedders produced in Rozmital pod Tremsinem have proved themselves in Switzerland, Holland, Italy, and of course in the people's democracies.

"Finally I have an airplane with which I can fly with my family without any danger over the endless deserts of the Middle East and over the broad jungles of southeast Asia." Thus the "flying diplomat", the Belgian charge d'affaires Louis de San, expressed himself about our Aero 45 aircraft. He took one in Prague and flew with it from Brussels to Milan, Castel Benito, Cairo, Bagdad, Teheran, Shardjek, Karachi, New Delhi, Calcutta, and Rangoon to Bankok.

Many amateur flyers and professional pilots have expressed themselves in similar terms concerning our sport aircraft. Whenever these aircraft are presented at foreign fairs they cause a sensation, as occurred in Djakarta and Toronto, where our aircraft won enormous success. As in the case of the motorcycles each such success brings more orders -- to Indonesia, Switzerland, Argentina, Austria. We are producing and selling new types of sport and training aircraft: Aeros from Let in Kunovice; Treners from Moravan in Otrokovice; and Sokols from Orlican in Chocen. There is also a great deal of interest in the Brigadyrs from Chocen; these are used for the aerial dusting of crops with pesticides. Argentina, for example, has taken 100 of these aircraft.

In 1945, against very strong international competition from England, the USA, West Germany, Austria, and Hungary, we received an order for 50 locomotives for the Indian railroad system, surely a great achievement for Czechoslovak industry. We are sending India 2,050 railroad cars, also on the basis of a victory in competition against 37 firms from all over the world. India has thus become one of our greatest purchasers of locomotives and railroad cars. At the same time the Czechoslovak locomotive factories (the V. I. Lenin Plants in Plsen and the CKD Sokolovo) and our Tatra railroad-car plants in Studenka-Butovice, Smichov, and Ceska Lipa

are occupied in filling orders for other countries as well. Recently we have sent special cars to the USSR, freightcars to Korea, and express cars to Bulgaria and Turkey.

One of the largest export orders in the entire history of Czechoslovak foreign trade is the delivery of 150 electric cleaning locomotives to the Soviet Union. Heavy mine electric locomotives from the V. I. Lenin Plants in Plzen are working to complete satisfaction in Siberian and Chinese surface mines. They weigh 150 tons and turn out 2,100 horsepower. In the V. I. Lenin Plants they say with pride that these locomotives are unequalled by any competitive machinery.

The Stavoloko Plants in Radotin u Prahy send small mine locomotives to France, Sweden, and Turkey as well as other countries. In 1955 the administration of the phosphate mines in Jordan ordered 200 mine tipple cars for the field line. Although the order was small it was promising for the future, while a difficult condition was attached: the cars had to be delivered within 2 months. The Stalingrad Plants in Liskovec were quite ready to meet this condition and won the order. They proceeded with similar flexibility in the case of an order for Argentina in which it was necessary to meet special technical requirements.

"Jesterky" [lizards] is the name given by the people to the agile battery carts used to carry small loads in factories and at railroad stations. The Decin Machinebuilding Plants export them to the Soviet Union, Austria, Rumania, Greece, Egypt, Sweden, Afghanistan, Holland, China, and Yugoslavia.

During the Five-Year Plan we have built up a new branch of exports in the construction of ships. The Diesel-electric passenger ships produced in the Komarno shipyards, now plying the Volga

and the Don, are floating hotels in which 300 travelers and tourists find the most comfortable accomodations.

We have sent 20 or 30 tugboats to the Soviet Union; they are used now both on Soviet rivers and in coastal shipping on the Black Sea. They are recognized to be of the highest quality in the Soviet Union. These tugboats can draw as many as eight 1,000-ton barges which generally corresponds to the load carried by 530 fifteen-ton freightcars.

The third type of floating stock which we produce for export is the floating suction dredges which are made by the Bohemian Shipyards in Holesovice. These iron colossi work on Siberian rivers which they reach by water down the rivers and canals of Europe, through Szczecin, and thence by sea to the Soviet system of rivers and canals. Transportation conditions alone show how solid the construction must be. In one hour the dredge can transport about 350 cubic meters of alluvium. The operation of the entire dredge is controlled by a single person while the rest of the crew is there only to see that all the equipment is in order and works faultlessly.

"Your dredge is a terrific machine," said one of the most experienced Volga communication machinists, Engineer Khakhanin. "In a short time it has gained the respect of the Volga workers. Believe me, that's not easy, since our river fleet is now equipped with such advanced machinery as our Sormov ships."

These words are not only the highest reward for our work but an inspiration for further effort.

Export Achievements in Electronic Engineering

Whereas in prewar Czechoslovakia the financiel and patent position of foreign concerns, particularly German, did not permit the proper development of electronic engineering, we have in our

people's democratic state built up an extensive industry of electrical measuring instruments and telecommunications and radio instruments and equipment. At a recent exhibition in Brno more than 40 plants engaged in electronic engineering exhibited radio instruments, electronic measuring instruments for laboratory and industrial use, oscillographs, electrical microscopes, vacuum tubes, incandescent bulbs, and fluorescent tubes.

The Tesla national enterprises in Bohemia, Moravia, and Slovakia now concentrate all the main branches of electronic engineering and, by exporting large quantities, are performing valiant service in extending radio operations and the telephone network. .

From the Tesla plant in Karlin we send telephone central offices to various countries -- most recently to China and Finland, where we received an order following a very vigorous international competition. At the plant in Liptovsky Hradek they were forced to increase the production of modern telephone instruments for export. The Tesla plant in Hloubetin participated in deliveries for one of the largest radio stations in the world in China. Production of electronic measuring instruments, which we have developed from nothing, is concentrated in the Brno Tesla plant, whereas fluorescent tubes are produced by Tesla in Vrchlabi. From this plant they travel in a soft bed of excelsior to Turkey, the Far East, and Latin America. Enterprises in Pardubice, Prelouc, and Holesovice also work for export, and these plants are connected with countries near and far and work for the development of modern telecommunications engineering and thus for understanding among nations, for progress, and peace.

The name of the great Czech inventor, Krizik, is found on the electrical engineering plants in Smichov, Karlin, and Trutnov, with which the Krizik-Dukla plant in Presov is also associated. The

Smichov Krizik plant won in public competition a large export order for 60,000 single-phase electric meters for Egypt, which is evidence of its good export work. The Presov plant exports low-voltage transformers, small rectifiers, and small fans to 20 countries, including Egypt, Pakistan, Burma, India, Brazil, Turkey, and the Union of South Africa. In another Slovak plant -- the Krompachy MEZ -- they say, with justified pride: "There is not a single electrical machine used in Czecholsovakia or exported to the Soviet Union, China, Austria, Turkey, Afghanistan, Lebanon, Iran, or India which does not have as part of its assembly an instrument produced in our plant." Also the Bratislava Gumon plants supply important parts for electrical-engineering equipment used in the construction of large electric power plants in the people's democracies and overseas. Once again these products were formerly imported, principally from Switzerland.

The Elektro-Praga plants in Jablonecke Paseky - Tanvald have received orders worth millions of crowns for the export of small electrical fixtures.

"Clara" bulbs from the glassworks in Utekac illuminate the streets in Bombay and Copenhagen and burn in Austria and Yugoslavia. In 1955 new safety illumination equipment was installed at the Leipzig airport; this equipment greatly increases landing safety and was exported by Czechoslovakia.

Precision Mechanics and Optics Also Export Items

The optical products of the national enterprises called Meopta in Prague, Prerov, and Bratislava -- cameras, movie cameras and projectors, copying and enlarging instruments, binoculars, microscopes, theodolites, analytical balances, photo-elasticimeters, and other optical measuring instruments -- are exported to more than 30 countries.

The Czechoslovak Flexaret camera is, for example, very well received even in the USA, a country which is one of the most advanced in this field. We have exported tens of thousands of pairs of polarizing eyeglasses. The precision mechanics plants in Bytca export engraving tools, geometrical instruments, and metal levels to Brazil, Burma, and Uruguay. Okula in Kromeriz exports microscopes, while Metra in Blansko exports precision measuring instruments, the national enterprise Laboratory Instruments exports vacuum pumps and other equipment, and Somet in Teplice exports measuring instruments.

An entire new field, extremely important in the struggle for public health, has been built up in the production of medical instruments, in the national enterprises Chirana, and "Prema" in Slovakia. Both enterprises are outstanding exporters. We manufacture dentists' chairs and instruments, diagnostic and microstructural X-ray machines (such as the smallest X-ray instrument in the world, the Minident), various medical equipment and surgical instruments, injection syringes, surgical needles, stethoscopes, sterilization drums, and mobile clinics. Today not only Czechoslovak physicians but physicians throughout Europe and many countries across the seas use our instruments and utensils.

Precision mechanics includes the production of office machinery and sewing machines, which are also a successful object of export. Czechoslovak Zeta typewriters from the Jan Sverma Plant in Brno can hold their own even with products from countries highly advanced in this field, as is indicated by the special recognition received in Australia by the model called the "portable consul." Exports of calculating machines have also recently been undertaken.

"Sao Paulo, Moscow, Sofia" can be read on the cartons into which the Lada Plant in Sobeslav packs its sewing machines. Western Europe, Canada, Brazil, and South Africa purchase Lada sewing machines, just as do Turkey, India, and Australia. The same can be said of Minerva sewing machines produced in Boskovice to be used by readymade clothing plants and tailor shops.

A wide variety of electrical appliances and other household furnishings -- washing machines, electric mixers, stoves, baby carriages, metal furniture -- are also successfully exported. Large washing machines and ironers are also exported for industrial use. Stoves from the Kovosmalt Plants in Trnava are found at Soviet polar stations. Alarm clocks from the Chronotechna Plant in Sternberk wake up people in Uruguay, Indonesia, and Finland, while locks "Made in Czechoslovakia" are used in Egypt, Turkey, and Holland.

The Jan Sverma Plants in Brno also produce hunting and sporting rifles for a wide variety of uses. If we are to believe the former Pakistan governor, who is himself a good hunter, our hunting weapons are among the best in the world. That is what he said about them at the Czechoslovak exposition at the fair in Karachi. Kovo, the foreign-trade enterprises, received a letter from an Indonesian hunter who had shot a tiger in the jungle with a small-gauge Czechoslovak rifle.

Czechoslovak enamelware called Sfinx has achieved real world renown. It has reached the Pacific Islands and the most remote regions of Africa. In Nigeria, for example, the natives, faced with a choice of goods from 25 countries, ask for "those with the longest name", i.e., with the inscription "Made in Czechoslovakia." The secret of success is both excellent quality and unlimited ingenuity in form and decoration of goods. Therefore the

plants in Vrata near Ceske Budejovice, in Brno, in Filakovo, and in Frydlant n. O. export annually several hundred carloads of these products to the entire world. Enameled tubs are also a successful export item.

The Export of Metallurgical Products

All important Czechoslovak metallurgical plants share in the export of metallurgical products, which make up a significant portion of all Czechoslovak exports. Even the New Klement Gottwald Metallurgical Plant is exporting increasing quantities of forgings and rolled products to Poland, Hungary, the German Democratic Republic, and China. A particularly sought-after product is tubing -- smooth tubing and oil piping -- which is used by the Soviet Union, the people's democracies, and the capitalist countries in Europe and overseas. Good proof of the quality of this tubing is the fact that it is being used even in the German Federal Republic, which itself exports this material. Furthermore an Austrian company which took over some oil mines from the Soviet administration has remained loyal to deliveries from Kuncice.

The Vitkovice Ironworks also export tubing to a number of European and transoceanic countries. Vitkovice combines metallurgical production with the manufacture of structural steel and heavy machinebuilding. This plant rolls for export not only rail, large quantities of which is used in Egypt, but also turns out boilers and Füller mills, as well as structural steel for China, hydraulic piping for Korea, heavy forgings for the Soviet chemical industry, roll stands for Soviet metallurgical plants, equipment for Polish coking plants, rolled profiles, forgings and stampings, crankshafts, fire tubes, tires for freightcar wheels, and many other products for export to all continents.

The Vitkovice Ironworks also have a great deal of experience in the production of steel bridge structures. There are several bridges in the Soviet Union which were sent by Vitkovice. The Vitkovice Ironworks also played an important part in the Friendship bridge over the Danube connecting Rumania and Bulgaria. Several bridges have also been sent to Turkey. Recent achievements of the Vitkovice bridge- and machine-builders include a swing bridge for Egypt, which was installed by the end of 1955. This bridge, 40 meters long, weighing 220 tons, can be turned in only 3 minutes. Another such bridge was delivered in 1956.

Another Czechoslovak plant sending bridge constructions abroad is the Stalingrad plants in Mistek-Liskovec. In 1955 this plant sent to Egypt the structural parts for a bridge 102 meters long and 30 meters wide and weighing 650 tons. Assembly requires 220,000 rivets. The fact that a Czechoslovak plant won the order for this bridge in competition with 18 leading foreign firms is evidence of the quality of our metallurgical and machinebuilding plants.

The V. M. Molotov Plants in Trinec send rail and various rolled products to Holland, Sweden, Africa, and South America. In 1955, for instance, they sent more than 50,000 tons of rail to Argentina.

One-fifth of all the tonnage of rolled products turned out at the Gustav Kliment Ironworks, in Bohumin, is intended for export, and is sent to 20 countries. The ironworks in Podbrezova suffered chronic unemployment in the pre-Munich republic and were threatened with permanent shut-down. They are now fully employed with domestic and foreign orders, and export to 28 countries. Foreign markets show great interest in refined steel, Thomas steel, and other products from the Kosev metallurgical plants of the United Steel Mills, in Kladno.

The Pipe-Rolling Mills, in Chomutov, keep receiving foreign orders for their tubing, which they send to the entire world. In 1955 exports from these plants to the Soviet Union alone were 15-percent greater than the average of all exports of these plants from 1936 to 1938. In additionto the Soviet Union, however, the Chomutov plants export to Brazil, Turkey, India, Indonesia, Austria, and, recently, to Norway, Sweden, and Finland.

Along with large metallurgical deliveries exports include smaller goods from smaller plants which cannot be underestimated. The chain plants in Ceska Ves near Jesenik, for instance, export snow chains to northern countries, and commercial chains to India and Ceylon. The screw plants in Kyjov in 1955 produced 120 carlodas of various screws and nails for export to China. The Kovohute [Metallurgical Plants] in Povrle export hundreds and thousands of tons of iron wire to the Soviet Union, Egypt, and Brazil. In the Decin Kovohut they manufacture electrical conducting cable which is sent, among other countries, to Iceland. The Bohumin Wire Mills also export cable; in the 5 years that this product has been made here they have turned out 10,000 kilometers of its, which is more than the distance from Bohumin to Vladivostok. Among recent deliveries we may mention cable for the great freight cableway in Brazil, which is now being assembled by the workers at Tramontaz, in Churdim.

CHAPTER V

A NEW FOUNDATION FOR EXPORTS OF LIGHT-INDUSTRY PRODUCTS

Planned socialist industrialization requires that the focus of all industry be on heavy industry, whose development must be more rapid than that of light industry. This requirement was in conflict with the industrial structure which we inherited from the pre-Munich republic. Before the war the textile industry led all other branches of industry with respect to the number of employees, share in total industrial output, and share in exports. In 1937, for example, textile exports represented one-fourth of all Czechoslovak exports, and the share of other branches of light industry was proportionately large: 6.6 percent of all exports were glass products and 5.2 percent were other consumer goods (porcelain, leather goods, wood products, etc). About two-thirds of all textile output was exported. Some other branches of industry -- porcelain production for instance -- were still more dependent on exports than the textile industry. The world depression and the decline in exports represented a real catastrophe for these branches of industry. The preponderance of light industry in our economy and its great dependence on foreign markets was inherited partly from Austria-Hungary (since Czechoslovak industry, as has been said previously, worked principally for the territory of the entire former monarchy) and on the other hand resulted from the capitalist system which gave priority to light industry, since this type of industry requires less investment and provides great profits in exports. Of course, during the depression years this profit was achieved primarily at the price of starvation wages in all industry, and also at the expense of the domestic consumer who paid high prices for goods which were dumped on foreign markets.

This, for example, was the policy of the sugar cartel, which exported sugar at a fraction of the price paid by domestic consumers.

Another negative aspect of the inordinate share in the economy and export trade held by textile industry and to a certain extent the leatherworking industry as well was the fact that these branches of industry were almost exclusively dependent on raw materials imported from abroad. In certain years this dependence forced us to maintain exports with great effort and great loss only in order to be able to import the necessary cotton, wool, raw hides, and other raw materials. The situation was the more serious since many of these raw materials were exported again, after only the simplest processing, in the form of semifinished products (such as cotton in the form of yarn), albeit with profit for the entrepreneur, although at the expense of workers' wages.

This much must be said by way of introduction concerning Czechoslovak exports of consumer goods before the war, in order that we may understand the spirit and significance of the changes made after 1945 during the Two- and Five-Year Plans. Basically the following problems were solved:

1. The structure of our economy was altered so that the focus of industrial production was shifted decisively from consumer goods to the means of production.

2. The share of consumer goods in total exports was reduced such that a substantially greater share is occupied by the products of the machinebuilding and metallurgical industries.

3. Dependence on imports of raw materials from capitalist countries was reduced in those industries which, because of their special foreign-exchange requirements, did not produce sufficient foreign-exchange yield. This measure was in harmony with the general line of consolidating independence from the capitalist world.

Planned management of the proportional growth of individual branches has meant that the share of the means of production in total Czechoslovak industrial output has increased from 57.8 percent before the war to 62.3 percent in 1953, while the proportion of consumer goods in total output has dropped from 42.2 to 37.7 percent in the same period. This has been achieved by directing greater investments toward the output of the means of production than toward light industry. Thus during the Five-Year Plan machinebuilding production increased by 224 percent, metallurgical production by 102 percent, chemical output by 138 percent, power by 110 percent, while output in the textile and readymade goods industry has risen only 50 percent, ceramics 28 percent, glass 21 percent, and leatherworking 19 percent.

