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Times Past - "Blauer Pfeil"

Boyd Misstear looks at the background to BLS "Blue Arrow" No.731

With the backdrop of the global economic crisis emanating from 1928, railway companies in Switzerland were not spared impact. There was a need to reduce costs, increase equipment reliability and availability with the objective of increasing utilization, resulting in improved service reliability and customer satisfaction. During the 1930s, light railcars were seen as the answer to handle certain traffic, primarily on low traffic volume lines. Following the success of the SBB's 'Rot Pfeil', independent rail companies that would later merge into what is now the Bern Lötschberg Simplon Group (BLS AG), decided to experiment with single and double unit light railcars or Leichttriebwagens. The experiment proved successful. However, financial resources were severely constrained which led to somewhat involved and creative purchasing. At the time No.731 came into existence in 1938, it was part of an order arrangement for four units. The then Bern-Lötschberg Simplon Bahn (BLS) ordered one unit for the Bern-Schwarzenburg-Bahn (BSB) designated CFZe 2/6 No.681. To pay for it, BSB sold four passenger cars to the BLS! No.681 had a weight of 53t; normal load of 40t; power of 352 kW/480 PS (metric horsepower); length of 29.400m and a top speed of 80kph. This arrangement found the unit to be underpowered with an inability to pull normal heavy passenger stock and thus difficult to maintain speed on the more mountainous routes causing service difficulties. What was needed were short, light and fast trains. The following three two-coach units, articulated using three bogies, were given 700-series numbers, consistent with BLS numbering for railcars. The first, ordered by the BLS for its own operations, was given No.731. The following two went to the Bern-Neuenberg-Bahn (BN) and designated No.736 and No.737. These three light-weight double-coach units had twice the number of powered axles compared to the first of the batch and were designated BCFZe 4/6 at the time. All four units were ordered from Sécheron (SAAS) in Genève who were responsible for electrical and final assembly. Schweizerische Industriegesellschaft (SIG) located in Neuhausen near Schaffhausen, provided the car bodies, bogies, interior and mechanical parts. These four wholly Swiss twin "electric Leichttriebwagen" railcars, built as mentioned during a period of economic depression, were innovative for their



BLS BCFZe 4 No.6 731 Zürich Wollishofen 1939. From the collection of the Model Railway Club.

time both in design and with limited drive axles, which reduced the weight and reduced the cost of operation. All four were delivered in the summer of 1938, just as the clouds of forthcoming combat were gathering across Europe. It was deemed very important at this time of pending national emergency, that they should be fully sourced in-country and operate off the overhead electric catenary, fed from

the natural resources of the self-sufficient hydroelectric, rather than rely on imported fossil fuels as their source of power.

The following summer of 1939 saw No.731 exhibited at the Swiss National Exhibition (the "Landi") in Zürich as shown in the accompanying photograph.

Research indicates these three 700-series railcars had very special bogies with radially adjustable axles to reduce wear on the rails called "System Liechti". Designed by Roman Liechti (1904-1981), the primary suspension was rubber, the secondary suspension having leaf springs. The bogie in the centre had a long wheelbase, allowing it to be parted when separating the two cars, thus avoiding having to lift one of the bodies off the bogie. Around 1957, the bogie suspension was modified to improve the ride.

The 700-series railcar sets remained in service with the BLS for nearly 45 years. During this time, in 1956 the 3rd class was abolished and the cars became 1st and 2nd class during a refurbishment. During a later makeover in 1963, the units lost their mail compartment and were re-designated ABDZe. Following the sale of all three in 1983 to the Sensetalbahn (STB), modifications were undertaken to former Nos.736 and 737 with No.731 becoming a donor in the process whose remains were sent for scrap. These two remaining Triebwagens lived on until 1997 when one was scrapped and in the autumn of 1999, on the eve of the millennium, the Tramverein Bern (Tram Club Bern - TVB) rescued the last remaining "Blauer Pfeil/Blue Arrow" No.736. In 2012 the BLS-Stiftung (Foundation) bought No.736, considering it to be one of its most important railway symbols that should be preserved.

Details of the CHF2m restoration project in time for the "Jubiläum 100 Jahre Lötschbergbahn" (BLS Centenary) in 2013, that included reinstating the original right angle window edges in place of the rounded 1980s variety, can be found at <http://www.bls-stiftung.ch/blauer-pfeil.html>. 