

Boundlessly beautiful views - the Monte Generoso Railway

By Bernhard Studer (all photos by Bernhard Studer except where shown)



On the southern edge of the Alps, directly on the border between the Swiss canton of Ticino and the Italian province of Como, rises the 1701 m high Monte Generoso, also known as Monte Calvazione. From this mountain, you have a breathtaking panoramic view down to the lakes of Ticino and Upper Italy, as well as to the mountain giants from Monte Rosa and the Matterhorn in the west to the Bernina Group in the east. If you look south, your gaze wanders to the endless expanse of the Po Valley. If you have a telescope at hand, on a clear day you can even spot the battlements and turrets and the golden Madonna on Milan Cathedral.

Steam train on its way up the mountain below Generoso Vetta in the early days. Photo collection Claudio Pedrazzini

IF YOU WANT TO GET to Monte Generoso in comfort, use the 9 km-long rack railway. The ride from Capolago (273 metres above sea level) to Generoso Vetta (1592 metres above sea level) takes 40 minutes. The altitude difference of 1319 m is overcome with gradients up to a maximum of 220‰. The tracks are equipped with racks throughout. From the Generoso Vetta mountain station, an easily accessible footpath leads to the mountain peak about 100 metres higher up.

The rack railway up Monte Generoso was the first to be built in Switzerland with a gauge of 800 mm. The tracks are equipped throughout with double-lamellar Abt racks, which are more modern than Riggenbach's system and were developed by Riggenbach's student Roman Abt. Abt's rack system, which was not developed until the mid-1880s, was first installed in the German Harz mountains, quickly gained world fame thereafter and was also used on mainline networks. The Furka-Oberalp and Visp-Zermatt railways, for example, opted for the Abt system, as did many other railways in Bosnia-Herzegovina, the South American Andes, Lebanon and India.



Steam locomotive No.2 in 1973 during the time it was plinthed at Capolago, directly next to the tracks of the Gotthard railway. This beautiful locomotive has been operational again since 1985.

Construction of the cog railway began in February 1889. Roman Abt himself took over the construction management. Only 16 months later, on 5 June 1890, the 6.4 km long section from Capolago Lago to Bellavista was opened. A short time later, on 22 June of the same year, the entire line was open to traffic. This very short construction time was extraordinarily impressive as the steep rock faces of Monte Generoso posed a very great challenge. In addition, five tunnels had to be bored, the longest being the 167 m long horseshoe tunnel below S.Nicolao station. The railway started operation with six steam locomotives and ten prefabricated wagons of different types.

A troubled early existence

The Monte Generoso Railway was not fortunate, as passenger numbers initially fell far short of expectations. This was despite the fact that in 1893 even Queen Margarethe of Savoy and the hereditary prince and later king of Italy, Vittorio Emanuele III, travelled up the Generoso by train. In 1914, after the outbreak of the First World War, hardly any tourists came to the region.



On 1 August 2005, the Swiss national day, steam locomotive No.2 has arrived at Generoso Vetta mountain station.



Steam train with locomotive No.2, below Generoso Vetta on 21 August 2021.

And so, the Generoso Railway had to file for bankruptcy. No more trains went up to Monte Generoso until 1918.

From 1919 to 1939, the railway was again in operation – but more poorly than well. As early as 1921, the company had to be financially restructured once again. When operations had to be suspended in September 1939 due to financial difficulties, serious consideration was given to demolishing the facilities.

Migros takes over

But things were to turn out differently: Gottlieb Duttweiler (see Note 1), probably the most unusual entrepreneur in Swiss economic history, was inspired by the grandeur of Monte Generoso. His idea was to attract customers and bring the rack railway back to life by offering rich and good food on the mountain and low ticket prices. At the beginning of 1941, when a terrible war was raging in Europe, he bought the railway without further ado. Operations were resumed as early as 12 March 1941. Duttweiler massively reduced fares, offered low-priced package deals and helped the railway – like all other companies in his sphere of influence – to achieve high turnover with low margins.