The buildup of heavy industry will surpass increased output of light industry also in the second Five-Year Plan, and this will in turn raise the share of machinebuilding in total industrial output and exports. According to the latest determination machinebuilding represented 27.8 percent of total industrial production, whereas textiles represented only 8.5 percent, readymade goods 2.5 percent, leatherworking 2.2 percent, and glass 0.9 percent. Whereas before the war metalworking and metallurgy occupied 24 percent of all industrial workers and textiles 29 percent, nowadays, with a considerably higher absolute number of employees, 38 percent work in the metallurgical and machinebuilding plants, and only 16 percent work in textiles and readymade goods. During the same period the share of the metalworking and shoemaking industry dropped from 6 to 3 percent, and of the glass industry from 7 to 2 percent, of the total number of industrial workers.

The drop in the percentage share in total exports of individual branches of light industry is shown by the following table:

Item	1937	1948	1953
Textiles	25.0	16.2	6.8
Glass	6.6	6.3	3.1
Other consumer goods except foods	5.2	11.5	5.1

These figures show clearly how the share of light industry in total industrial production and exports has dropped, following the requirements of socialist industrialization and changes in the structure of exports.

It is convenient to note that this decline in textiles from a leading position in Czechoslovak exports corresponds to the general development of international trade. After a number of decades exports of textiles in world trade are now dropping, whereas exports of machinery are on the rise. This development is quite understandable, since the industrially underdeveloped countries are gradually establishing their own production of at least ordinary textiles and other consumer goods, so that exports of textiles in world trade are becoming increasingly limited to special types and high-quality products, thus reducing total turnover. On the other hand, the gradual industrialization of underdeveloped countries is raising the demand for machinery on a world scale and thus increasing their share in international trade. If, therefore, we are attaching increasing export importance to machinery at the expense of textiles, this corresponds to general developments.

The decline in the share of textiles in total Czechoslovak industrial production and exports has simultaneously solved the problem of reducing our dependence on imports of raw materials from capitalist countries. This has been done in two ways: we have expanded domestic production of natural fibers (flax and hemp) and synthetic fibers (artificial silk, cellulose staple fiber, and

glass fiber) and changed over to raw materials imported from the Soviet Union and the people's democracies -- Soviet cotton and wool, Chinese silk, hemp, ramie, jute, etc. This has made it possible in the cotton industry, for example, to use cellulose staple fiber and artificial silk, as well as raw materials imported from the USSR and the people's democracies, to such an extent that between 1949 and 1953 the proportion of cotton and cellulose staple fiber imported from the capitalist states dropped from 45 to 23 percent. It is clear from this how the total trade balance of our textile industry has improved, particularly since with our own production we have replaced the majority of previously imported dyes and auxiliary materials.

We have proceeded similarly in other branches of light industry in which we were disproportionately dependent on imports from capitalist countries. For example, in the leatherworking industry the use of pigskins has made it possible for us considerably to reduce our dependence on imports from capitalist countries. In the production of glove leathers we have completely liberated ourselves from imports by using domestic raw materials. Tanning agents which were previously imported are now partially replaced by domestic synthetic production.

The reduction in imports of raw materials for the textile and leatherworking industries has completed the transformation of the formerly unhealthy structure of our foreign trade resulting from the excessively large share of light-industry products in exports and the simultaneous great dependence of this type of industry on imports of raw materials from capitalist countries.

New Jobs and Prospects for Exports of Light-Industry Products

The transformation in the structure of Czechoslovak foreign trade outlined above does not, of course, mean that the signifi-

cance of exports of light-industry products is to be diminished in the future. It must be emphasized that, while in this reorientation of industry we strove to reduce the proportion of light industry in total foreign-trade turnover, a further relative or absolute drop in light-indutry exports is not desirable in the future. Production of all branches of light industry has grown and will continue to do so, albeit not at the pace of heavy industry. This growth of production is necessary not only in order to meet the constantly growing domestic demand coupled with rising living standards, but also so we may continue and develop exports of light-industry products, based on increased output of domestic raw materials.

It should be emphasized above all that with the continually rising living standard in the people's democracies there is a simultaneous growth in interest in numerous products of Czechoslovak light industry. We are able to meet this demand. On several capitalist markets new advantageous opportunities are developing for us in sales of a variety of consumer goods whose production is based on domestic raw materials and will thus yield considerable foreign exchange. It remains the job of foreign-trade workers to transfer their experience in foreign trade to the production plan, to acquaint our workers with new developments abroad, and help them maintain our good export tradition in this branch of production.

In many branches of industry, particularly light industry, there was a profound change of personnel following the liberation. Women in large part replaced men so that today in many plants working principally for export the majority of employees are women. For example, we can mention the Lina textile plants in which 95 percent of the employees are women; the Hamiro toy factories in

which only 3 men work, the rest being women; the Centroflor factories producing artificial flowers, the factories of fancy leather accessories in Paludzka, the Pleas knitting mills in Havlickuv Brod, the Plants of International Women's Day in Bratislava, and the Jaroslav Jezek plants producing accordions in Horovice. A large percentage of women also work in the Dvory porcelain plant, the Bohumin chemical plants, the Sandrik plants in Vlkanova, and elsewhere. Women have shown themselves to be highly adaptable and quickly trained, although this is not always an easy task. Experience shows that an agile girl very quickly learns her work and can often operate two or more machines. Demanding foreign markets require that new workers be trained carefully, while the experience and skills of older workers must be fully utilized. In the majority of our plants whose product is primarily exported these tasks are well understood. By way of example we may mention the Czechoslovak lace industry, which includes production not only of lace but also of tulle, curtains, and embroidery, 80 percent of whose products is exported, primarily to South America. This type of export is economically very advantageous, since the material content is much smaller than the labor content. The lace-industry workers have done a great deal to promote exports, since in this industry it was necessary to train a large number of new workers. Although these are delicate products lace and embroidery are often produced on gigantic machines and therefore it is very useful to have these machines operated by women, who in many respects are superior to men and can sometimes operate two tulle machines simultaneously. Special attention is devoted to training youth, and the apprentice center at the Tylex enterprise in Letovice is among the best apprentice centers in all of light industry.

In this connection it may be pointed out that the important role which women must play in producing for export, and particularly in those industries in which we must maintain valuable traditions, is not understood everywhere. For example, in the Vamberk lace plant one can hear complaints that the manpower offices, in an effort to fulfill recruitment quotas, prevent young girls from devoting their efforts to lace production. This is a direct threat to the future of the production of bobbin lace at Vamberk, which in 1955 won second place at an international exhibition of lace in Bruges. Thus we took second place to Belgium, a traditional lace-producing country, and won against a number of other competing countries.

The demand on foreign markets changes constantly and great flexibility is needed to keep industry adapted. This does not mean that we should turn away from our traditional products which have brought us a good reputation abroad and which provide opportunities for further development. On the other hand, however, we must also develop production of new types of goods which will bring technical progress and for which there is demand. The glass industry provides a good example of this. This industry, like the lace industry, has a particular value for exports, not only because of its good export tradition, but also because its products contain a great deal of skilled labor and use primarily only domestic raw materials. The glass industry lives not only on the tradition of Czech cut glass and costume jewelry, but has been able substantially to expand its production program.

In developing new techniques we have begun to produce optical glass, glass for vacuum technology, special glass (Sial, Pekal), glass fiber, products of melted basalt and melted silica,

and a variety of products required by new techniques in industry and agriculture: vaginal inserts for insemination, "distance rings" for vacuum tubes, pyrolusite frit for cementing light-bulb bases, corundum loops for dairy centrifuges, glass and sapphire phonograph needles, frit filters, containers for firefighting equipment, etc.

We already export to the people's democracies glass tubing for chemical and food-industry plants and, in the second Five-Year Plan, this type of export will increase considerably. It is interesting to note in this connection that a "glass bakery" has been installed in Prague-Holesovice, representing a complete revolution in the production of bread and baked goods. Patents have been applied for on this equipment in all countries and foreign interest gives every hope of great export opportunities. Also in Chrudim we may be proud of an automatic mill with glass equipment.

The Kavalier Glassworks in Sazava are producing not only glass industrial equipment but also special technical and cooking glass. Simax glass particularly has great export promise and will be used to produce export goods, since it may be compared with the famous Jena glass. At the glassworks in Retenice they are producing so-called "dethermal" glass, which does not permit the passage of either heat or cold. Our Spartak-Skoda 440's are manufactured for export with this glass. Glass fiber, produced by the national enterprise Vertex in Litomysl, is also exported to the people's democracies and capitalist countries. The Duchcov Glassworks are well-known in many foreign countries for their glass shaped tile. Particularly noteworthy are the micro-cover glasses 0.1-0.2 millimeter thick which scientists, physicians, and chemists use to observe microorganisms under the microscope. We formerly imported these cover glasses from the USA and Germany. In 1947 we under-

took domestic production at the Jablonec Glassworks in Dolni Polubny and gradually perfected it so that we became exporters instead of importers.

Conscientious research in this aspect of the glass industry opens promising perspectives, in that the glass research institute in Hradec Kralove has succeeded in working out the production of precision optical glass for microscopes, binoculars, and photographic objectives, which were formerly the monopoly of the German glassworks. Earlier the research tasks connected with producing glass for vacuum technology and particularly for producing glass for television picture tubes were solved.

If we mention the glass industry by way of example this does not mean that similar opportunities have been completely overlooked in other industries. For example, in textiles a number of products have been introduced or perfected, many of which will go very well on export markets (this is indicated particularly by the interest of the USSR and the German Democratic Republic in basic knitted goods with multi-colored film printing).

In looking for new export opportunities we must not forget traditional export products as occurs in some cases when a particular industry is occupied solely with supplying the domestic market or loses interest in exports for other reasons. Cases of this kind can be found, among other places, in the export of certain food and agricultural products. In this field we have a tradition which must be managed carefully. No one can claim that in the export of food specialties and agricultural products, such as high-quality seed, pedigreed animals, etc, we are now using all opportunities, of which more than enough might be revealed by better organization. How advantageous is the export of certain of these products is shown by the fact that the feathers taken from one goose

earn enough foreign exchange to import the grain necessary to feed the goose. This means that when the feathers are exported the meat and fat are pure gain. Some countries such as Hungary, Austria, and Scandinavia show a great deal of interest not only in goosefeathers but in chicken feathers as well. Nevertheless we have not organized the collection of feathers in such a way as to make full use of foreign demand. Despite the considerable effort which we have exerted better results can be achieved in exports of medicinal plants and other wild crops, whose sale on foreign markets is extremely advantageous for us. We thus have a real interest in developing this type of export.

In the next chapter we will discuss the success which we have recently achieved in exports from light industry, chemical industry, and the food industry. Here it must be stated in conclusion that following the structural change in Czechoslovak foreign trade which placed exports and imports on a more healthy foundation we must strive to consolidate consumer-goods exports on the same basis. These exports must not be overlooked or underestimated because of the development of machine exports. We must keep in mind that production of light-industry goods is in a number of industries based on a domestic raw material and for this reason exports are very valuable with respect to foreign exchange. In many of its branches Czechoslovak light industry has outstanding production experience and a commercial tradition which it would be incorrect not to utilize.

The tasks facing foreign trade are great, economically important, and require the maximum utilization of all the forces which may contribute to it. There is no question that light industry may take a large part in this effort.

CHAPTER VI

EXPORTS OF PRODUCTS OF LIGHT INDUSTRY, CHEMISTRY, AND THE FOOD INDUSTRY

Although the focus of Czechoslovak exports has been shifted to machinebuilding products, nevertheless light-industry products -- glass and ceramics, textiles and leather -- as well as products of the woodworking, chemical, and food industries will continue to be important items with which we shall achieve success. We shall attempt here to give a brief survey of the development of these exports in which, in addition to the national enterprises, the co-operatives and local-industry enterprises play an important role.

Czech Glass Unequaled

Czech glass exports continue to rise. In 1955 they increased by 20 percent and in 1956 by another 15 percent.

Despite all the efforts of the competition Czech glass, with its age-old tradition of refinement and beauty, remains unmatched. Our trademarks Moser, Lobmayer, and Bohemia lead the world, while Harrachov cut glass, Borocrystal products from Bor, and crystal chandeliers from Kamenicky Senov are no less valued.

In the picture gallery at the Louvre, in the Moscow theater, in the Hall of Columns and the Winter Palace, in La Scala in Milan, in the Brussels Theatre de la Bourse, in the Sydney Opera, in the palace of the Afghan king in Kabul, in Hayderabad, in Manila, in the Congreso Internacional in Quito in Ecuador, and in many other important buildings Czechoslovak chandeliers shine out with unique beauty. The chandelier whichdecorates the Sydney Opera is 5.70 meters in diameter, 7 meters high, has 208 lights, and 10,000 pendants; it weighs 3,500 kilograms. It was shipped in 72 cartons. The Manila chandelier is still heavier. The national enterprise Lustry in Kamenicky Senov is successfully continuing its glorious

tradition. Among its recent exports we may mention 140 chandeliers sent to the Moscow Gastronom. The smallest of these is 160 centimeters high and weighs 160 kilograms, while the largest is 460 centimeters high and weighs 360 kilograms. A chandelier has been sent to the Imperial Palace in Addis Ababa; it has 160 lights and weighs over 200 kilograms. A decorative chandelier was made for the ruler of Saudi Arabia, the design of which used a modern combination of metal and glass.

We also supply table glass for rulers, diplomats, and other outstanding persons.

In addition to these exclusive and individually designed products, in which an important position is occupied by cut and etched vases of outstanding artistry, we also export a variety of useful and decorative glass. Numerous smaller glassworks which are less well known to the public than the Harrachov and Podebrady glassworks have a good reputation abroad and have customers throughout the world. This is true particularly of the glassworks in Annin near Susice, Nizbor near Beroun, and Katarinska Hut near Banska Bystrica, all of which export very valuable cut glass. Series-produced pressed glass is exported by the Moravia glassworks in Rosice u Brna, the Inwald glassworks in Horska Rystrice u Teplic, and a number of other plants. We also export simple packing glass, particularly bottles, and flat glass, including mirror glass.

A Czechoslovak specialty, valued throughout the world, is Zelezny Brod figurines, now produced from "metallurgical" glass; another specialty is costume jewelry and glass buttons. The foreign-trade enterprise Jablonex, in Jablonec nad Nisou, which handles exports of glass and metal costume jewelry, pearls, buttons, and various decorations, is in active contact with 90 countries throughout the world and notes increasing demand year by year.

If there was uncertainty for a while concerning the future of this typical Czechoslovak export industry, this uncertainty is now a thing of the past, and production based on export success is being modernized by investments in machinery and by reactivating idle factories. Important plant investments are being prepared for the second Five-Year Plan in Bor and Kamenicky Senov.

Closely related to the production of costume jewelry is the output of Christmas decorations; this is not, however, concentrated in Jablonec and Zelezny Brod but reaches as far as Dvur Kralove. Glass Christmas decorations are manufactured even in Moravia and around Bratislava. The national enterprises share in this with the production cooperatives. The scope of Christmas-decoration exports is astonishing. Dozens of carloads of these small and delicate goods are sent to France, Holland, Italy, and Switzerland and a number of other countries in Europe and overseas. The spirit of Christmas is peace on earth toward men of good will. Our Christmas decorations go to all the world as a greeting from our people working in peace and for peace, to all people who wish to live in good will and friendship with us.

Among exports of technical glass we should mention the successful export of thermometers from the Technosklo Plant in Drzkov. In 1955 this plant produced 10,000 thermometers in excess of the plan and sent them to Norway, Rumania, Bulgaria, China, and elsewhere.

Czechoslovak Ceramics Widely Known

In the Czechoslovak ceramic industry there are several plants which are known throughout the world. This is true particularly of the Rakovnice Ceramic Plants whose Rako glazed structural tile was used for the facing of a tunnel under the Hudson River in

New York, for the luxury hotel Gooiland in Holland, the Amalienbad Baths in Vienna, Ford garages in Antwerp, and many other important buildings and installations throughout the world. Through the foreign-trade enterprise Czechoslovak Ceramics the Rakovnice Ceramic Plants recently received an order for large green facing tile for the facades of several great new buildings, including a hospital in Cuba.

Another leading plant whose traditions and whose continuing improvement of product contributes to our export success is the West-Bohemian Ceramic Plants in Horni Briza near Plzen, renowned for its refractory material. The products of these plants are sought in industrially mature countries like France and Switzerland just as they are in underdeveloped countries across the seas. We export sanitary ceramics to 60 countries. The national enterprise Duchcov Ceramics plays a great part in this export since it has customers in Latin America, Africa, and the Near and Middle East. Recently we have achieved great success also in exporting ceramic tubing by winning a public competition in several countries of the Near East. The contract concerns several hundred kilometers of this tubing. Almost two-thirds of the asbestos-cement water-supply and sewerage pipe produced at the Beroun Eternite Plants is now exported, and demand is continually on the rise.

In Mlynarce near Nitra a factory has been built to produce asbestos goods which are successfully exported to India, Indonesia, Burma, and Pakistan.

Throughout the world -- in Europe, Asia, the USA, and Australia -- the trademark "Dux" is highly valued; this trademark is used on small ceramic goods from the Ceramic Plants in Teplice, one of the Duchcov plants. In their elegant execution, taste, and originality these products are reminiscent of porcelain figurines.

Exports of porcelain were temporarily reduced but certain steps have been taken recently which assure us that we will be able to continue our former success in exporting Karlovy Vary porcelain, with its tradition of more than 250 years. The factory of the national enterprise Starorolsky Porcelain in Dvory is working exclusively for export since the Brezova plant of this enterprise (formerly Epieg) was changed into a developmental factory as part of the program to improve exports. The exports of another plant with a great tradition, the Thun Porcelain Factory with plants in Klasterec nad Ohri and Dalovice, are continually improving. A new set of fine decorative porcelain aroused such interest in Belgium that a carload shipment was ordered immediately from the sample.

