

HAVING A LOOK BACK TO THE FORMER PETROL-BASED ELECTRIC RAILWAY, DORNIȘOARA - TIHUȚA - PRUNDU BÂRGĂULUI Lia-Maria CIOANĂ

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Abstract: *The former petrol-based electric railway, built during First World War originally served for the food and ammunition transport meant for the armies, which had settled down the mountain peaks nearby, today in the area of Vatra Dornei or Cărlibaba and which were guarding the passage towards Transylvania. They were often used to evacuate the wounded and for commercial purposes as well, in order to transport cereal and many other kinds of grains at the blooming 1916, all this acquired from the requisitions of Bucovina and even from the smuggling or imports of Romania, which still enjoyed neutrality by the time.*

Keywords: railway, petrol-based and electric railway, depot, transport

1. General considerations

The plans for the construction of a railway linking directly Bucovina and Transylvania were numerous, but these projects faced the strong and constant opposition of Hungary, which did not want to enable any connections between the Romanians on one side and the other of the Carpathians.

The petrol-based electric train or the so called "Landwehr - Train" was an idea of the Austrian general, Ottokar von Pragenau Landwehr, who, in 1908, set the grounds of a vehicle with multiple-trailer system with extended traction, able to run both on roads and rails (Brașcanu, 2014).

2. The stages of construction of the electric railway within political context of the time

The Military Railway No.1, Dornișoara-Tiha Bârgăului built under emergency conditions by the Austro-Hungarian army in order to make the so-long wanted strategic connection at the time, between Bucovina and Transylvania, was the only

railway built here, which functioned on a petrol-fuelled electric system. Before the war the only direct connection between Bucovina and Transylvania was the old country road from Câmpulung to Măgura Calului; between the years 1780-1787 under the direct supervision of the imperial army there was built the route from Câmpulung to Măgura Calului, and by the end of 1848, the connection between Vatra Dornei and Prundu Bârgăului was completed, thus achieving an old dream of Emperor Franz Josef, that of finally having a connection between the country of Transylvania and Galicia. Despite the crucial strategic importance which this railway had for the Austro-Hungarian Empire, its construction was not yet possible because of the strong opposition of Hungary which, nevertheless had every reason to prevent from and stop the communication between the Romanians living on both sides of the Carpathians, namely in Bucovina and Transylvania (Brașcanu, 2012).

At the end of 1914, the army commander, General Pelahzer Baltin orders a counter offensive movement and starts the dissolution of some large army units from southern Bucovina bordering Transylvania. It was then that the importance of a railway communication system between Bucovina and Transylvania was more than compulsory. Only during the ongoing war, when the Austro-Hungarian armies had been blocked by the Russian armies, in the Bistrița Valley, at Cârlibaba - the Vatra Dornei area, cut off from Austria-Hungary and without any possibility of supply, was the railway construction decided, from Dornișoara to Tiha Bârgăului or the rail connection between Bucovina and Transylvania. The time elapsed quickly, fact which did not allow the construction of an elaborate passageway across the Carpathians (that is the building of viaducts, bridges and tunnels) and then they decided the crossing line to be established quickly and straight along the roadside according to the existing inclination area. Two different routes have been analyzed, that is from Borșa through the Prislop Gorge then down the Bistrița Valley up to Iacoveni - an about 100 kms long route, slightly curvaceous and the second route, from Tiha Bârgăului over the Mount Măgura Calului up to Dornișoara and from hereto Vatra Dornei, partially using the road built in 1848.

They had agreed the second option was much better and had gone down to work. Shortly after the division of tasks on the construction sites, they started to build the petrol-based electric railway from Dornișoara to Tiha Bârgăului, also known as the "kukKraftwagenbahn No.1 Felső Borgo – Dorna Völgy. For the construction of this railway connection worked about 300 civilians and approximately 560 war prisoners. It was built to standard gauge (of 1435 mm), finally having 230 curves and of about 8 % inclinations, this way making access to

another route to the Tihuța Gorge. The highest point of the route reached 1145 meters.

For the relatively rapid construction of the railway in question, there were manufactured in Cluj, Bistrița and Dej, prefabricated railway panels with lengths ranging between 1.9 and 5 ms, a 10 kg / ton- rail type and metal sleepers transported with trucks, made both for the alignment and varying range curves, placed on a 20-30 cms thick ballast bed, and later on the section built with the electric train cars, the installation speed being of 2 kms / day.

