The Reichsbahn (DRG) on the Eastern Front

Alexey ARTEMYEV, M-Hobby 1/2013

[*Layout by o5m6.de, translation by Google*]

*Junction station Bobrinskaya (now named after Shevchenko) on the line Cherkassy - Znamenka. The photo was taken in the **spring of 1943**, when the German army was preparing for a summer offensive in the southern direction. The entire station was densely packed with trains of fresh military equipment, which at that moment was continuously moving from Germany to the East. This photo clearly shows that almost all station tracks have already been "altered" to the "European" gauge standard. And only the side branches remained untouched.*

This is a very interesting moment: **a different gauge, foreign infrastructure, huge distances**. Tasks that the Germans ultimately failed to cope with, despite to the fact that, in the 40s, Germany was considered the most advanced and energy-equipped railway power. The wars of the 20th century clearly showed that **without a railway component, any major military operations are doomed to failure**.

***Left**: Improvised **ferry crossing** of DRG railway cars to the left bank of the **Dnieper in the Kherson region**. The photo was taken in **July 1943**. During the retreat of the Red Army, almost all bridges across the Dnieper were blown up, so German railway workers, with the help of Wehrmacht engineering units, had to come up with a variety of ways to cross trains over water obstacles. **Right**: Znamenka Depot. The photo was taken in the spring of 1943. Znamenka was a key hub for the Air Force in the Southern direction. The photograph shows **how diverse the DRG locomotive fleet operating on the eastern front was**. Here you can see both old German freight locomotives, for example, series 55, 56, 57, 58, 93, and a new military locomotive, **series 52**. A passenger locomotive, series 38, is also visible. Znamenka was liberated from occupation on December 8, 1943.*

Preparing "Barbarossa"

In October 1940, the German Railways (DRG) was ordered to begin preparations for a military campaign against the Soviet Union as part of the original „**Otto**" Plan. At the same time, the General Directorate of Eastern Railways **Gedob** („Generaldirektion der Ostbahn") was a branch of the DRG in Warsaw, which was established on October 26, 1939 after the occupation of Poland.

According to the points of the Otto Plan prescribed for the DRG, by the end of spring - beginning of summer 1941, 141 German divisions were to be moved to the Soviet borders without detection. This is almost **34,000 trains with military equipment**, ammunition, personnel, fuel and lubricants, food, fodder, etc. Already in the spring of 1941, up to **220 trains per day** were moving eastward. Moreover, almost all the trains were carefully **disguised as civilian freight trains**.

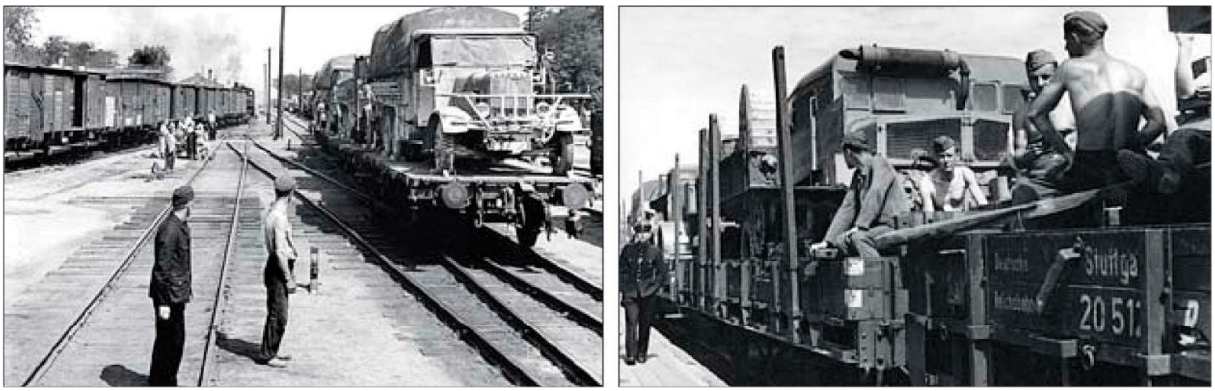
***Left**: Opening of a fully constructed railway bridge across the Dnieper in **Zaporozhye in June 1943**. For the DRG this was a grandiose event, since this bridge opened up ample opportunities for the uninterrupted movement of trains from the right bank of the Dnieper to the left, which was very important for the German troops preparing for the summer offensive. However, the bridge did not last even three months, as it was blown up by the Germans themselves after the start of the Zaporozhye offensive operation of the Soviet troops. **Right**: DRG construction crew is laying a branch of the "European" gauge in **Crimea** using the labor of local residents. By **mid-1943**, in almost the entire territory of the USSR occupied by the Germans, **all major and most secondary lines had been converted to 1435 mm gauge**.*

