

Policy of shipbuilding development in Bulgaria in the second half of the 20th century. Successes and shortcomings

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Abstract: *Regardless of the fact that all the prerequisites exist for the development of maritime business and shipbuilding in Bulgaria, a purposeful state maritime policy has not been implemented for a long time. Although there are registered beginnings of our shipbuilding already at the end of the 19th century, and the first serious orders were made during the Second World War, one can speak of a Bulgarian state policy of shipbuilding only in the 2 ½ of the 20th century. Until 1962, the development of the shipbuilding industry was at an average level for the capabilities of our country. In the following decades until the end of the socialist period, shipbuilding emerged as a sub-branch of machine-building of strategic importance for the entire industry, and the scale of its development was comparable to the scale of countries with developed shipbuilding. It is characteristic of the entire period that the majority of shipbuilding production is not created for internal needs, but is dictated by external orders, structural changes are constantly made in the management, there is a lack of continuity, and the construction of capacities for the construction of large-tonnage ships takes a very long time time is a debatable issue. Nevertheless, the development of the shipbuilding industry brings enormous positives to the country. During this period, Bulgaria was recognized as a maritime country; builds a production and technical base that is not small for the scale of our country; puts the work on a scientific basis and gives an opportunity for the appearance of a whole constellation of engineers, according to whose projects dozens and hundreds of ships that sail under the Bulgarian and foreign flags have been built.*

Keywords: HISTORY, MARITIME, SHIP-BUILDING

1. Introduction

The aim of the proposed study is to present some significant moments from the creation and development of shipbuilding in Bulgaria in the second half of the 20th century. The chronological framework in which the subject is traced suggests the disclosure of the epoch-specific politics directly directed by the top of the state apparatus. Ideologically burdened and declared wrong today, the policy for the development of Bulgarian shipbuilding leads to results that bring substantial positives for the state and society in the second half of the 20th century. These results are evidenced in the rich documentary legacy left by both the business organizations directly involved in shipbuilding, as well as the administration and state bodies managing the national economy, monitoring and directing the development of the industry. The documents are a constituent part of various funds stored in the State Agency "Archives". For the purposes of this article, the work of Tremol Ivanov "Pages from the history of Bulgarian shipbuilding" was used.

2. Solutions

The history of modern Bulgarian shipbuilding begins at the end of the 19th century and the beginning of the 20th century, when several vessels were built and successfully launched. These successes should be attributed to the first Bulgarian shipbuilders, who were driven by pure enthusiasm, rather than to any state policy. Compared to the development of railway transport, it can be said that shipbuilding was not on the agenda of the state policy of Bulgaria, until the threshold of the Second World War. Tsar Boris III's passion for railways has been repeatedly witnessed at that time, his negative attitude towards shipbuilding is less known. Nevertheless, there was no lack of supporters of the policy of shipbuilding development in our country. Unfortunately, without solid state support, systematic shipbuilding appeared in our country only after the establishment of foreign companies, such as the German "Koralovag". Its appearance is connected with the economic and political orientation of Bulgaria to the orbit of Germany in the middle and second half of the 1930s - the years of the 20th century. After the outbreak of the Second World War, the German High Command commissioned the construction of 12 amphibious ships to a small shipyard in Varna. For this first major order, expansion and reconstruction of the production base is required. A German specialized enterprise arrives with all the necessary technological park to fulfill the order and supervises the work. Construction of an entirely new shipyard began, which was not completed until the end of the war. For the period 1939 - 1944, a total of 86 vessels were built there, with only 17 designated for

Bulgaria, and the remaining 69 built for the needs of the German fleet. The Varna Shipyard employs 1,450 workers, and three of the four production manager engineers graduated in mechanical engineering in the Czech Republic. An extremely valuable document proving the technological readiness of the Bulgarian society for the development of shipbuilding is Todor Delistoyanov's concept for the expansion and reconstruction of the Varna shipyard, developed as early as 1939 and presented to the attention of the Directorate of Water Communications at the General Directorate of Railways and Ports. [1]

