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SRS STUDY TOUR 2013

Boyd Misstear looks back at the visit to the Rhätische Bahn



The distinctive turntable in the works.

All photos: Boyd Misstear

In what is now becoming a bi-annual 'tradition', Roger Ellis offered another of his excellent fun, informative walking and educational forays into the inner sanctums of Helvetica and specifically Swiss Transportation. To the delight of some 20-plus members and partners who converged on Canton Graubünden at the beginning of July this year, the get-together was neatly timed after the 'BLS 100' celebrations in Frutigen, and the Rhätische Bahn's 100th anniversary of the opening of their line from Bever to Scuol-Tarasp. A number of members chose to set up 'base camp' at the welcoming Hotel Grishchuna located adjacent to Filisur

Station. If it wasn't for the suspension of most rail traffic after 22.00 each evening, when the last passenger service arrives from Chur, not many would achieve a full night's sleep, rather preferring to savour every moment of passing activity! But for insomniacs, some unscheduled freight and work's specials were to be heard, allowing sufficient time to raise an eyelid and peek out of a bedroom window.

On Wednesday July 3rd, the metre-gauge Rhätische Bahn (RhB) graciously agreed to an in-depth conducted tour both of their Landquart engineering depot and the Landquart Rail Control Centre that is responsible for controlling all movement on their 384km of routes across the largest of Switzerland's Cantons. Arriving at Landquart the SRS group was met by three members of the RhB staff, David Wiegatz and his colleagues Simon and Walter. Following introductions, our group was split evenly and we were conducted around by these knowledgeable individuals. It was a most informative and instructive



The critical traverser at the Landquart works.

few hours, where we donned safety glasses and were allowed access to all engineering departments necessary to keep a “well-oiled” modern railway operation. And as you might expect, pride and cleanliness is clearly evident. The RhB network dates to 1889 when the Dutchman Willem Jan Holsboer inaugurated the line from Landquart to Klosters, which continued on to Davos the following year. Since then the RhB has grown by leaps and bounds, and having made



a conscious decision to avoid rack operation, it can now operate longer heavier trains (of up to 400t) than is possible on the MGB that has a 130t limit. This necessitated longer route kilometres and spiral/helix tunneling to achieve the maximum gradient of 3.5% (1:28). Initial operations were with steam motive power, and with the threat of World War One looming, large amounts of relatively cheap coal were stock piled in 1913. As WW1 dragged on it readily became evident the scarcity of coal was causing the cancellation of services, so some other form of motive power was needed, and this quickly resulted in rapid electrification during the period 1918-21. Initially the catenary was supported on locally sourced Larch posts but over time all this has undergone significant stages of improvement.

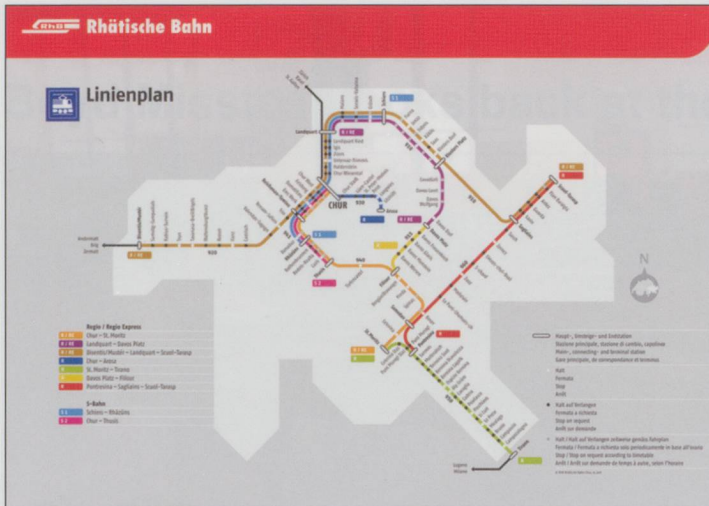


The RhB now handles some 11m passengers and more than 800,000t of freight a year over its very scenic route and its many major civil engineering achievements. Not least is the famous 100m arc curved Landwasser Viaduct comprising six 20m arches resting on five 65m high columns that connect directly into a sheer rock face. Designed by Alexander Acatos, it was built between 1901 and 1902 by Müller and Zeerleder and used some 9,200 cubic metres of limestone. And in testament to the undertaking, in July 2008 the Albula and Bernina lines were incorporated into the UNESCO catalogue of World Heritage sites.