During the spring of 1941, three military **field railway** administrations FDB (Feldeisenbahndirektionen) were formed in the DRG to attack the Soviet Union. These administrations were supposed to regulate and uninterruptedly ensure all supplies for the invasion forces in the USSR.

The next step of the DRG within the framework of the Otto Plan was a thorough study of the railway transport network of the USSR and an analysis of the possibility of using Soviet railways to support the offensive. Without a doubt, the German railway transportation system played a more important strategic role specifically on the Eastern Front than in any other German theater of war. And the **biggest problem** for the Germans, as it first seemed to them, was a **different gauge standard** in the Soviet Union, which was **10 centimeters wider than the European one** (in fact, another point that became fatal for DRG turned out to be a more serious problem, but more on that a little later).

It should be noted here that after the signing of the **Molotov-Ribbentrop Pact**, economic cooperation between the USSR and Germany was declared in some paragraphs of this document. Freight trains were sent from the Soviet Union to the Germans by rail, and Germany, in turn, took on the construction of border points for sorting cargo and changing carriages of "European" and "Russian" standards. The first such point was built in **Brest**, the second in **Prze-**

mysl. Interestingly, when Operation Barbarossa began, it was these two border points that helped out the DRG in the first stage of the invasion of the USSR.



***Left**: A train with German military equipment at one of the sidings on the Minsk - Orsha - Smolensk line. On the left, shunting operations are carried out with a train of covered wagons of the **G10 type**. On the right, a train with trucks transported on new "military" two-axle platforms type „**Ommr Linz**". Summer 1942. **Right**: A train with a Wehrmacht engineer unit on Rungenwagen type „**R Stuttgart**". Almost all military equipment in 1941 -42 was transported on wagons produced at the very beginning of the 20th century !*

Back in the fall of 1940, DRG, through an agent network of German intelligence, began to collect information about the railway transport network of the USSR. **Four main highways** were identified, along which it was planned to ensure uninterrupted transportation from the western borders to the rear regions of the USSR.

These were highways from the border of

- East Prussia (the Neman River) to Leningrad,
- Brest - Orsha - Moscow,
- Przemysl - Kremenchug - Donbass and
- Prykarpattya - Odessa.

All lines are double track. The Germans also considered the

- Leningrad-Murmansk line

with particular interest.

Simultaneously with the development of plans for the use of the main highways, special military field construction teams were also being prepared to "change" the **railway gauge** from the "Russian" to the "European" standard. But "**re-stitching**" is a rather labor-intensive operation, which also takes a lot of time.

Therefore, the military field railway administrations of the FDB planned to **use captured Soviet rolling stock for transportation** at the first stage of the invasion. However, DRG did not form any of its own locomotive crews or maintenance personnel to operate "foreign" railway equipment. The Germans counted on voluntary or forced support from local railway workers. And, it should be noted that railway workers from the annexed Western regions of Belarus and Ukraine collaborated with the German occupation authorities. True, mostly under duress.