The development of machine, forge, foundry, welding and compressor departments, according to the concept, was supposed to ensure the construction of ships up to 6000 tons. Without being strictly followed, this plan was implemented at variable rates only towards the end of 1949. After the change, carried out on 9.IX.1944, the development of shipbuilding passed under the direction of the Directorate of Water Communications under the Ministry of Railways and Water Transport. The production base - property of the German fleet in Bulgaria, was handed over to the USSR after a law was passed in the National Assembly. The production of ships did not cease, but began to serve the interests of the new owner. This situation was preserved until 1950, when an agreement was signed for the formation of the Bulgarian - Soviet parity shipbuilding company - KORBSO. [2]

In the same year, an inspection of the Maritime Register of the USSR was opened in Varna, which began monitoring ship production. For the period 1945 - 1949, 41 vessels with a carrying capacity of 9216 tons were built in the shipyard in Varna. The classification documents issued by the Maritime Register are the first international recognition of Bulgaria as a shipbuilder. Renovation of the machine park begins, a new foundry and tool shop, oxygen and compressor stations were built. The report of the shipyard for 1951 indicates that the goods industry is performed at less than 50%, and the cost price of some of the vessels is too high. The reason for this is the low qualification of the staff. For the solution of this problem, a new specialty "Shipbuilding" was opened at the Mechanical Engineering School in Varna, and the following year - a shipbuilding department at the Faculty of Engineering and Construction of the State University. An important moment in the development of Bulgarian shipbuilding is the election of our country as a permanent member of the shipbuilding section of the Permanent Commission on Mechanical Engineering within the Committee for Mutual Economic Assistance in 1956. According to the contracts to which Bulgaria is a party, it specializes in the production of four groups of ships: 1. cargo - from 3,000 to 5,000 tons of carrying capacity; 2. cargo from 10,000 to

15,000 tons; 3. tankers with a carrying capacity from 4000 to 5000t, 4. passenger - from 500 to 2000t. [3]

For the absorption of the new production, the Ministry of the Shipbuilding Industry of the USSR provides Bulgaria with working documentation for the construction of ships and the production of articles of ship's furniture. (ibid., p. 263)

During this period, the construction of an extremely successful series of 4000t tankers began. Then the passenger ship designed by the Bulgarian engineer L. Veselinov for near and far coastal navigation was completed and handed over to the Bulgarian Navy (BMF). Engineer Atanas Yordanov designs 150 and 300 ton marine cargo motor ships for close and coastal navigation. Under the guidance of engineers Hristo Naydenov and Georgi Tashev, a project for a floating workshop with a reinforced concrete body was developed. The USSR alone received about 200 such workshops by the end of the period under review. (ibid, p. 89)

In 1957, at the technical council at the Shipbuilding and Ship Repair Plant (KKZ) "G. Dimitrov", Varna, a project assignment for the construction of a 10,000 t dry cargo ship is being discussed, which is not being implemented. In 1959, engineer Todor Ganchev presented a project for a 5000 t dry cargo motor ship, in the construction of which low-alloy steels were used for the first time and an electrical network with alternating current was designed. (ibid, p. 91)

The inclusion of Bulgarian shipbuilding in international specialization increased production several times during the period 1955 - 1960. Compared to the previous five-year period, the volume of production jumped 2.7 times, commodity production 1.6 times, and labor productivity was three times higher. The reason for the increase in indicators is the successful transition to the construction of more expensive medium-tonnage ships. However, at the end of the 1950s, there was an increasingly frequent fall behind the requirements required for the economic and operational planning of production, the annual plans could not be fulfilled, and this led to non-compliance with the deadlines for the handover of the objects. The industry is lagging behind in terms of technological level as well – the transition to the mechanization of manual labor is taking place too slowly, and the available equipment is outdated. (ibid, p. 95)

