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in the Far East. The ex-BVZ loco "Weisshorn" is also presently undergoing an overhaul but DFB hope to run trains through the summit tunnel and down to Gletsch for the 2000 season. At some future date, and with the assistance of the two HG4/4 locos when rebuilt, services will be extended to Oberwald.

The repatriation of Nos. 1 & 2 from the Vietnamese jungle to the Swiss Alps will surely go down as one of the most amazing feats in the annals of railway preservation.

*Close up view of the Sponsors and name plates of DFB No 1. 24/7/98 Photo: Peter Arnold*



## Locotrol Will Increase Capacity In Alps

Swiss Federal Railways (SBB) has carried out tests successfully with GE Harris' Locotrol locomotive control system on freight trains operating on the steeply-graded St Gotthard route. Installation of the system would enable SBB to increase capacity on this busy international route across the Alps.

Locotrol is a radio system to control remote locomotives in a train. GE Harris supplied four permanent units to SBB, which were fitted to class 460 electric locomotives. Four portable units were also supplied to improve the flexibility of the system, but these can only be used in the leading locomotive.

Traditionally on the St Gotthard route, the brakes on the locomotive at the front of the train were insufficient to brake the train downhill between Erstfeld and Chiasso on the Italian border. But the pneumatic brakes on the wagons can only be applied intermittently to prevent overheating. This results in a low average speed.

Normally, a banking locomotive is used to push the train uphill from Chiasso to

Erstfeld where it is detached from the train. In the tests, a locomotive fitted with Locotrol was coupled to the rear of the train for the descent from Erstfeld to Chiasso. The driver at the front of the train is able to control the rear locomotive's braking system remotely using Locotrol. This avoids the need to use the air brakes on the wagons.

Using Locotrol, SBB was able to increase train speed from an average of just 45km/h to 75 to 80km/h downhill, which is almost as fast as an intercity passenger train. SBB estimates that it could increase the number of trains a day on the St Gotthard route from 250 to 270 if all trains were fitted with Locotrol.

In addition, there is no need for a driver in the rear locomotive, more energy is returned to the catenary, braking noise is lower, and there is no snatching. SBB is now considering whether to order about 30 fixed and 60 portable Locotrol units.

German Rail plans to start testing Locotrol soon on three different types of locomotive. Knorr-Bremse is the main contractor for the tests.

*(The article above is from International Railway Journal ( March 1999 ) and is reproduced with their kind permission)*