From the 1950s onwards, diesel locomotives and railcars were procured. The steam locomotives were now gradually



In dry weather, an auxiliary train for the fire brigade runs behind each steam train in order to extinguish any fires on the embankment as quickly as possible. Auxiliary train with the Hm 2/3 No.1, was photographed below the Generoso Vetta mountain station on 21 August 2021.

sidelined. This allowed costs to be reduced and operations became more rational. In 1954 the diesel locomotives Hm 2/3 Nos.1 and 2 were built on the chassis of old steam locomotives. In 1957, two four-axle railcars Bhm 2/4 Nos.3 and 4 and in 1968 two small two-axle railcars Bhm 1/2 Nos.5 and 6 were purchased. These four diesel railcars could be supplemented with open front cars for passenger transport. These new vehicles were considerably faster. Whereas in the steam era it took about 90 minutes to travel uphill, today a modern train covers the same distance in 40 minutes.

Since 1957, trains no longer run only in summer, but occasionally also in the winter months. However, since only a few trains run in winter, it is worth taking a look at the timetable.

The last steam locomotive, only rarely used in its last years of operation, was withdrawn and scrapped in 1966. Steam locomotive H 2 from the opening year of 1890 had already been retired in 1956 and installed on a plinth for almost a quarter of a century in a prime location in Capolago, right next to the Gotthard railway tracks, as a memorial locomotive. In 1984, the beautiful locomotive was taken down from its monument base and restored to working order. It has been running again since 1985. Every summer, a few steam-propelled special trains are run. Reservations are



Steam train with locomotive No.2, above Bellavista station on 21 August 2021.



The MG logo used to show a stylised cogwheel (photograph from 1973). Today's logo (below) shows the "Fiora di pietra", the new summit restaurant, stylised to the left.





Crossing of trains at S.Nicolao (707 m above sea level) on 6 August 1978: On the left diesel railcar Bhm 2/4 No.3 with carriage B 4, on the right diesel railcar Bhm 1/2 No.5 with B 5.



Train Crossing at Bellavista station on 21 August 2021.



On 21 March 1981, Hm 2/3 No.1 propels a panorama car uphill. In view of the forthcoming electrification, the tunnel visible in the background has been widened and lined with shotcrete.



A busy scene between Bellavista and Generoso Vetta on 8 August 1985. In front the electric double railcar Bhe 4/8 No.14, behind it the diesel railcar Bhm 2/4 No.4. In 1982, after the electrification of the line, this diesel railcar was the only one from the diesel era to be painted in the new colour scheme. In 1987, however, the railcar was withdrawn after an accident.



The starting point of the Ferrovia Monte Generoso is the stop Capolago Lago (273 m) next to the landing stage of the Società Navigazione del Lago di Lugano, where there is a connection to a scheduled boat on Lake Lugano. However, it is only served in summer and even then, only by one train pair daily. The starting point for all other trains is the SBB station Capolago-Riva San Vitale (274 m above sea level), about 300 m further south. Photograph taken 18 September 1986.



Bhm 2/4 No.4 descending between Generoso Vetta and Bellavista on 8 August 1985.



On 21 March 1981, in front of the SBB station at Capolago-Riva S. Vitale, three Ferrovie Monte Generoso trains are ready for departure: At the front is Hm 2/3 No.1 with the panorama coach B 1 (same number as the locomotive!). In the middle, diesel railcar Bhm 2/4 No.4 with carriage B 3 and, bringing up the rear, diesel railcar Bhm 1/2 No.6 with carriage B 6.

required for these services. Special tickets can be purchased via the Internet.

In the 1970s, serious consideration was given to replacing the railway with an aerial cableway. But things turned out differently: since 14 June 1982, the Generoso Railway has been operated electrically with 750 V DC. At the same time as the electrification, the tunnels were extended and the tracks were upgraded so that they could meet the demands placed on them for at least another 40 years of operation. At that time, the Migros-Genossenschaftsbund financed the procurement of the four electric double railcars Bhe 4/8 Nos.11 to 14. The vehicles, built by SLM Winterthur and Siemens Albis Zürich, are of the same design as the railcars built at the same time for the Rochers de Naye railway.

