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The motor vessels of the type “Erofej Khabarov” – the first Ukrainian project of lake-river passenger ship

Теплоходи типу “Ерофей Хабаров” – перший український проект озерно-річкового пасажирського судна

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Ключові слова:

Україна, теплохід, Яків Вольфсон, пасажирський річковий флот, транзитні пасажирські перевезення.

Key words:

Ukraine, motor ship, passenger river fleet, Yakiv Wolfson, transit passenger transportations.

Анотація: Стаття присвячена історії проекту № 860 першого українського озерно-річкового пасажирського теплохода, створеного у ЦКБ Київського заводу “Ленінська кузня”. Аналізуються основні технічні характеристики суден цього проекту, серійне виробництво яких було налагоджене на суднобудівних заводах у Росії. Макет головного судна “Ерофей Хабаров” експонується у Державному політехнічному музеї при НТУУ “КПІ”. Згадуються пасажирські теплоходи, які здійснювали транзитні пасажирські перевезення на Дніпрі і серед яких не було жодного судна проекту № 860. Робиться висновок про те, що відновлення транзитних пасажирських перевезень на Дніпрі можливе за рахунок будівництва і подальшої експлуатації теплоходів, створених на основі проекту № 860 з його обов’язковою модернізацією.

Abstract— This article is dedicated to the “Yerofey Khabarov” class motorship (Project 860), the first lake-river passenger ship in Ukraine, designed at the Central Constructor Bureau of the Leninska Kuznia plant in Kyiv. In the article the main characteristics of this ship type are discussed. All ships were produced at the ship building factories in Russia and a model of the main ship “Yerofey Khabarov” is exhibited in the State Polytechnic Museum at the National Technical University of Ukraine “KPI”. Also mentioned in this article are the other passenger ships that carried out transit transportations via the Dnipro River. The conclusion is made that the re-establishing of passenger transit via the river Dnipro was possible through the building and further exploitation of ships built based on Project 860 and its obligatory modernisation.

In the period following the Second World War much attention was paid in Ukraine to the development of a transit passenger river fleet. This was made possible primarily through the creation of new passenger steamer ships, at the plant Leninska Kuznia in Kyiv, as part of project number 737 and their mass production [1, 2]. However, although the new ships had benefits over the old pre-war steamers, vessels in project number 737 had major drawbacks. It is known that the efficiency of the steam engine was much lower than that of internal combustion engines, and adjusting of the angular velocity of the shaft cannot be done remotely from the bridge. In addition, in the early 1960s a system of hydroelectric stations and reservoirs was built on the Dnipro River. The largest of these is in Kremenchuk, filled in the years 1960-1961, with a width at the dam of 40 km and a length exceeding 170 km. To pass these reservoirs with minimal restrictions, vessels must be class-case “O”, while steamer ships had class “P”. In this regard, there was a need for a class “O” passenger motor ship, which would replace steamers from project number 737, especially on the rivers with reservoirs.

And in 1958, the Central Constructor Bureau (CCB) of the Leninska Kuznia plant in Kyiv drafted a class “O” lake-river cargo-passenger two-decked motor ship (Project 860) (Fig. 1). The chief designer of the project was the engineer shipbuilder Yakiv Yosypovych Wolfson, who came to the plant in 1949 and began working in a project developments group (Fig. 2). Unfortunately, project 860, was not implemented at the Leninska Kuznia plant, but some equipment for the ships of this project was manufactured in Kyiv [3].

The main ship of project number 860, which was called “Erofej Khabarov” was launched in 1958 at the shipyard in Sretensk (RSFSR) and passed to the Amur River Shipping Company. The scale model of the main motor ship of project number 860 is displayed at the exhibition at the State Polytechnic Museum at National Technical University of Ukraine “Igor Sikorsky Kyiv Polytechnic Institute” (Kyiv). According to CCB of the Leninska Kuznia plant, a total of 15 ships of project number 860 were built, 9 of which were built at the Sretensk shipyard and 6 at the Tyumen Shipbuilding Plant. These ships [3] were used on the Amur, Lena, Ob and Irtysh Rivers.