In addition to artistic and useful porcelain we export technical porcelain as well. For example, about one-third of the products of the national enterprise Elektroporcelan, in Bohosudov near Teplice, is sent abroad, as is the product of the plants in Merklin and Louny. The new porcelain plant in Cap near Nitra, which has been operating only a year, sends its products all over the world, particularly large insulators for power engineering -- to the Soviet Union, China, the European people's democracies, India, and several capitalist countries.

Finally it may be mentioned that we export ceramic raw materials and basic materials as well -- kaolin, cement, and Slovak magnesite.

Czechoslovak Textiles Also Renowned

Czechoslovak materials with satin and corded effects have been hailed by Austrailian importers as the most successful collection of the 1955 season. A few days after they were offered orders were received for them exceeding one million crowns. Their

success was equally great in Cuba, where they set the style. The foreign-trade enterprise Centrotex receives orders from Cuba for hundreds of meters of material.

Today the world textile market is not interested in ordinary "dozen" goods. These can be made in all countries. Only special products or products with outstanding quality, patterns, and taste can be sold. For this reason this is the direction taken by exports of Czechoslovak textile products, and we are achieving success in this way.

For example, our tickings have become so well liked in Canada for their excellent quality, strength, impermeability, and fine appearance that customers ask for Czechoslovak goods exclusively. The situation is similar in shirtings and furniture coverings. Our frotté goods are exported to 50 countries.

The national enterprise Tiba, which is a combine including textile printing plants, is one of the largest enterprises of its kind in the world and continually increases its exports of a wide variety of printed fabrics, particularly through its constant innovations. The Textilana plant in Liberec also exports hand-printed wool wraps, shawls, scarves, tablecloths, and women's suitings to all parts of the world.

Silon [nylon] material from the Atlas weaving mills in Kraliky have achieved success at all foreign fashion shows. For 1956 this enterprise prepared 100 new patterns and types of silon and artificial-silk fabrics. In the Brokat plant in Rymarov they are producing luxury brocades which were ordered for the coronation of Queen Elisabeth II.

Consumers around the world are wearing Czechoslovak linen goods. Our linen tablecloths are used in Montreal, Copenhagen, Bergan, and Capetown. Steamers plying the Volga and Don use table- and bed-linen produced in our linen-weaving mills.

It is not very well known that handkerchiefs are among the textile products most sought abroad. The national enterprise Lina in Hradec Kralove has handkerchief customers in Egypt, Kenya, Venezuela, and Cuba, in Tangier, Uganda, Honduras, and Haiti. The Mostex factory in Mostek, a plant of exemplary quality, has customers in Australia, Canada, and the German Democratic Republic. The Mileta plant in Horice produces handkerchiefs almost exclusively for export. Particularly brightly colored scarves were prepared by this plant, as by the Atlas plants in Zabreh, for the Olympic games in Melbourne.

An important item in textile exports is light readymade goods -- our checked flannel shirts, for example, are so well liked in Norway that 150,000 of them were sold there in 1955. The situation is similar in a number of other countries where we have been able to adapt to the taste and requirements of customers. Our exports of underwear to Denmark increased 5-fold in 1955. In Abyssinia our trademark -- two lions, which denotes Czechoslovak flatwear -- is so well known that importers have stopped sewing in their own trademark.

Leading exporting textile plants include the Karel Havlicek Borovsky Pleas plants in Havlickuv Brod. Thousands and tens of thousands of shipments are sent out from this plant to all parts of the world, containing knitted "natelniky", undershirts, underpants, and "scampola" which are very much sought after in Haiti, Egypt, and Indonesia. One of the leading customers for socks produced by the enterprise Tatrasvit in Svit pod Tatrami is Sweden which at the beginning of 1956 ordered 50,000 pairs. The national enterprise Elite in Varnsdorf leads in the export of women's stockings. Readymade goods from Prostejov, including almost all types of clothing, are exported to the entire world, principally to Latin America and the Near and Far East

Interesting export specialties are "simplex" gloves, flannel trousers and, above all, ribbons and braid. The S. K. Neumann Plants in Krnov are the largest ribbon and braid combine in Europe. This plant produces 2,000 types of ribbon and braid which are purchased in the most remote countries. The national enterprise Stuha [ribbon] in Dobruska has also specialized in so-called "leontine" goods in whose production metal fiber is used instead of textile fiber (one kilogram of copper produces 65,000 meters of metal fiber!). These leontine ribbons and braid have become such a specialty in international trade that we export them to all corners of the world.

Demand, particularly in western Germany and Australia, for certain types of Czechoslovak lace is so great that production can scarcely keep up with it.

The Plant of International Women's Day -- 8 March, in Bratislava, produces thread and embroidery yarn, exports of which have tripled since 1947. It would be erroneous to underestimate this product. We export it to 30 countries, some of them very far away -- Ceylon, the Gold Coast, numerous South American countries, Kenya, Iraq, and Jordan. Sponit in Chribska has also achieved considerable success with exports of its thread and yarn.

The national enterprise Juta which produces rugs has customers throughout the world. Czechoslovak rugs are well liked even in the lands of the Oriental rug -- in the Near East.

Our hats are truly exported on a world scale. Tonak hats from Novy Jicin and Valasske Mezirici are worn in the Soviet Union and America, in England, Sweden, New Zealand, Iceland, and Nigeria. Czechoslovak factories produce sombreros for Venezuela, fezes for South Africa, and ghurkas for India. Seventy percent of all hat production is now sent abroad.

Even before Strakonice was renowned for the production of motorcycles it was well known in the Orient for its fezes. The Strakonice Fezko still produces fezes but now turns out mainly berets, "radiovky", and patterned caps in a wide variety as required for continually increasing exports.

Shoes and Gloves

The foreign-trade enterprise Centrotex exports not only textile goods but also shoes and gloves. The Gottwaldov shoeware house, which sends "Ce-Bo" Czech shoes to the entire world, is a sort of gazeteer containing the names of dozens of European and overseas countries, all of them our customers. The largest customers include countries in Asia and Africa. Shoes are exported also from the plant in Trebic-Borovina and from the Plants of 29 August in Partizanske.

Production of leather gloves, which was formerly scattered mainly throughout the frontier region, has now been focused in a new center -- Dobris. Only branch factories remain in Prague and Abertamy. In the 5 years of its existence the Dobris plant has won back a leading position on export markets for Czechoslovak leather gloves.

Various Exports from the Wood Industry

We export wood as raw material and semifinished products, but principally in the form of finished products -- furniture, musical instruments, matches, various small wooden objects, etc.

The plant in Zarnovice exports high-quality veneers. Smrecina in Banska Bystrica has achieved success with its structural and furniture material Smrekolit and Isoplat. The national enterprise Lira in Cesky Krumlov exports moulding for picture frames to Jamaica and the Middle East

Czechoslovakia leads the world in exports of bentwood furniture, both in quality and quantity. TON chairs are well-liked in Madagascar and Malaya, on the Fiji Islands, in Hongkong, the USSR, the people's democracies, and the USA.

Our furniture industry retains a tradition of careful and tasteful execution and is at the same time mastering modern methods of work on production lines and mechanizing and automating numerous operations to adapt itself to the demands of modern technology. The UP Plants sent special folding dining chairs and school benches to Switzerland and office bookcases to the German Democratic Republic. No less successful in exports of special furniture are Jiton in Lisov, Sloboda in Gelanta, the West Bohemian Furniture Plants in Plzen, and the national enterprise Interier in Prague.

Present exports of pianos are six times as great as before the war, the result primarily of the high quality of our products. If Czechoslovak pianos are chosen for radio and television studios in Rome and Singapore, this is certainly the best evidence of the quality of their sound. In Australia and New Zealand Czechoslovak pianos are considered the best instruments. Exports of Czechoslovak pianos under the trade-marks Petrof, Foerster, Weinbach, Roessler, Scholze, and Dalibor bind Czechoslovakia to the entire world. Our organ factory in Krnov is also one of world renown. Among its recent exports we may list the export of an organ for the capital city of Iceland, Reykjavik. World-renowned also is the production of stringed instruments at the Cremona Plant in Luby and of brass instruments by the national enterprise Amati in Kraslice, with several branch plants.

Jazz bands and individual instruments -- saxophones, trombones, horns -- trade-marked Amati are exported to Canada, Mexico, the USA, and Venezuela, while instruments for wind bands are sent

to the people's democracies in Europe and Asia and several African countries. Particular confirmation of the quality of our wind instruments comes from the victory which we have achieved in several public competitions.

Accordions are also much sought after in the export trade and we have achieved great success with them on the world market. They are produced in the Plants of Jaroslav Jezek in Horovice with branch factories in Pisek and Louny. In 1955 we exported 12,000,000 crowns worth of them.

A long tradition, almost 90 years old, stands behind our export of matches from the Solo plants in Susice. They are known throughout the world. A tale is told of a Czechoslovak cultural worker who brought back from a trip to Java a box of Indonesian matches as a curiosity; not till he arrived home did he realize that he had brought back Czechoslovak matches which had been exported to Java and supplied with an export label. The Susico Solo plants are not, however, satisfied with the old tradition and with continuing the new tradition in match exports; they have also undertaken to produce wood-fiber sheets from their waste. These sheets are now exported to England, France, Greece, and other countries.

One of the most advantageous forms in which we export processed timber is paper, one of the most highly desired Czechoslovak products. A large number of countries with which we trade make special reservations in their trade agreements that we will send them various types of paper in which they are interested. There is scarcely a country in the world to which we do not export paper. Even countries which are typical exporters of paper, such as the Scandinavian countries, Austria, and Canada, import at least

certain special types from us. We have been successful even on the remotest markets and recently, against great international competition, have won several public contracts in Afghanistan, Pakistan, Iran, and Cyprus.

The Olsany Paper Mills, UP Paper Mills, Harmanec Paper Mills, Slavosov Paper Mills, and the national enterprise Grafocelpap in Ruzomberok export the majority of paper. Some of them produce specially desired types. The Olsany Paper Mills, for example, are celebrated for the export of cigarette paper from their main plant and handmade paper from the plant in Velke Losiny, where the paper was produced for the Kralice Bible. Grafocelpap in Ruzomberok exports 90 percent of its products, including seven main types of paper, particularly printing and writing paper. Amongst its customers are the Ethiopian emperor Haile Selassie. Writing paper for his personal use is sent out in special boxes with a decorative sticker which is printed in the North Bohemian Printing Plants in Turnov, a factory which has proved itself in export production.

The Vratim Paper Mills in Cesky Tesin have a century of experience in the production of commercial books, notebooks, and copybooks. They have continued their prewar export tradition by sending commercial books to Ethiopia.

Pragoexport: Exporter of Small Consumer Goods

The export of timber and the products of the woodworking industry and paper is handled by the foreign-trade enterprise Ligna; certain wood products, however, are handled by the enterprise Pragoexport, which exports small consumer goods: pencils, stationery, school supplies, brushes, buttons, tailors' and shoemakers' supplies, fancy accessories, artificial flowers, umbrellas, shaving

and smoking supplies, fishing and sporting tackle, and supplies, toys, hygienic and surgical rubber, and numerous other products.

Among the best-known goods exported by Pragoexport are products of the national enterprise Koh-i-noor, which has several branch enterprises in addition to its main plant in Vrsovice. Gripper snaps, zippers, straight pins, safety pins, hooks, and other tailoring supplies are exported to the entire world.

Koh-i-noor in Decin exports pocket flashlights to Norway and Finland.

Shoemakers' tacks, "Moravia" brand, are exported in freight-car lots to various countries as one of Czechoslovakia's export specialties.

The output of buttons at Butonie in Roudnice is intended primarily for export. Twice a year through Pragoexport this enterprise sends its foreign customers its collection containing 1,500 types of buttons.

One of the most active enterprises working for Pragoexport is Igla in Ceske Budejovice; this enterprise produces needles for household, industrial, and medical use, and fishing hooks, which have become a very desirable export item. It's sister plant in Valasske Klobouky exports sewing-machine needles.

Among fishing supplies we also export reels and artificial feather flies. Among sporting goods we export principally hockey sticks -- to countries in which this sport is native -- and frames for tennis racquets. It is interesting that a country like Sweden, in which winter sports are so widespread, buys skates from us -- from Kovopol in Police and Metuji. Another indication of the high quality of our sporting goods is the fact that balls of Czechoslovak manufacture were chosen for the European championship games in women's basketball.

Among smoking supplies we export briar pipes, tobacco containers, (the demand for these is constantly on the rise so that production must be increased), cigarette holders, etc.

Czechoslovak shaving brushes are used principally in South America and in the Near East and India. They are exported from the plants in Pelhrimov together with other brush products, of which the greatest exporter is the Orlice Brush Factories in Cervena Voda.

Women throughout the world like artificial flowers which are produced for them by Czechoslovak women in the Centroflor plants in Dolni Poustevna. These perfect typical export products decorate women in Uruguay and Venezuela, in Jamaica and Canada, and they decorate apartments in Iceland, Lebanon, and Syria. We export tens of millions of them each year.

Women also delight in various leather accessories and handbags which are successfully shown at various foreign fashion shows. Therefore exports of these products from Paludzka near Litpovsky Mikulas and the national enterprise Gala are constantly on the rise. Czechoslovak bags, briefcases, leather travel and hunting supplies and wallets -- all find a permanent market in Switzerland, Holland, Belgium, and other countries of Europe and overseas. The national enterprise Kazeto in Prerov is one of the largest plants of its type in the world. In serial assembly-line production this plant turns out suitcases, principally for export throughout the world. It is interesting to note that in some countries of Africa and on the Pacific Islands Czechoslovak suitcases are almost the only property of the natives, who carry their few possessions in them.

Czechoslovak exports of toys include wooden, metal, rubber, and textile toys. The largest plant in the country devoted primar-

ily to export production of wooden toys is the national enterprise Tofa in Albrechtice, which also exports wooden Mohammedan beads. Metal mechanical toys are exported from a number of factories including Koh-i-noor in Vrsovice and the Slovak plants in Gelnica and Pohorela. An exporter of rubber toys is Oder Optimitka, while stuffed animals are produced for export and domestic use by the Hamiro plants in Rokycany.

Next to gripper snaps the most popular items in Pragoexport's repertoire are pencils from the Koh-i-noor pencil plants in Ceske Budejovice, used in 76 countries. Children and adults know them in Patagonia, in the most remote countries of Africa, and in Indonesia. We now produce three times as many pencils as we did before the war and 70 percent of them are exported in 2,000 varieties. We also export pens (straight pens and fountain pens) as well as various school supplies -- rulers, pen holders, inkwells, T-squares, protractors, and compasses -- produced by Logarex in Kardasova Recice, whence they are sent to Lebanon, Holland, Finland, England, Norway, and Venezuela.

Cottage production in the poorer regions of the Bohemian-Moravian Upland has for decades produced export objects of mother-of-pearl -- buttons, decorative articles, and jewelry. Today this production has been organized on a new basis and exports are constantly on the rise. Similarly the plant in Chrast, which uses local cottage industry, produces wigs not only for the use of Czechoslovak motion pictures and theaters but also for export to the people's democracies and the capitalist countries.

Participation of Local Industry and Cooperatives in Czechoslovak Exports

The goods handled by Pragoexport include, in addition to products of the national enterprises, materials turned out by the

local-economy plants -- okres industrial combines and production cooperatives. Local-industry plants and production cooperatives of course supply export goods and important parts of export goods to other foreign-trade enterprises and for this reason their contribution to Czechoslovak exports must be particularly appreciated. No contribution to our exports can be underestimated, and these small plants can provide new and unexploited sources for export.

Local-industry enterprises and production cooperatives understandably make a greater contribution to exports in those fields whose products contain a great deal of manual-artisan or artistic-industrial labor. This includes a variety of objects made of various materials: garnet jewelry, buttons, glass Christmas decorations, electric hotplates, reproduction machinery, phonographic instruments, children's bicycles, umbrellas, razors, combs, automobile fittings, various office supplies, basketry, reed and bast products, toys, special watchmakers' products, and many other small goods.

A special Czechoslovak product for which there is demand throughout the world is woven reed goods whose previously scattered production with a century-old tradition had been organized by the industrial combine in Bakov nad Jizerou. Baskets, trays, and tiles similar to those made in Bakov are manufactured by the okres industrial combine in Morkovice, where wicker boxes and other basketware are produced on the basis of cottage industry. Recently they have begun making them of polyvinyl chloride. About 80,000 boxes are made here annually, a large proportion of which are sent to Canada, England, Australia, Sweden, Egypt, Iceland, New Zealand, and the USSR.

Similar popular creativeness is the foundation of export production in other local-industry plants. The workers at the communal enterprise in Vimperk produce a variety of decorative articles of bone, while the lathe workers in the industrial combine in Trest have exported chess men even to the Olympic games in Helsinki. The local economy enterprise in Bila Tremesna exports glass Christmas decorations to 20 countries. At the Keralit Plant in Litomysl they produce white and red popular ceramics. Other export articles are the artificial flowers produced by the okres industrial combine in Jicin and jewelry from Kovosluzba in Trencin.

The glassworks in Skrdlovice, an enterprise of the Kraj National Committee in Jihlava, an exclusive export enterprise, is not only the only plant of its type in Czechoslovakia but, save for the Swedish firm Oleforx, is the only one in the world. This plant turns out decorative "metallurgical" glass, each piece of which is a unique work of art. There is no country which does not show interest in these products. Among the largest customers are India and Egypt, which have a special sense for the truly remarkable beauty of this luxurious glass.