The railway route was: from Tiha Bârgăului, on the left side of the road Bistrița-Vatra Dornei, of about 28.5 kms long up to the highest point of the route, of 1145 ms high, namely the Fântânele Monastery, from where it left the road behind and went 7.2 kms downward on the side of a country road up to Dornișoara, of 1050 ms high.

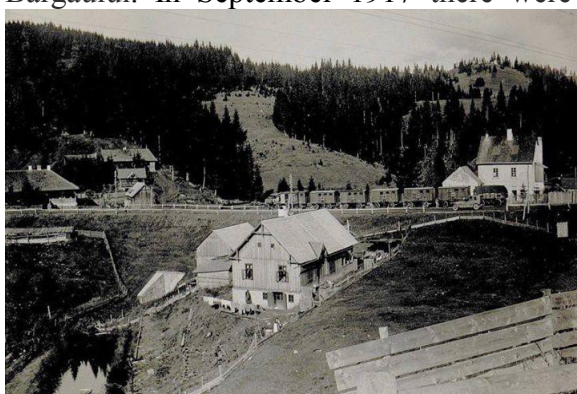
The trains were composed of one generator (Daimler Electric), 4-5 trailers and for starting the engine they used gasoline. Between January and March 1916, there were transported large quantities of grains from Romania through the Suceava customs. On the route Dornișoara- Tiha Bârgăului, between the 15th of August 1915 and the 23rd of June 1939, there were in function the following train stations: Dornișoara, Dorna Minor Șendroaia, the Fântânele Monastery, Măgura, Tihuța, Path, Cicera, Valea Străjii, Mureșeni, Tureac, Macaz and Tiha Bârgăului (Brașcanu, 2012).

The construction of the ordinary "petrol-based electric" railway, Dornișoara-Tiha Bârgăului, 34 kms long was carried out between the 1st of December 1914 and the 15th of August 1915.

In 1915, the Austro-Hungarian military situation improved significantly. However, the newly-built railway route was used for the military transport. In 1916, even food was brought in Austria-Hungary from

Romania which still enjoyed neutrality. The Russian Brusilov Offensive of the year 1916, broke once again the Galician railway; the temporary route became of utmost importance for supplying the Austro-Hungarian troops. Since the Russian northern and western army troops continued to head Vatra Dornei, in 1916, the Austrian authorities evacuated 45 engines and several cars off the railway in order to avoid falling at the hands of the Russians. Similarly, 25.000 war-wounded soldiers and 30.000 civilians were taken as refugees from Bucovina. Although it was a standard gauge track, the engines and its cars could not be disconnected and put on ordinary rails because of the existing steep and tight curves, but disassembled piece by piece, at Dornișoara and finally loaded on special cars and reassembled at Tiha Bârgăului. In September 1917 there were

functioning 14 trains in each direction on a daily basis (compared to only five existing in 1915). Since the peace treaties of Brest-Litovsk and Bucharest from the early 1918, the route had lost its military relevance for the Austro-Hungarian authorities, keeping on being used for commercial purposes. At the same time, there appeared to be developed some detailed plans for a permanent passageway across the Carpathians between Ilva Mică and Vatra Dornei. Shortly before the end of the war (in October 1918), the route was equipped with 7 train units and 92 cars. The situation changed once with the dissolution of Austria-Hungary, in October-November 1918. Both Bucovina and Transylvania united with Romania. Prior to this, both the route, the engines and the cars were destroyed by the Austrians and Hungarians (Brașcanu, 2012).



a



b

Figure 1: (a,b) Health Care Train in the Tihuța Gorge, October, 1916



Figure 2: The Engine of a petrol-based electric 1917, train during a revision at the Tiha Bârgăului depot, in 1916 (photo by engineer Ilie Popescu)



Figure 3: The Tihuța halt, period 1916- located 20 kms away from Tiha Bârgăului and 13 kms far from Dornișoara (photo by engineer, Ilie Popescu)