***Left**: An elderly Russian fireman in the booth of a German series 38 steam locomotive. When attacking the Soviet Union, the Germans planned to use local specialists as railway personnel for the DRG. However, all drivers of military age were mobilized and left the depot where they worked, along with the retreating units of the Red Army. Therefore, the DRG had to forcefully involve railway workers of retirement age in servicing rolling stock in the occupied territory.* ***Right**: When in the **bitter winter of 1941-42 all German railway equipment stopped working**, some of the transportation was attempted to be provided by special locomotive brigades of the Wehrmacht using Soviet steam locomotives captured in the first months of the war. The photo of an **IS-20** was taken in February 1942 in Smolensk.*

Moving into the Soviet Union

However, in the process of moving to the East, such support was provided less and less. Moreover, **local railway workers deliberately damaged rolling stock, caused sabotage and accidents**, and created congestion at junction stations in order to try to disrupt schedules as much as possible. And this, indeed, greatly hampered the work of the DRG, which ultimately affected the success of the Wehrmacht's offensive operations and the evacuation of the wounded.

But this was not the main problem of the DRG on the eastern front. When German railway workers prepared for Operation Barbarossa, they did not take into account intelligence information about the primitiveness of the Soviet railway transport system. And this became a fatal mistake in the entire DRG strategy, which the Germans realized only later, when the front stretched from Leningrad to the Crimea, and when the time came to provide transportation along secondary highways. And for minor ones...

...the highway carried the main traffic load. These were mainly single-track tracks, with rare locomotive equipment points and manual signaling, which created problems with the safety of train traffic and their congestion on hauls. And this served as a **good target for aircraft and partisan attacks**.

In addition, a significant part of the tracks were laid on **sand cushions** or simply lay on the ground. The lower the technical standard of the railway track, the smaller the amount of payload that the train could transport.

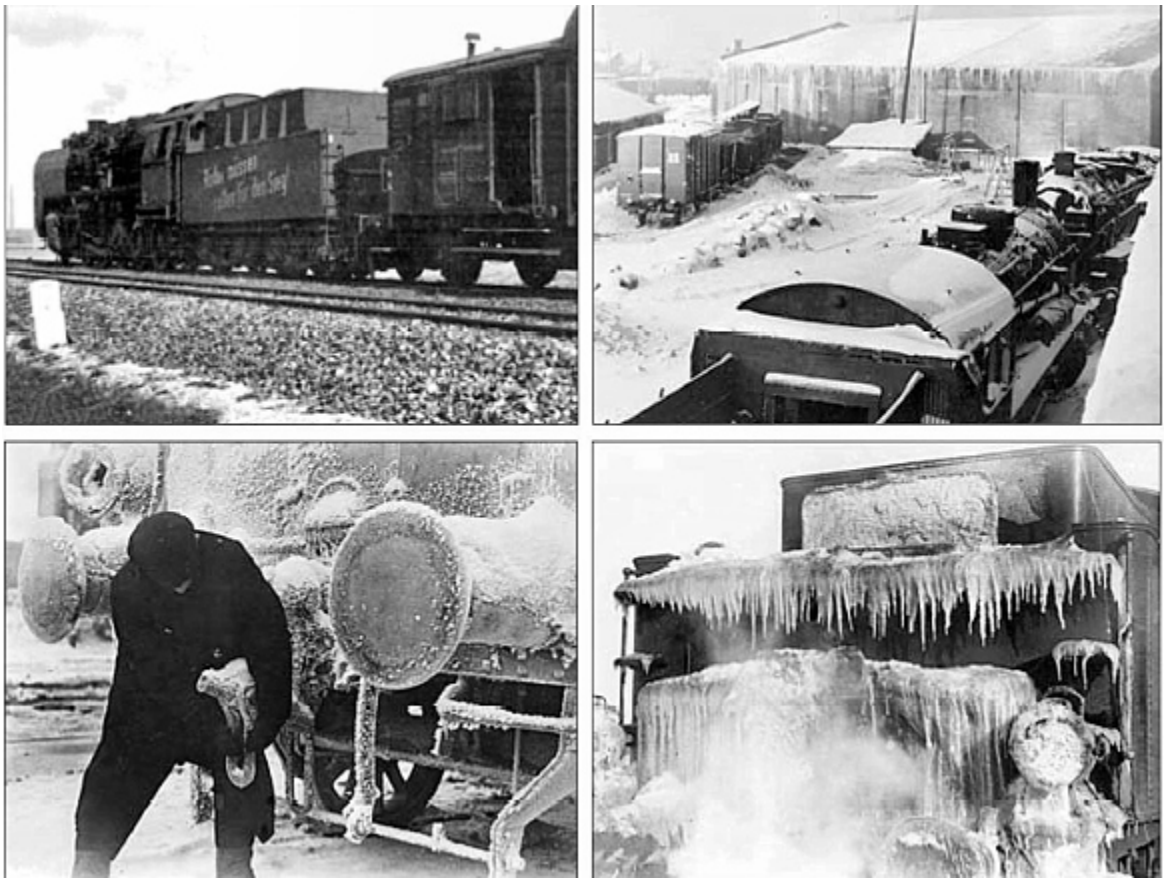
Many of the **railway bridges** in the European part of the USSR were, in fact, temporary, built urgently during the First World War. Some of these bridges were bolted together from steel sheets, and they could not support the load from the German trains.

