

NAVIGATION ON THE DANUBE – SUPPORT FOR BANAT MINING

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The Danube, the 29th river in the world, as regards the length and flow rate, and the second in Europe after the Volga, springs from Black Forest mountains – Germany, and after a route of 2880 km, crossing the center of Europe, flows into Black Sea, near Caraorman forest, which in the Turkish language means also black forest. Actually, there are two springs, namely Brege and Brigach, occurring from Kandel Mountain, at the altitude of 1241 m and join in Donaveschigen town in the yard of Fürstenberg castle.

Built between 1959 and 1992, the Danube-Main-Rhine channel, having a length of 171 km, connects North Sea and Black Sea, and the Danube-Oder channel makes the connection with Baltic Sea. Navigable from Ulm, the Danube has been closed on certain sections, between 1999 and 2003, due to the bomb attack of the bridges from Serbia. Until the interconnection of the railways from the river-side countries, the Danube was the main communication and transport way for the central European trade.

The assurance of the Danube navigability, depending on seasonal flow rates, obstacles or ice bridges, was the main concern since the earliest times. The Romans marked through 5 commemorative tabulae the works executed by them for arranging the navigable channel. The first, by Tiberiu Emperor, between 33 and 34 through the tabulae from Gospodin, at Cozla cataract, and downstream continued by Vespasian and Domitian Emperors, up to that one nominated “tabulae Traiana” of Traian Emperor from Small Gorges and the last found more recently at Cladova also of Traian Emperor placed now in the museum from locality. At the time of Traian’s reign, a channel was dug and a small dam was built on the right bank near Sip locality. The channel, 3.2 km long and 30 m wide has been finalized in 101.

The denomination of the Danube Defile is not the most correct because the Danube has several narrow passes, for example that one from Visegrad, or in our area that one from Golubac, 14.5 km long and 230 m wide; that one from Gospodin Vir, 15 km long and 220 m wide or that one from Great Gorges with a width of only 150 m and a depth of 53 m.

The gorges are divided from Orșova into 21 Great Gorges and behind Dubovei bay there are Small Gorges.

The Iron Gates, Poștile de Fier in Romanian language or Gvozdena Vrata in Serbian, Demirkapa in Turkish, Eisernes Tor In German or Vascapu in Hungarian represent the entire chain of gorges from area, having a length of 134 km.

Several factors hindered the traffic of the ships on this river section, one geological given by the narrowness of the gorge inducing the increase of the water speed, the rapids, the presence of the visible or invisible stones depending on their height and water level, the two curves of the river from Svința and Ada-Kaleh and also the meteorological factor given by fog, mist, snow, rain, floating ice and draught inducing a low level of the water. A team of pilot officers with head office in Orșova and Tekija guided the ships irrespective of the atmospheric conditions assuring in this manner the transport on river.

On the Danube, processed or raw ores were transported from the mining units, some situated even inside the built area of Orșova town, quartz ores, asbestos, mica, feldspar, serpentine, bentonite, talc. Some ores were transported on the Danube up to the foundries from Bratislava. At the km 80-81 from the Bazias town, on the right bank in Milanovaț harbor, the funiculars brought copper and iron ores from the Maidanpec mines and from here these reached Reșița. From Cozla, by a narrow railway, the anthracite was transported up to Drencova harbor. The fluidization of the navigation on the Danube was imposed.

Between 1834 and 1846, the arranging of the Danube started again beginning with the removal of some stones from the navigable channel. Following the peace from Adrianopol (1829) the trade on the Danube was free, and in the next year, the first steamship named Arno under Austrian flag crossed the area of Iron Gates. The commodities from Romanian Principalities could circulate free on the Danube without Turkish transport monopoly. The Crimea War (1853-1856) had inter alia to settle the Danube problem. The passenger transport intensified, and among the personalities who traveled on the Danube the 17 Wallachian revolutionaries arrested in 1848 may be numbered, namely N. Bălcescu, C.A. Rosetti, I. Brătianu, Brothers Golescu, D. Bolintineanu, C. Boliac who

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were transported from Rusciuc to Ada Kaleh. In the next year on August 25, 1849, L. Kosuth accompanied by the general Bem and a group of officers returned from Ada Kaleh to Vidin inside the Ottoman Empire. Also on the Danube arrived in country the future King of Romania Carol I together with I. Brătianu landing first time on the Romanian territory at Turnu Severin. Their meeting took place on ship at Baziaș, from where continued the route with the ship at class II, because the future King circulated clandestinely with Swiss passport under the name of Karl Hetting (Austria and Prussia being at war).

Several works of regularization, embankment, removal of obstacles have been carried-out on different sections on both banks of the Danube For Sip area situated between Orșova and Turnu Severin having a length of 32 km and a minimum width of 170 m, the arranging works of the river have been assigned to Austro-Hungary, and the government from Wien transferred the task to Hungary which performed the works (Barbuțeanu). The geological investigations and the plans endorsed by Austria, Hungary and Turkey have been finalized in 4 years, so that on September 18, 1890, the works were started. The investment was assigned for execution to Eng. Hajdu – Berlin Luther Company from Braunschweig and to Discount Company from Berlin. The works were not finalized until 1855, as these have been planned. The works, solemnly inaugurated in 1986, were finalized only in 1898.

