

Press Release

Rotkreuz, December 14, 2022

Sierre – Montana – Crans funicular uses innovative energy storage system

Europe's longest funicular railway in the Swiss town of Sierre scores with an energy storage system and enhanced comfort for its passengers. The Sierre – Montana – Crans funicular went back into service on December 11, following a modernization carried out by Garaventa.

Since 1911, the Sierre – Montana – Crans funicular has linked the town center of Siders (Sierre) with the Swiss resort of Crans-Montana, which lies 930 meters higher up. Over its four-kilometer route, the funicular serves the villages of Venthône and Bluche. Its upper terminal is located at Montana railroad station. Over the past nine months, Garaventa carried out a complete overhaul of the funicular.

Innovative energy storage concept ESFOR

The completely overhauled funicular uses the innovative energy storage system ESFOR, which optimizes the consumption of electrical power. The energy storage system developed for ropeways by Frey AG Stans incorporates a high-performance battery system in the uphill drive system. This reduces the costs of electricity for the installation and utilizes the braking energy generated by the funicular. The energy storage system acts as a buffer directly in the ropeway drive. When the funicular is braked, the energy therefore flows into the battery and is available for the next acceleration phase. The photovoltaic system on the roof of the upper terminal is also directly integrated into the energy system. This constellation significantly reduces the power costs as part of running costs because the funicular needs to draw less power from the public grid in normal operation. Another major benefit of ESFOR is the emergency operation functionality. An emergency drive is required to bring passengers to the nearest station in the event of a power outage or main drive failure. For this reason, Frey AG Stans has also certified the energy storage system as an electric emergency drive. This means that ESFOR replaces the fossil fuel-powered emergency drive system what would otherwise be required.

Snow-clearing system for enhanced availability

In order to ensure high availability in the winter months, the funicular uses a snow-clearing system made by Zaugg. In the case of snowfall, a blower with adjustable nozzles and retractable side cutters is fitted to a carriage and blows away the snow from the track.

Comfortable and barrier-free

The cars were made by CWA and provide room for 120 people. The roofs are glazed, enabling efficient air circulation when opened as well as offering optimal vistas for the passengers. In addition to the ropeway equipment, the stations have also undergone comprehensive modernization. Passengers with baby strollers or wheelchairs now enjoy barrier-free access to the funicular.

120-FUL Sierre – Montana – Crans

Customer: Cie de Chemin de fer et d'autobus Sierre-Montana-Crans (SMC) SA

Inclined length: 4,192 m

Vertical rise: 928 m

Capacity: 480 PPHD

Speed: 8 m/s

Opened: 12/2022

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Garaventa AG is a Swiss company headquartered in Rotkreuz, with additional sites in Goldau, Uetendorf and Sion. It is the Swiss branch of the Doppelmayr Group and has established itself as the competence center with international reach for reversible aerial tramway, funicular railway and material ropeway systems as well as for complex rope installation work. Garaventa is also responsible for all ropeway projects of the Doppelmayr Group in Switzerland. All functions and competencies for special ropeways are made available to the Group worldwide from Switzerland. Garaventa employs 380 people in Switzerland.

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