Coal for locomotives was of such low quality that not a single German locomotive could simply be heated. Here, of course, the design features of German locomotives, which were created with a small firebox in anticipation of good coal, had an impact. Therefore, later **coal also had to be brought from Germany**.

There was a second option for using low-quality Donetsk coal - it was enriched. It was **soaked in oil** in special bunkers at large junction stations. But not all German trains could receive enriched coal.

The Winter of 1941/42

All these above points were ignored by the DRG on the eve of the war. The **winter of 1941/1942 put the DRG in an extremely difficult situation. By January 1, 1942, the German railway system on the Eastern Front was almost paralyzed.**



***Top left**: One of the most modern German freight locomotives of that period, series 50. The tender bears the then popular motto in DRG: "Räder müssen rollen fur den Sieg!" - "The wheels must roll to victory!" **Other photos**: Harsh winter of 1941/42. Temperatures in some regions of the country dropped to more than minus forty degrees. Almost the entire rolling stock of the occupiers was completely frozen! The photographs show a frozen German steam locomotive of the 55 series and a fragment of the Minsk depot, to which this locomotive was assigned after the occupation of Belarus.*

First of all, because of the harsh winter, which the railway equipment could not withstand. The Germans were perplexed: how did almost everything freeze with the excellent German technologies in locomotive building? Even steam locomotives specially prepared for winter were out of order!

The front suddenly felt the virtual stoppage of DRG work. For example, in February 1942, only eight trains per day could travel from Brest to Smolensk. The front, in order to simply receive the essentials for defense and survival, needed at least 30 trains per day. There was no traffic

at all on secondary lines - this is where the factor of the “primitiveness” of the Soviet railway system, to which DRG did not pay due attention before the war, was fully reflected.

***Left**: One of the first “respectable” trophies of DRG in Russia - the newest and best passenger locomotive of the IS series (Joseph Stalin) in the country at that time. A German reconnaissance team poses against the background of the trophy for a photojournalist from Berlin. July 1941, Orsha. **Right**: The crash of a German train on a bridge washed out by floods in the spring of 1942. A Series 50 locomotive was involved in a wreck.*

When they began to understand, in fact, the purely technical reasons, they first of all paid attention to **Soviet steam locomotives that continued to work in the bitter cold**: a simple and reliable design, a large firebox, a closed booth.

The Military Locomotive BR 52

It was then that an order appeared for the production of a special military locomotive, the design idea of minimalism for which was borrowed from us. It was a steam locomotive of the 52 series, and behind it was a steam locomotive of the 42 series with a large firebox, powerful, capable of “accepting” low-grade Donbass coal. **At the beginning of 1943, series 52 steam locomotives were already en masse replacing all German and captured locomotives** operated in the occupied territories of the USSR.