In addition to artistic-industrial products, local industry working for export also produces other products of a purely practical nature. For example, the stone workshops of the administration of water flow in Hradec Kralove uses Hradec Kralove sandstone to produce grinding cylinders for synthetic precious stones, and sends them to the Soviet Union. The okres industrial combine in Horovice uses stone from its own quarry to produce discs for fine grinding of enamel and soft metal, which it exports in large quantities to other European countries. The brickyard in Pulice near Dobruska exports special bricks and drainage tile. The local industrial combine in Vejprty exports auxiliary rolling-mill fit-

tings for boiler tubing, required equipment for export orders for refrigeration machinery and various boilers. We previously imported this product ourselves. The Metalworking Enterprise of the City of Prague is producing patented fireboxes which are being exported to Iran and Mexico.

The Olomouc Industrial Enterprise is exporting equipment for fishing, while the okres combine in Sumperk is exporting wooden boxes primarily to Holland, flexible tubing to China and Bulgaria, and vapor saturators to Poland. The okres combine in Rakovnik is exporting infants' bootees.

Similarly the Prerov Industrial Combine and the okres industrial combines in Litomysl and Svitavy export part of their products. For example, interest has been shown abroad in water-harvesting combines from Litomysl. The Wood Enterprise of the City of Brno produces toys of the plastic durolin, which are much sought after in England, France, Turkey, and which are exported to South America as well.

Almost every kraj contains local-industry enterprises which contribute directly or indirectly to our exports. The same is true of the production cooperatives. In 9,000 production-cooperative operations, in which more than 100,000 workers are employed, more and more goods are being produced for export, while some cooperatives can be considered exclusively export enterprises.

This is true, for instance, of the cooperative Majak which unites several hundred permanent and cottage producers of costume jewelry. The production cooperatives in Doubravice and Zdobin near Dvur Kralove also work primarily on export orders for glass Christmas decorations. The stone-polishers' cooperative Precious is in Turnov, as is the cooperative Granat, which produces garnet jewelry in which there is even greater interest abroad than in Czecho-

Slovakia so that about 90 percent of the product is exported. They have also undertaken polishing marcasite, for which there is some demand in Australia. Also Soluna, the gold cooperative, has sold its handmade jewelry on the foreign market.

Another export plant is the Bratislava cooperative Datex which through Pragoexport sells umbrellas by the thousands to Australia, Africa, South America, and India. Its exports did not begin until 1954, and it is now an important factor in the total export market; this should be an inspiration to other cooperatives as well.

Other exporting cooperatives produce automotive fittings. An example is Drukov in Brno, which produces ignition contacts. The greatest success in exports has recently been achieved by the "Perfektor" electromagnetic switching instrument produced by this cooperative. The West Bohemian Cooperative ZAD has made its mark with its ZAD pipe tap. Some types of radiators produced by the Production Cooperative of the Auxiliary Automotive Industry in Prague are also exported.

The Metal Cooperative in Sedlcany may take pride in the fact that it exports about 6,000,000 high-quality razor blades each year to a large number of countries, principally overseas. Its export goods include also replacements for meat cutters.

The Blatna Cooperative Drevona has aroused interest abroad in some of its musical instruments, particularly electric basses and guitars. The cooperative Special in Rovensko pod Troskami is again exporting pipes made of cherry wood which are used primarily in the Union of South Africa in the wine industry.

The cooperative ESA in Prague has recently exported 250 vacuum cleaners to Finland and 1,000 to the German Democratic Republic.

In precision mechanics the cooperative Druopta has been particularly outstanding and has for several years been exporting its Pionyr cameras. In 1955 orders totaled 80,000 for Finland, Poland, China, and the South American republics.

There has been some interest shown in stopwatches produced by the Electron Cooperative in Polna and in exposition watches produced by the members of the watchmaking cooperative in Mala Skala, Liberec.

The Popular Cooperative Igra in Prague exports mechanical toys and parts, primarily to Finland. A similar exporter of toys, of a collection of charming animals, is the Prague cooperative Duva. In its Zizkov plant this cooperative produces gifts of plexiglas to be used for advertisement purposes by the foreign-trade enterprises and the Czechoslovak Chamber of Commerce. They are very cleverly designed. For example, a cigarette case in the form of a barrel, advertising Plzen Prazdroj, has a music box which plays Vejvoda's popular polka whose English refrain is "Roll out the barrel!"

Among rural toymaking cooperatives Jas in Straz nad Nezarkou has made a great contribution to exports and has a number of foreign customers.

Five thousand fountain pens were produced in 1955 for export by the cooperative Penco in Pardubice. Svedrup in Gottwaldov supplies winter caps and plaited shoes to Iceland. One of the oldest furniture-making cooperatives, Universal in Prostejov, participates in exports of furniture to equip the cabins on Soviet ships. The upholstery cooperative, Kvalita, in Hradec Kralove, has sold a large order for couches to the German Democratic Republic, and it has customers in Indonesia and Saudi Arabia.

The Vamberk Lace Mill is one of the cooperatives exporting lace.

Popular ceramics are also an export item. The people's cooperative Keramo in Kostelec nad Cernymi lesy produces and exports Cernokostelec ceramics, and similar interest is shown abroad in the remarkable popular majolica from Modra near Bratislava. Small plants in Jihlava Kraj also produce various decorative objects, in which there is interest abroad. For example, in Obratim, near Pacov, various rare woods are used to produce beer steins, which are an export item in much demand.

A great many products are made by the cooperatives and the local-industry plants. Many of them have found their way abroad, but many still wait for the proper initiative to get them into export trade. The discovery of these reserves to supplement export resources is a job worthy of increased attention.

Millions of Czechoslovak Books and Phonograph Records Go Abroad

In the field of cultural goods -- books, sheet music, phonograph records -- we have built up a very interesting branch of exports, under the care of the foreign-trade enterprise Artia.

Being one of the largest Czechoslovak publishing houses, Artia publishes books by Czech and Slovak authors in foreign-language translations to be sent to foreign readers throughout the world. Printings of these books run into the hundreds of thousands, and include novels, children's literature, travel reports, scientific and technical literature, and beautifully prepared graphic publications on Czechoslovak art and historical monuments, popular art, and the beauties of Czechoslovakia. Among the most widely sought books are Plicka's work on Prague and Slovakia, and of course the popular travel account by Hanzelka and Zikmund. The

book about Mis kulicek, with Trnka illustrations, has been translated into several languages. In the 5 years of its existence Artia has published 500 books in 14 languages and 5 million copies. The 1956 plan envisions 120 more titles in a total of 1.5 million copies.

An important place in Artia's activity is occupied by sheet music, since there is increasing interest throughout the world in Czechoslovak music, particularly Smetana and Dvorak. Artia also exported around one million phonograph records in 1955. Greatest interest in them is shown in the Soviet Union, the people's democracies, Belgium, Holland, Italy, Australia, South America, and among Czechs and Slovaks in the USA. We also export phonographs, which are produced in Vrable and Litovel in Slovakia, and are sent to the European people's democracies and several lands overseas.

Artia also exports postage stamps, jewelry, picture postcards, and paper toys; photographic picture postcards, for instance, have been manufactured in the Orbis plant in Sadska for export to Malta and Iceland. Three-dimensional toys include children's pop-up books, which are assembled so cleverly that when the book is opened the picture stands up. Representations include Christmas scenes, grandfather Frost, forests, a circus and a farm. Children play with them on Mauritius, Trinidad, and Ceylon. We have sent 100,000 nativity creches to the USA. In 1956 Artia will export about one million of these toys, and we could sell twice as many of them if we could manufacture them. At the request of Mohammedan customers we have printed 100,000 copies of a new three-dimensional picture of "Mohammed's Tomb in Mecca", which are being sent to Egypt, Syria, Pakistan, Jordan, and Casablanca as souvenirs.

Among Czechoslovak films The Emperor's Baker has had the greatest foreign success; it has been sold to 20 countries.

By exporting cultural objects we not only earn foreign exchange but at the same time we perform a valuable service for the cultural rapprochement of nations, and thus for the peaceful coexistence of all nations.

Export Success in the Chemical Industry

It is characteristic of the present position of the chemical industry that we are exporting products in which we were recently partly or completely dependent on imports. This is true, for example, of textile dyes and auxiliary preparations. Some Czechoslovak tar dyes are now superior to those sold on the world market by other countries. We are also continually expanding the range of dyes produced. This is true not only of textile dyes, but of paints and lacquers too, which are produced in Usti, Rybitvi, and other plants and sent to the Soviet Union and the people's democracies, to western Europe, Scandinavia, and overseas. Sweden approves of our chrome black and ultrazols. Brazil is increasing its imports of titanium white, which is produced in the Hrusov Chemical Plants. The largest customer for white paints from the Dukla plant in Ostrava is China.

The Eduard Urx Plants, in Ostrava, have for the first time begun producing carbon black from tar oils and coke-oven gas. Before the war the United States had almost a monopoly of world sales of this product, which is used particularly in the rubber industry. Now we supply carbon black not only to China, Finland, and Turkey, but even to the USA! Products from the Eduard Urx Plants are sent to a total of 19 countries.

We have also made great progress in drug production. We now export them (from Chemofarma in Usti, Slovakofarma in Hlohovec, and other plants) to countries in the democratic camp and to 21 capitalist countries. For example, 60 percent of all our sulfonamide

production is exported. Exports of pharmaceutical products make it possible for us to purchase abroad various special drugs which we do not produce ourselves. It is worth noting that Dental, in Jicin, which turns out 800 types of artificial teeth, exports to Brazil, Indonesia, and Turkey.

Another product which we export today but formerly imported is incandescent mantles for gas or pressure kerosene and alcohol lamps.

The young plastics industry still has much ground to cover. Nevertheless the Ostravit plants export pressing powders to 27 countries. Another interesting export product from this industry is raincoats made of polyvinyl chloride from the national enterprise Fatra in Napajedle.

Czechoslovak photographic papers are recognized as the best in Switzerland, where they meet severe competition.

The Stalin Works in Zaluzi, near Most, have begun exporting chemical products. They have consumers in the USA, Sweden, Australia, east and west Germany, and England for their special products.

Along with new branches of the industry we are not forgetting our traditional chemical production. For example, the plants in Michle export decorative candles, a Czechoslovak specialty, to the remotest countries -- even to the Pacific Ocean.

Rubber goods were also exported from Czechoslovakia before the war, but today we have considerably expanded the variety of such goods exported and have found new customers. Tires from the new plant called the Rubber Factory of 1 May, in Puchov, are used in almost the whole world.

Sugar, Malt, Hops

Among the food products which we export the most important is sugar. Before the war sugar represented 10 percent of our total exports in certain years, and still is our "white gold", even if its share in total exports is not so great. Because of its great sweetness and the fact that it suits consumers Czechoslovak sugar is sought after in a wide variety of countries in Europe and overseas. Several sugar factories contribute to sugar exports -- factories in Nemcice, Dobrovice, Skrivany, Modreny, Usti nad Labem, and Melnik -- totaling about 15 sugar factories and refineries, some of which have decades of export experience.

If sugar is our white gold, hops are our green gold. Zatec hops are still considered the best in the world, although other Czechoslovak hops also have a very good reputation. The care with which the hops are marked and packed contributes to their reception abroad. Because of the great amount of foreign exchange which hops yield us maximum attention should be devoted to their cultivation and harvesting, as well as help from brigades.

No less sought after throughout the world than Czechoslovak sugar and hops is our malt, which is exported from several malthouses -- in Olomouc, Prostejov, Ivanovice, Prague, and Trnava. Other countries grow barley, of course, and malt it, but Czechoslovak malt, particularly that from Hana, remains unequaled because of the quality of our barley, the care devoted to malting, and the enormous experience we have in its manufacture. For these reasons our malt is truly a product of world renown. It is much desired in the people's democracies and in capitalist countries, in the USSR as in the USA, in Sweden and Africa, in Switzerland and in a number of Latin American republics. We are the world's greatest malt exporter and, despite the fact that we export more malt than

before the war, we are unable to meet all demand on the world market. Therefore in the next Five-Year Plan we shall increase the capacity of the malthouses and production and exportation of malt will rise further.

The export success of our beer is based on the excellent qualities of Czechoslovak hops and malt. Nowadays Plzen Prazdroj (Urquell) alone does not have to sing the praises of Czechoslovak beer around the world. It is exported to 67 countries, and finds ever new customers; but in addition Crystal beer from Ceske Budejovice and beer from the Smichov brewery are finding a good reception abroad. In one month the Budejovice plant exports 6,000 hectoliters of beer, while Smichov sends out 7,000 bottles a day of 12-percent beer, mainly to Hungary and the German Democratic Republic.

Other Foods and Beverages

Our distilled liquors are appreciated abroad. The reputation of our specialty -- Vizovice slivovice -- has reached Australia. Whiskey from Krasny Brezen, griotte [cherry brandy?] from Prostejov, trademarked liquors from Mochov, "Becherovka" from Karlovy Vary, are favorites in many countries, even far overseas. The greatest export success in this field, however, has been gained by the liquors, particularly the fruit cordials, exported in luxurious containers from the Kord plant, East Bohemian Distilleries, in Hradec Kralove.

Chocolate figurines in hand-painted containers, the way they know how to adapt them to the taste of foreign customers at Zora in Olomouc, Sfinx in Vsetuly, and Marys in Rohatec, find customers in more than 50 countries, including Paraguay, Venezuela, New Zealand, the Dominican Republic, Curacao, Lebanon, China, and the Bahamas. Exclusive chocolate candies are exported principally to wes-

tern Europe by Lidka, in Kutna Hora, but many other candy factories have their own export specialities. While Arabs like our "neapolitanky" manufactured in the Prague Chocolate Factories in Modrany, the Icelanders are fond of "mignonky", trade-marked Fiedor, Meteor, and Melergos. "Deli" caramels from Lovosice are well liked in the German Democratic Republic, and Velim Christmas collections are the favorite in France. The Stolwerck plants in Bratislava export mainly fruit candies. Karlovy Vary wafers are liked in Canada, and the Prague Baked-Goods Plants send crackers to China. It is particularly remarkable that our candies are sought after in countries which have their own well-developed industry, such as the USA and Switzerland.

Dried chicory is one of the traditional Czechoslovak exports. Today synthetic coffee is also exported. Exports in 1955 reached 360 carloads, and in 1956 they are expected to rise further.

During the Five-Year Plan we built up a new branch of the food industry -- the dairy-products industry -- in seven modern combines. Today we are exporting the products of this industry to 25 European, Asiatic, and Latin American countries. And Slovakia is exporting sheep's-milk cheese to Austria.

The good foreign reputation of Plzen beer, Hana malt, and Zatec hops, not to mention Znojmo pickles, is shared also by Prague ham and Czechoslovak smoked meats in general. Shipments to Moscow and Berlin, Belgrade, and New York by Meat Industry, Zvonarka, in Vinohrady, maintain the world renown of Prague smoked products. Our meat industry does not, however, limit its exports only to traditional ham, but also uses modern canning techniques to make customers abroad acquainted with other smoked specialties. The good reception of our smoked meats abroad is shown clearly by their success at the Moscow exhibition entitled "Ten Years of People's Demo-

cratic Czechoslovakia", in 1955. The Czech restaurant there served 8,000 frankfurters and 6,000 bacon samples daily, and the Soviet Ministry of the Food Industry decided to introduce and expand the production of smoked meats according to Czechoslovak recipes and include them in the basic variety of smoked products.

Potatoes, so often overlooked, are another successful export item. We export eating potatoes to countries which do not produce them and high-quality varieties as seed. Consumers are in France, Switzerland, Belgium, Italy, and Egypt. The main producing and exporting regions are the Bohemian-Moravian Upland region and southern Bohemia, but the Cesky Brod, Prestice (Plzen), and other regions also produce them. A total of more than 50 purchasing enterprises participate in purchasing potatoes and other crops.

We also export processed potatoes, in the form of starch. The starch mills in Pohledske Dvoraky near Havlickuv Brod, for instance, export hundreds of carloads annually of the well-known preparations Solamyl and Maizena to Finland, Switzerland, Italy, Greece, and many other lands.

Fruit and vegetables are exported both fresh (such as cherries and cauliflower) and canned. The longest tradition in exports of canned vegetables is held by pickles. Their cultivation and processing is not limited to Znojmo, however; Slovacko Fruta in Bzenec and the plants at Malacky and Nitra in Slovakia also participate. Pickles are exported to a number of countries in Europe, and to Australia.

In addition to canned vegetables and tomato puree we have recently developed exports of a variety of canned fruit, compotes, jams, syrups, and marmalades. They are produced in a large number of Fruta plants in Bohemia and Moravia, while Slovakia has some

of the largest canning plants at the sugar factories in Sladkovicov and Nitra. Canned fruit is sent in carload lots to many countries in Europe -- east and west Germany, England, Scandinavia, Finland -- and are appreciated also in Iceland and Australia.

Exports of fruit and vegetables are simplified by refrigeration technology. The freezing plants in Litomerice freeze a wide variety of fruit and vegetables so that domestic and foreign markets may be supplied with fresh food out of season. Freezer freight cars and trucks are used for exporting these products. The advantages of Czechoslovak frozen plums, pears, apples, apricots, and various vegetables are appreciated in Italy, Holland, and elsewhere.

A source of foreign exchange which cannot be overlooked exists also in the fruits of our forests. In the forests of southern Bohemia, Sumava, and Slovakia brigades, which also include youth, collect blueberries and mushrooms. Hundreds of tons of these are exported fresh by the most rapid means of communication, and arrive at their destination one day after picking. We also export them processed. Chantarelle mushrooms, for instance, are "silaged", i.e., they are covered with brine and then sent in barrels to Switzerland. Great interest has been expressed abroad in dried mushrooms; their consumers include New Zealand. For one kilogram of dried mushrooms we receive foreign exchange sufficient to purchase 3.5 kilograms of butter. It is worth mentioning that there is interest abroad in "sipky". In 1955 we exported about 18 carloads of them to western Germany, Holland, Sweden, and Switzerland, where they are used to prepare tea, jam additives, and soups. The wealth of our forests, which we can turn into foreign exchange, includes the seeds of forest trees, which we export to Austria,

the German Democratic Republic, France, Denmark, and elsewhere. One kilogram of larch seeds on foreign markets is worth 14 kilograms of lard. We also export Christmas trees to Hungary.