Figure 4: The Valea Străjii halt, 1917



Figure 5: Petrol-based electric train with (photo by engineer, workers and German soldiers at the Tureac halt, 1916-1917 Ilie Popescu)



a b

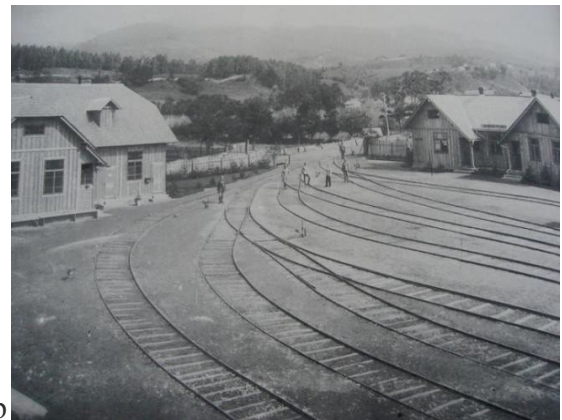


Figure 6: (a,b) The Tiha Bârgăului Depot, period 1916-1917 (photo by engineer, Ilie Popescu)

In 1916, August 15th, when Romania declared war on Austria-Hungary, the situation had changed and the headquarters of the Austro-Hungarian army evacuated over the hills nearby, in Transylvania all train engines and cars from Bucovina. Until 1916, November 30th, there were evacuated 45 engines and 108 cars. In October 1918 the route was equipped with 7 trains (with an engine capacity of 30-50 tons / train), 3 generators, 92 cars and two railcars. The same month of October 1918, the traffic on this route reached 28 train pairs a day opposite to 5 in 1915.

The maximum activity of the petrol-based electric railway in question was recorded in November 1916 when they used to transport 32,282 tons per month, respectively 1176 tons per day. The maximum intensity of the traffic was reached in September 1917 when 14 train

pairs used to run on a daily basis.

At the blooming 1918s, after the peace of Brest-Litovsk and Bucharest, the Austro-Hungarian eastern front did not ask too many transports any longer, therefore the Austro - Hungarian Military Railway Headquarters was ordered to build the ordinary railway of high capacity, linking Ilva Mică to Floreni on a route close to the existing railway, Ilva Mică – Vatra Dornei. By the end of the war, the Austro-Hungarian army had withdrawn from Bucovina 100 train engines and 2403 cars and at the end of 1918, the Austro-Hungarian Military Railway Department abandoned the electric railway, Dornisoara-Tiha Bârgăului power line, leaving behind equipment, sleepers and rolling stock all in a wreck .

On 15th of January 1919, the railroad, Dornisoara-Tiha Bârgăului passed over

under the control of the General Railway Department, as property of the Romanian state. Starting with the 1920s, in order to make the railway connection among Transylvania, Bucovina and Northern Moldavia they started to restore the former railroad. The railway was rebuilt and the train engines and cars from the workshops of Dej, Cluj and Apahida were all collected and repaired. Thus, at the end of 1920s, at Tiha Bârgăului there were collected 10 generators and 80 train cars. Due to the concern and diligence of the staff from the Tiha Bârgăului depot, on the 8th of June 1922, the railroad was reopened but only with 2 generators on and

8 cars with the help of which they could form a pair of mixed trains on a daily basis, which covered in 2 hours and a half the distance from Dornișoara to Tiha Bârgăului.

3. A long-forgotten railroad

In December 18th, 1938, after putting into function the route, Ilva Mică – Vatra Dornei and after 28 years of exploitation, it had finished its activity.

Between 1939-1940, the railroad was disassembled; the only memories of its existence up to the present are the station buildings and workshop buildings of Tiha Bârgăului and, certainly the traces of Dorna - Burcut halt.



Figure 7: The petrol-based electric railroad 1916- 1917 (photo by engineer, Ilie Popescu)



Figure 8: Today, the European road, E 58



Figure 9: The Muresenii Bârgăului halt, period from 1916-1917 (photo by engineer, Ilie Popescu)



Figure 10: The European Road E 58 Mureșenii Bârgăului

The sector from Prundu Bârgăului to Dornișoara no longer exists. The only memories reaching up to the present are

the few photos left, bearing yellowish print of time passing by, some shabby buildings in Tiha Bârgăului, the railway

halt traces and that ones where they were disassembled from the station of Dorna - Burcut or Dornișoara or two old bridges, long -ago through the green forest.

To conclude with, one can state that the genuine solution to build a standard gauge railway adaptable to the petrol-based electric trains and traction, after a model

already in use and successfully tested since 1912, in the Austrian location of Tyrol, aimed at solving the problems, created by the very difficult route and short time pressure, by using this multiple-trailer vehicle with extended traction, able to move and run both on ordinary roads and railways as well.

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