

Cape Point Funicular Railway System

genisys ensures safety of Cape Point funicular

Overview

The funicular is a cable-drawn railway system which provides a quick and easy way of reaching the old lighthouse at Cape Point. It is unique in that it has two cars on one track – named after the ships Thomas T. Tucker and the Nolloth, which sank off the infamous ‘Cape of Storms’ – with a passing loop midway, and curves both vertically and horizontally up a steep slope. A ride up the 585 m long track allows visitors to enjoy the awe inspiring panorama, with views of the Cape of Good Hope, Dias Beach, Buffels Bay, Bellows Rock and Cape Maclear, perhaps even the ghostly Flying Dutchman itself.

The Challenge

Micromation, a communications system supplier based in Johannesburg, South Africa, was contracted to supply the genisys system for the funicular. Derrick Willcock, CEO of Micromation, explained: “The previous system was becoming very difficult to maintain. The technology was over 10 years old; it was experiencing breakdowns and spare parts were hard to obtain. There were no microprocessors and the system was relatively crude by today’s standards. Micromation was responsible for all the car electronics, and for fitting brand new carriages to the original chassis of the funicular.” Derrick added: “Working in the middle of a game park provided us with an unusual challenge as the area is overrun with baboons who steal anything which they think contains food. That certainly added a new dimension to the project!”



Situated in the spectacular Cape Point Nature Reserve, The Flying Dutchman Funicular at Cape Point, South Africa – whose name derives from a legendary ghost ship – has recently been refurbished, and now incorporates Carnation Designs’ genisys system for control of the railway.

The Solution

“The funicular is overseen by the rail safety regulator (RSR) and must comply with stringent safety requirements, and so the genisys system’s ability to keep a log of all operator actions and external equipment faults is very important, providing an audit trail for the RSR in the event of an accident. The genisys system was originally designed for use in emergency vehicles and provides a number of interlocking and monitoring functions. Virtually all the funicular’s safety features are replicated, with each of the carriages having duplicate systems, so

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there is no single point of failure. It was important to take into consideration all the various emergencies that could arise, such as a cable breaking, and, should slack cable be detected, genisys will instantly activate special emergency brakes. The genisys system will also prevent the carriages leaving the station if the doors are not properly closed, and its power management facility will issue visual and audible warnings if there are signs of the battery going flat, shedding non-essential loads and eventually stopping the vehicles if the voltage falls below a safe operating level.”

The Result

Derrick concluded: “The operators have found genisys very user – friendly, and the compact system fits neatly into the carriage underneath the front seat. It comfortably handles our requirements and, from the customer’s perspective, having the ability to automatically make announcements over the speaker system in English is a major advantage.” For more information about Micromation visit www.micromation.co.za/

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