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# Climbing to Stoos - The New Line

Ernst B. Leutwiler reports on the steepest funicular in the world!



A side-on view of one of the unique 'trains'.

All photos: Ernst B Leutwiler

On Sunday 17th December, a second funicular opened to serve the car free alpine resort of Stoos in Canton Schwyz. With its 110% (47.7°) gradient, it is the world's steepest funicular that has been built to replace the old Stoosbahn which with a 78% gradient was already one of the steepest tracks of its kind in Switzerland. The amazing maximum gradient was dictated by the terrain as the designers and contractors did not necessarily seek this record, but are

happy that they were able to master the many problems. The new operation is also unique as it uses two 'trains' that use self-levelling passenger (and freight) carrying 'capsules' which adjust to the varying degrees of slope that the cars have to travel over, during their 1.7km traverse of a 743m climb, some of which is in a tunnel. The 'train' with its four 34-seater capsules travels at up to 10m/second, giving passengers a totally level area during their swift climb from the base station up to the village. The funicular is also the main means for goods to reach Stoos as road access is limited.

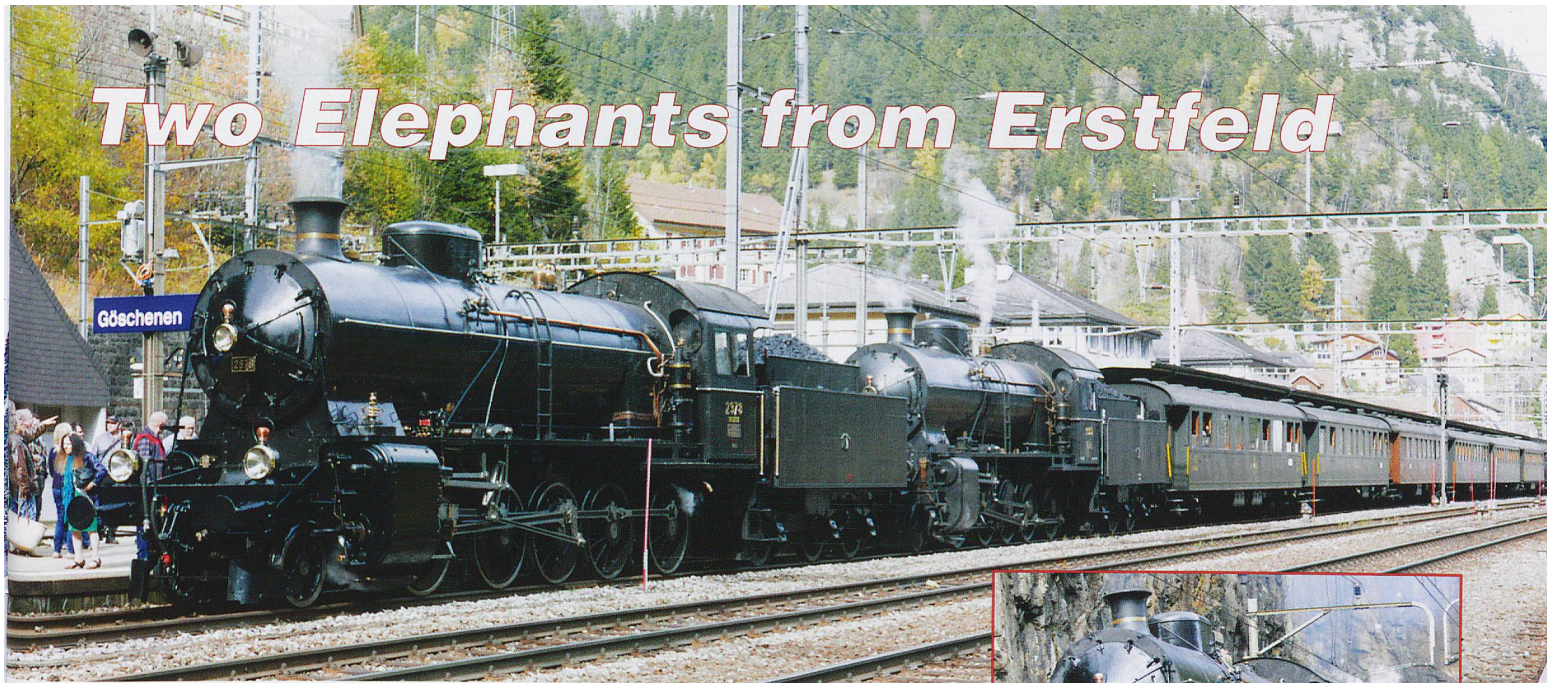
Replacing the life-expired system that was described in the previous edition of *Swiss Express*, was a long and complicated process that started over 10 years ago. Early proposals were for a cable-car operation, or to reconstruct the existing operation on the same alignment, but by the beginning of this decade the decision had been made to build a state-of-the-art funicular on a new alignment. Construction work

LEFT: Lowering the car onto the track at the bottom station.

BELOW: Traversing a flatter section of the route.




# Two Elephants from Erstfeld




On Saturday the 21st October, the Gotthard 'Mountain' route echoed to the impressive sound of a train double-headed by two of Switzerland's most impressive locomotives. This day marked the return to service of Eurovapor's C5/6 No.2969 'Elephant' after a long and problem-ridden restoration, mostly at Sulgen. After much work had been completed on the 20-year project, in December 2013 its completed chassis and mechanism were caught in the disastrous workshop fire of the Ballenberg railway in Interlaken. Getting the work back on course required some heroic efforts as well as solid finance, but it now has an unrestricted licence to operate in Switzerland, a remarkable achievement after 49 years out of service. On the triumphant return trip it was accompanied over the historic line between Erstfeld and Bellinzona, by SBB Historic's

ABOVE:  
Nos.2978 and  
2969 pause at  
Göschenen.  
Photos:  
Christoph Perrez.



The two 'Elephants' storm up the north ramp to Göschenen. similar 'Elephant' C5/6 No.2978 – the two making an impressive sight for those lucky enough to be at the lineside or riding the train. Unfortunately the day for No.2969 ended in Faido, when a connecting rod big end bearing overheated, but no serious damage was done. Those who remember regular steam operation know that hot axle boxes and big-ends were always with us, even then. 

commenced in September 2012 and due to the difficult terrain and various other problems that occurred (including major tunnelling issues and the need to use helicopter transport), it soon became clear that the CHF52m budget would be exceeded. Now this small village in a delightful, but under visited by non-Swiss tourists, area of Switzerland has probably the most sophisticated access transport of any community in the world. 



LEFT: Nearly at the summit station.

BELOW: An early view of construction showing some of the difficulties to be overcome.