Finally we export game -- hare, pheasant, and partridge. They are sought after abroad for establishing and freshening stocks. Each year about 30,000 live partridges and 12,500 pheasants leave Czechoslovakia. On the international market the price of one partridge equals about 12 kilograms of pork, while a hare is worth 25 kilograms of meat. Thus this export is very advantageous for us. We also successfully export furs from the fur-animal farms which operate independently or as part of certain forest farms.

In addition to forest products nature also gives us medicinal plants as another source of foreign exchange. In Slovakia, where 330 schools have been recruited to collect them, about 100 types of plants are collected for which good markets are found in France, Belgium, east and west Germany, Austria, Switzerland, Hungary, and the USA. Among the mineral waters which our therapeutic springs provide us the favorite abroad -- not only in Europe but in Egypt, for example -- is that from the Kysibl Mattoni spring. Karlovy Vary mineral water (from the Mill spring) is also exported. A more common form of export than water in glass bottles, however, is export in the form of salt obtained by evaporating the spring water. Eighty percent of the salt produced from the Karlowy Vary springs is exported to the USSR, India, Iran, Italy, Austria, and Holland. Similarly Piestany exports its medicinal mud to Belgium, Germany, and Australia.

The demand for Czechoslovak feathers in Europe and America is more than we can supply. Interest extends to various feather products -- decorations for women's hats, artificial insects for

fishermen, and Christmas trees made of feathers, which are much liked in South America.

As regards agricultural products we are continuing to export high-quality seed, although we are far from utilizing all opportunities. We are also beginning to develop exports of pedigreed cattle; for example, we sent Valesske rams from the Bystrena farm, of the Spisska Nova Ves state farm, to Poland in order to regenerate Polish coarse-wooled sheep.

CHAPTER VII

WHERE EFFORTS MUST BE IMPROVED

The continually rising volume of foreign trade and the success of Czechoslovak products on new markets are convincing proof of the generally good work of the factories which have been able to provide sufficient material for export, and of our foreign-trade enterprises which have organized exports. This success thoroughly shatters all the slanders which have been uttered by enemy propaganda concerning our production. The perfection and beauty of our products is evidence that they could be created only by people living and working freely. In this connection our exports are an effective means of telling the entire world the truth about life in Czechoslovakia.

Overall success does not, however, permit us to overlook certain shortcomings and errors of which we are still guilty.

There is no doubt that our economy, progressing relentlessly toward socialism, is on the whole superior to a chaotic capitalist economy. This does not mean, however, that we do not meet on capitalist markets competitors who can offer better delivery deadlines, prices, selection, or quality of goods. We must learn from these instances, draw from them necessary conclusions, and direct maximum effort toward eliminating shortcomings wherever we remain behind.

This is the reason why we must seek ways continually to improve relations between the foreign-trade enterprises and the production enterprises, and why competition for the exemplary fulfillment of export deliveries must be developed on the initiative of the Ministry of Foreign Trade.

Toward Better Collaboration between the Foreign-Trade Enterprises and Production

The organizational separation of production from foreign trade is the direct result of the monopolization of foreign trade. This does not, of course, mean that the former cooperation in the fulfillment of goals should be abolished; on the contrary this cooperation must remain as close as possible, and be strengthened further.

It often happens that before new working methods can be developed the organizational separation causes certain difficulties. Therefore we strive to overcome the remnants of antiquated thinking in ourselves and seek new working methods adapted to new forms of organization. The success of our products in sales abroad depends on the closest possible cooperation between foreign-trade and production workers. With respect to the foreign customer, workers in production and in the commercial apparatus are a single party; both sectors therefore have a common interest in measures which will help to fulfill their common goals with honor. It is in the interest of our entire economy that the production plants support our foreign-trade enterprises in the struggle to obtain orders and make it possible for them to offer high-quality goods on short deadlines and at prices prevailing on foreign markets.

Although cooperation between the two groups -- production and the foreign-trade enterprises -- is growing continually closer, nevertheless too much paperwork has sometimes unnecessarily hampered cooperation. From the foreign-trade workers one often hears complaints that the production enterprises, with their parochial interests, cause unnecessary difficulties. On the other hand production workers complain that the foreign-trade enterprises, in obtaining orders, do not know how to take into account the technical, production, and financial consequences of these orders on production, and accept orders which mean that production equipment

will have to be rebuilt. It is understandable that foreign trade will always require certain adaptations to markets, and this in turn demands flexibility and preparedness in production. At the same time it is possible, however, that the foreign-trade workers might meet complaints from production workers by working out their own long-range plans and thus giving a more precise idea of their future requirements. These long-range plans must be compiled sufficiently in advance, particularly in the case of complex equipment, so that extensive cooperation can be worked out between design and production enterprises.

In this connection it will be very important to set up technical centers, as have undertaken to do in our main customer countries. These centers will be able to provide better service to our customers and simultaneously will make much more profound technical market studies than individual delegates can. These centers will be used for our exports of machinery and equipment, particularly investment units. Their main jobs will include more intensive sales efforts, better preparations of contracts, and general provisions for export. They will follow deliveries and assembly of equipment and, after the equipment begins operating, will continue to observe its performance so that it will operate to the customer's satisfaction and provide a basis for more oders of the same kind. Another important task will be market research dealing with further investment activity in a given country and with checking on technical and design innovations of the competition. In certain countries these centers will become to some extent advisors in large investment programs.

In view of these extensive goals those centers which are able to continue the good tradition of the technical offices of the leading Czechoslovak machinebuilding enterprises should be sup-

plied with experienced technical personnel who also have commercial knowledge. The workers in these centers will have not only to find potential customers and advise them, but will to a considerable extent have to explain their requirements and adapt them to the capacities of our factories. They must also maintain the necessary liaison with domestic production and acquaint our plants with the requirements of customers and with technical developments on foreign markets.

Intensified research abroad and careful following of technical progress throughout the world are among the leading tasks in the further buildup and consolidation of our foreign trade.

J. Mudrunka, a worker in the Central Committee, KSC, has written of this job: "The result of close cooperation must be that foreign trade informs production of the experience of other countries in introducing new techniques, how our products are received, and what improvements should be made. The valuable experience gained on foreign markets should be included in the technical-development plants of individual producing plants and the plans compiled should be further improved on the basis of experience gained later. In order to achieve this goal initiative must be developed on both sides. In addition foreign trade must bring back all new and valuable experience concerning technical development in general. This experience must then be applied as rapidly as possible in our production" (Nova mysl [New Thought], No 3, 1956, page 229).

It must of course be admitted that the working style of the foreign-trade apparatus in certain sectors still has not entirely freed itself of certain bureaucratic methods which definitely do not contribute toward clearing the path between producer and foreign consumer. But in a planned economy it is not only necessary

but quite easy to achieve high adaptability, speed, and flexibility. In order to make production's job easier in providing goods for export the foreign-trade enterprises must present their orders in time, and in these orders all details must be clearly explained so that the export materials will be delivered properly and in time; so that foreign-trade workers will consider ways of increasing foreign sales of those products in which domestic production has not exhausted all its capacity; so that goods prepared for shipment be picked up in time and factory working morale not injured by delays; and so that the "signum" be applied in time and not changed later. (The "signum" is the number or other symbol which is affixed to an individual shipment -- carton, sack, etc -- for shipment abroad, with the items entered in the proper invoice or account for goods shipped and in the transport documents.) These shortcomings do not result from the basis of the present organizational system but merely represent bad execution of the functions which the system assigns. Therefore these shortcomings should be relatively easy to eliminate. In the Ministry of Foreign Trade and individual foreign-trade enterprises these errors are really being gradually liquidated by proper checkups, and this provides assurance that liaison with production will be maintained by the Ministry and its apparatus.

There is no other way to solve the problems which arise between production and foreign trade than for the workers in both sectors in every instance to understand the difficulties which must be overcome, using the overall national economic interest as a standard.

More Understanding of Export Requirements

The uninterrupted growth of Czechoslovak foreign trade and its continuing expansion into new markets are proof that our industry has in general been able to provide the necessary export goods. The success of our foreign trade should of course not be considered simply as the results of the acquisitive and organizational work of the foreign-trade enterprises, but in it we must see above all the results of the efforts of our workers in production plants. Despite these generally successful results we can still see considerable evidence that many production enterprises forget that every breach of discipline in working for foreign markets injures the good reputation of our products and thus harms our export interests.

Faultless and timely filling of foreign orders is not only an economic matter. It is at the same time a calling-card from our entire nationalized industry, our economic and political system. As regards our relations with the Soviet Union and the people's democracies each failure to fulfill planned deliveries on our part or shortcomings in quality shows up directly in the fulfillment of their plans, whether production, investment, or retail-turnover plans. Therefore it may be considered a serious infraction of the principle of mutual aid and cooperation among the countries of the peace camp. Similarly we must keep in mind the fact that the working people in the capitalist countries judge our republic and its regime according to the products which we supply and according to our accuracy in filling the orders we receive.

It is from this standpoint that we must evaluate work on export orders in our industrial enterprises. Our good work is known and appreciated abroad, and therefore our products enjoy the

especial confidence of foreign customers. We must not only maintain the good international reputation enjoyed by our goods but we must continually raise the quality of the goods we export. We must keep in mind that today speed in submitting bids, delivery time, quality, and price of goods mean everything, because the consumer is not limited to a single supplier but can choose from a large number of producers in different countries.

It is particularly in certain types of consumer goods that we have a great tradition and a good reputation. If we are now in a favorable position in foreign trade as the legatees of that tradition, we certainly cannot be completely satisfied simply by living off that tradition. We must continue to develop it, nor can we permit that tradition to be tarnished or used to conceal our own shortcomings. By supplying faultless goods and filling orders in time we will show the world that our nationalized industry has greater possibilities than did private industry, whose owners were motivated only by the search for maximum profit.

Particularly as regards the machinebuilding industry, which is today the focus of our exports, we must keep ever in view our great export goals and achieve them in all ways. The great work being done in our factories must not be spoiled by the failure of some workers, who out of bureaucratic laziness or indifference toward their duties commit errors such as the failure to answer inquiries, sending inaccurate specifications, etc, all of which may have very unfavorable consequences. The least failure in our export efforts may give a customer an excuse to make complaints against us, may cause disputes, and may even mean the loss of a market.

For all these reasons all workers in our plants must understand the economic and political importance of our exports and, with this understanding, work with increased zeal to fulfill export orders and for the good name of their trade-mark on foreign markets. The good reputation of the factory trade-mark should become an object of pride of all our workers.

The Foundation of Export Success

The success of our export efforts depends in large measure on placing on the market up-to-date and appropriate goods, offering them at a competitive price and with short delivery deadlines.

Further success in exports depends on the accurate filling of purchase agreements. This means that deliveries must be made precisely, within the agreed time limit and quality specifications. Delays in delivery or failure to maintain contract quality are causes for complaint, and usually have unfavorable price consequences, since the customer will ask for a reduction in the original contract price to make up for the loss which he has sustained as a result of the delivery delay or reduced quality.

Above all we must attempt to satisfy every foreign inquiry with a rapid bid, and in more complicated cases we must provide for the rapid preparation of a bid. Therefore we must reduce as drastically as possible the amount of time necessary to draw up plans, if the bid requires them, and devote increased scrutiny to the prices which we quote. We must offer our foreign customers a broad selection, be certain that we are offering them products of the highest technical quality, and make available new products. For this reason we must accelerate development, and adapt it flexibly to the special wishes of customers; we must sharply reduce delivery deadlines, down to competitive levels, and then stick abso-

lutely to the agreed time limit. Nor can we overlook the burning problem of spare parts, since the opportunities for much machinery trade are diminished by the fact that sometimes we cannot offer sufficient quantities of spare parts.

The Importance of Timely Bids

We frequently owe much to the timely preparation of bids for submission to foreign customers -- indeed, this is perhaps the first condition of export success. We shall therefore mention at least the main shortcomings and list certain examples by way of warning.

From the experience of Technoexport, an enterprise which organizes the export of large mechanical equipment and investment units, we may present the following case: Toward the end of November of one year an inquiry was sent by Technoexport to a producing plant for the preparation of a bid. The plant's answer was not received until the following February.

Sometimes the preparation of bids takes us so long that our competitors have time enough to supply the finished product. When the preparation of complicated bids would take us months the competition does it in weeks. This situation definitely requires improvement. Our capitalist competitors and the producers in the German Democratic Republic, in textiles, for example, are able to supply samples desired by a customer within 3-5 weeks, and then often make up samples on the suggestion of the customer. Our plants, on the other hand, are this efficient only in handkerchiefs and cotton fabrics, poplins, and dress materials; in other products we are far behind, and cases in which sending out samples took 6 months or more do not belong entirely to the past.

Foreign trade often requires changes which concern only the method of treatment and not the material. Shirts will be ordered

with the pocket on the left instead of the right, or single-breasted instead of double-breasted coats. These requests do not always meet proper understanding in all plants, since they do not require fundamental changes in the production process. Each such failure to adjust makes the order more difficult, whereas positive experience shows that demand for our export clothing grows when we are able to adapt to the requirements of foreign customers. For example, we have begun sending out shirts with the same collar size but different sleeve lengths. This might seem to be trivial, but it is important in order to satisfy the customer and thus to increase sales.

Another shortcoming in bids is their incompleteness. Technoexport, for example, transmitted an inquiry for a certain complete group of equipment, but the production plant submitted a bid for only a certain machine making up a part of the whole group. This of course makes it impossible to satisfy the customer with a complete bid, and negotiation of the purchase agreement drags on. A lengthy correspondence often warns the customer to order his products where administrative handling is more flexible, or where he can actually make personal contact.

Still another shortcoming is the failure to prepare technical descriptions of new goods and technical documents in general. The foreign-trade workers often miss from production the proper technical documentation, whether descriptions, sketches, or other technical material, which is most effective in demonstrating the technical superiorities of our products, and the generally high quality which the postwar buildup has brought to our technology.

Our plants are aware that the bidding system must be improved. For example, on direct orders from the Ministry of Machinebuilding, with the cooperation of Energoprojekt in the elec-

trical-engineering industry, a program was carried out directed toward better bidding practice. We may assume that with the strengthening of the sales groups in those production plants working for export, toward which many plants are trending, particularly in heavy industry, bidding practice will surely take a turn for the better in order to provide for timely preparation of proper bids.

In order to improve operations in this field it will, of course, be necessary for the foreign-trade enterprises to heed the justified requests of our design institutes and production enterprises and send in inquiries in the most concrete possible form, and to inform them of the reasons why their bids were not accepted, particularly in cases of complicated bidding. Concrete information as to why their bids failed to satisfy the foreign customer or why they failed in competition can be an incentive to improve work in the design plants and institutes.

In connection with delays in submitting bids it may be noted that certain plants lag not only in preparation of bids, but also in sending out bills and other documents on which payment for the delivery depends. This type of delay actually amounts to extending credit to the foreign customer, although we ourselves need foreign exchange to pay for imports of a variety of goods.

The Importance of Price

One of the greatest advantages gained by the production enterprises from the organizational separation of foreign trade from production is the fact that they are protected from the unfavorable effects of continuous price fluctuations on capitalist markets. This means that they can sell export products to the foreign-trade enterprises at fixed prices specified by the state price list. The risk of price fluctuations in foreign trade is borne by the foreign-trade enterprises.

It would, of course, be erroneous to believe that the separation of production from foreign trade and the functioning of the monopoly as a protective wall against disturbing fluctuations on capitalist markets has broken all connection between international and domestic prices or that the formation of domestic prices is unrelated to exports.

On the contrary the problem of price is a very important one in relations between foreign trade and production, and the clarity and unambiguity of this problem is a condition for the smooth handling of export trade in its first phase. We must keep in mind that a comparison of domestic and foreign prices provides a check on the competitive position and productivity of individual branches of industry; nor can we overlook the fact that there are types of goods which our competitors can manufacture more cheaply than we.

In machinery particularly it is not enough in our bids to show clearly the technical standards and efficiency of the product; we must also, in terms of price, convince the customer of the profitability of the purchase.

With respect to price we must welcome any suggestion which reduces the cost of the production process, however trivial it may seem. We have recently had several examples of this type of inventiveness on the part of the workers. For example, at the Sumavan plant in Vimperk, where they were to fill a foreign order for shirts with a seam in the middle, a very difficult operation, two workers made an improvement suggestion which resulted in the design of an attachment which accelerated production and reduced its cost, so that the order was filled in time without increasing the number of workers occupied on it. At the Zirovnice plant producing mother-of-pearl goods for export a local improver perfected a machine for drilling holes in buttons so that a worker could drill 90 in-

stead of 50 gross per shift. And in producing thermometers for export the design of a new machine for automatic filling considerably reduced production costs. At the Valasske Wood Factories in Valasske Mezirici, which sends several carloads of lumber and crate slatting daily to England, Holland, and the Near East, they are particularly interested in obtaining the maximum yield of lumber and parquet material from each tree bole. Proper setting up of frame saws and better organization of work made it possible for the employees to save 224 cubic meters in a single month, amounting to about 9 carloads of round timber. At the Bohumin Chemical Plants the initiative of the women workers was directed toward utilizing wastes so that more than 500,000 extra incandescent mantles could be made, thus increasing export resources. In metalworking it can be noted that at the Precision Machinebuilding Plants in Hulin transferring certain types of threading and milling operations on rotary machines brought production time down from 184 to a mere 8 minutes. At Vitkovice, to produce a single "Igor" rotor they needed an ingot weighing 22 tons. The new system uses ingots weighing only 16 tons. This means that every fourth rotor produced for export was made out of material saved, with 2 tons left over!

