Railtalk Magazine Xtra

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Submissions & Contributions

Railtalk Magazine Xtra, a magazine written by the Enthusiast for the Enthusiast. So why not join the team. We are always looking for talented photographers and writers to join us at Railtalk. Be it though pictorial submissions or via a written article featuring an event or railtour, we greatly appreciate any contributions to the magazine however big or small.

Photographic Contributions

All Photographic contributions should to be sent to us via email, post or via the members section page on our website. Contact addresses are provided above.

All images should be provided at a resolution of at least 2400px x 1700px at 240dpi.

Welcome to Issue 198Xtra

As I write this, news of the huge rail crash in Greece is unfolding, where it looks like at least 57 people have been killed and 85 injured. This is devastating for all concerned with early reports are saying the disaster appeared to be mainly down to “tragic human error” with two trains on the same line heading towards each other.
A station master has been arrested as investigators tried to work out why the two trains had been on the same track “for many kilometres”, while the country’s transport minister, Kostas Karamanlis, has resigned. Eight rail employees were among those killed, including the two drivers of the freight train and the two drivers of the passenger train, according to Greek Railroad Workers Union president Yannis Nitsas. Many of the victims were thought to be university students returning home after a long holiday weekend.

In other news, Renfe have announced that its Board of Directors have agreed to submit to the Ministry of Finance and Public Function, through MITMA, the proposal to create a subsidiary in France. This new subsidiary will allow Renfe to sign contracts, issue invoices, hire staff, and offer market services (ticket sales) in France.

This will allow the company to continue expanding its high-speed activity in the corridors with the highest density and economic interest for the company, as well as opting for the provision of public services.

The new subsidiary reflects Renfe’s belief in the French market and will to remain in the long term, this also being a fundamental piece in its Strategic Plan for international expansion to become a reference operator, through the provision of quality services, safety and efficiency. The Spanish company is also continuing to work on obtaining the Safety Certificate to operate throughout France (as SNCF-Ouigo already has to operate in Spain). Currently, Renfe has already obtained the certificates to operate on the Barcelona-Lyon and Madrid-Barcelona-Marseille lines.

Meanwhile, with the increase in electric charges, resulting in some operators increasing the use of diesel locomotives, the European Commission has approved, under EU State aid rules, a €1.1 billion German scheme to compensate rail transport operators using electric traction in the context of the recent spike in electricity prices. The measure will contribute to ensuring that the rail sector remains competitive while preserving the environmental performance of electric rail, in line with the objectives of the Commission’s Sustainable and Smart Mobility Strategy and of the European Green Deal.

Germany notified the European Commission of its intention to introduce a €1.1 billion scheme to support freight and passenger rail transport operators using electric traction. The aim of the scheme is to help rail operators cover part of the additional electricity cost experienced due to the exceptional increases in electricity prices in the context of Russia’s war against Ukraine. In doing so, the scheme aims to support and preserve the modal shift from road to rail transport using electric traction, thus promoting a greener means of transport.

Under the scheme, the aid will take the form of monthly reductions in the freight and passenger rail transport operators’ electricity bills. Electricity suppliers will then be reimbursed by the German state only for the economic support provided to the rail transport operators. The scheme will cover electricity consumed between January 1st 2023 and December 31st 2023.

“This €1.1 billion scheme will enable Germany to support electric traction, which is a more environmental-friendly mode of rail transport compared to diesel-fuelled vehicles,” Margrethe Vestager, Executive Vice-President of European Commission, said. “It will help Germany meet its European Green Deal objectives, while reducing the burden of rising electricity costs for transport operators, to the benefit of passengers and freight customers.”

Until next month...

David

This Page

MAV Class 431.374 awaits departure from Nagykanizsa with train No. IC201 16:35 Zagreb Gl Kol to Budapest Deli on February 11th. *Andy Pratt*

Front Cover

SZ Class 644.020 has just arrived at Podbrdo with Autovlak train No. 855 11:37 from Bohinjska Bistrica on February 10th. In the background can be seen the southern portal of the 6327m Bohinj Tunnel, the longest in Slovenia. *Andy Pratt*

On February 13th, No.71.002 shunts stock at Septemvri in Bulgaria. *Mark Torkington*

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Austria

Operated by Stern und Hafferl Verkehr, Hercules Class 2016.913 waits for the road at Wels Hbf with a mixed freight on February 9th.
Andy Pratt

Austria

300 tonnes of aid supplies on their way to Turkey

Rail Cargo Group are supporting earthquake victims in Turkey and Syria with what they do best – transport and logistics services. The first aid train is already on its way to the earthquake zone heading for Edirne, Turkey.

Around the world, numerous citizens, organisations, NGOs and governments are organising donations for those affected by the devastating earthquake disaster in Turkey and Syria with tens of thousands of deaths. The people in the affected areas lack everything after the massive destruction. To ensure that the urgently needed aid also arrives safely and reliably at its destination, it needs fast and uncomplicated transport.

The rail transport company Hamburger Rail Service (HRS) has been a partner of the ÖBB Rail Cargo Group (RCG) for many years. The managing director of HRS, Adem Gülaz, has organised 300 tonnes of relief goods with his private contacts. These included generators, mobile toilets, food, clothing, hygiene articles, heaters, sleeping bags and tents, which were packed into 18 wagons.

These are 800 pallets that will go directly to the Turkish National Disaster Agency (AFAD), according to Adem Gülaz, the managing director of HRS.

The transport started in Hamburg and was handled by HRS as far as Passau. From Passau to Edirne in the west of Turkey, RCG will take over. After the arrival in Turkey, the Turkish RCG subsidiary will additionally support the partner HRS in the distribution of the aid supplies to the earthquake area. Further aid transports of this kind are already being planned.

“We at Hamburger Rail Service are doing this to give the people in the crisis area a bit of hope. That is why we have named this train ‘Train of Hope’,” says Adem Gülaz. “After all, this is not primarily about religion or origin, but about humanity!”

First timber train from Germany to Bosnia

From Germany directly to a large paper mill in Bosnia. ÖBB Rail Cargo Group (RCG) organises a block train – loaded with logwood – across the Balkans for the first time.

In December, RCG organised and carried out a timber transport from Germany to Bosnia for the first time. The logwood was loaded onto the wagons at a loading siding in Giessen.

After a journey of 1,435-kilometres via Passau (Germany) – Spielfeld/Maribor (Slovenia) – Dobova/Savski Marof (Croatia) – Slavonski Šamac/Bosanski Šamac (Bosnia), the wood logs finally arrived at the siding of the recipient – the company Natron-Hayat, a large paper mill in Maglaj.

Individual solutions for each wood product

The transport was 100 % in the hands of RCG through Austria and Croatia; partners handled the transport in the other countries. In addition to organising and executing the transport, RCG’s logistics professionals also took care of customs clearance.

This was the first test train of this kind, and more are currently being planned. A team of experts specialised in the wood products industry is responsible for designing and organising well thought-out, comprehensive solutions for international transports at RCG.

As a reliable partner of the forestry, timber and paper industry and the largest timber transporter in Central Europe, RCG focuses on ecological transport by rail.

RCG transports new TGV

ÖBB Rail Cargo Group (RCG) doesn’t just transport ordinary goods such as steel, wood and grain; it moves entire trains too. The second special transport of a TGV for RCG’s client Alstom took place in February.

The new TGV will be used for passenger transport in France from 2024. TGV is one of the best-known types of high-speed train in the world, having set several records for reaching up to 350 km/h. The new trains are produced by Alstom in France and will race through the countryside for SNCF, the French state railway company. Before that, however, they need to undergo extensive testing. This is where RCG comes into the frame.

Special transport through Austria

The first TGV was transported from France to the test site in the Czech Republic in December. Several railway undertakings were involved in the operation. RCG was responsible for the transit through Austria. There are empty freight wagons in front of and behind the TGV. These are connected to the locomotive and serve as brake wagons, as the TGV cannot brake for itself while being transported.

As the train has not yet been licensed, it needed a special permit to travel as an extraordinary consignment. RCG special transports unit takes care of that.