An essential reason for stopping the development of shipbuilding in our country during the period is the delay in the expansion of the plant in Varna, which should provide opportunities for the construction of ships with large tonnage. Already with the undertaking of the commitments to the SIV on the specialization for the construction of ships of 10,000 and 15,000 tons, a task was approved for the preparation of a master plan for the reconstruction of the KKZ - Varna, but the project was not implemented due to the transfer of the plant to the Ministry of Heavy industry. [4]

A significant development in Bulgarian shipbuilding is provided by the signed long-term agreement with the USSR providing for the construction of 95 vessels within 5 years. Of interest to the guarantor are the possibilities of KKZ - Varna for the construction of 6,500 tons of reinforced concrete docks. During the negotiations, the plant in Varna prepares a comprehensive concept for the development of reinforced concrete shipbuilding, but on the condition that the existing facilities are reconstructed. With the signing of the agreement, "Zavodproekt" renews the development of a master plan for the reconstruction of the plant. [4] By Decree of the Council of Ministers No. 1608 of 30.08.1961, a deadline of March 1, 1962 was set for the conceptual project for reconstruction to be completed.

In the meantime, at the invitation of KKZ - Varna, three representatives of the Soviet shipbuilding industry arrive in our country, who prepare a competent assessment of the state of Bulgarian shipbuilding. The assessment is critical, but true. It is emphasized that the general development of ship engineering is lagging behind. There is no reconstruction plan for the shipyard in

Varna, the construction of the shipyard in Ruse is going slowly, and the ship repair base in Burgas is in a hopeless state, cooperation with other factories in our country is weak, there is no technological institute for shipbuilding.

On February 13, 1962, the Council of Ministers approved the XXII Resolution of the Central Committee of the BKP on the development of shipbuilding. [5]

The document considers shipbuilding as one of the important branches of heavy engineering with great importance for the development of other industrial branches. As the first task, the need to complete the reconstruction of the KKZ - Varna by the end of 1964 and the complete construction of the KKZ - Ruse by the end of 1963 was indicated in order to expand the possibilities for the production of sea and river ships and, of course, to prepare the production for the construction of ships with a carrying capacity of 10,000 tons. Bearing in mind the assessment given by Russian shipbuilding specialists, the decree emphasizes the need to create a scientific and research base in Varna and to strengthen cooperation between enterprises in the shipbuilding system by specializing and profiling.

With a delay of five months, on 13.8.1962 the Council of Ministers approved with Resolution No. 1295 a conceptual project for the reconstruction and modernization of the KKZ "G. Dimitrov", Varna. The project is worth BGN 120 million and only Bulgarian design companies, institutes and construction associations are working on it - "Zavodproekt", "Mashelectroproekt", "Transproekt", "Transstroy" and many others. The execution of the project is close to the average world level of shipbuilding production. Complex hydrotechnical facilities are planned for construction - dock chambers, each of which absorbs 100,000 tons of concrete steel and 110,000 cubic meters of concrete. The late approval of the conceptual design causes the object not to be completed on time and the commitments to the guarantor are not fulfilled on time. Regardless of this, during the period of intensive construction for the reconstruction and modernization in KKZ - Varna until 1965, 54 vessels were built and handed over to the customers. Then, for the first time, a project for the construction of a 5,000-ton dry cargo ship was completed with engineer Todor Ganchev as designer.