The RhB plan a life expectancy of 55 years for its 1,400 locomotives and items of rolling stock, achieving this by regular maintenance at annual (R1), 7 yearly (R2) and 25 yearly (R3, a complete strip down and rebuild) maintenance intervals. Since it is quite possible that the original equipment manufacturers may no longer be in business throughout the duration of this


Everything is repairable at RhB Landquart.
RhB No.1 Rhatia on shed at Landquart.

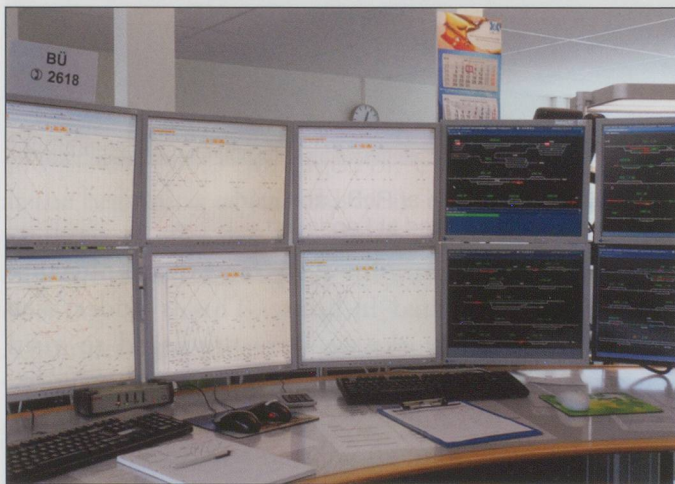
life cycle, it is necessary for every facet of maintenance work to be conducted in-house. This is undertaken at the Landquart works we were privileged to visit. A recruiting and work programme encourages apprentices, indeed of the 200 employees in the engineering works, at any one time some 40 are trainees. And ever safety conscious, each Friday at 15.00, work stops to clean the workshops prior to the weekend. And if this wasn't sufficient, an additional annual summer clean takes place across the last two weeks of July timed immediately prior to the Swiss National Day holiday on August 1st. The oldest locomotive in the RhB fleet is 2-4-0T No.1 “Rhatia” dating from 1889, while the latest addition is not, as might be expected, the powerful Allegra EMUs, but at time of writing the first of four bright yellow heavy diesels designated Class 287 Gmf 4/4, destined for maintenance and engineering trains. Number 287-01 had just arrived from the manufacturer Schalker Eisenhütte in Gelsenkirchen, Germany and was about to undergo commissioning and acceptance.



Many departments working in close cooperation are needed to achieve a successful transportation business, and we next visited their Rail Control Centre – the ‘heart’ as our guide described, but which might be disputed by others from whence we had just emerged! Located in the Landquart passenger station building complex, on an upstairs floor, a room full of half moon shaped consoles manned 24 hours a day, each comprising multiple monitors, telephone, PCs and other equipment, where an experienced controller sits at each and has responsibility for specific aspects of day to day railway operation. In addition to consoles controlling major route signalling areas, perhaps least expected are consoles

with responsibilities for other vital areas of coordination, including staff, locomotives and managing resources to make sure known tour groups have sufficient capacity on chosen services. Screens chart green when services are on time, change to red when in excess of 5 minutes behind schedule and this helps with key operational decisions whether to let trains proceed to next suitable passing locations or hold and incur further delays on this almost wholly single track network. Dispatcher Franz Bislin explained that Siemens were awarded the contract to provide the signalling and track occupancy system, that is also used by the SBB, while PSI Berlin specifically developed the timetable scheduling program to replace the age old graph plotting of yesteryear. He noted that it takes between 2 to 3 years to become sufficiently proficient to become a dispatcher. CCTV monitors are located in key station locations, as much to help with passenger control and satisfaction (to hold a train if someone is in an underpass trying to catch an hourly service), as it is for safety and security. In the unlikely event of a complete control centre failure, a switch-over to the standby centre in Klosters will be initiated. If this too should be somehow affected, trains will still run as they can control the signals!

Our thanks go to the RhB team who graciously met, conducted and answered a myriad of questions from the very interested members of the SRS group. 



For those who were unable to attend either the BLS 100 or Rhaetian Railway 100, check out www.bls.ch/100 and www.rhb.ch/100-Jahre-Bever-Scuol [Tarasp.2082.0.html?&L=4](http://www.rhb.ch/Tarasp.2082.0.html?&L=4) respectively.

A detailed breakdown of the current list of rolling stock can be found at <http://www.rhb.ch/List-of-rolling-stock.2445.0.html?&L=4>

LEFT

TOP: The RhB track diagram.

MIDDLE: Part of the RhB Control Console.

BOTTOM: Filisur on camera in the control room.

BELOW: David Wiegatz, Projectleiter RhB, with some of the SRS group.