TGV No. 2 is on its way

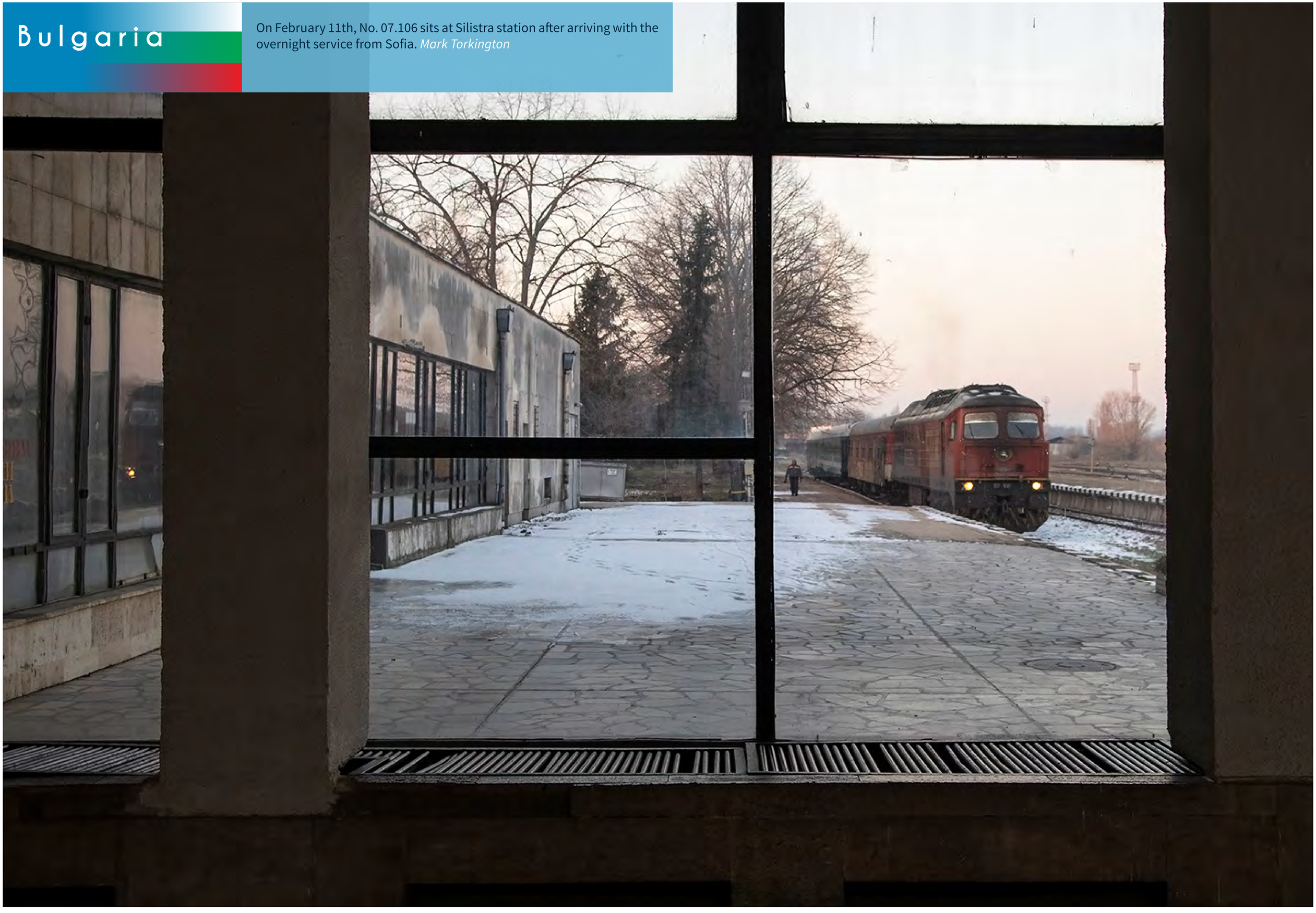
Alstom’s second train was brought from France to Austria in February. Once again, RCG took care of the stretch that goes through Austria. The TGV will then be assessed for temperature, wind and humidity, among other things, in Vienna’s Climatic Wind Tunnel.

A transport solution whatever the item

RCG’s special transports unit moves track-laying machines, underground trains, trams, metro trains, rail-grinding trains, passenger carriages and many other rail vehicles for customers in the automotive industry. RCG offers a variety of innovative logistics services and transport solutions – from the first mile to the last.

Bulgaria

On February 11th, No. 07.106 sits at Silistra station after arriving with the overnight service from Sofia. *Mark Torkington*



Bulgaria

No. 07.126 waits departure time at Dobrich with the 12:00 service to Varna on February 11th.
Mark Torkington

Bulgaria

On February 10th, No. 55 144 pulls into Lovech on a frosty morning with the 08:15 Trojan to Levski service.
Mark Torkington

No. 55. 196 rests after arrival at Trojan on February 10th with the 10:35 service from Levski. *Mark Torkington*

Bulgaria

On February 12th, No. 75.004 pauses at Razlog to top up its steam heating equipment whilst working a service to Dobrinishte. *Mark Torkington*

Bulgaria

On February 12th, No. 75.004 enters the passing loop at Vavara en route to Septemvri. *Mark Torkington*

Bulgaria

No. 75.005 waits to pass another service at Avramovo on February 13th on the Rhodope narrow gauge railway. *Mark Torkington*

Croatia

Šapjane lies on the border between Slovenia and Croatia. As well as being the loco change point it's also the voltage changeover from the Slovenian 3000V DC to the Croatian 25kV AC system. The voltage change occurs in the middle of the station and changeover boards can be seen in the OHLE above the 2nd coach. Arriving trains lower their pantographs when entering Šapjane station and coast to a halt under the new voltage. The engine taking over the train then removes the incoming dead engine and shunts it back under its correct voltage. The new engine then drops back on the train to take it forward. In the last light of the day on February 10th, HZ Bo-Bo Class 1141.377 prepares to remove ŠZ Bo-Bo 342.024 from train No. 483 15:20 from Ljubljana before working forward the train forward to Rijeka. The loco change is given 14 minutes in the timetable. On this day it took just 8 mins. *Andy Pratt*

HZ Cargo Class 2062.112 leads classmate 2062.114 light engine through Ogulin station onto the small servicing shed having just arrived with a freight from the Split direction on February 11th. *Andy Pratt*

Czech Republic

Slovenská PSŽ will expand its locomotive fleet with EffiShunters 1000

The company Prvá Slovenská železníká (PSŽ) will expand its transport fleet with two EffiShunter 1000 locomotives. The purchase agreement was signed by representatives of both companies at the CZ LOKO plant in Jihlava. Both will be delivered in early 2025.

“ The shortage of diesel locomotives and the increased volume of transport in Romania and Hungary, especially on non-electrified lines, hastened our decision to purchase two EffiShunters. The decisive criterion, in addition to quality, was precisely the extension of the interoperability of this type of locomotive to Romania,” said Ladislav Szuťányi, CEO of PSŽ.

The company also transports goods to the territory of Slovakia and the Czech Republic. Through interoperable locomotives and one license in these four countries, the European Union has simplified and accelerated carriages without bridging at transfer stations

The Slovak freight carrier already has two other CZ LOKO vehicles in its fleet, namely the diesel locomotive EffiLiner 1600 and the electric EffiLiner 3000, which enable driving under current systems of 3 kV DC and 25 kV AC.

The new contract confirms the success of the EffiShunter 1000 locomotive on the international market. For us, its deployment on Romanian tracks is another big challenge. Romania will thus become the sixth country where it will be possible to operate this locomotive,” added Michal Schaffer, manager of the CZ LOKO sales department.

Železiarne Podbrezová deploys the first EffiShunter 600 from CZ LOKO

Slovenské Železiarne Podbrezová, which produces steel and seamless steel pipes, has taken delivery of the first of three EffiShunter 600 locomotives from CZ LOKO. The rest will follow in quick succession. Complete completion of the contract is planned for the turn of March and April. The locomotives will run on the company siding while serving demanding steel operations.