***Left**: A section of the Polish-Soviet border between Terespol station and Brest after the German attack on the USSR. On this section there was a point for changing carriage bogies from the “European” to the “Russian” gauge. To speed up the process of transferring their rolling*

*stock to our rails, the Germans also used mobile workshops. The photo captures the moment of changing carriage bogies in "field" conditions. **Right**: a German freight locomotive of the 57 series is moving along a "rewired" branch in Inkerman, Crimea, Summer 1943.*

New rolling stock

Around the same period, the car park on the Eastern Front also changed. Since the beginning of the war with the USSR, the Design Bureau has used mainly **freight cars built before the First World War**. These were standard two-axle or four-axle platforms with racks, designed for transporting wood, fodder, and agricultural machinery. During the campaign on the eastern front, a need arose for cars that would best meet the conditions for **transporting heavy loads and with minimal axle load**. In addition, the old car park very quickly fell into disrepair due to the discrepancy between the cargo and the possible wagon, partisan attacks and bombardment.

Therefore, DRG was in great need of **new type cars**. Several factories in Germany immediately began producing several types of "military" cars.

The most widespread was the four-axle platform of the **SSy type**, which was used for medium tanks and other equipment weighing **up to 50 tons**. These platforms are still in use in Germany, although they have survived more than one post-war modernization.

***Left**: Transportation of heavy Tiger tanks on six-axle platforms of the SSyms type. The tanks have narrow "transport" tracks. **Right**: A Soviet two-axle platform with wheelsets repressed to the "European" rail standard and a German series 55 steam locomotive. In this case, this platform plays the role of protecting the German train from rail mines. The photo was taken at Orsha station in 1942.*

For equipment weighing **up to 80 tons**, a six-axle platform of the **SSyms** type was produced. This platform was mainly used for Tigers and self-propelled guns based on the Tigers. By the way, these cars are still running in Germany. A "military" two-axle **20-ton Linz-type platform** was designed for light tanks, armored personnel carriers, and trucks. In addition, **special "military" passenger cars** with a simplified design, **gondola cars for bulk cargo and PoWs**, and **covered freight cars** for transporting ammunition and Ukrainian forced laborers were built. It seems that DRG learned lessons from the failures of 1941-42. But nonetheless...

Disrupted traffic again

The **spring of 1942** came quickly, the snow began to melt intensively, and the **Rasputitza** floods began. Many railway lines "floated". In addition, a significant part of the old bridges that survived the fighting or were not blown up were destroyed by flood waters. And again, the railway component of the German troops was not up to par.

Supplies to the front were disrupted. Fortunately for the Germans, the floods quickly subsided, and teams of railway construction workers were able to quickly restore sections of the highways destroyed by the elements. It should be noted here that by this time the EJB had

managed to “change” a significant part of the main and secondary roads in the occupied territories from the “Russian” to the “European” track. The first such line was laid back in 1941 from the Neman (East Prussia) to Leningrad.

The high speed of laying the European standard line in the Baltics was due to the active voluntary assistance of railway specialists from Latvia and Estonia. In other occupied territories, the Nazis had to force the local population to build a new railway.

By the summer of 1943, almost every important highway in the occupied territory had been “converted” to the European gauge standard. That is, the Germans could easily deliver military cargo directly to the front without overloading or changing wheel pairs. And this seriously increased the number of trains per day. In that period, **every day more than 200 trains went from Germany directly to their terminal stations**.

True, not all trains reached their destination. In **June 1943** alone, **more than 840 trains were attacked by partisans, sabotage groups and aircraft**.

Retreats

Between 1943 and 1945, the DRG's functions on the Eastern Front changed dramatically. Now the main task of the military railway workers was to quickly **transport the wounded and damaged military equipment back to Germany,** including the evacuation of locos and rolling stock. Here, of course, the “changed” track, which the Germans destroyed after the last train carrying fugitives to the West, helped a lot.

Thanks for reading !

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