All of these examples show clearly how the cost of export production can be lowered while simultaneously increasing the opportunities for selling Czechoslovak products on foreign markets.

An important job will be to reduce the cost of design work, which makes it more complicated to calculate prices in submitting bids for investment units. It should be noted particularly that where no price list exists for the goods, but the price is being established on the basis of special calculation, the production enterprises sometimes act irresponsibly and overestimate prices. Not

until their incorrect estimate has been pointed out to them do they adjust the price with astonishing agility. This of course makes the work of the foreign-trade enterprises considerably more difficult.

Delivery Deadlines

Too frequently, and usually unnecessarily, the excessively long delivery times which we offer rob us of orders. Delivery dates are of absolutely key importance, after competitive prices, in our export success, and for this reason we should meet the competition as far as possible. Instead, however, there have been cases in which we have been able to offer an S 160 Diesel engine for 15-month delivery, while foreign firms have made delivery in 4 or 5 months. Our delivery dates on hats have been 8-10 weeks, and those of the competition 3-4 weeks; in cotton fabrics comparable figures were 6 weeks as against 3-4 weeks. Our delivery dates on linen fabrics are considerably longer than those of the competition.

We cannot conclude from the relatively short delivery times offered by the capitalist countries that they have achieved any greater flexibility through better organization of their enterprises. The principal factor operating here is the fact that with chronic unemployment the capacity of their factories is not fully utilized, so that production can be suddenly expanded to meet short delivery deadlines. On the other hand when the market is more active, with full employment, delivery dates in capitalist enterprises are considerably longer, and sometimes, in metallurgical products for example, reach 15 months.

There are many instances in which we were able to surpass capitalist enterprises in delivery dates. For example, the Stal-

ingrad Ironworks in Liskovec won an order for mine carts for Jordan's phosphate mines only because, other conditions being equal, they offered the quickest delivery.

In 1955 workers in the West Bohemian Ceramic Plants in Horni Briza were able within 3 months to fill an important order for 150 quintals of white square tiles for blast-furnace use and refractory bricks for glassmaking vats for Yugoslavia. Growing numbers of plants are reducing their delivery deadlines for delivery to the Soviet Union, China, and Korea.

This is proof that even with our full employment, based on planning, we can, by better organization, more flexible planning, and taking certain technical and organizational measures, sharply reduce delivery times, so that we can not only equal but, in some cases, can even surpass the competition. If some plants can deliver within satisfactory deadlines the other plants must learn to do so too.

Many plants are, however, still not sufficiently aware of the importance of short delivery deadlines and of the importance of fulfilling export orders on time. The cases in which our deadlines, already long ones, were not fulfilled have had very unfavorable results. A customer who orders goods in Czechoslovakia naturally wants to have them by the time specified in the contract. Our customers order goods so that they can receive them before the selling season. When we fail to meet an agreed deadline the goods frequently arrive in the middle of the season or even after it, reducing or annihilating chances of selling the goods. The customer understandably does not wish to keep the goods sitting in the warehouse until the next season, and therefore he may refuse to accept the goods or may insist on large price discounts. Under the

most unfavorable form of payment, the so-called accreditive, the money to pay for a shipment is available in the bank only as of a certain deadline. If by this time no documents are presented to the bank showing that the goods have been delivered the accreditive is withdrawn and other methods of payment must be employed, less secure and taking a great deal of time. Thus the foreign exchange earned cannot be used for foreign purchases for several months.

In order to avoid all these unfavorable results we must exhaust all possibilities for seeing that deliveries are made within established time limits. Nevertheless some plants permit the failure to export according to plan and allow delays in individual orders.

The opinion is still widespread in our industry that one week more or less is not important in making deliveries. In export deliveries, on the contrary, a great deal often depends on days and hours in order that the deadline be met, that the goods reach a certain ship, that the accreditive with which the customer pays for the goods be drawn on, and that the foreign-trade enterprise not have to undertake risky and expensive shipping procedures.

When time has been lost by negligence people often try to make it up by last-minute efforts. But this always has its dark side. This is shown clearly in the case of a delivery of glass necklaces to Saudi Arabia. When it appeared that the deadline might not be met the necklaces were actually manufactured with great effort, but the special fast shipment necessary raised the cost of transportation by 40,000 crowns.

Analysis of production cycles as now carried out in Czechoslovak metallurgical plants has shown that the majority of production time is spent by the material in transit between operations

or lying idle between operations, and less time is spent on actual production operations, although the situation should be reversed. This shows clearly that if production times are to be reduced substantially a great deal depends on good work organization. The difficulties which we encounter here should be solved primarily in terms of planning method.

Insufficient provision for deliveries of starting material, bad preparation of production, poor organization of work in actual production, unsatisfactory operational management of production, and the improper organization of final operations -- these are the main causes of long delivery times and the failure to meet even them.

Does it not indicate bad work when, for example, in a glassworks more than one-third of the monthly deliveries are made in the last 5 days of the month?

The most important job of all enterprises working on export orders now is to strengthen our reputation for keeping our word once we have given it.

Many plants have already attempted, with varying degrees of success, to solve the problem of how to shorten deadlines and assure their maintenance. The Gustav Kliment Pipe-Rolling Mills in Chomutov have appointed an experienced, skilled worker for complex checking on goods for export. Precise directives have been issued for the work of all skills working on foreign orders. Weekly controls are made and the elimination of shortcomings is checked operationally.

The enterprise director of the Bila Cerkev Ironworks, in Hradek near Rokycany, holds regular weekly meetings to check on export orders; this has assured in a simple fashion that the export plan was fulfilled in time, with only a few small exceptions.

At the Julius Fucik plants in Chomutov they have set up a production-dispatching department which, on the basis of confirmed delivery orders, works out production graphs for individual operations, controls their fulfillment, and, when the goals are not operationally met, eliminates obstacles.

At the Klement Gottwald Vitkovice Ironworks they have introduced weekly and 10-day determinations of the state of production of export orders, in terms of the delivery deadlines during the particular month. In certain plants this activity has been intensified to the point where the control is carried out twice each week at dispatcher meetings. When deviations are detected the necessary steps are taken instantly, in production, shipping, and in liaison with the foreign-trade enterprise.

At the Unicov Machinebuilding Plants the factory trade-union organization encourages the workers toward the proper fulfillment of orders. If the deadlines are threatened the workers take socialist pledges to reduce production deadlines. In order to fulfill export orders they often work into the night, and on Sundays and holidays, and thus make up for insufficient working discipline and the poor understanding on the part of the supplying factories.

A very good example of how to provide for timely fulfillment of export deliveries was given by the Union workers in an important department of the V. I. Lenin Plants in Plzen. They conducted more than 20 production inspections whose purpose was to help production and eliminate unnecessary loss of time. The Union members saw to it that all the orders which they sponsored were fulfilled on time and with proper quality.

In a number of cases the Branec Ironworks have filled orders in less than 14 days. They have done this by using some ma-

terials on which production had already started. In the MEZ plant in Vsetin socialist competition succeeded in reducing delivery time to the required 7 months, so that the promised deadline was met. That the workers in the TOS plant in Lubenec fully understand the importance of maintaining all contract provisions is shown by the fact that they pledged that they would reduce by 6 months the delivery time on seven LB 150 presses, and would take other measures to produce an extra 17 presses for export. The Precision Machinebuilding Plants in Gottwaldov adhere absolutely to agreed deadlines. At the request of the foreign-trade organs the plant and all its workers exerted extraordinary efforts to reduce by three months the delivery time on a large delivery of shoemaking machinery for the Soviet Union, and thus made it possible to increase substantially the production of shoes on new production lines in the USSR.

Svit in Gottwaldov also has very good experience. There they have been able to see that the warehouse is always supplied with the desired types of footwear, and that the wishes of foreign customers are supplied rapidly. Not a day goes by but what the workers, and of course the master workmen, in the shops and the operational directors know precisely how the export-order plan is being fulfilled. Thus they can in time take the necessary corrective steps wherever production has slowed down for any reason. Since a great deal can be learned at Svit from the technology of production and the organization of work, comrades from the Kaganovich Shoemaking Plants in Minsk have studied there.

At the CKD Sokolovo despite a number of unforeseen difficulties the assembly section under comrade Koumaks assembled a gigantic compressor for the Soviet Union within the specified deadline, in the autumn of 1955. A detailed harmonogram was worked out, so

that each worker knew precisely when his part was to be finished, and that the fate of an important delivery hung on each worker. A large chart hung in the shop showing the progress of the order was challenging to anyone who began to fall behind.

In the Bratislava Electrical Engineering Plants they make certain they will keep down delivery time by assembling two or four generators extra each month; thus they keep ahead.

By the use of improvement suggestions and making the necessary changes in the technological procedure it is possible to bring about a substantial reduction in production time. One need only get out of the accustomed rut and at production discussions agree on methods which will accelerate and improve work. Only on the basis of such correct solutions can the plants accelerate export orders by one week or two, or a whole month. Not by frantic last-minute measures but by a well-prepared, thought-out, and organized procedure.

Other plants, on the other hand, in the solution of their production problems, show such incompetence that they take each difficulty to the foreign-trade organ, asking for the necessary parts, power, fuel, freightcars for loading, and other services which are not within the jurisdiction of the foreign-trade enterprises.

From the positive and negative examples which we have presented it can be seen that the problem of reducing delivery times must be solved systematically, not only in some but in all plants working for export. Overall delivery time is composed not only of actual production and assembly time, but includes design time, construction, technological preparation, providing raw materials, parts, and, sometimes, subdeliveries. In the majority of cases these pre-production stages can be cut down substantially. The

new measure will be of great importance; it permits enterprises working for export to depart from strict interpretation of the regulations concerning reserves in excess of norms and, in the interest of more rapid filling of export orders, to maintain the necessary reserves of raw materials and semifinished and finished products. In order that this program be carried out it will, of course, be necessary to expand the storage capacity of the plants. Similarly the new government order No 9/1956, Collection of Laws, superseding order No 200/52, considers it desirable to make more flexible cooperation among plants working to fill orders for investment units. In this sector particularly regrettable incidents have occurred such that, because of delayed delivery of small parts from one plant, the delivery of complete equipment has been delayed, thus spoiling the good work of all other plants. The maintenance of delivery deadlines in cases of subdelivery from several plants in filling a complicated order remains one of the most important tasks.

A Word about Assembly

In connection with the effort to reduce delivery time a special word is necessary on the question of assembly. Delivery of investment units, complicated machinery, and equipment entails assembly on the spot, and we send out our own specialists, technicians, and workers to do this. Similarly when it becomes necessary to repair these machines and equipment we must be prepared to send our specialists abroad. In both cases not only specialized and reliable work is important but also its timely completion.

We have frequently erred in this respect. When shortcomings are found it has often taken too long to decide who is to eliminate the shortcoming and who will give the necessary orders.

These hemmings and hawings often scare the customer away from further dealings. For this reason we need more plant loyalty, reflected in the fact that all plant workers feel the importance of rapid elimination of shortcomings. It is interesting to observe the procedure among our Soviet comrades: When a fault shows up on Soviet-built machinery or equipment, at home or abroad, the supplier takes the necessary steps on the spot to restore operation, usually within 24 hours. Immediately a report is written on the cause of the breakdown. If it is found that the trouble originated in production a bill is issued against the producer; if the trouble originated in assembly the assembly department is obliged to make up for the difficulty. We should do the same thing.

For the assembly of investment units we have several specialized enterprises seperate from production which have proved themselves, particularly in the construction of large electric power plants -- Inota in Hungary, Doicesti in Rumania, as well as in Poland and Bulgaria. They worked under very difficult conditions in assembling the Afghan cement plant. The Brno and Bratislava electrical-assembly plants, Metallurgical Assembly in Kuncice, Steel Constructions in Brno, Chemontaz in Hradec Kralove, Tramontaz in Chrudim, and Stavosvit in Gottwaldov have done a number of important installations and assemblies abroad. Despite this success experience shows that, because of increasing specialization and preparedness it will be efficient in assembly and particularly in repair to use more assembly workers sent directly from the plant which supplied the equipment. For this reason special assembly departments will be set up in the important exporting machinebuilding plants The idea is basically to train here highly skilled technical personnel, with language training as well, for the jobs

abroad, where they will have to represent our socialist production. The attention which used to be devoted to language courses in some of our plants, such as the V. I. Lenin Plants in Plzen and Kovosvit in Sezimovo Usti, should point the way for the other plants.

It is certainly a joyous mission for our technicians and assembly workers to be able to contribute to the construction of plants in the fraternal people's democracies and in remote lands across the seas, where industrialization is struggling against economic and political backwardness. And it is equally joyous to aid local technicians and workers, as is usually done in connection with assembling factory equipment sent from our plants. This is a practical expression of technical aid and proletarian internationalism. But even in cases where it is not actually their job the members of our assembly groups make use of opportunities to give lectures and courses to acquaint the local workers (in places where they have been sent to perform special jobs) with various aspects of our technology. A grand example of this was provided by Engineer Bor's 50-member technical brigade in Korea.

The Chinese electrical-engineering worker Hwa Chin-liang at the exhibition "Ten Years of Building Socialism in Czechoslovakia" in Peking was given an opportunity to learn to operate Czechoslovak machines. He wrote: "I am indebted to the Czechoslovak specialists because in two weeks they have taught me to operate 13 beautiful machines..."

The responsible and honorable work of our assembly technicians and workers is recognized everywhere. O. K. Dvorak of the Varnsdorf TOS received the following statement from London: "The customers are completely satisfied with his work and respect him for his excellent knowledge of machine tools. They would appreciate it if he could be sent on future trips to England."

Our workers return from abroad enriched by valuable technical knowledge and other experience. "I learned in both China and India that the finest ambassadors of Czechoslovakia in these countries are the products of our people. That is the grandest experience, one that I shan't forget," says designer Trebin from Doudlevce near Plzen. And assembly worker Josef Urban of Kovosvit says: "Abroad I was doubly proud of our machinery, our people, and of the fact that I am a Czech."

Greater Attention to Product Quality

Shortcomings in quality injure our export interests as seriously as does the failure to meet delivery deadlines. And just as in the case of delivery times a rapid improvement lies completely within our grasp, if sufficient attention is devoted to this problem in the plants working for export. Foreign markets are a very exacting test of quality, and to fail means either to lose the market or to lose out considerably in price.

In one foreign order for 70,000 meters of shirtings, produced by the Jiskra plant in Cerveny Kostelec, flaws were discovered in the fabric at delivery time and the customer had to be granted a discount. This amounted to foreign exchange sufficient to purchase the cotton to manufacture 17,000 meters of the same shirtings. Another delivery of low-quality shirting, this one from the national enterprise Utex in Usti nad Orlici, robbed us of foreign exchange to purchase cotton enough for 12,000 meters of the same goods If our plants had followed the example of other light-industry plants and devoted greater attention to socialist competition to increase quality our internal market could have received almost 10,000 extra men's shirts made of export poplin. Such cases

show more clearly than anything else how important it is to assure high-quality export deliveries

Quality shortcomings exist at various levels. In the majority of cases the product itself is not bad, but its final handling is imperfect. For example, the quality of our pencils is good, better in many cases than the competition's. The shortcomings were in their surface finish and packaging, so that improvement was easily brought about.

The director of an export enterprise expressed himself as follows on various metal tools for household use, on the basis of knowledge gained at fairs: Our products are as good as those of the competition, and often more efficient; they have been difficult to sell, however, because their surface finish was unsatisfactory. We are now adjusting to foreign requirements on the basis of this experience.

What is true of pencils and small metal goods is true of metallurgical products. When complaints come in they do not refer to basic production but to auxiliary operations. Most complaints deal with bad bundling, packaging, and marking of goods.

The principal shortcomings which injure the competitive position of our textiles are in the finishing of fabrics; this is largely the result of the fact that technological procedures are not adhered to in production.

In machinebuilding we must put an end once and for all to cases, albeit isolated, in which the surface finish is neglected, so that paints peel, machines are not preoperly preserved, parts are cemented poorly using bad materials, etc. It is certainly bad news for those who supplied the machines that one customer had his machinery painted immediately on arrival in order to correct their appearance.

At the fair in New Delhi we exhibited a very good grinding machine from the CZ plant in Strakonice. The impression created by the machine suffered, however, from its poor appearance; the surface was uneven and poorly worked, and the paint was rough. As the editor of Rude Pravo said it looked as though the machine had had smallpox.

As regards finish many of our plants can profit from the example of good work done in the production of Favorit factory wheels [bicycles?]. The quality of surface finish and the harmony among material, color, and shape were assured by collaboration with the creative artist, among other things.

Still worse than neglect of surface finish are cases in which our exported machinery shows actual faults combined with frequent breakdowns. People talk about one error more than about 100 good features. The competition will see to that. It is therefore particularly regrettable when negligence in making up orders for export injures the reputation of plants doing good work, as happened to the Decin Machinebuilding Plants. One of their battery carts, a "lizard", showed a serious fault upon delivery to Brazil. The Precision Machinebuilding Plants in Gottwaldov, whose products have earned a very good reputation abroad, received 12 complaints in a single 3-month period dealing with faults in their machine tools. One may well ask what the OTK [unidentified] does when a customer complains about a damaged bicycle, a burned-out electric motor, a worn worm gear, or a set of tongs without a spring. The Jan Sverma Plants in Brno sent 10 tractors to Sweden as an initial order. One might expect that they would have sent out an exemplary shipment Actually, however, loose nuts, unbent cotter pins, faulty hydraulic system, and other shortcomings were discovered.