“Železiarne Podbrezová is the first Slovak siding company that decided to completely modernize its locomotive fleet. For us, this results in a huge commitment to meet customer expectations in the demanding conditions of steel mills,” says Michal Schaffer, manager of the CZ LOKO sales department.

The modern EffiShuners 600 were created by rebuilding four decades old ČKD shunting locomotives of the T448 series. Users significantly save on operating and maintenance costs, as only the chassis and frame remain from the original vehicle. But they are also undergoing testing and modifications, everything else is completely new.

“We primarily expect higher operational reliability, lower operating costs and lower maintenance costs from the modernization. This will extend the life cycle of locomotives and improve the working conditions of our train drivers,” said Peter Krajan, head of transport operations at Železiarní Podbrezová

In 2015, the EffiShunter 600 was born in Třinecké železárny, which also has the most experience with them. Compared to the original locomotives, fuel costs were reduced by about 25 percent.

With a lower failure rate and higher operational reliability, the costs of routine maintenance have also decreased. The new control system allows online access to speedometer data and operational data. The vehicles have a hood filter against flying dust, stainless steel air tanks and air distribution systems or an air-conditioned driver’s cabin. At the same time, the Caterpillar C18 combustion engine with an output of 563 kW meets EU Stage V emission standards.

“For users, this is a radical saving in operating costs. The fleet will be managed in the MyLOKO electronic system, which is used, among other things, for maintenance management, location monitoring, consumption and other important parameters,” added Michal Schaffer.

Železiarne Podbrezová is one of the leading European producers of seamless steel pipes with an annual production of approximately 160,000 tons. The ŽP Group brand covers production plants in Slovakia, the Czech Republic and Spain, from which production goes to 50 countries.

Photo: Class 723.726 ©Dalibor Palko

Czech Republic

Alstom and ČD-Telematika sign agreements for the supply of ETCS Level 2 for Pendolino trains and electric vehicles

Alstom, a global leader in smart and sustainable mobility, has received an order from ČD-Telematika, a major supplier and provider for the railway environment in Czech Republic and Slovakia, to supply ETCS (European Train Control System) Level 2 for 7 Pendolino vehicles of the Class 680 and for 66 electric vehicles of the Class 471. Both agreements commit Alstom to deliver ETCS system, including the design and implementation of the solution. The ETCS system will be supplemented by national functionalities to allow trains operation in the Czech Republic and in Slovakia.

“I am proud that we offer adaptable, competitive signalling solutions capable of increasing train operation frequency and safety on rail. ETCS Level 2 is the optimal signalling solution for current needs and Alstom’s proven solution includes best-in-class features with a flexible, upgradeable design,” says Dan Kurucz, Managing Director of Alstom Czech Republic and Slovakia.

“ČD - Telematika is one of the leaders in the field of retrofitting driving vehicles with the European Train Control System ETCS. We are really pleased to join forces with the leading ETCS supplier, Alstom, for the retrofitting of two of ČD’s major series, namely the 680 Pendolino and the 471 series known as CityElefant,” says Jan Hobza, Chairman of the Board of Directors of ČD - Telematika.

European Train Control System Level 2 allows for a continuous digital radio communication with train movements based on signalling block occupation detection by the trackside system. It provides the highest safety protection and allows for network capacity increase when deployed without lineside signals or with lineside signals cancellation.

Originally designed to harmonise cross-border rail traffic, ETCS Level 2 increases the speed, punctuality and capacity of trains in total safety. The most advanced version of Level 2 (Baseline 3) features optimised braking curves for maximised operational performance and increased passenger comfort. This version also enhances odometric performance, enabling drivers to select the appropriate speed in strict compliance with SIL4, the highest level of safety under EN 50129.

Alstom Group’s signalling facility in Charleroi, global centre of excellence, will be responsible for the engineering of the various signalling systems and for the delivery of the on-board equipment. Alstom will also provide maintenance for a 10-year period, including spare parts and repairs.

The award of this contract confirms Alstom’s leading position in the railway signalling system market. In Europe, over 70% of trains equipped with a European-made ETCS chose an Alstom system. This latest-generation Level 2 train control and supervision system is already being successfully implemented by Alstom in Norway, in Belgium as well as in the Czech Republic.

It’s now being deployed on the high-speed trains of Deutsche Bahn throughout Germany, and on S-Bahn suburban trains by Alstom and competitors in the Stuttgart region, as well as on various projects in Spain, UK, India, and Australia.

Alstom and RegioJet sign an agreement for the supply of another 13 Traxx MS3 locomotives

Alstom, a global leader in smart and sustainable mobility, has received an order from RegioJet, Central Europe’s largest private rail passenger carrier, to supply 13 Traxx MS3 locomotives to be operated in the Central Europe region. These new locomotives will be used for domestic and cross-border journeys on the electrified networks in the Czech Republic, Slovakia, Austria, Hungary, Poland and Germany. They are designed for use with various electrification systems and are equipped with an ETCS Level 2 signalling system, as well as all conventional signalling systems for the respective countries. Deliveries are expected to begin in 2024.

Radim Jančura, owner of RegioJet, says: “We look forward to further deliveries of the new generation of Traxx MS3 locomotives. We currently operate 22 multi-system locomotives, 18 of which are the latest generation of Traxx MS3. These modern locomotives are a reliable and proven part of our locomotive fleet. In addition to increased efficiency and lower operating costs, the new locomotives will enable us to further expand our quality and modern rail transport services under the RegioJet brand in the Czech Republic, as well as in other European countries. At the same time, these purchases clearly confirm our commitment to invest in new train technology that brings greater comfort to passengers.”

“RegioJet is a valued customer in the locomotive sector with whom we have a long and successful partnership. We are delighted to be able to continue contributing to making passenger and freight transport in the Central Europe region more efficient and sustainable with these 13 Traxx locomotives, that come with an optimised maintenance regime with fewer interventions. We believe that this contract will open the way to other contracts we are negotiating with RegioJet,” – added Dan Kurucz, Managing Director Alstom Czech Republic and Slovakia.

The Traxx platform offers a flexible and modular design for many applications and configurations (AC, DC and multi-system) in Europe and neighbouring regions. Its strong, modular platform approach results in various advantages for single as well as multi-country applications.

The third generation Traxx locomotive delivers increased operational performance and reliability, and when compared to earlier versions, comes with a higher energy efficiency. In addition, its maintenance intervals have been extended by 33% to improve availability and reduce maintenance effort. More than 2,400 units have been sold over the last 20 years. They have been approved in 20 countries and cover a total annual distance of more than 300 million km per year.

The new Traxx locomotive was designed at Alstom’s site in Mannheim and is manufactured at the Kassel site (Germany). The bogies are provided by the Siegen site (Germany) and the body structures are manufactured in Wroclaw (Poland).

France

TGV M launches its first dynamic tests in the Czech Republic

Since December 7, 2022, the first TGV M test train, from Alstom's Avelia Horizon range, has been at the Velim test site in the Czech Republic. This test campaign will last almost 6 months and is part of a long series of tests for this new generation of High Speed Trains.

Decisive test campaigns for the admission of the train and its reliability

The TGV M test programme consists of the following phases:

1. Static and quasi-static testing:
Each piece of equipment on the train was first assessed separately to validate its own performance and service life. Then, once assembled, the test train was tested at Alstom's Bellevue site (in France) at a standstill and then at a speed not exceeding 30 km/h. The operation of all the equipment integrated into the train was checked, as were the interactions of this equipment with each other.

2. Pre-validation testing:
The pre-validation tests are first conducted on the Velim site. This is a closed circuit where traffic is less constrained than on the national railway networks and, above all, there is no interaction with commercial traffic. The objectives here are to validate the overall operation of the train, to remove the risks that appeared during the design phase in relation to the regulatory requirements and to adjust the digital modelling accordingly. This phase takes place at speeds of up to 200 km/h.
On the basis of this sequence, the tests will then continue with traffic on the French national network. The overall operation of the train will be tested up to 320 km/h.

