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## Miscellanea

from Richard Pinner

### Is this a Record?

A Catholic priest from Germany set out to travel through all 26 Cantons in one day in as short a time as possible using ordinary trains. He succeeded in doing so after 19 hours continuous travel. His route was:

Airolo - Neuhausen - Winterthur - Gossau - Appenzell - St.Gallen - Landquart - Zürich - Luzern - Alpnachstad - Luzern - Basel - Neuchâtel - Kerzers - Neuchâtel - Geneve - St.Maurice. Altogether, he travelled in 16 trains.

### 75 Years of Electrification

In 1991 the SBB celebrated 75 years of electric traction, for with no indigenous coal and a high potential for hydro-electric power generation the change was dictated by economic considerations.

However, the initial experiments took place on the tramway systems, with the Vevey - Montreux - Chillon line switching to electric traction in 1888, using motor coaches with 11 kw motors operating on 500V dc. Other routes followed, almost all using direct current below 1000V.

The first standard gauge line to electrify was the Orbe - Chavornay on 17 April 1894, using 700V dc, whilst in 1899 the 40km Burgdorf - Thun line was opened, electrified at the outset with 3-phase 750V ac supply at 40 Hz. This system remained in use until 1933.

In 1904 the Swiss Study Commission for Electric Railways was established. As the result of its deliberations it recommended a single phase ac system at 15 Hz for standard gauge lines.

From 1905 to 1909 trials were carried out on the Seebach - Wettingen line with high voltage single phase ac overhead supply. The best results were obtained with a 15 Hz supply. In 1913 the SBB decided to build its own power stations, and in 1916 finally decided to standardise on 15000 V ac at 16 2/3 Hz, with the first two power stations at Arnsteg and

Ritorn. Today there are 5000 km of electrified lines in Switzerland, 4200 of which are equipped for 15000V, 16 2/3 Hz ac traction. This system is also used in Germany, Austria, Sweden and Norway.

### Panoramic Coaches

New *Panoramic* coaches with extra large windows have been introduced by the SBB on the scenic routes, the idea being to give passengers a better, more undisturbed view. The floor level has been raised 450mm higher than in normal coaches to 1700mm above rail level.

The large, curved windows are 19m long and 1.6m high, with very narrow pillars between the panes, giving a good view. They had to be specially constructed to resist the pressure generated when two trains pass at up to 200 km/h in a tunnel. Each pane weighs 140 kg.

The coaches have 54 seats, 18 in the smoking section, 36 in the non-smoking saloon, arranged 2+1, with reclining seats. Each seat has individual reading lights and a small table is built into the arm rests of seats next to the gangway. Toilet facilities and space for baggage are provided in the entrance vestibules. Each coach costs SFr.2.4 million and twelve coaches have been built.

The main technical details are identical to the SBB EC coaches. They are built by the Schindler/SIG/ABB consortium. The principal details are:

Length	26.4m
Width	2.825m
Height	4.26m
Weight	48t (tare)

They are currently used on the Chur/Interlaken - Amsterdam, Zürich - Venice and Genève - Milan routes.

There are no current plans for more of these coaches, or for a second class version, but plans exist for similar stock for the metre gauge.