The consequences of failure to devote sufficient attention to export shipments are shown by the experience of a Czechoslovak technical group working to restore hydroelectric power plants in Korea. One can imagine the enormous effort required to raise a 3-ton compressor up to the top of a 30-level drop. When it was finally in place, however, it was found that the electric motor did not work. In addition the attached description of the machine did not contain a description of the motor, and only the skills of our assembly workers made the motor operate. Our welders also did excellent work until they used up their carbon electrodes, since someone had forgotten to send spare electrodes. Again our workers knew what to do, although it is possible that if they had not been there no one in this faraway land would have known how to get the machinery and instruments into working order, which would have caused serious loss.

Similar cases, in which imperfect parts spoil the effect of excellent products, are still quite frequent. Czechoslovak motorcycles are the pride of our export trade, and the automobiles which we export are also very valuable. What is true of the vehicles themselves, however, cannot be said of the wipers and other equipment, and the factories will have to give greater attention to the new developments in packing, brake linings, types of clutches, etc, being produced abroad.

In other Czechoslovak products discrepancies in the quality of individual parts are at fault. The good reputation which we build up by the excellent quality of a large number of parts can be lost utterly by a single part which fails to maintain the prescribed quality. Standardization is particularly urgent in the paper industry, and more attention should be given the matter in

the phonograph industry. We must be relentless in the matter of quality, and not shrink from sharp criticism or thoroughgoing self-criticism.

Closely connected with quality are the complaints of our customers who point out the relatively limited selection in certain types of goods and the paucity of new developments. This is true particularly of consumer goods -- textiles and leather goods, useful ceramics and porcelain and glass, in which we have relied on our traditions; it is true also of our phonograph recordings and small wooden consumer goods. In all these fields the competition is always putting out new products, introducing new forms, and making changes to meet the wishes of the consumer, and here too we must keep pace with the competition. Our light industry, particularly textiles and leatherworking, must keep up with changes in fashion and taste and requirements in cut, pattern, color, accessories, finish, etc. Our textile pattern designers have insufficient contact with the market, and this explains why they are forever proposing patterns which have already gone out of style.

There are of course many plants which show a great deal of initiative in this respect. For example in the production of costume jewelry at Jablonec they are making every effort to keep up with the competition in replacing glass, metal, and other familiar materials with plastics, and they are already producing goods made of combinations of materials. The developmental centers in this field understand their job as being not so much to keep up with competitors but rather to keep bringing out new products and thus demonstrate the maturity of our socialist production. In the national enterprise Bohemia the workers have on their own initiative made new proposals for printing decorations on porcelain, and new, tasteful combined decorations, and thus put themselves in a posi-

tion to offer new and desirable porcelain patterns on foreign markets. At Svit in Gottwaldov they have included in the domestic and export collection 540 new patterns produced by the Gottwaldov patternmakers.

As an example of careful attention to quality we shall give instances from the textile and food industries.

At Sumavan in Klatovy "trubenis" are used to illuminate the collars of export shirts in order to detect the smallest faults, so that goods for export pass through quality control as though under X-ray. Products of the Plant of International Women's Day in Bratislava -- thread and embroidery yarn -- can stand up to competition throughout the world because they are produced with the greatest care and their colors are permanent and well-chosen.

At the Plzen brewery in 1955 they extended the guaranteed lager time on export beer. In Budvar [the Budejovice brewery?] they also devote the greatest care to quality. In order to assure the good taste and quality of beer even with the shaking which it experiences in traveling and under tropic temperatures samples are taken from each brew and subjected to remarkable tests: first they are placed in a special rocker and shaken, turned, and jolted for 150 days; then heated in the laboratory to 45 degrees for 3 weeks; and then cooled to the freezing point for one day. This surely guarantees that the beer can take adverse conditions. For this reason we get from abroad not complaints but new orders.

This is a very good example of how some export plants attend to quality and maintain the reputation of their trade-marks. It should apply to all plants producing for export, providing of course that the quality of products for the domestic market not be overlooked in the effort to produce high-quality export goods.

Czechoslovak consumers also have a right to goods of the highest quality.

Particular attention must be directed toward completeness of line. In the case of textiles we sometimes see instances in which a producing enterprise does not supply all types, or is lacking the sizes desired by the customer. Understandably shipments of this type, particularly if the content of packages differs from the invoice, cause the greatest dissatisfaction and justified complaints from the customer.

Completeness of product is particularly important in furniture, which is shipped knocked down, and of mechanical equipment. Otherwise assembly is disturbed or completely impossible, it takes a longer time to make the product operable, and this dissatisfies the customer and causes economic loss on both sides.

We export considerable numbers of "plymsol" presses but we do not supply the necessary plymsol molds for making rubber shoes. We must supplement the variety of motorcycles produced by adding scooters, and complete attachments must be provided for the tractors we export.

The problem of the quality of export goods must receive broader attention. For our goods to be considered really high quality they must be on a high technical level.

The Importance of Progressive Techniques.

Neither competitive prices, short delivery times, nor excellent quality by themselves will assure us continued success in exports if our export products, particularly machinery and equipment, are not on the highest technical level. We must admit self-critically that in all fields, including even machinebuilding, we have grown accustomed to the one-sided effort at quantity produc-

tion. In a number of products, of course, we have placedburselves in the lead in world technical progress, but in others we have fallen behind.

Let us consider a typical example, the transition from steam locomotives to Diesel-electric. The former management of the CKD Sokolovo ignored the developmental work on Diesel-electric locomotives, and thus harmed not only progress in our own transportation but our export opportunities as well.

The situation in the sale of machinebuilding products on the world market absolutely requires us to concentrate on the quickest possible introduction of prototypes into serial production. We must not repeat the case of the highly productive PS 31 lathe, the prototype of which was developed as far back as 1951, but which was not tested out until 1955, so that many foreign producers have passed us by in the meantime.

Inasmuch as we are unable to bring about rapid development in all branches ourselves it is desirable for economic and technical reasons to concentrate on selected fields, master them in all aspects, and achieve and surpass the world level in them. At the same time we must strive toward a proper division of labor within the democratic camp.

"In our relations with the countries of the socialist camp we can see the development of their own modern, technically advanced production. This is reflected in the justifiably increased demands of our democratic partners for technical quality and economic efficiency in the machines and equipment they import," wrote Deputy Minister of Foreign Trade Jaroslav Kovar in Kovak [Forge Worker] on 5 October 1955. "This attitude will be a decisive factor in the scope of our future deliveries to the countries in the

socialist camp, and will be basically decisive in the question of whether Czechoslovak industry will be able to occupy the position of bringer of technical progress in the democratic camp. High quality of our machinery and equipment is not only a condition for more simply meeting capitalist competition but is necessary for the fulfillment of our economic and political mission in the economically backward countries Technical quality is one of the basic indications according to which the world compares the productive capabilities of the capitalist and socialist economic systems."

We have presented a number of evidences of the continuing progress of Czechoslovak technology and of the success which we have achieved in exports on this foundation. Not long ago the Soviet journal Literaturnaya Gazeta enumerated all the technical experience that the Soviet Union had received from Czechoslovak industry which we extended, in fraternal cooperation, in exchange for extensive Soviet technical aid. Reinforced-concrete railroad ties, which will be produced according to documentation from Czechoslovakia, will present Soviet transportation with broad opportunities, particularly in regions without forests. Engineer Holuba's new method of casting punches will reduce production time eight-fold and will at the same time double the life of these punches. The same Soviet journal also wrote about the Czechoslovak Z-M 330 combine with an air-cooled engine which will find wide use particularly in Central Asia. V. Svaty's shuttleless loom, which will also be produded in the USSR, will be enormously important for Soviet industry.

On the occasion of the spring fair in Leipzig in 1956 Die Wirtschaft [Economics], published in the democratic part of Berlin, wrote: "Czechoslovakia has matured into a state which not only

need not fear comparison with world producers but from which, as the British machinebuilding specialist William Purge has said, the older industrial countries can learn a great deal. Along with the machinebuilding industries of the USSR and the German Democratic Republic this industry in Czechoslovakia is now able to solve any technical problem which arises and can promote the economic development of the entire democratic camp. An important role is played by the specialized-manpower potential, which has been built up in recent years in Czechoslovakia."

This is how persuasive our success is. But at the same time we must become self-critical and learn to admit our shortcomings. We have been able to admit them, and cure them. We have every opportunity to do so. In our jubilation we must not underestimate our shortcomings.

Experience in 1955 showed that our insufficient technical maturity costs us foreign orders worth several dozen million crowns in sales of equipment for electric-power plants and sugar factories. This very fact shows that in machinebuilding we have much progress to make in a number of areas before we reach the pinnacle of technical quality.

As a typical example we may mention the case of a regulating transformer, on which we sent a bid to Finland. Tests showed that its power losses were so much greater than those of the competition that our equipment would have cost the customer more after 2 years of operation than the cost of the entire equipment.

One cause of loss on foreign markets is the great weight of our equipment. A 27-megavolt-amp turbogenerator manufactured by CKD weighs 48 tons more than a product of the Brown-Boveri firm with the same characteristics. In this case, with the same overall price, the competition is selling material for 10.50 Czecho-

slovak crowns per kilogram, while we are selling it for 7.55 crowns. We are giving away 48 tons of material. Similarly the Skoda 1200 car is 200 kilograms heavier than competing cars in the same category.

Similar examples of technical backwardness are of course to be found in light industry as well. For example the competitive position of Czechoslovak textiles abroad is weakened by the fact that insufficient attention is paid to their crush, shrink, and water-resistance qualities. In shoemaking we are also behind in the use of artificial "semiš", leather lacquer, and plastic soles. Here, too, the testing stage of certain products takes much too long, so that frequently products have ceased to be new and have lost whatever price advantage they might have had by the time they reach the market.

Open criticism of our shortcomings and a few unfavorable comparisons must not, of course, lead to discouraging conclusions; on the contrary, these shortcomings must be an incentive for improvement. This improvement can actually be achieved in a relatively short time by proper organization and the application of appropriate measures. For this reason the development of new production techniques and the achievement of high technical quality are among the principal goals of the next Five-Year Plan. In raising our technical standards we have made outstanding progress, and therefore criticism of shortcomings and backwardness in a few sectors must be taken only as a challenge that maximum use be made of the gigantic opportunities of the socialist system for the general development of technical progress on the broadest possible foundation.

Exports to the Tropics

The problem of preparing shipments for the tropics is closely connected with the question of technical perfection. With grow-

ing exports to countries within the tropic zone we must devote increased attention to protecting our products against the tropical climate, principally heat and humidity. This is true not only of our machinery, particularly of insulation and lacquers, but also of tires, foods, and certain other products. Here we encounter the problem of so-called tropicalization, meaning the handling of products in a manner appropriate to the tropical climate, with temperatures reaching 40 degrees Centigrade and relative humidities of 80 to 90 percent, i.e., twice the water vapor in the atmosphere of Central Europe.

Many of our plants working for export have already had considerable experience in this respect A great deal has also been done by the Research Institute for Materials Protection in Prague-Nebusice and several other research institutes, such as the Microbiological Institute, Czechoslovak Academy of Sciences. The Research Institute of Electric Power Engineering in Bechovice near Prague was assigned the problem of tropicalization as a special program in 1953. This institute tests electrical-engineering materials -- lacquers, fiber, technical resins, ceramic and mica insulators, and other materials -- in artificial tropical atmosphere in special rooms. This research is concerned with the effects of both high humidity and mold. In this connection the establishment of an electrical-engineering research station in southern China, which is concerned specifically with problems of tropicalization, will be very important for us. This station was set up in 1955 by Czechoslovak experts, who trained 30 Chinese specialists here. Electrical-engineering, physico-chemical, and microbiological groups work here, as well as a group for developing electrical-engineering equipment and the technical management of power stations. In its examination of changes in the properties of variously-trea-

ted samples of insulators and products under a tropical climate this station works in close liaison with our Research Institute of Electric Power Engineering in Bechovice. A distance of several thousand kilometers is no obstacle to the close scientific and technical cooperation which has developed between Czechoslovak and Chinese pioneers in new trends in tropicalization. The Czechoslovak maritime ship Republika is also testing various materials to see how they are affected by ocean water and various climatic zones.

Broad horizons open up for the use of glass fiber and certain plastics in solving the problems of tropicalization. Paints and lacquers must receive no less attention than insulators. For this reason, for example, in 1956 the national enterprise Pragolak in Prague was given the special task of providing for production of special paints for export to tropical regions.

Spare Parts

One of the most important aspects of satisfying customers of machine products is providing spare parts. A well-working machine or vehicle is useless if spare parts are not available when original parts wear out. Some plants satisfy this condition well and remember to send sufficient supplies of spare parts. Such plants include the factories producing Diesel engines, in Plotiste n. L. But other plants have permitted our automobiles, motorcycles, tractors, and engines to stop operating before their time for lack of spare parts. It is no secret that in some countries local entrepreneurs have begun producing spare parts for Czechoslovak vehicles when our plants were unable to supply the necessarh spare parts in time.

A radical improvement is certainly necessary here. We have undertaken to do this, and the results are beginning to be felt. In exporting those automobiles, for instance, which we are now

producing we also sent a sufficient number of spare parts. In the case of automobiles whose production has been stopped, on the other hand, proper supplies of spare parts have not been provided. Assuring reserves of spare parts remains a problem in this field. We must send spare parts abroad in sufficient quantity to keep our vehicles in proper and uninterrupted operation. But we also have a primary interest in exports of spare parts for other reasons: export of these parts is more profitable for us than that of the machines themselves, and can play a very important role in our overall export program. The experience of some countries with mature machinebuilding industries shows that the foreign-exchange yield of spare parts sometimes reaches 40 percent of the total foreign-exchange yield in any given branch of machinebuilding. This fact more than outweighs the disadvantages which are pointed out by the production enterprises when they are asked to supply larger quantities of spare parts. In any case the matter must be solved in such a way that not only the exporting enterprise but the producing enterprise as well will be interested in production of spare parts, and not lose in the process, particularly when we follow the Soviet example and set proportional norms for the production of spare parts. With each delivery of vehicles, machinery, and equipment we must supply a number of spare parts proportional to the total delivery. When plants are not supplied with the proper equipment it will be necessary to expand production by adding shifts in order that machine capacity be fully utilized and that production of the necessary parts be guaranteed at all cost. At the same time we must set up ready stocks of spare parts. These measures are a necessary condition for the successful growth of our machinebuilding exports.

Associated with the problem of spare parts is establishment of technical service in the countries in which a large number of Czechoslovak automobiles, motorcycles, and tractors are in operation. This is also one of the most urgent problems facing us. Some plants, such as the Mlada Boleslav automobile plant, which produces "spartaks" -- the Skoda 440 -- is already making preparations to give language courses for employees in order to build up cadres for foreign service to customers.

Joining Production to Foreign Advertising

For Czechoslovak foreign-trade enterprises to be able to develop proper advertising abroad they must be provided with more concrete technical material from the producing plants. For this purpose the advertising departments in these plants must be strengthened.

One of the most important ways of advertising Czechoslovak products abroad is our participation in international exhibitions and fairs. In 1955 we participated in more than 30 fairs and exhibitions, 23 of which were in capitalist countries. But these included the traditional fairs in Europe (Utrecht, Copenhagen, Milan, Brussels, Paris, Stockholm, Solun [Solingen?], and Vienna), visited by about 8,500,000 people, and the fairs overseas (Toronto, Melbourne, Reykjavik, Karachi, Casablanca, Djakarta, Damascus, New Delhi, Addis Ababa, and Rangoon), in addition to the exhibition at Ghent in Belgium, which was, together with the exhibitions in Helsinki, Cairo, and Bombay, attended by about 8,000,000 people. These fairs and industrial exhibitions had great commercial and political importance for us and, on the basis of experience gained at them, the fair program for 1956 was expanded. Experience showed simultaneously, however, that in order to increase the effective-

ness of our expositions it would be desirable for the production plants themselves to take a direct interest in preparation of exhibits and to be responsible for their quality and shipping.

A healthy decentralization of advertising activity and greater participation of producing plants in advertising programs will undoubtedly increase the effectiveness of our advertising program abroad.

Packaging -- An Important Factor

Proper packaging is one of the cardinal conditions of successful export trade; therefore the responsible workers in Czechoslovak production plants should learn what a shipment is subjected to in its voyage to the foreign customer, particularly in the case of deliveries going overseas to countries with poorly equipped ports, or on journeys where they will be shaken greatly during the voyage. Good packaging can save millions of crowns in foreign exchange.

A good and reliable package is an indication of the product itself. A good product loses in value if sufficient care is not devoted to its packaging and protection from accidental injury. It is particularly important in the case of more valuable goods for the package not to offer opportunities for theft. One must realize that certain types of packaging which are satisfactory for shipment to certain countries are inappropriate for transit to other places Decisive factors here are the geography of the country of destination, its climate, and its port facilities. The colonial and dependent countries are kept technicallybackward, and therefore the handling of shipments in the ports and later transportation is poorer in these countries than in the modern European ports. Therefore if a certain type of packaging is satisfactory

for a modern port the package must still be chosen with particular care and fixed securely when other means of transportation are chosen. It should also be kept in mind that large trans-oceanic ships have large cargo holds, so that the goods intended for more distant ports are on the bottom and subjected to great pressure from the goods above, destined for earlier ports.

This type of loading, for example, has meant that when a shipment of automobiles was sent to Bangkok only junk arrived; the shipping company, in order to make full use of shipping space, had placed another heavy load on top of the crates. Under this load the crates broke down and the tops fell in on the roofs of the automobiles. The loss totaled $20,000. A similar loss resulted from the shipment of enameled tubs, which are placed in special cartons for export. Through the corners of the cartons, from bottom to top, passed long screws, ending at the top in hooks for the cranes to catch. The surfaces of adjacent tubs were covered with felt. Nevertheless the shipment arrived in damaged condition. Just as the designers of the crates for the automobiles never imagined that the tops would be overloaded, the designers of the tub cartons never thought that the tubs would be in any position but upright. But at the port where the cartons were unloaded there were no cranes, and the crates were unloaded from the side of the ship, being hauled from in front. The cartons were unable to take this treatment, twisted, the felt packing fell out, and the tubs were damaged. In both cases it was proved that the damage was the result of improper handling by employees of the shiping company, but only after very complicated negotiations by the Czechoslovak State Insurance Society. At the same time it is clear that it is in the interest both of our customers and of ourselves to avoid ac-

cidents like this, since even if the damage is made up by a third party the economic loss remains. It is still worse when these losses occur because of our own negligence or are directly caused by us.