3. Admission tests:
They consist of testing the operation by reproducing the configurations and contexts that the train may encounter throughout his entire life (degraded modes, weather conditions, obstacles on the network, etc.). They will be carried out on the French national network, with traffic up to 320 km/h by an accredited organisation. The admission tests will make it possible to obtain the Commercial Service Authorisation issued by the ERA (European Railways Agency).

4. Endurance tests:
Over a long period prior to commercial operation, several trainsets will run throughout the French national network to test the reliability of the train under real operating conditions. All functions will be tested, in particular those relating to passenger comfort. These tests will also be an opportunity for SNCF Voyageurs drivers and conductors to familiarise themselves with this new train and its innovations.

At the end of all these tests, the TGV M will have benefited from a total of 350 weeks of testing and will have covered more than a million kilometres before the first customer experiences the high-speed train of tomorrow.

Six months of tests in Velim before joining the French railway network
Pre-validation tests needed for the dynamic development of the TGV M are currently being carried out at Velim by Alstom with the support of the Test Agency of the 'SNCF Voyageurs' Equipment Engineering Department.

The Velim test site, equipped with high-performance infrastructure, consists of a ring where rolling stock can run at up to 200km/h. On arrival at Velim, the TGV M began its tests and a gradual increase in speed to 200km/h was successfully achieved in less than a week. A very short time, well under the forecasts. Once this stage was over, the first phases of functional development tests began: braking without load and under load, pantograph tests, signalling tests (communication between the train and the ground infrastructure), etc.

Still in progress, this key sequence aims to ensure compliance with the safety requirements for railway operations and to submit the Request for Authorisation to Run a Test Train on the French National Railway Network (RARTT).

This test campaign also allows SNCF Voyageurs drivers to take charge of the train and discover their working environment. The driver's cab was carefully designed with the support of SNCF drivers to ensure that it meets their needs in terms of comfort, space and ergonomics.

Climatic tests in Vienna in early March
Another power car dedicated to climatic tests will leave the Alstom site of La Rochelle in mid-February for the test site in Vienna, Austria.

These tests are crucial in the current context of global warming/disruption. The aim is to evaluate energy efficiency. Indeed, the creation of optimal thermal comfort inside a vehicle leads to high energy consumption by auxiliary systems (ventilation, air conditioning).

From the beginning of March, tests in a climatic chamber will begin on site. They will be conducted over a temperature range of -20°C to +40°C. The programme includes:
- Simulation of sunshine up to 800 W/m^2
- Wind simulation up to 160 km/h
- Tests of heating, air conditioning, insulation of the undercarriage as well as the driver's cab and passenger cars.

Not only is this part of the train qualification process, but it will actively contribute to the planned 20% reduction in energy consumption of the TGV M.

Tests on the National French Railway Network in Spring
Thanks to the success of these various steps, the tests will be able to begin on the French National Railway Network: the train will be tested at 320km/h in Spring 2023.

Higher capacity, more ecological, better connectivity, better accessibility
115 units have been ordered to date (100 domestic and 15 international trainsets). The TGV M will be used for both the INOUI and OUIGO TGV services and is characterised by major innovations:

- Unprecedented modularity, which makes it possible to adjust the number of cars as closely as possible to market needs (7, 8 or 9), to rapidly transform a 1st class space into a 2nd class space and vice versa, to reconfigure the interior by removing or adding seats, bicycle or luggage spaces, etc.

- A 20% increase in on-board space, i.e. a possible offer of up to 740 seats compared to the current maximum of 634.

- Ultra-competitive energy efficiency and carbon footprint per passenger: the TGV M's carbon footprint is the lowest on the market and 97% of the train's components are recyclable. With a 32% reduction in CO^2 emissions, the TGV M is fully in line with the SNCF Group's environmental commitments, as set out in the SNCF Voyageurs "Planète Voyages" programme, which aims to reduce the carbon footprint and energy consumption of all its activities.

- Access to evolving connected services that meet passengers' needs, such as on-board Wi-Fi, as well as complete information in real time in the different areas of the train.

- A highly "communicating" train set whose sensors continuously transmit thousands of pieces of data enabling the train to be examined in real time from every angle to optimise maintenance and availability.

- Increased accessibility on board, for the benefit of all passengers.

TGV M, a project supported by the French government through ADEME and the 'Secrétariat Général Pour l'Investissement' (SGPI), with the first train sets scheduled to enter commercial service at the end of 2024, has benefited from the knowledge of Alstom's top experts and SNCF Voyageurs' Matériel and TGV-INTERCITES departments, brought together on a common platform.

France

The interior train design of the future Line 18 of the Ile-de-France metro is revealed by Île-de-France Mobilités, the Société du Grand Paris and Alstom

Île-de-France Mobilités, Société du Grand Paris (SGP) and Alstom have unveiled the final design of the rolling stock for the future Line 18 of the Île-de-France metro network. Designed and manufactured by Alstom, this latest generation automatic metro combines capacity, comfort, speed and reliability. The first trains will be put into service on Line 18 from 2026.

Fully funded by Île-de-France Mobilités, the future trains for Line 18 were designed by Alstom's Advanced & Creative Design office, in collaboration with Île-de-France Mobilités, SGP and Egis Rail, in order to meet the specific needs of Line 18 and the expectations of passengers.

The new interior design of the Line 18 trains combines capacity, fluidity and comfort for passengers.

The future three-car 47-meter-long trains can carry up to 350 passengers, are 100% accessible to all, and offer a smooth and comfortable ride.

To facilitate passenger flow, access to the train is on the floor level through three wide doors featured on each car. The wide corridors, wide inter-aisles and large panoramic openings at each end give a spacious feeling and allow a greater flow of traffic.

The interior offers passengers a variety of handrails, spaces and seating options. To create a new travel space, the interconnecting bellows offer a rigid lining that replaces the traditional bellow design. Along with the fixed seats are complementing flip-up seats to provide more seating at off-peak times.

Passengers with limited mobility, who have been involved in the design process, have dedicated seats and wheelchair spaces. The priority seats are numerous and easily identifiable by their specific red colour, which is now recognisable on all new equipment. In anticipation of the service to Paris Orly airport, mixed spaces for passengers with pushchairs and luggage have been specifically created in the central car.

Interior design for an optimised passenger experience
Equipped with Internet connection, USB sockets and dynamic information display screens, these new trains are definitely connected.

Each car is equipped with efficient ventilation, air conditioning and heating systems to ensure thermal comfort in all seasons.

The feeling of space and luminosity is reinforced by the streamlined shapes associated with a play of bright colours and (this is new) with lighting that follows the circadian rhythm: it is similar to natural light that varies according to the time of day and adapts to the biological rhythm of travellers to improve their well-being.

For enhanced safety, each access has special lighting and is equipped with video surveillance.

An exterior design supported by the people of Île-de-France
Wishing to involve the people of Île-de-France in the choice of the exterior design of this new generation metro, Île-de-France Mobilités launched an online consultation with the population at the end of 2021. Among three proposals designed by Alstom, voters chose the current design, with its distinctive luminous signature around a large windshield. Much appreciated by passengers, especially children, this new wider windshield offers a panoramic view of the front of the train and optimises the available surface area to create additional space for passengers in the metro.