A secure future

In October 2010, the hotel and mountain restaurant at the Generoso Vetta railway station had to be closed on an emergency basis because the rocky ground beneath the structure had subsided. The structure was demolished in 2014. However, the Migros Cooperative Federation has provided a magnificent replacement, Star architect Mario Botto, who comes from Ticino, was commissioned to build a new summit restaurant. Botto's "Fiore di pietra", the new landmark of the Generoso Railway, was inaugurated on 29 March 2017. Two restaurants, one self-service, cater for the physical well-being of guests.

In 2014, the Generoso Railway commissioned an engineering firm to

carry out a detailed examination of the condition of the entire superstructure, *ie*: the tracks, sleepers, points and racks, with a view to securing its long-term existence. The engineers found that after almost 130 years of operation, the facilities are still in a relatively good and, above all, completely safe condition. This speaks for the excellent quality work that was done in the late 1880s under the direction of Roman Abt. Nevertheless, the railway engineers recommended that the superstructure, comprising 17 km of track and racks, 13,000 rail-sleepers and seven switches, be completely rebuilt. Over a longer period of time, this would be cheaper than gradual renovations. Where necessary, the engineers have also recommended the renovation of retaining walls, the only major steel bridge and the tunnels.



On 21 March 1981, Hm 2/3 No.1 propels a panorama car uphill. The photograph was taken between Bellavista and Generoso Vetta.

Clearly, management at Ferrovia Monte Generoso believe in the future of their company. The engineers' recommendations are being implemented in full at a cost of CHF 22 million. The work is being carried out in the months of November to March and will be completed in 2023. The result will be an infrastructure that is practically as good as new. The S.Nicolao crossing station, which has always been a little too short since the line's construction, will be extended at the same time, so that two double railcars can cross there – as it has always been the case at Bellavista.

Nothing will change in the simple but proven safety equipment: The railway will continue to rely exclusively on manual switches, train control will be via radio link between the railcars and the operations centre in Capolago, trains running behind each other will run on sight, and the installation of stationary signals will continue to be dispensed with.

In addition to the railway, Ferrovia Monte Generoso also operates the summit restaurant "Fiore di pietra" and a camping site in Melano. A total of 80 people are employed, 18 of them on the railway. The employees are deployed very flexibly, and there are also opportunities for internal development. Here's a good example: Massimo Bosisio, the railway's operations manager, used to work as a wagon driver. So, everyone knows everyone, and there is a very good working atmosphere.

Note 1:

Gottlieb Duttweiler (1888–1962), a native of Zürich, was a captain of industry, politician and visionary. Today, Migros, the retail trade company he founded, employs 106,000 people and is one of the largest employers in Switzerland. The idea of the "cultural percentage", a voluntary commitment of the Migros Cooperative, also goes back to Duttweiler: as a rule, one percent of sales should flow into the areas of culture, society, education, leisure and the economy and enable a broad population to have access to cultural and social services. The commitment to the Generoso railway was and is also financed to a large extent by this Migros cultural percentage. 🇨🇭



Even after electrification diesel trains continue to run when the line is very busy. This picture shows the Hm 2/3 No.1 together with the panorama car B 1 on 8 August 1985.



Generoso Vetta terminus on 8 August 1985. The summit hotel visible in the background has disappeared today, as has the summit restaurant of 1971 visible on the left, which is now replaced by the "Fiore di pietra". The two electric double railcars Bhe 4/8 Nos.13 and 12 and the diesel railcar Bhm 2/4 No.4 are waiting for passengers.



The Generoso Vetta terminus is dominated today by the "Fiore di pietra", the new summit restaurant. Photograph taken 21 August 2021.