



## *Fire protection for rolling stock*

**Dear Ladies and Gentlemen,**

There are news. The management of WAGNER Rail is changing: In addition to the current Managing Director Markus Kock, the management of WAGNER Rail GmbH will be expanded by Dr. Markus Müller and Dr. Peter Stahl as of 01.04.2021. The two are no strangers to the industry and have been successfully active in the mobility sector for years. Most recently, Dr. Markus Müller and Dr. Peter Stahl held the management of WAGNER Switzerland, but are now switching completely to the Rail business. We are looking forward to this support and the upcoming projects.

And these are not the only news. Maximum safety in rail travel is a credo that has not only applied since the Corona pandemic. For this reason, the Munich subway is not only receiving new trains from the manufacturer Siemens, but also reliable and appropriate fire protection from WAGNER Rail.

In this newsletter, we also report on the Rhaetian Railway, which is receiving a solution with a water mist module specially adapted to rail transport to protect passengers. This also masters difficult external conditions such as low minus temperatures or 1,800 meters of altitude.

Furthermore, SBB is taking over BLS's route network in western Switzerland and thus also the long-distance trains from Stadler. The vehicles used for this purpose will be equipped with a solution consisting of the earliest possible fire detection and reliable fire fighting. And there are also news from the distant Indian subcontinent. WAGNER Rail is again equipping Indian Railways trains with fire protection technology.

Enjoy reading and stay healthy.

With kind regards  
Markus Kock, General Manager WAGNER Rail GmbH

## THE MUNICH PUBLIC UTILITIES RECEIVE NEW SUBWAYS

**For the protection of passengers WAGNER Rail installs complete fire protection technology portfolio**

**Munich's municipal utilities are to receive new metro trains for the city's public transport system (MVG). By 2024, train manufacturer Siemens will deliver a total of 67 new C2 trains that will gradually replace the old Type A trains. They offer almost ten percent more space and greater comfort for passengers. WAGNER Rail ensures the best possible safety with a comprehensive fire protection solution consisting of smoke detection, a fire alarm system as well as a gas extinguishing system and effective fire fighting with water mist.**

The protection goal for the underground is clear: personal protection is paramount. Before the Corona pandemic in 2019, 596 million passengers used the services of Munich's public transport system, including the subway. So

every day, that's more than 1.6 million people on Munich's public transport. The fire protection solution must therefore be optimally adapted to the circumstances in order to ensure the greatest possible safety for all users.

The solution is comprehensive and effective: all trains are equipped with Rail 138 fire alarm control panels. TITANUS® aspirating smoke detectors are used in the passenger area. If these detect a fire at an early stage, the water mist system is triggered. This not only fights the fire, but also prevents the spread of toxic smoke gases – a real lifesaver on long escape routes through tunnels, for example. WAGNER Rail installs multi-sensor detectors, linear heat detectors and gas extinguishing systems in the technical areas. If the detectors detect a fire there, a nitrogen extinguishing system is triggered immediately, which extinguishes the fire within a few minutes. In this way, any possible damage to the technical components is kept as low as possible in the event of an emergency.

The fire protection solution for the Munich subway complies with various European standards (EN 54, 45545, 50155, 50121, 15004), ARGE guidelines and is certified by VdS. ■



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# WATER MIST PROTECTS PASSENGERS ON THE RHAETIAN RAILWAY

**WAGNER Rail again supplies suitable fire protection for Stadler trains**

**The Rhaetian Railway is continuing to modernise its train fleet in the canton of Graubünden and is taking delivery of 20 new “Capricorn” multiple units from train manufacturer Stadler. The total order comprises a total of 56 vehicles – the first of which are already in service on the Landquart-Davos(-Filisur) line – and is scheduled for completion by 2023. According to the Rhaetian Railway, this is the largest rolling stock procurement project in its history. As with the previous order, the appropriate fire protection solution comes from WAGNER Rail. And as usual, it is innovative and designed for maximum passenger safety.**