Image: ©Alstom SA

The HP1 signal allows driving at the speed permitted in the timetable for ESG Class 275.117 seen in Ratingen on February 15th. *Erik de Zeeuw*

On February 15th, SBB Cargo Class 193.522 ‘Elbe’ passes ‘bypass Lotharstrasse’ in Duisburg with an intermodal from Hannover-Linden Hafen (D) to Novara Boschetto (I). *Erik de Zeeuw*

HSB Harzkamel Class 199.861 stands at Brocken station on February 5th ready to clear more snow, a task not dissimilar to painting the Forth Bridge on the day in question. *Andy Pratt*

After a short break in Krefeld, DB Class 193.300 continues its way with a Rotterdam (NL) to Verona (I) shuttle on February 15th. *Erik de Zeeuw*

Germany

In Duisburg on February 15th, Thyssenkrupp G1206 No. 545 is seen with a Wülfrath to Duisburg Wascosa rent chalk train. *Erik de Zeeuw*

On February 15th, Chemion Logistik G800BB No. 278.006 has arrived in Krefeld with a cargo of liquid Sulphur Dioxide from Grillo in Duisburg and will make a see-sawing motion to reverse into Chempark 1. *Erik de Zeeuw*

Germany

On February 15th, Rail Cargo Carrier Class 203.152 passes Duisburg with a mixed freight towards Oberhausen West.
Erik de Zeeuw

DB Regio Class 146.260 awaits departure time at Fulda with train No. RE4515 11:07 to Frankfurt (Main) Hbf on February 4th.
Andy Pratt

DB Cargo doing its part for energy supply

An efficiently operating infrastructure is crucial to the future viability of our energy supply. This is one of the reasons the LNG import terminal is being connected in record time to the north-west European gas network at the Elbehafen port in Brunsbüttel.

Climate-friendly pipe transport by rail
DB Cargo made an important contribution to this effort by delivering around 3,000 urgently needed pipes via eco-friendly rail transport in the space of a few weeks. The pipes are 18 metres long and about a metre in diameter, and they weigh around five tonnes; they were produced by Mannesmann-Grossrohr GmbH, a subsidiary of Salzgitter AG. The cargo was transported by freight train directly from the plant in Salzgitter to the port in Brunsbüttel, which is becoming an important site for a more secure and sustainable energy supply.

After its completion in time for the start of next winter, the pipeline will extend 55 kilometres from the Brunsbüttel LNG terminal to Hamburg. It will be operated by distribution network operator Gasunie Deutschland. The pipeline's entire infrastructure is hydrogen-ready, so green hydrogen could also flow through it in the future, further underscoring the project's importance to the environment.

Final transport concludes successful project
Government and business figures met on the occasion of the final pipe transport at Elbehafen Brunsbüttel, where they were welcomed by Frank Schnabel, Managing Director of Brunsbüttel Ports GmbH. Among those in attendance for the final wagon load were Volker Wissing, Germany's Federal Minister for Digital and Transport; Dr Sigrid Nikutta, DB Board Member for Freight Transport and CEO of DB Cargo AG; Dr Sebastian Bross, Member of the Executive Board of Salzgitter AG; Jens Schumann, Managing Director of Gasunie Deutschland; and Tobias Goldschmidt, Minister for Energy Transition, Climate Protection, Environment and Nature for the State of Schleswig-Holstein.

In a statement at the event, Dr Nikutta emphasised the important logistical role played by rail freight transport in Germany's energy supply.
"A chain is only as strong as its links. This is also true of supply chains, and of the energy transition in Germany. Hand in hand, we're turning the challenge into an opportunity, and rail freight transport is playing an important role in all of the logistical aspects. DB Cargo has delivered thousands of large-diameter pipes to the LNG terminal in Wilhelmshaven and now to Brunsbüttel – quickly and on time. We thank our innovative customers like Salzgitter AG for their collaboration in this forward-looking project," Nikutta said.

Germany

Battery trains from Siemens Mobility for the Westerwald

Hessische Landesbahn has opted for three two-car Mireo Plus B battery trains from Siemens Mobility for their Upper and Lower Westerwald railway pilot project. Both routes in the Westerwald, with demanding gradients and long non-electrified sections, require high-performance trains. With its high drive power, the Mireo Plus B is ideally suited to meet this challenge. Battery-powered trains will achieve substantial CO2 savings and reduce noise levels and exhaust emissions in the region when they replace diesel trains.

Mireo Plus B Network Westerwald

"As Minister for Climate Protection and Mobility, I am especially thrilled about the progress being made in the planned pilot project with battery-powered trains in the Westerwald. The decision favoring the high-performance battery trains from Siemens Mobility marks a milestone on the long path toward providing climate-neutral public transport in Rhineland-Palatinate. Expanding the use of alternative drives is indispensable for achieving the mobility transition and protecting the climate. We are preparing the road for the public transport of the future," emphasized Katrin Eder, Minister for Climate Protection, Environment, Energy and Mobility, State of Rhineland-Palatinate.

"We would like to thank those responsible in the state of Rhineland-Palatinate and here in the region for enabling us to contribute to this demanding and exciting pilot project. We are convinced that this environmentally friendly, innovative technology is especially suitable for use in difficult, longer uphill stretches in the low mountains, and are really pleased to have this opportunity to deliver proof of this capability in everyday operations", stated Veit Salzmann, CEO Hessische Landesbahn.

"I'm really proud that our joint commitment to alternative drives for regional rail transport in northern Rhineland-Palatinate is bearing fruit. The order from Hessische Landesbahn as our contractual partner to Siemens Mobility for the delivery of the battery trains has laid the basis for the innovative trains with climate-friendly drive to prove their suitability in everyday passenger service in the Westerwald region. We're quite excited about the experience and lessons that the pilot project will provide. This will allow us to take further decision on the use of alternative drives", concluded Achim Hallerbach, District Administrator, District of Neuwied and Head of the SPNV-North.

Elmar Zeiler, Head of Regional Trains, Siemens Mobility: "We are delighted to have this opportunity to demonstrate in the Westerwald pilot project that alternative drives offer a really good and green alternative for passenger transport even on topographically challenging routes and long non-electrified route sections. The Mireo Plus B from Siemens Mobility is climate-friendly, powerful and quiet, and delivers significant CO2 savings since it replaces diesel with battery power."

The new battery trains will operate on the Oberwesterwaldbahn (OWB) from Limburg to Altenkirchen – Au – Siegen, and on the Unterwesterwaldbahn (UWB) between Limburg – Montabaur – Siershahn. The OWB route is 115 kilometers long and includes a 75-kilometre stretch without overhead power lines. Plans call for charging the train's batteries in Limburg and on the Au

– Siegen stretch. The non-electrified section on the UWB is approximately 35 kilometres long. This enables trains to operate back and forth without recharging. The trains will serve more than 50 stations on the two routes.
For this project, Siemens Mobility is building three two-car Mireo Plus B battery trains, each with three doors on each side to facilitate quick and easy entries and exits. The trains are equipped with pantographs for operating under catenaries and charging batteries, and with batteries for operating on non-electrified routes. When operating in battery mode, the range of the Mireo Plus B on topographically challenging routes is around 80 kilometres without recharging. Silicon carbide technology used in the Mireo Plus B contributes to significant energy savings. The spacious train offers 126 seats and standing room for 156 passengers.

DB Cargo delivers energy security: three million tons of coal for power plants

Interim report: Winter supply of German power plants with hard coal proceeded smoothly
All requests were met
More than 1,000 special freight wagons reactivated

Germany got through the winter well - as far as the energy supply is concerned. DB Cargo AG has made an important contribution: German power plants have been supplied with around three million tons of coal since October 2022. Every day, DB Cargo freight trains bring an average of 30,000 tons of coal from the seaports of the North Sea to around 15 large power plant locations across the country. This corresponds to a doubling of the previous transport volume.

Energy suppliers were thus able to ensure the country's supply of electricity and heat at all times. Some of the freight trains also used "energy corridors" and could primarily travel through the rail network. There were no significant interactions with the rest of the train traffic, such as ICE & Co.

dr Sigrid Nikutta, CEO of DB Cargo AG: "Nobody had planned it - but then we implemented it quickly: With great commitment, we doubled the usual transport volumes for hard coal within a few weeks. The power plant supply by DB Cargo is an important building block for European energy security in times like these."

Due to the halting of gas deliveries to Germany ordered by Russia, some power plants in reserve were reactivated last autumn and went back on the grid. DB Cargo AG has also made more than 1,000 coal transport wagons that were already sitting in sidings technically fit again.

Ports of arrival were mostly Rotterdam and Amsterdam, a focus of the routes led to power plants in southern Germany and Saarland.

