



## *Fire protection for rolling stock*

**Dear Ladies and Gentlemen,**

What a crazy time: We are currently celebrating from the third to the fourth Corona wave, trying to quickly enjoy the summer holidays before the next lockdown and at the same time feeling the effects of climate change in Germany in all clarity. And while people in the west and south of the Federal Republic are trying to free their belongings from the water and mud masses of the last weeks, the richest people on this planet are flying into space as tourists. Perhaps to dare a look from a different perspective. We can only hope that they are left with a lasting impression of what they see - a planet Earth that is worth preserving. For this reason, the railway industry has been investing for some time in alternative drive technologies consisting of battery cells, hydrogen and hybrid drive technology. Because only if we realise that "business as usual" is not an option, but that innovative, sustainable ideas will take us forward, do we have a chance that in a few centuries people will still be able to look down on our blue planet from space.

In today's newsletter, we again report on customised fire protection solutions for current projects. For example, we are helping Indian Railways to ensure that passengers on passenger trains travel even more safely and that potential fires are detected immediately. For the metro trains in Newcastle upon Tyne, UK, we had to come up with a comprehensive protection concept. And we are also installing fire protection technology in the new KISS trains from Stadler in the Interregio trains of the Swiss Federal Railways. .

With this in mind: Stay on track with climate protection!

We hope you enjoy reading.

With kind regards  
Markus Kock, Managing Director WAGNER Rail GmbH

# SWISS FEDERAL RAILWAYS ORDERS 60 NEW TRAINS

**Stadler supplies SBB with 60 double-deck Interregio trains and relies on fire protection from WAGNER Rail**

**Swiss Federal Railways (SBB) has ordered 60 Interregio double-deck trains (KISS Option 2020) from train manufacturer Stadler. The first trains are scheduled to be in service by 2024. SBB is replacing part of the old fleet with a large proportion of these trains, thus complying with the requirements of the Disability Equality Act to enable barrier-free access for people with reduced mobility from 2023. Stadler relies on WAGNER Rail as a long-term partner for the appropriate fire protection. The solution is based on the use of various technologies for early fire detection.**

The KISS trains have six compartments, are 150 metres long and offer space for a total of 466 passengers on two levels. The fire protection solution had to be precisely adapted to these specifications in order to provide safety for all passengers. The passenger area of the upper and lower decks is safely protected by TITANUS PRO-SENS® air sampling smoke detectors of the C-Pro series. TITANUS® continuously takes samples from the air via a flexible

corrugated aspirating pipe and the sampling points. The smallest amounts of pyrolysis particles are quickly identified and fires are detected in their incipient phase. Countermeasures can thus be initiated as early as possible. Installed in false ceilings, the detectors are also reliably protected against vandalism. The C-Pro series also offers fast installation and is low-maintenance. Throughout the passenger compartments, flashing lights are also used for visual alarms and pedestal sirens for acoustic alarms.

Multisensor switches are used in the technical areas of the six-compartment trains. Depending on the situation, the switches can use two detection principles for fire detection. Like other optical smoke switches, the multisensor switch uses the scattered light principle to detect smoke particles at an early stage. In addition, it reacts to a rapid increase in temperature: If the temperature rises, the sensitivity of the smoke detection increases. The roof boxes equipped with technology and the bulkhead boxes located in the passages between compartments are additionally protected with linear heat detectors. All detectors are also connected to a Rail 138 fire protection control centre, which automatically triggers suitable measures in the event of an emergency.

In this way, the new Interregio trains are not only barrier-free but also optimally protected against fires. In addition to the KISS for SBB, WAGNER Rail has already equipped a number of other KISS trains with suitable fire protection solutions: the MAV Hungary, the Austrian Westbahn and the Caltrain in California. ■





# WAGNER RAIL SUPPLIES ALMOST 700 TITANUS® UNITS

## Air sampling smoke detectors ensure safety in Indian Railways' LHB trains

Since the early 2000s, Indian Railways has increasingly relied on Linke-Hofmann-Busch (LHB) trains, formerly manufactured in Salzgitter, for passenger services. Among others, the Rail Coach Factory is responsible for the construction and, according to its own information, has produced around 6,500 such trains so far. For about two years now, Indian Railways has increasingly been relying on air sampling smoke detectors from WAGNER Rail for fire protection. The reliable operation of the systems has now led to another order for almost 700 devices.