In 1967, it was agreed to receive from the Soviet Union specifications for four types of ships of interest to us. The following year, a program was specified for the construction of 61 vessels with a total carrying capacity of 1,300,880 tons in the period up to 1975, thus ensuring full utilization of the new facilities built. (Ivanov, T., Shipbuilding, p.164 – 165) The highest rates of development of Bulgarian shipbuilding were realized in the period 1965-1969. Then the production funds were increased nearly three times, the total industrial and commodity production jumped 3 times, and the tonnage of vessels amounted to 601,000 tons of deadweight for 377 ships, according to a report of the Minister of Mechanical Engineering Mariy Ivanov to the Chairman of the Council of Ministers Todor Zhivkov. [6]

In 1969, the first deals were concluded for the export of ships "in the second direction", i.e. for developed countries that are not part of the SIV. The contracts with these countries amount to BGN 24.4 million. The total export of vessels for the period 1966-1970 is in the amount of BGN 178,781,000 (ibid.) The high values reached by shipbuilding cause even higher goals to be set in the next decade. At the end of 1975, the production of a 75,000-ton tanker and a 75,000-ton coal carrier is expected to be mastered, which will constitute the main type of production until 1980. (ibid)

The scale of this scope and self-confidence, which is demonstrated by Bulgarian engineering, is due to the qualitative changes that occurred in the industry during this period. New technological methods are used in shipbuilding, the degree of process mechanization has been increased, new technical equipment has been provided, and a scientific organization of labor has been introduced. The modernization of the production base and the new

production methodology bring Bulgarian shipbuilding closer to the achievements in this industry of developed countries. An example of this is the pursuit of higher productivity by shortening construction cycles. In 1971, a 23,500 ton coal carrier was produced in an average of about 260 days, which was close to the achievements of other shipbuilding countries. The aspiration leads the Bulgarian shipbuilders to shorten this time to 140 days. (ibid)

The main obstacle to the realization of these goals is the existing huge dependence in our country on the import of materials and equipment. All shipbuilding countries complete the ships with locally produced equipment, and their import varies between 5% and 10%, while in Bulgaria the import is 75% [6].

The import of ship equipment and main engines places the Bulgarian shipbuilding industry in great dependence on the suppliers, which negatively affects the duration of the construction of the ships, the cost of production and the foreign exchange return. In a technical-economic report developed by KKZ, Varna, it is stated that imports can be reduced if the plant adopts the production of main ship engines. The Ministry of Mechanical Engineering proposes to purchase from the USSR a sublicense for the production of marine engines from the Western company "Burmeister & Wein" in line with international cooperation, or to purchase a license directly from a Western company producing marine engines. (ibid) A desire for cooperation with the West was also demonstrated by the visit of a delegation of Bulgarian shipbuilders to Japan, at the invitation of the Association of Japanese Shipbuilders and the Hitachi Zosen company, which took place at the end of 1970 [7]. The purpose of the visit is to study the achievements of Japanese shipbuilding and to establish scientific and technical cooperation with one of the largest shipbuilding companies in the world. An agreement was reached for the conclusion of an agreement for technical assistance from the Japanese side, which is expressed in: training of 5 of our engineers and 20 workers in the shipyard in Inoshima, which is close in profile to KKZ "G. Dimitrov", Varna; training of 2 Bulgarian specialists in the implementation of electronic - computing technology in management, organization and production; consultations on the plan for the modernization of the plant in Varna; consultations for the implementation of progressive technologies and modern equipment for the mechanization and automation of production processes; delivery of a project for the construction of a 70,000-ton tanker and preparation for the mastering of the construction of such constructions in Varna, etc. (ibid)

The aspiration of the Bulgarian shipbuilding industry to specialize in the construction of ships with large tonnage is clearly visible. This production is economically more profitable, but also requires higher technological capabilities, for which Bulgarian shipbuilding is not sufficiently prepared. This is evident from a report prepared in 1972 by specialists from "Vneshtekhnika", Moscow, who follow the state and our opportunities in this industry[8]. According to the report, the relative share of Bulgarian production, with which the ships being built in our country are completed, is still too low - 15-25%, and the technological level of the factories, excluding those in Ruse and Varna, is low. There is also still a lack of capacity to produce marine engines. In this connection, in 1974, the "Mayak" machine-building plant in Tolbukhin was handed over to DSO "Shipbuilding", which is planned to be converted into a plant for the production of marine diesel engines under the license of the Swiss company "Sulzer" [9]. In the 1970s, the development of the scientific service of shipbuilding was observed. An Electronic - computing center for shipbuilding was built in Varna, where work is being done on the automation of engineering work and on the development and implementation of automated production management systems. In 1973, the Institute of Ship Hydromechanics was built, approved by RMS No. 11 with 14.7 million BGN capital investments, of which 2.5 million were aid from the United Nations. This is the year in which shipbuilding is designated as a subsector of particular importance to the national economy. The previous year, 1972, the production of ships with a total carrying capacity of 1 million tons