The supply of the power plants continues as required by the customers. Due to the current situation on the energy market, experts are currently assuming that the power plant reserves will continue to operate in the coming summer and winter.

MRCE Class 182.595 leads 182.523 with Flixtrain No. FLX1241 06:44 Berlin Hbf - Stuttgart Hbf during it's stop at Fulda on February 4th. *Andy Pratt*

Germany

The path to a high-performance network: DB is entering into further talks with the federal government with a proposal for a restructuring plan

Deutsche Bahn (DB) has developed a preliminary rehabilitation plan for the expansion of the heavily used rail network into a high-capacity network. Based on various criteria, DB identified around 40 sections of track nationwide that needed to be renovated in the short, medium or long term. It is about a total of around 4,200 kilometres of route in the period up to 2030. At a series of dialogue events with the railway industry, proposals were also discussed in which order the affected routes could be subjected to a general renovation. The resulting working paper serves DB as a basis for further talks with the federal government, which ultimately decides on the concept.

DB Infrastructure Board Member Berthold Huber: “For more quality, punctuality and reliability on the rails, there is no alternative to a new renovation concept. By 2030, we want to expand the heavily used sections of our rail network into a high-performance network. The first corridors have already been determined: the general renovation of the Riedbahn between Frankfurt/Main and Mannheim will begin in the summer of 2024, with the corridor sections Hamburg-Berlin and Emmerich-Oberhausen following a year later. How and where to continue after that is decided by the federal government. I am glad that we can now go into further talks with a specific proposal. The exchange with the industry is an important basis for this.”

In principle, all route sections with particularly high utilization and particularly fault-prone infrastructure systems are suitable for a general renovation. With its new approach, DB intends to bundle construction measures much more closely than before and to completely renew routes that are in need of rehabilitation within the shortest possible period of time.

This includes sleepers and ballast, tracks and switches, signals and signal boxes as well as the stations. This means that the route will be closed once, after which no major construction work will be necessary for several years. In addition, the refurbished sections will be significantly more efficient, will have a first-class standard of equipment and will be prepared for the digital railway operation of the future.

For travellers and freight transport companies, every completely renovated route brings noticeable improvements in quality and punctuality. By consistently replacing the old technology, the number of infrastructure-related faults is significantly reduced.

In addition, the long-term planning of diversions and rail replacement services ensures that passengers and goods reliably reach their destinations even during the general renovations. DB will upgrade detour routes in advance.

DB and PKP expand rail connections and help Ukrainian railways

Poland and Germany are moving closer together on the rails. At the 5th German-Polish Railway Summit in Potsdam, DB CEO Dr. Richard Lutz and high-ranking representatives of the Polish railway PKP discussed the status of various construction projects and line densifications in international transport at the invitation of the coordinator for German-Polish inter-societal and cross-border cooperation in the Federal Foreign Office Dietmar Nietan together with the ministries of both countries.

The partners are striving for a better offer on the long-distance connection Berlin-Frankfurt (Oder)-Kraków-Przemyśl. Currently, a pair of trains rolls per day; in the future, two trains will run in each direction. A two-hour cycle is planned for the Berlin-Poznan-Warszawa long-distance line, which is already well used today - with six pairs of trains a day starting in June 2023.

For a journey time of 90 minutes between Berlin and Szczecin, the route between Angermünde and the German-Polish border is currently being double-tracked, electrified and equipped with the European train control system ETCS. From 2026, local trains from the German capital to the Polish Baltic Sea will be half an hour faster than today.

At the railway summit, both railways reaffirmed their support for the Ukrainian railway Ukrzaliznytsia (UZ) and the people of Ukraine. DB boss Dr. Lutz: “From the day of the criminal attack, we have been in close contact with our partners at the PKP about how we can help. We are cooperating on the rail bridge, which has been used to bring humanitarian supplies directly to war-affected areas since March 2022.

Together, DB and PKP ensured that hundreds of thousands of people were able to leave the war zones safely. Half a million refugees have used our helpukraine ticket. The European family of railway workers is strong and will continue to support our Ukrainian colleagues wherever possible.”

On February 5th, RFO Class 193.947 is seen in Meteren with a Bad Bentheim (D) to IJsselmonde (NL) biodiesel tank train.
Erik de Zeeuw

RTB Cargo Class 186.428 passes Bathmen with a Pernis to Frankfurt Oder (D), Kutno, Brzeg Dolny, Gliwice, Kolbuszowa & Poznań (PL) container liner on February 4th. *Erik de Zeeuw*

Train Charter Services Class 193.527 'Main' (rented to SBB Cargo) heads TUI Ski Express No. 13426 from Bludenz (A) to Amsterdam CS (NL) passing Nieuwersluis on February 12th. *Erik de Zeeuw*

On February 5th, HUPAC Class 193.493 approaches Den Bosch with intermodal No. 40028 from Terminal Intermodale di Mortara (I) to Pernis (NL). Hupac was founded on March 1st 1967 in Chiasso by the transport companies Bertschi and F.lli Bernasconi, the haulage contractors Danzas and Jacky Maeder and Swiss railways SBB. *Erik de Zeeuw*

Netherlands

On January 22th, LINEAS Class 186.294 rolls along Soest with a Rotterdam (NL) to Bad Bentheim (D) tanker train. *Erik de Zeeuw*

Near Loenersloot on January 22nd, VolkerRail V100 No. 203-2 ‘Jerry’ runs ballast empties No. 56944 from Rotterdam IJsm to Amsterdam Awhv.
Erik de Zeeuw

Netherlands

Due to maintenance on the HSL (High Speed Line), the Thalys from Amsterdam was rerouted from Amsterdam via Utrecht - ‘s-Hertogenbosch and Breda. This route is not used often so there was the opportunity to get a picture of a Thalys in ‘s-Hertogenbosch. Here Thalys No. 4306 just left the train station of ‘s-Hertogenbosch on its way to Breda. *Andre Pronk*

Netherlands

Plan-U 151 passes by ‘s-Hertogenbosch heading to the HSL to test the signalling and to get the rails rust free. When a track has been out of service for a while, the rails must be cleared from rust and the Plan-U 151 is used because the train is heavy in weight, so they do not have to run as often on the tracks to get rid of the rust. Secondly it runs on diesel power, so they not have the use the overhead power lines. Also as this train has no HSL safety features, it can run to a red light to test the signalling. The Plan U-151 is a historical train and the money they earn is used to maintain the train. *Andre Pronk*

Slovakia

There is a small pocket of broad gauge railway in operation in eastern Slovakia linking the huge United States Steel plant south of Košice to the Ukraine border at Maťovce. The 1520mm line mainly runs parallel to the 1435mm network. At Trebišov station on February 13th, a train bound for the steelworks trundles through behind a smartly turned out double DC loco Class 125.803 and classmate, while 125.832 banks on the rear. The 6 single locos develop over 16,000hp between them. The locomotives were originally Czechoslovakian ČSD class E469.5, built by Skoda at Plzeň and are approaching 50 years in service. *Andy Pratt*

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Slovakia

ZSSK railcars Class 812.042 and 812.052 await departure from Trebišov station with train No. Os9014 11:30 to Michaľany on February 13th. Note the temporary wooden platform in use while the station is being rebuilt. *Andy Pratt*

MRCE operated Vectron Class 193.666 takes in the winter sun between duties at Michaľany on February 13th. *Andy Pratt*

The driver of Slovakian Goggle Class 757.006 has a quick glance back to ensure all is in order as he departs Tornal'a station with train No. R918 'Gemeran' 13:22 Kosice to Zvolen Osobna Stanice on February 12th. *Andy Pratt*

MRCE operated Eurosprinter Class 189.152 awaits departure from Michaľany on February 13th while in the background ZSSK Cargo Grumpy Class 752.048 pauses between local freight duties. *Andy Pratt*

ÖBB Vectron Class 1293.013 awaits departure southbound from Jesenice towards Ljubljana with a car train on February 10th. The sun had just risen over the Julian Alps and the outside temperature was -11c when the photo was taken at 08:00. *Andy Pratt*

SZ Class 644.020 is ready to depart Bohinjska Bistrica with train No. 855, the 11:37 Autovlak service to Podbrdo on February 10th. *Andy Pratt*

U.S.A.