The workers who are assigned the packaging of goods for export in the production plants, particularly the designers of export packages, must make use of the experience made available to them by the State Insurance Society, the Czechoslovak transportation enterprises, and the foreign-trade enterprises, to realize the stress and the frequently improper handling which products undergo during a transoceanic voyage, and turn their attention in this direction. It is a great error, which often costs us dear, when people think that it does not matter if goods are damaged, since they are insured. On the contrary such damage must be prevented.

Some plants have had a great deal of experience in export packaging and are very inventive on this subject This is true particularly of plants in the food industry. The careful packing of Czechoslovak hops and malt for export shipment deserves particular appreciation. In Zatec they are now testing a new method of packaging hops for overseas shipping. The packing crates and cylinders have been replaced by a plastic container made of polyethylene. A fine, translucent membrane protects the contents. For better shipping the plastic is wrapped in a jute container which is tied up with knots with which the bundles are handled in loading. With the aid of workers in the paper industry a very clever export package has been developed for bottled beer from the Plzen brewery. Zora in Olomouc and other candy factories are sending candy to the Near East in specially forged boxes so that they can be carried on the backs of camels in caravans.

Other plants, however, often overlook the importance of packaging. This is the only possible explanation of the backward method of packing which we still see in some overseas shipments of machinery, which arrives at its destination rusty. Because of bad packaging in boxes some parts arrived damaged, which understandably not only causes dissatisfaction on the part of the customer but costs foreign exchange spent on the necessary repairs.

Severe complaints have been lodged against shortcomings in packaging in the metallurgical industry. At the Sverma Ironworks in Podbrezova the problem of packaging was discussed with the workers; they now use sheet iron instead of wire and the complaints have stopped They are also improving their work in marking by using better colors and correcting the "signum" even while loading.

Similarly at the Vitkovice Ironworks they have realized that if they are to meet the demand that goods be better prepared for shipping this means greater consumption of binding material and greater labor expense, but that this is nevertheless necessary and desirable in the interest of the good international name and reputation of the Czechoslovak metallurgical industry and its products.

We must make the rolls of knitted goods tighter for shipment, because our former incorrect method increased maritime shipping costs, which are determined by cubic volume in these materials. This example also makes it clear that the workers must be systematically and broadly instructed and trained in the handling and shipping of products for export

Packaging is most important, of course, in the case of delicate products such as glass and porcelain. In this case poor packaging may cause real damage, as happened with a shipment of porcelain dishes to British West Africa: out of two crates only a few plates were unbroken. It is surely unnecessary to spoil our good

work in this way and ruin our reputation on foreign markets, since we are able to solve much more serious production problems.

Even if we give the greatest care to the security of goods packaging we must simultaneously see to it that bulky packaging not increase shipping costs. In one plant producing useful porcelain they originally packaged some goods for Iraq in 100 crates with a volume of 56.5 cubic meters. Preliminary calculations showed the sales referent that this packaging would render the deal unprofitable from the foreign-exchange standpoint. This is because in ocean shipping one pays by volume, and the transportation costs, which go up as volume increases, frequently force us to stop doing business. In this particular case the referent came to the plant with the request that the goods be repacked and the plant try to keep the volume down. As a result the plant repacked the goods, and the same products were packed in 60 crates instead of the original 100 and the volume reduced by 30 cubic meters. This saved shipping costs of 5,000 crowns in English pounds. The deal could be carried out and the economy was saved valuable foreign exchange. How many similar savings could be made on other shipments if the proper attention were paid to this problem! Each packer and shipper in the producing plants has the key to this problem, and it is their job to keep in mind in packing each crate that the space saved represents foreign-exchange savings.

In the case of some products -- machinery, vehicles -- the designers can keep in mind that unnecessary projections and angles will unnecessarily increase the volume and therefore shipping costs of the product.

The Research Institute for Packaging Technology can do valiant service in solving similar problems for our industries.

Considerable attention must be devoted to the climatic influences (temperature and humidity) through which products must pass on their journey to the customer, particularly in going through the tropic zone. These influences are being scientifically investigated by the Research Institute for Materials Protection in Prague-Nebusice. Our factories should be urged to cooperate closely with this institute, which is making its investigations even on Czechoslovak ships, and is checking the stability of individual products.

For completeness it should be pointed out that in packaging small piece goods great care must be devoted to seeing that the number of pieces in the crate correspond to the number in the invoice. This is necessary because we are forever getting complaints that packages contain a smaller number of pieces than the invoice indicates. In some fields as many as one-fourth of all complaints revolve about this subject.

Proper marking of packages is very important. The factories frequently mark shipments differently from the way the foreign-trade enterprise marks them in the accompanying documents and invoices. Careless marking causes difficulties in loading and unloading, the packages are mixed up, and complaints result. The foreign-trade enterprises naturally require the ship-loading documents to show the same markings as the invoices and accreditives, and in such cases the port expediter must usually give the ships a guarantee for the difference in markings. This guarantee of course shows that something about the shipment is out of order, which disturbs its normal shipping.

One more characteristic matter. In the case of one large delivery to the Soviet Union, which was sent in stages, a five-figure number had to be printed on each piece shipped. In the

plant this figure was affixed by hand, although it had to be written more than 1,000 times in all, and not until this was pointed out by the receiving commissar was a stencil made. It should not be necessary for the foreign customer to do our thinking for us; we must ourselves think of these things in order to simplify our work.

Reducing Shipping Costs

As we have seen, the problem of packaging and shipping fees are closely allied. In the case of some goods shipping costs may equal the total price of the goods This makes it perfectly clear how important it is for us to save shipping costs, since in delivering goods to overseas markets we have to cover much greater distances than the competition, which has its own ports.

The importance of the weight of goods in shipment is shown by the example of the shipment of wet lumber, raw timber, and lath for crating. The greater weight of wet wood increases the cost of transportation both within Czechoslovakia and abroad, as well as fees in transshipment and transloading. At a certain period the average weight of timber exported equaled 580 kilograms per cubic meter, although the average should vary between 500 and 550 kilogrms in summer and winter, respectively. If we added up the cost of this extra weight we would find that the extra shipping cost would total millions of crowns each year, not to mention the fact that unnecessary weight needlessly burdens our freightcar pool.

When we consider transportation in foreign trade we must realize what a web of problems must be solved. All goods which we export in one year represent about 150,000 shipments, i.e., an average of 400 export shipments daily. The task of providing transport for all these shipments abroad is the job of Metrans,

the transportation and shipping foreign-trade enterprise in Prague, which also organizes the shipment of goods imported into Czechoslovakia. Another transportation enterprise, Cechofracht, in close cooperation with Metrans, provides ocean transport, using among others our own three ships -- the Julius Fucik, the Lidice, and the Republika.

Metrans combines all export and import shipments so that maximum tariff and foreign-exchange advantages can be taken. It makes up small piece shipments into carload lots, so that transport media can be best utilized and shipping accelerated. At the same time it cooperates with similar enterprises in the USSR, the people's democracies, and with enterprises in the capitalist countries in order to obtain for Czechoslovakia the best rates and conditions.

To discharge all transportation tasks in time and at the least cost requires much effort and many headaches, because in addition to normal shipping there is a large number of special problems every day. One might think the problem of shipping a locomotive to Shanghai was quite simple: you just put it on the shortest rail line. The trouble is that railroads do not have the same gauge everywhere: Soviet railroads, for instance, have a wider gauge than we do, and it is for this reason that we had to build up the large transshipment point at Cierna nad Tisou for rail traffic with the Soviet Union. Because of this obstacle the locomotive had to be dismantled at the Soviet frontier, placed on five Soviet freightcars, and transferred again to Chinese freightcars at the Soviet-Chinese frontier. The trip to Shanghai took 5 weeks.

The shortest route is not always the cheapest, depending on tariff differences. Water shipping is substantially cheaper than rail shipping. Therefore we prefer to ship some goods by a combin-

ation of rivers and canals, or to go roundabout by sea, rather than to use direct rail connections. For example, Czechoslovak sugar is sent to Switzerland from the refinery by rail to the Vltava transshipment point where it is transferred to river barges. It travels down the Vltava and the Elbe as far as Hamburg, whence it goes by sea to Amsterdam or Rotterdam and again by river barge to Basel in Switzerland. Barley travels from southern Moravia to Strasburg thus: by rail to Bratislava, then down the Danube to Galati, through the Black Sea to the Bosphorus and the Dardanelles, through the Mediterranean Sea to Gibraltar, up to Rotterdam, and thence up the Rhine to Strasburg (Cf. Fr. Smrcek, Dopravni pojisteni v zahranicnim obchode [Transportation Insurance in Foreign Trade], Orbis, Prague, 1955.

We present these examples to show that the foreign-trade enterprises together with Metrans must often demand considerable adaptability and understanding of the producing enterprises with respect to packaging requirements. Cooperation can often lead to very positive results. For example this type of cooperation among production workers and foreign-trade ~~producers~~ transportation specialists has led to a very successful solution of the problem of shipping automobiles to South America. When cars and trucks were shipped together the passenger chassis were mounted on the truck chassis without increasing the volume used to calculate shipping fees. This saved 1,000 crowns on each passenger chassis shipped, thus increasing the foreign-exchange yield of the transaction.

The production plants sometimes complain that the foreign-trade enterprises often do not issue dispatching orders in time and the goods produced then wait too long in the plant and take up too much storage space. In numerous cases, however, the delay is jus-

tified, since the enterprise must see to it that it uses the most advantageous transportation facilities, which sometimes means waiting. The plants must therefore have storage space available for such cases.

By way of example, if we can send rolled material to South America in a Finnish ship from a Polish port this is much preferable to shipping from Hamburg in a ship whose fees would have to be paid for in foreign exchange which is difficult for us to earn. It must also be kept in mind that the journey through Poland is much more advantageous for us than shipping through Hamburg. If in choosing shipping routes we therefore strive for efficiency we must sometimes postpone shipping goods for a while. It is of course desirable for the production enterprises to notify the foreign-trade enterprise in time that the goods are ready for shipment, so that the foreign-trade enterprise can provide ship space.

If goods come out of the production plants at irregular intervals and unannounced this makes provisions for shipping quite difficult

On the other hand production enterprises which announce the shipment of goods in time and prepare them for ocean shipment make it possible for Cechofracht to proceed to rent space and to make use of seasons when rates are most advantageous This furthermore makes it possible to make better use of ports in the people's democracies, particularly on the Black Sea, because when it is certain that the goods will be delivered on time Cechofracht has better changes of making up shipments in those ports. It is also possible to save foreign exchange by using tramp ships instead of liners, since when deliveries are made on time it is possible to make up several small shipments to be sent by tramp ship rather than

using more expensive liners to send individual shipments. (A liner is a ship plying regular lines according to fixed schedules. A tramp ship is one whose direction and rates are fixed by special contract for each voyage.)

If shipments from the factories are late, the goods cannot be loaded on a maritime ship in time at the port, and the shipment is delayed and must wait until the next ship leaves. When shipping connections are few one day's delay may result in a month's delay, with all the unpleasant consequences this leads to.

Savings Are Possible in Imports Also

We have attempted to give a brief survey of the main reasons why production for export is not crowned with still greater success. In conclusion it should be noted that problems of imports deserve greater attention as well.

We wish to expand international economic cooperation, and thus imports as well. Therefore any effort at autoarky is alien to us. Our economic interests require us, however, to import only necessary goods which will help us to accelerate construction, improve production, and raise our living standards. We do not wish to import goods unnecessarily, goods which we can produce ourselves more efficiently. We also want imported raw materials, foods, and products to be used economically, and therefore it is the goal of our economic policy not to be dependent on imports of key products, since we do not wish to expose ourselves to the possibility of discrimination and economic pressure.

Frequently many of the goods which we import could be produced relatively easily in Czechoslovakia. Examples are certain types of imported sheet metal whose production could be arranged by Czechoslovak factories. In other cases our factories must learn to turn to different sources for imported raw materials. In this

respect we exerted enormous efforts when, because of the discrimination we suffered, we reoriented our imports of key raw materials primarily toward the Soviet Union and the people's democracies.

All of these and similar cases require close cooperation between the production plants and the foreign-trade enterprises if the goal is to be reached quickly.

A great deal depends on the proper utilization of imported raw materials. An example can be found in the textile industry, showing how our competitors have solved this problem. In England raw American cotton is used to spin yarn up to No 40, long-staple Egyptian cotton for yarn up to No 60, and Karnak cotton for higher numbers: 100, 120, and above. Czechoslovak producers, on the other hand, often use high-quality long-staple cotton where other types would suffice, thus increasing the cost of the product. We must also see to it that the waste from imported raw materials, such as in cutting hides, be at a minimum.

Frequently an enterprise working for export requests the importation of some small auxiliary machine or equipment which will help it to fulfill its goals Of course the Ministry of Foreign Trade and its agencies proceed in such cases with sympathy. After all, the foreign-exchange expenditure will ultimately earn a much greater foreign-exchange yield. It is of course regrettable when the plant losee interest once the equipment has arrived and does not even make the necessary provisions for installing the imported machinery. We have encountered isolated cases of this kind recently. This attitude does not of course indicate that all our production plants are properly acquainted with our import problems; for this reason their understanding of imports must be expanded as well as their grasp of export problems.

Developing Competitions for Exemplary Fulfillment of Export Orders

We have discussed sectors in which we must improve cooperation between production and the foreign-trade enterprises in the interest of better fulfillment of export goals. What conclusions can we draw from this analysis?

We must, above all, considerably strengthen the sales groups in the large export plants, particularly in enterprises working on deliveries of investment units, so that they will be able to provide bids and bases for operational designs in time, to control export deliveries as they are produced and assembled, to devote their time to compiling advertising material and technical and commercial documentation, to provide for excellent packaging and shipping of goods, and to cooperate with the foreign-trade enterprises in following technical development throughout the world and, on the basis of the information gained, apply the most progressive technology in their plants. We must end the incorrect failure to appreciate the importance of the sales groups in export enterprises; on the contrary we must recruit for them the most highly skilled cadres with proper technical and commercial knowledge. At the same time we shall make better use of the experience of engineers, technicians, designers, and research workers, both in preparing commercial negotiations and in the fulfillment of export deliveries.

Socialist competition for exemplary fulfillment of export orders is very important for improving work in foreign trade and the liaison between foreign-trade enterprises and production. This competition was begun in 1955, on the initiative of the Ministry of Foreign Trade, based in turn on a government resolution of 28 June 1955. Production plants which maintain the prescribed quality, have no complaints from foreign customers, maintain the deliv-

ery times specified in delivery orders, provide service to foreign customers, have proper cadres of assembly and technical workers, and maintain good liaison with the foreign-trade enterprises receive material rewards in addition to honorary recognition. They are rewarded according to the principles applicable to the issuance of the Red Banner, and they can send some of their technical specialists abroad for study trips, with the travel costs in part being paid out of a special portion of the bonus which the plant obtains for the exemplary fulfillment of export tasks.

In 1955 about 320 enterprises in all fields were included in the competition for exemplary export plants and several dozen of them were given incentive rewards in addition to honorary recognition for fulfilling the conditions of the competition.

It is the job of the factory organizations of the KSC and of all mass organizations, particularly the ROH and the CSM, in the plants working for export, to use all their facilities to develop and support this type of competition. There are many resources which can help in reaching this goal.

Thus the collective contract should, in its first chapter, make a precise statement of the pledge to maintain delivery deadlines, and further pledges should be given eliminating all complaints by providing for maximum quality of export goods.

We must systematically follow and control the fulfillment of working goals associated with export orders. We cannot wait for results; we must in advance be sure that the basic conditions exist for timely fulfillment. We must examine the causes of delay and organize their elimination. Complaints from abroad must be used to draw the necessary lesson so that the errors will not be repeated in the future.

Another method of assuring the completion of export orders is the organization of discussions on the significance of foreign trade, connected also with problems of the international political situation. It is precisely in foreign trade that the principles of cooperation of the socialist camp and the peaceful coexistence of all lands are carried out in practice.

Anything which promotes the introduction of progressive technology helps our exports also. Therefore in terms of foreign trade it is supremely important for the party and trade-union organization in the production plants to extend innovators and inventors the necessary support, for sufficient attention to be directed toward improvement suggestions, to arouse the initiative of the workers, increase specialized training, and make it possible to exchange Czechoslovak working observations and Soviet experience.

The effort to improve Czechoslovak foreign trade must be led by Communists, trade-union members, and Union members in all sectors of the national economy. This means still more emphatically to explain to our workers the importance of regular fulfillment of the plan for production of export goods, and to use special examples to point out the opportunities of achieving high product quality. The important thing is for the party organizations in the production plants properly to exercise their right to control the management, and to encourage the responsible factory workers and the Communists in the ROH and CSM committees to organize socialist competition and exemplary-quality brigades for the honor of the factory trade-mark.

Experience convinces us that despite all the recent success of Czechoslovak exports we are far from having utilized all the opportunities available for continuing in our good tradition and

increasing sales of Czechoslovak goods on foreign markets. Therefore we must mobilize all the workers to increase their efforts toward better fulfillment of export goals, which are constantly on the rise. If we fulfill these goals the results of our common work for the exemplary fulfillment of export deliveries will be reflected in a better and richer life for our workers.

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