TITANUS *PRO-SENS*® devices are used for this purpose. These continuously take samples of the ambient air, detect small amounts of smoke particles at an early stage and thus detect fires already in their incipient phase. With the help of the High-Power Light Source (HPLS) optical detection method, the TITANUS® devices offer up to 2,000 times the sensitivity of conventional point type smoke detectors.

However, there is another special feature for the air sampling smoke detectors used in India: Due to the special requirements in the tenders issued by the Indian state railroads last year, the rail experts at WAGNER developed a TITANUS *PRO-SENS*® including a module specially adapted to the required alarm thresholds. This enabled WAGNER Rail, together with its Indian partner EXIM Private Limited from New Delhi, to prevail against around 25 competitors



The LHB trains are produced in large numbers for Indian Railways and equipped with fire protection technology made by WAGNER Rail.

and win the contract. EXIM Private Limited will be responsible for the installation in the vehicles as well as for the handling of the organisation on site.

### Advantages of TITANUS® devices:

- The sensitivity of the smoke detection can be individually adjusted according to requirements.
- Intelligent signal analysis with LOGIC-SENS® enables the detection and suppression of deceptive phenomena even under difficult conditions.
- A blockage or rupture of the aspirating hose system as well as a failure of the aspirating unit is reliably signalled by the airflow monitoring PIPE-GUARD.
- Complies with the temperature requirements of EN 50155 Class Tx.
- The sampling points are almost invisible and therefore protected against sabotage and vandalism, thus reducing costs for the operator. ■



The passenger coaches receive the earliest possible fire detection with TITANUS® air sampling smoke detectors to protect the passengers.

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## WAGNER RAIL PRESENTS ITSELF LIVE IN BERLIN

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### 7<sup>th</sup> Railway Forum

At the hybrid Railway Forum on 07 and 08 September 2021 in Berlin, more than 1,400 decision-makers and professionals from the rail industry will meet to discuss the future developments and challenges of the industry. The team from WAGNER Rail will be there as fire protection experts for rail transport. Find out more about the two-day conference, which will take place both physically at the Estrel Congress Center Berlin and digitally. ■



# METRO TRAINS IN NEW CASTLE, UK, RUN SAFELY PROTECTED

## Fire detection ensures passenger safety

**The university city of Newcastle upon Tyne in the northeast of England used to be an industrial city and was especially known for shipbuilding. Today, with a population around of 270,000, the city is known for its museums, theaters and the university with its nearly 20,000 students. Good connections between the city's districts are provided by the regional public transport system, which also includes the metro. The operator Tyne and Wear is now receiving 42 new trains from vehicle manufacturer Stadler. The suitable fire protection is provided by WAGNER Rail.**

The special feature of the new metro trains: Before ordering, users were given the opportunity to submit their ideas and suggestions for the redesign of the trains. More than 3,000 people took part in the campaign. The result was the desire for straight seating in the style of the London subways together with modern features such as charging points via USB, bicycle transport as well as retractable steps.

The fire protection solution for the modern metro trains is therefore just as innovative and focuses entirely on early

fire detection. TITANUS *MICRO-SENS*® air sampling smoke detectors, smoke switches and linear heat detectors (LHD) are used in a stand-alone system. In detail, the solution is as follows: The passenger areas of the new metro trains receive TITANUS *MICRO-SENS*® air sampling smoke detectors of the C-Pro series with a flexible corrugated aspirating pipe. TITANUS® continuously takes samples of the air via the sampling points, thus identifying even the smallest amounts of smoke particles and detecting fires in their incipient phase. Countermeasures can thus be initiated as early as possible. In addition, the sampling points are well hidden under the ceiling of the zones and thus protected from vandalism.

Multisensor switches are used in the technical areas of the five-compartment trains. Depending on the situation, the switches can use two detection principles for fire detection. Like other optical smoke switches, the multisensor switch uses the scattered light principle to detect smoke particles at an early stage. In addition, it reacts to a rapid increase in temperature: If the temperature rises, the sensitivity of the smoke detection increases. If the temperature rises more than 5 Kelvin in 5 minutes, the sensitivity of the optical sensor doubles. A strong temperature increase of more than 20 Kelvin in 5 minutes causes a thermal alarm (heat differential principle) to be triggered.

The power converter, which is also located in the technical area, is additionally protected with a linear heat detector.

The start of the installation phase is planned for WAGNER Rail from October 2021. ■