The 20 four-car electric trains consist of a motor coach, a driving trailer and two middle cars. They can carry a maximum of 178 passengers. The special feature of the trains is their area of operation in the canton of Graubünden. The canton lies entirely in the Alps and is characterised by its mountain landscapes. The route Landquart – Klosters Platz – Davos/St. Moritz is characterised by steep ascents and descents as well as narrow curve radii. The lowest station is at 523 AMSL and the highest station at 1814.7 AMSL. This means that the temperatures also fluctuate. In addition, the trains run in the so-called wing train operation. The trains will start in Landquart as 16-unit trains (in quadruple traction), separate from Klosters Platz and run as eight-unit trains each to St. Moritz and Davos. On the return journey, they can be automatically coupled together again from

Klosters Platz. The customer's specification was that fire protection must still function without restriction at minus 35 degrees Celsius and at altitudes of up to 1,800 metres.

Together with train manufacturer Stadler, WAGNER Rail has developed a solution that not only withstands the harsh environmental conditions and gradients, but is also installed in a space-saving manner. TITANUS® aspirating smoke detectors with SIL2 certification are used in all train areas to ensure reliable fire detection. The heart of the solution, however, consists of a water mist module which, in an emergency, emits water mist into the area to be protected in order to fight a fire and prevent the spread of toxic smoke gases. The water mist module is specially adapted to the aerodynamic profile of the train as well as the sometimes extreme external influences and is mounted on the roofs of the trains for reasons of space. The sensor system in the water tank also had to be refined: “If the train goes up and downhill a lot, the water in the tank shifts due to the movement. We use intelligent sensor technology to ensure that there are no error messages about the extinguishing water level,” Stephan Bech, Technical Manager at WAGNER Rail, explains the reasons. Heated pipes and tank also ensure that the extinguishing water on the roof remains liquid even in sub-zero temperatures and does not freeze. This is because the water mist module must be fully functional from minus 35 to plus 40 degrees Celsius outside temperature – that is the specification. Thanks to the maintenance flap, the water tank on the roof of the vehicle can be refilled more quickly and easily. ■



The new trains of the Rhaetian Railway travel through the canton of Graubünden and thus through the picturesque mountain landscape.

## FLIRT TRAINS RECEIVE EXTENSIVE FIRE PROTECTION

**Effective water mist technology and early fire detection ensure added safety**

Eleven electric FLIRT multiple units from Stadler are to further expand the long-distance network in western Switzerland. SBB is thus also connecting the Swiss region of Neuchâtel Jura to the long-distance network. The four-car trains with 27 seats in 1st class (2+1 seating) and 154 seats in 2nd class are handicapped accessible and will in future commute between Bern and La Chaux-de-Fonds. The trains can be flexibly coupled and decoupled – depending on traffic times. This will help SBB to save energy and costs. To ensure that passengers reach their destination safely, WAGNER Rail supplies the reliable fire protection solution.

This consists of fire detection and fire extinguishing with water mist as well as a fire alarm system. Smoke detectors are used for early fire detection both in the technical areas and in the passenger areas. The information from the detectors is fed into the RAIL 256 fire alarm control panel, which initiates appropriate further measures in the event of a fire. For extra safety, WAGNER Rail also installs a water mist system in the passenger areas.

The trains are scheduled to be in service on the route from Bern before the end of 2021 – with added safety from fire protection experts WAGNER Rail. ■



From end of 2021 the new Stadler trains will pass through Bern and its surroundings.

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## FIRE DETECTION WITH TITANUS® SECURES LHB TRAINS IN INDIA

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### Second major order in two years

Girivar Global, an Indian company for sales, marketing and consulting for Indian Railways and Metro, has again commissioned WAGNER Rail to supply fire protection technology for the Linke-Hofmann-Busch (LHB) trains frequently built in India. Following the first major order at the end of 2019, further LHBs are now to be protected safely by early fire detection with TITANUS *PRO-SENS*®. ■

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TITANUS *PRO-SENS*® will in future ensure greater passenger safety on LHB trains in many Indian Railways railroads.