Sustainable rail transport: Stadler brings battery trains to the USA

Utah State University (USU), the ASPIRE Engineering Research Center and Stadler have signed a contract to develop and test a battery-powered passenger train. Based on the successful FLIRT Akku concept, Stadler will bring the first multiple-unit train with battery drive to North America.

The aim of the project is to develop, build and test a FLIRT Akku battery-powered two-car multiple unit. Stadler's FLIRT Akku model is a single-decker, lightweight multiple-unit train for regional transport. Thanks to its battery drive, it allows CO2 emission-free rail transport on non-electrified lines. Stadler has already sold over 110 FLIRT Akku vehicles. In Germany, for example, the battery-powered trains have replaced diesel fleets in Schleswig-Holstein, Rhineland-Palatinate and Mecklenburg-Western Pomerania.

In cooperation with ASPIRE, Stadler is now developing a FLIRT Akku model tailored to the American market. This requires extensive research and development work to adapt the vehicle to the American infrastructure and national regulations. While Stadler is concentrating on the design and production of the train, ASPIRE is working on the development of the trackside charging infrastructure for the vehicle. During subsequent extensive test runs, ASPIRE, USU and Stadler hope to gain important insights for the decarbonisation of American passenger transport through the use of battery-powered trains.

«We are honored to partner with Stadler on this groundbreaking project. Success will bring design and manufacturing jobs to Utah. It will also chart the path to electrified commuter and light rail systems along the Wasatch Front. The battery-electric train solution will improve air quality and reduce operating costs while supporting shared charging infrastructure with trucks, buses, and cars. We're beyond pleased to have such an incredible opportunity to be working with a world class manufacturer here in the state», said Dr. Regan Zane, Director of the NSF ASPIRE Engineering Research Center.

«With little to no electrified routes in the North American public rail transit system, a battery train is a great zero-emission alternative to diesel-powered vehicles. After a contract for a hydrogen-powered FLIRT for California, we are now excited to bring our battery solution to the United States. In ASPIRE we have found an excellent partner to develop the most efficient and fully integrated system for environmentally friendly mobility. We are proud to be able to work with local talent to design and build this technology here in Utah», said Martin Ritter, CEO of Stadler US, Inc.

«The Utah Legislature is committed to developing strong public-private partnerships like this, that result in innovative solutions to critical issues facing our state. We are thrilled to be partners in this project and look forward to its success» said Mike Schultz, Majority Leader, Utah House of Representatives.

FLIRT Akku: the world record-beating train

The FLIRT Akku is the battery-operated version of Stadler's FLIRT model. The vehicle has an operating range of around 100 kilometres. Having covered 224 kilometres in battery-only mode, the FLIRT Akku holds the world record for the longest journey travelled by a regional train in battery-only mode without additional charging. As well as the purely electric and battery-electric versions, Stadler also makes a FLIRT model that runs on hydrogen. Stadler is currently developing the first hydrogen-powered FLIRT for the San Bernardino County Transportation Authority (SBCTA).

Belgium

ŠKODA GROUP ACQUIRES DIGITAL RAIL SYSTEM SAFETY DEVELOPER, THE SIGNALLING COMPANY

Škoda Group has acquired a 93.9% stake in The Signalling Company, a Belgian digital developer of onboard safety software and signalling systems for railway operators. The acquisition is in line with the Group's strategy to expand into modern mobility systems. Earlier this year the Group took over the Austrian operations of Molinari Rail, a technical engineering and design company. The remaining 6.1% stake of The Signalling Company remains with the company's two executives, Stanislas Pinte and Frederic Du Jardin.

The Signalling Company designs cutting-edge, Level 4 safety software fully compatible with the current European Train Control System (ETCS) standard and is also applicable to autonomous mobility.

"Expanding our portfolio with our own signalling solutions, especially ETCS, is important to the Group's success in European markets, especially in Western Europe. This sector has great potential, and we're looking forward to developing new solutions to improve rail transport safety, efficiency and sustainability," says Didier Pfleger, CEO of Škoda Group.

Škoda Group's acquisition of The Signalling Company will boost its competitiveness with major European train manufacturers. The Group will be able to offer a full range of products and services to railway operators in Western Europe, especially Belgium, Germany, and the Netherlands. The Signalling Company is Currently equipping 110 locomotives with ETCS for Europe's largest private rail freight operator, Lineas.

By integrating the company with 38 employees into the Group an own business line "Signalling" will be established within Škoda Group under the leadership of one of the shareholders, Stanislas Pinte, who will be appointed as Vice President for Signalling. His task will be to complete the development of the existing signalling solutions and ensure the development of new technologies in this area.

"With the entry of a large and successful partner into our company, there are further great opportunities for growth in the signalling business. Thanks to Škoda Group's investment and the connection with such a major European rolling stock manufacturer, we will gain access to the European market," says Stanislas Pinte, Vice President Signalling at Škoda Group.

Brazil

Alstom delivers the first train for ViaMobilidade's line 8-Diamante and line 9-Esmeralda, in São Paulo

Alstom, global leader in smart and sustainable mobility, delivered the first 8900 series train to ViaMobilidade, the concessionaire that manages lines 8-Diamante and 9-Esmeralda of São Paulo, thus marking the beginning of a new journey in urban mobility in the greater São Paulo area.

Under the scope of its contract with ViaMobilidade, Alstom is manufacturing 36 8-car trains at its rolling stock industrial plant in Taubaté (SP). For this, the company invested in a new industrial line that doubled the factory's capacity and contributed to the generation of more than 500 direct jobs.

Alstom's Metropolis trains for lines 8 and 9 are made from stainless steel and one of the main advantages is their durability: the car shells last more than 40 years and are lighter compared to carbon steel models. In addition, they consume less energy and are therefore more energy efficient.

The trains, covered in the lines jewelled colours, can each carry 2,600 passengers, have doors and corridors that will offer excellent passenger exchange and freedom of movement, in addition to spaces reserved for people with reduced mobility. Large windows and doors provide a clear view of the outside, guaranteeing a smooth, safe and comfortable journey for passengers. The trains also feature modern technologies: passenger counting, dynamic line maps, monitors and video surveillance, as well as fire detectors and fire extinguishers.

"Proud to be part of the modernisation of urban mobility in São Paulo, Alstom delivers the first train for lines 8-Diamante and 9-Esmeralda. This advanced train, with Alstom automatic train control technology, will allow for more fluid and comfortable circulation for the local population, and marks the beginning of a journey towards the continuous improvement of people's quality of life through the rail network," says Pierre Bercaire, General Director of Alstom Brasil.

"We have been investing heavily in improvements to lines 8 and 9 since we took over the concession in January 2022. The arrival of the first train, out of a total of 36 new trains that we acquired from Alstom, is a fundamental chapter in the path of transformation that we are implementing, while always focusing on providing better services to passengers," explains Marcio Hannas, President of CCR Mobilidade.

ViaMobilidade lines 8 and 9 transport more than 1 million passengers a day, according to data from before the COVID-19 pandemic. Line 8, which connects Júlio Prestes to Amador Bueno, is 41.6 kilometres long and has 22 stations, serving the municipalities of São Paulo, Osasco, Carapicuíba, Barueri, Jandira and Itapevi. Line 9, on the other hand, which connects Osasco to Bruno Covas – Mendes/Vila Natal, is 37.3 kilometres long and has 20 stations, serving the cities of São Paulo and Osasco. Osasco a Bruno Covas - Mendes/Vila Natal.

About ViaMobilidade Lines 8 and 9

ViaMobilidade lines 8 and 9 is the concessionaire responsible for the operation and maintenance of lines 8-Diamante and 9-Esmeralda of metropolitan trains in São Paulo. Line 8-Diamante comprises 22 stations, connecting Júlio Prestes to Amador Bueno, with integration into lines 3-Red and 7-Rubi. Line 9-Esmeralda, which connects Mendes-Vila Natal to Osasco, has 20 stations and integrates with lines 4-Yellow, 5-Lilac and 8-Diamante. And, in the future, with the Monorail Line 17-Gold.

