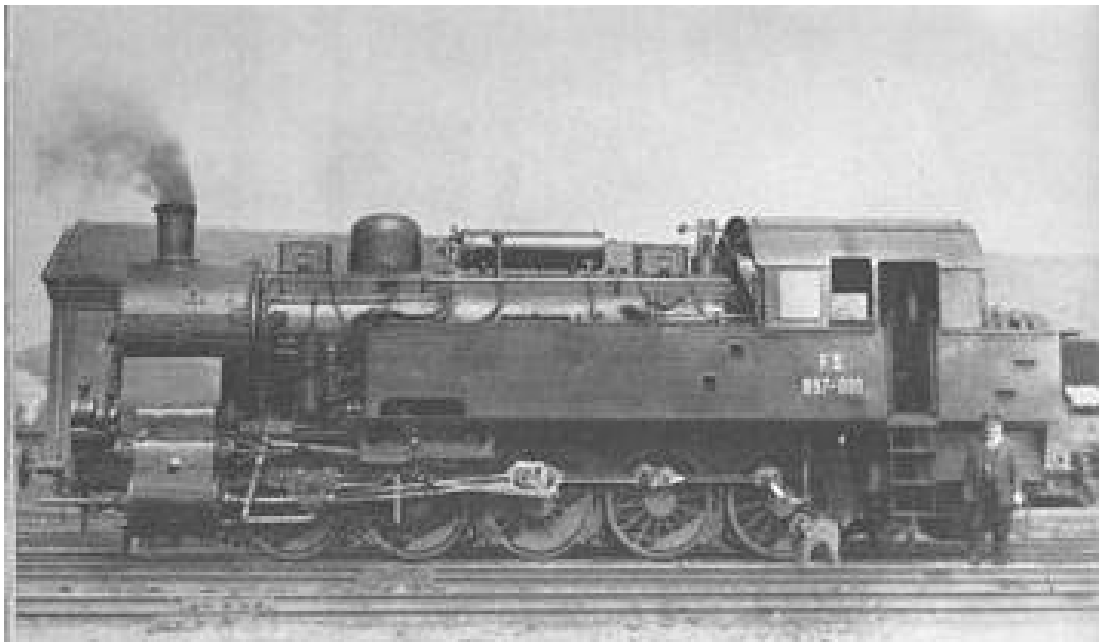


Of Prussians and Pasta: *ex-KPEV Locomotives in Italy*



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A somewhat unintended consequence of two European wars was the relatively wide dissemination of German steam locomotives to many parts of the continent and beyond. While a portion of these expatriates were true “War Booty” (the ubiquitous BR 52 ‘Kriegslok’ comes to mind), the many engines of Prussian design that were transferred to other countries as reparations for the First World War were arguably more influential on the development of European designs.

To fully understand the impact of Prussian locomotives on the rest of Europe, we must first remind ourselves of the organizational and technological state of Continental rail transport at the beginning of the Twentieth Century. The large national railway administrations with which we are now familiar were in their infancy. Locomotive design still reflected the technology of the 1800s and the aesthetic popularized by the early rail pioneers, most of whom were British. Each country operated its own R&D program, pursuing a mixture of homegrown designs and purchases from foreign sources.

Even prior to the First World War, loco designs of the KPEV (Königlich Preussische Eisenbahn-Verwaltung - *Royal Prussian Railroad Administration*) were drawing the attention of other countries’ railway administrations. German manufacturers had surpassed even the British in innovation and invention. Developments in saturated steam, superheating, and double-expansion cylinder arrangements characterized Prussian designs.

As a condition of the Armistice, the Central Powers were obliged to pay massive reparations to the allied nations. The list of reparations items levied on the Germans was staggering (and is widely credited with providing the catalyst for the nationalism that ultimately led to World War II). In total, over 5,000 locomotives were to be delivered to the victors.