was reached, which gave reason to plan for 1985 a volume of 2 million tons, and in 1990 - 3 million tons deadweight (Report No. M - 1964/30 of the Ministry of Mechanical Engineering) . It was decided, at the highest state level, to build a material and technical base for scientific research and development by 1976, to build a plant for ship engines by 1978, and to create conditions for the construction of a ship engine by 1980 in Burgas large-tonnage ships [10]

A significant problem, besides this circumstance, is that these decisions were not discussed and agreed with the executive bureau and the business council of DSO "Korabostroene". The complex program for the development of shipbuilding until 1990, which was drawn up by the planners at the highest levels of power, sets unattainable goals for our capabilities, one of which is for Bulgaria to increase its relative share in world shipbuilding from 0.2% to 2%, and the other - to achieve in 7 years such a development of ship engineering as was achieved in Poland in a period of 20 years. [11] Regardless of the failure of the megalomaniac aspirations (or precisely thanks to them, *my note.*) in the period 1970-1985, the goods production of DSO Korabostroene increased 2.5 times, and the value reached BGN 303.7 million (T. Ivanov, p. 231) A total of 29 new projects of self-propelled and non-self-propelled ships were mastered in the three main shipyards. The most significant drawback of the production policy during the period is that the majority of the ships created in our factories were not included in the national ship park, but filled the foreign ones. This applies with particular force to the output of the shipyard in Ruse, 90% of which goes to the Soviet Union. The absurd situation arises in which we have a factory specializing in the production of ships for bulk cargo, and at the same time the "Bulgarian River Navigation" Shipping Company is in dire need of tugs and pushers, because after 1974 the shipyard does not fulfill its orders at all. (T. Ivanov, p. 228)

Conclusions

The review of some literature on the subject and the available archival material testify to the discovery of many opportunities for the development of shipbuilding in Bulgaria in the second half of the 20th century. First of all, the fact that shipbuilding managed to establish itself, moving from a non-priority position in the Bulgarian economy to a strategic industrial sub-sector of particular importance for the development of the national economy, deserves attention. This is due to the implementation of a policy of permanent state support, expressed in a constant increase in capital investments, thanks to which the technological park and the material base manage to stay within the current world level. Placing shipbuilding on a scientific basis is not without importance for this development, which, again we must admit, is state policy. Apart from the debate on whether this was carried out in the most economically expedient way, we must calculate the benefits of this development, which are generally expressed in the inclusion of Bulgaria in the world list of shipbuilding countries. The policy of shipbuilding development in our country is a consequence of the perceived impossibility of Bulgaria filling the necessary ship tonnage from imports alone, in order to be recognized as a maritime country. Although led with all the shortcomings of the planned economy, constantly suffering from the lack of adequate staffing and technological renewal in production, the policy of developing its own shipbuilding guarantees the country more opportunities for independence in maritime trade and transport. With a lot of effort during the considered period, the foundations of a specific machine-building branch were laid in our country, borrowing the example of other maritime countries, thanks to which a whole generation of shipbuilders grew up, whose completed projects served various foreign fleets for many years. The names of dozens of Bulgarian engineers and specialist shipbuilders are evidence of a technological step forward, which was prematurely interrupted by the powerful tectonic tremors in world politics from the end of the 20th century.

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