The equipments were in majority from France and America. The working technology consisted in drilling-blasting. Therefore, drill holes in stone were executed in which dynamite was introduced and blasted. The rock breaking and wall finishing were made with pneumatic hammer. Lusenbach Company performed the works of rock breaking-up. A dredging machine manufactured in Scotland has been brought on site. On channel, the navigation was guided by buoys emplaced on the right bank of the Danube, starting from the both ends. To provide the maintenance of the fluvial flotilla –support for the Sip channel construction, on the left bank at the exit from Orșova towards Ișalnița, the “Naval Workshops” are established in 1890.

The water speed through Sip channel at the finalization of the arranging works was very high – 18 km/h. For the steamships from those times, their towage was necessary for the upstream traffic. For this purpose, a strong towboat has been built,

named Vaskapu, ordered in 1895 with an engine of 3000 HP. This towboat operated until the First World War propelled by the winding of a steel cable anchored with one end on the bank and with the other one on the ship on a drum.

At the beginning of the First World War, the Serbians confiscated the towboat Vaskapu which has been transported to Odessa from where after 1917 was brought by the Austrian marine to Orșova.

After 1916, the propulsion system changed, being made by steam locomotives in number of 3 at beginning; also a railway, 1800 m long, has been built. After 1918, another 400 m of railway have been built, and the number of locomotives increased to 11. These towed platform wagons equipped with steel cables winded on drum. The towboat operated also between 1920 and 1932, and since 1933 was replaced definitively by steam locomotives.

The festivities occasioned by the inauguration of Sip channel were very magnificent, participating 3 monarchs: Emperor Franz Josef (December 2, 1848 – November 21, 1916), King of Romania Carol I (May 10, 1866 – October 10, 1914) and King of Serbia Alexandru I Obrenovici (1889 – 1903). The Emperor Franz Josef arrived by train in Orșova railway station, nicely decorated, being met by high officials, from where continued the way to Băile Herculane, where met the Kings of Romania and Serbia. At the naval festivities, ships from the 3 countries participated. From Romania, a Danube naval division composed of “Smeul”, “Zborul” and “Năluca” torpedo boats accompanied by “Oltul”, “Siretul” and “Bistrița” gunboats participated, commanded by the colonel Urseanu who was decorated with the Austrian order “Iron Crown” class II. At Orșova, belonging that time to Austro-Hungary, the Emperor was accommodated with his suite in the Fota Popovici’s houses.

With the occasion of the Sip channel inauguration, a jubilee medal was stamped:

- Medal with ring fastener

Characteristic features: diameter=2.9 cm, weight=8.3 g, copper, well preserved

Avers: The three monarchs looking to the left in military uniforms. In order from the left to the right: Franz Josef, Carol I of Romania and Alexandru I Obrenovici.

Reverse: background: A Vaskapu Megnyitsa •Szeptember• 27 EN•Central Emlekere 1896 (in the memory of the opening of Porțile de Fier)



The three monarchs continued the festivities in the Cure Saloon within the Casino Complex from Băile Herculane. It must be mentioned that the relationships between Franz Josef and Carol I were very good. During his travels of transiting Austria, Carol I met Franz Josef at Wien, Bad or Budapest where the Emperor was accommodated in his regiment's garrison. The Empress Sissy was 5 times at cure at Băile Herculane where in 1887 met the King Carol I and Queen Elisabeta.

Băile Herculane ornamented, accommodated the gala dinner which took place at 6:00 PM, where 120 influential guests participated: ministers, high ecclesiastical officials, diplomats, superior military men, local officials.

The King Carol I leaved Băile Herculane and went to Craiova, following the first day of festivities. The Emperor Franz Josef made further on a three days visit in Romania. He was met by Carol I at Craiova and accompanied to Bucharest, the travel being made by train. Near Chitila, the fort batteries welcomed her Majesty with round of cannon. The members of the imperial family were

often in Bucharest; the Crown Prince Rudolf with his wife two times, the Archduke Alhbrecht and Archduke Karl Ludwig several times.

The Romanian Royal Family was present at railway station, together with Prince of Saxe-Coburg-Gotha, father of Princess Maria. The Emperor was greeted according to the Romanian custom with bread and salt by the major of Bucharest, with two gold cups and a tray - copy of the treasury from Pietroasa. At the military parade, the Romanian soldiers were commended by the King Carol I.

The commodity transport on the Danube increased progressively. If between 1906 and 1910, 2,669,000 tones were transported through Iron Gates, between 1926 and 1930, the commodity volume almost tripled, reaching 6,900,000 tones.

The Specialists of the Danube European Commission would have wished a channel with lock and not an open channel. Even if the navigation on the Danube improved substantially, the dangers did not disappear integrally. In the first 30 years since the opening of Sip channel, from

140,816 ships which passed through channel, 233 sank or suffered damages. The British delegate H. Trotter, on October 15, 1896, in the report regarding the inauguration of Sip channel (National archive of Galați, the Stock of Danube European Commission, volume 30, page 284-286), mentions the political character of the inauguration due to the celebration of the Hungarian millennium, shows its deficiencies and concludes that its sole utility is the prolongation of the navigation time on the Danube with 6 weeks in autumn.

Controversial discussions took place as regards the high taxes fixed unilaterally by Hungary. Romania which exported 800,000 tones of grains on the Danube would have to pay 80,000 of crowns. The tax at Iron Gates was 8 times higher than that one from Kiel channel (between North Sea and Baltic Sea). Sip channel had 1.7 km, and Kiel channel 95 km. In addition the construction of Kiel channel was 5 times more expensive (Gerald Lowter)

In 1964, the construction of Iron Gates Hydrotechnical Complex begun with a cumulated power of 2,200 MW. The water level increased with 35 m, a big reservoir was created which solved definitively the problem of the navigability on the Danube at Iron Gates.

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