Italy, being allied with France and Great Britain against the Germans and Austrians, was entitled to a share of these 'spoils' of war. Products of all types were to be delivered to Italy including over 28,000 individual pieces of rail equipment. Among these were 200 locomotives of Prussian design:

KPEV Type	Wheel arrangement	FS Class	Qty.	DB Class
G3	0-C-0	Gr 271	3	BR 53 ⁷⁰⁻⁷¹
G4 ^{1/2}	0-C-0	Gr 272	10	BR 53 ^{0, 10, 76}
G5 ^{1/2/4}	1-C-0	Gr 603	22	BR 54 ^{0, 2-3, 8-10}
G7 ^{1/2}	0-D-0	Gr 421	49	BR 55 ⁰⁻¹³
G8	0-D-0	Gr 422	22	BR 55 ¹⁶⁻²²
G8 ¹	0-D-0	Gr 460	45	BR 55 ²⁵⁻⁵⁶
G10	0-E-0	Gr 473	9	BR 57 ¹⁰⁻³⁵
P6	1-C-0	Gr 626	9	BR 37 ⁰⁻¹
P8	2-C-0	Gr 675	25	BR 38 ¹⁰⁻⁴⁰
S6	2-B-0	Gr 553	2	BR 13 ¹⁰⁻¹²
S10	2-C-0	Gr 676	1	BR 17 ⁰⁻¹
S10 ²	2-C-0	Gr 677	1	BR 17 ²
T16 ¹	0-E-0T	Gr 897	2	BR 94 ⁵⁻¹⁷

Perhaps a refresher in KPEV nomenclature is in order here. Prussian locos were classified according to the service they were most likely to perform:

- **P** indicated *Personenzug*; a passenger train engine
- **S** stood for *Schnellzug* (fast passenger train)
- **G** for *Güterzug* (freight train)
- Tank engines carried the letter **T** (Tenderlokomotiv).

The number following the letter was typically assigned in a sort of design order. However at some point, the additional distinction was made of assigning even numbers to superheated classes and odd numbers to those that were not.

At the beginning of the Twentieth Century, Prussian locomotive designers stood on the top rung of the technological ladder. They perfected and extensively applied the technique of steam superheating, bringing about a quantum leap in locomotive design in very few years time. By 1910 there were more superheated locomotives in Prussia than in any other country in the world.

The majority of the ceded Prussian locomotives employed a simple two-cylinder single-expansion design. Cylinders and valve gear were mounted outside the frame, and several types were fitted with preheaters. On some, a feature strange to American eyes was the lack of alignment between the cylinders and the exhaust stack; evidently, the designers were not above placing 'S'-shaped outlet tubes in the smokebox.

The 200 Prussian locomotives were delivered to Italy in short order; all were 'on the property' by the end of 1919. To a large extent, these newcomers dwarfed their home-grown Italian counterparts, both in tractive effort and in sheer size. Some of the heavier units, like the G8 and P8 locos, were largely consigned to moving trains on the heavily-laid lines of the Po River valley. For their part, the G10s spent much of their career pushing long strings of freight cars over the hump in the classification yards of Milan and Alessandria.

Now for a somewhat humorous historical anecdote: As might have been expected, the Italian Treasury levied the usual customs duties on these engines when they were delivered to the Italian State Railways (a government department in its own right). The fee was eventually paid

via a budget funds transfer, but this incident ultimately led to legislation that exempted Italian government agencies from future charges of this nature.

Initially, the Italian Railway lacked much of the information and specialized expertise needed to maintain them adequately. Occasionally they were sent back to Germany for repairs that couldn't be accomplished locally. But eventually the shop forces cobbled together enough information and experience to minister effectively to the Prussians' needs. For the most part, the transplanted Prussians served their new owner well through the end of WWII.

Within ten years of the end of WWII, all of the war reparations locos had been taken out of regular service, most sold off or scrapped, but a few were retained in workable condition against future needs. In retrospect, much of the Prussian influence had rubbed off to the benefit of Italian locomotive builders. Over the years, equipment and 'accessories' traceable to Prussian designs were borrowed and adapted to Italian needs. Furthermore, Italian locomotive design moved from the 'British Camp' which tended toward internal cylinders, low running boards, and fenders covering the upper part of each driver to a more continental, albeit distinctly Italian look.

Even after steam no longer figured prominently in the strategy of the Italian Railways, Italian industry often found itself the preferred source for repairs as well as for building brand new steam locomotives destined for the less-modernized railway systems of other countries.

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