Fig. 1. General view of the motor ship (project 860)

The main characteristics of the ships (Project 860):

Class	0
Length	77.0 m
Width	15.2 m
Height	13.65 m
Draught	1.45 m
Displacement	864 T
Passenger capacity:	304
of them:	
First class cabins	21
Second class cabins	58
Third class cabins	131
Seats	94
Load-carrying capacity	60 T
Engine power	2x400 hp
Speed	20,2 km / h
Crew	54 people.

Passengers on board the motor ship were offered well equipped comfortable 1-2 bed first class cabins, 4 bed second class cabins, 6-8 bed third class cabins, two restaurants with 96 seats, reading and music salons and a sitting room with seats, that were used as a cinema on ships for tourists.

Such equipment of vessels of this project made it possible to use them, especially after modernization, on tourist routes.

In the early 1990s, several motor ships of project number 860, which carried passengers on the Amur River, were reconstructed at Harbin shipyard, including

significantly redesigned superstructure on the ships, deckhouse replacement, upper deck facility expansion and comfort improvement of passenger cabins. The view of one of these motor ships after reconstruction is shown in Fig. 3.

Unfortunately, ships of this quite successful project



Fig. 2. Yakiv Y. Wolfson, the chief designer of the project 860



Fig. 3. One of the reconstructed vessels of Project 860 – Motor ship “V. Poiarkov” (photo taken in 2015)

(according to experts) did not appear on the Dnipro River. Instead, in the early 1960s on the Lower Dnipro three diesel engine ships made at the Škoda-Komarno plant (Czechoslovakia) started working on passenger lines between Dnipropetrovsk and Mykolaiv, serving mainly tourists. The operation of these vessels that were slightly inferior in characteristics to the motor ship project number 860, carried on until 1986. They were then used for the accommodation of liquidators of the Chernobyl accident, and then were finally written off for scrap.

Since the second half of the 1970s, further development of tourist passenger transportation on the Dnipro was associated with the commissioning of new passenger ships (project number 301, later project number 302 that was later slightly upgraded) made in the German Democratic Republic (GDR) that had the possibility of entering into the Black Sea (unfortunately, with very significant limitations) and worked on Kyiv – Odesa, Kyiv – Sebastopol and some others lines. However, we would not dare consider vessels of this project comfortable to operate on the Dnipro River. Designed for large reservoirs of the Volga River, the dimensions of these ships were too large for the Dnipro (length 125 m, width 17 m draft 3,05 m). This hampered their ability to maneuver, especially when there were strong winds, in places with limited width, and when passing difficult and shallow sections of the river (eg, Dnipropetrovsk gate). In addition, the operation of such vessels required a lot of money, primarily because of running costs associated with the high price of fuel. There were also problems when ships of project number 301 and number 302 entered into sea water, because these ships should have the class

register "M", while the motor ships of the mentioned projects belong to class "O".

In conclusion, from what was mentioned above we can determine that for decades there were no vessels in the transit passenger fleet on the Dnipro, that would satisfy the conditions of navigation in that area of navigation. In our view, restoration of transit passenger transportations on the Dnipro is possible based on vessels of project number 860 with mandatory modification that would increase the safety and comfort of passengers and crew. This would include using modern engines and navigation equipment, reducing the capacity of the class II and class III passenger cabins, establishing the climate control system and others. At present, some motor ships of project number 860 that were released in 1958-1960, carry on passenger transportations after having been modernized. Attention should also be paid to the project number 1867, a three-decked passenger motor ship for mixed sailing [3], developed in 1961 under the authority of the same chief designer Y. Y. Wolfson in the CCB of the Leninska Kuznia plant for the line Kyiv – Odesa.

Hopefully, in the revival of the fleet on the Dnipro River, that was mentioned by the President of Ukraine Petro O. Poroshenko, they will use an upgraded design of passenger motor ships that were created by Ukrainian designers and engineers at the Leninska Kuznia plant in 1958-1961.

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