Slovenia

SZ Class 644.020 pokes it's nose around the goods shed at Most na Soči while waiting to work it's next Autovlak train. *Andy Pratt*

Hungary

First 36 Flirt-type electric trains for MÁV-START equipped with Alstom's ETCS Level 2 train control system enter into service

Alstom, a global leader in smart and sustainable mobility, has reached an important milestone in the fleet modernisation project of the Flirt-type electric trains of MÁV-START - with European Train Control System (ETCS) Level 2, designed to increase the speed and safety.

The first 36 of 59 units have received the market authorisation license and are now back in passenger traffic equipped by Alstom's Atlas ETCS Level 2 L2 train control equipment that meets the strict European requirements. The entire project is scheduled for completion in September 2023, following a certification procedure involving extensive testing and verifications. Alstom was awarded this project through a public procurement process.

"In the history of Hungarian rail transport, this is the first case of electric trains being retrofitted with an ETCS train control system. The results confirm that this project successfully improves traffic safety and efficiency. Moreover, it was particularly important for us, as a company committed to the development of Hungarian railways, to install the equipment in MÁV START's Flirt electric fleet in Hungary, thanks to the work at our Szolnok site," says Gáspár Balázs, CEO of Alstom Transport Hungary.

The primary purpose of the European Train Control System (ETCS) is to monitor the movement of trains and enhance the safety of rail traffic in various operational situations. The system continuously calculates warning, operating and emergency braking speed profiles, and also monitors the authorised speed for both the train and the track. In full supervision mode, it is practically impossible for a driver to mistakenly ignore a red warning signal. The enhanced ETCS Level 2 provides continuous monitoring via GSM-R (the rail version of GSM).

Ultimately, ETCS Level 2 system improves traffic efficiency by allowing upgraded trains to circulate at higher speeds on lines where the track conditions allow, such as the Budapest-Székesfehérvár line, thus increasing the speed to a maximum of 160 km/h, compared to the previous speed of 120 km/h.

The first milestone of this complex project occurred three years ago, in January 2020, when Alstom obtained the conversion license for the Flirt electric multiple units. The production of the prototypes was followed by testing: the specifications required the trains to run 250,000 km without failure. Alstom was authorised by the Railways Authority to carry out type-approval durability tests on 5 prototypes. In parallel with this process, pre-fitting started, followed by a final fitting in January 2022.

The type-approval of the vehicle, which required an independent certification body to verify that the design, manufacture, and assembly of the vehicle complies with all European and national standards, was granted by the National Rail Authority in December 2022.

Alstom offers leading expertise in mainline signalling standards with over 120 ETCS projects worldwide, 19,200 onboard units and 13,300 km of equipped lines. In Europe, Alstom delivered 70% of ETCS-equipped trains in service.

Europe

RAILPOOL brings more Traxx locomotives into Poland, Italy and Scandinavia

RAILPOOL, one of Europe's leading rail vehicle leasing companies, and Alstom signed a framework contract comprising 27 new built Traxx AC3 and Traxx DC3 locomotives and an option for further 15 locomotives.

The locomotives are intended for use in Poland, Italy, Norway and Sweden and will be manufactured at Alstom sites in Kassel (Germany) and Vado Ligure (Italy) for delivery starting in 2024. Further to the investment in new rolling-stock, RAILPOOL will be shifting nine additional Traxx AC2 locomotives of its existing fleet to Sweden and Norway, where RAILPOOL operates three own workshop locations in Oslo, Gothenburg and Malmö since the takeover of Nordisk TogTeknikk AS and its 100% daughter NTT Sverige AB in 2022.

Torsten Lehnert, CEO of RAILPOOL said: " We are pleased to swiftly meet the increasing demand for rolling-stock in Sweden and Norway, providing more of our reliable fleet and additionally feeding the region with up to 20 new built Traxx AC3 Last Mile locomotives. The successful expansion of our footprint by the provision of modern e-locomotives but also through our local engagement in Scandinavia, Italy and Poland makes us proud."

Notably, with this latest order, RAILPOOL has become the lessor with the biggest homogeneous fleet of Traxx DC3 Last Mile locomotives in Italy, where RAILPOOL has its office in Savona. In Poland, at the beginning of February, RAILPOOL celebrated the official office inauguration for the newly established Railpool Polska Sp. z o.o. in Poznań.

Peter Amman, Customer Director Locomotives at Alstom, added: "We are delighted that with the Traxx 3, Railpool has once again opted for the most modern platform for four-axle locomotives in Europe. It makes us proud to decisively support one of our largest customers in the locomotive sector in the expansion of their activities throughout the continent."

Photo ALSTOM |© Mathias Oestreich

Algeria

Algeria's Mostaganem tramway enters commercial service

Alstom, world leader in sustainable and intelligent mobility, is contributing to the commercial launch of the two tramway lines in Mostaganem. The Métrod'Alger (EMA) company awarded the Mostaganem tramway project to Alstom and Cosider. Alstom's scope of work includes the provision of the whole system, telecommunications and signalling systems, the sub-stations and ticketing as well as the depot equipment. The Citadis trainsets were supplied by the Joint-Venture CITAL. For its part, Cosider's scope (Public Works/Engineering Works) carried out the civil engineering including the rail lines, the catenary and the traffic light signals.
The 14 km-long Mostaganem tramway will allow 10,000 passengers to travel each day on the line, with 24 stations. The two lines will link different districts of the town, facilitating access to the various university campuses for students, and providing quick access to the city centre and different stations.

"Alstom and its Algerian teams are proud to have supplied the Citadis tramways and to have contributed to the building of the whole Mostaganem tramway system and infrastructure in partnership with Cosider. We are at the end of a project that has been eagerly awaited by residents," says Amar Chouaki, Managing Director of Alstom Algeria. He adds that, "We are delighted to enable millions of passengers to get around more easily thanks to our sustainable mobility solutions. Moreover, it is the seventh town in Algeria equipped with the Alstom's Citadis tramway. This is a testimony to our commitment for supporting the Algerian vision of modern mobility."

At this time, more than 3000 Citadis trams have been sold in more than 50 cities worldwide, representing more than 20 years of experience and more than a billion kilometres covered. Present in Algeria for more than 30 years through Alstom Algeria subsidiary and the JV Cital (51% Algerian partners/49% Alstom), employing nearly 670 people, Alstom developed many transport infrastructures in the country such as the tramways of Algiers, Constantine, Oran, Ouargla and Sétif. Alstom also provided SNTF railway 17 Coradia regional trains, electrified the Algiers suburban line and conducted miscellaneous signalling projects.

The development of industrial and engineering activities in Algeria has always been a priority for Alstom, in particular involving technology transfer and the development of local skills.

Alstom will continue to meet the growing needs for mobility in the country and shall provide all its support to the development of Algerian towns.

India

Wabtec Delivers the 500th Evolution Series Locomotive to Indian Railways

Wabtec Corporation has celebrated the delivery of the 500th Evolution Series Locomotive to Indian Railways. The celebration at Wabtec's plant in Marhowra, Bihar marked another milestone in the 2015 $2.5 billion agreement as part of the Government of India's Public Private Partnership 'Make in India' program to develop and supply 1,000 fuel-efficient, emission-compliant diesel-electric Evolution Series locomotives.

"This achievement is a major step in Wabtec's growth as the leading rail industry supplier in this country and demonstrates the commitment to the 'Make in India' initiative," said Dr. Sujatha Narayan, Senior Vice President and India Region Leader. "It also is a tribute to the dedication of our team in India, as well as the support from the community, government, suppliers, and other Wabtec sites around the world. Their efforts are positioning the company and our customers for success in the region for years to come."

The 500th locomotive is a 4500-horsepower, dual-cab locomotive. To date, Wabtec has delivered 438 of those models and 62 of the 6000-horsepower, single-cab locomotives to Indian Railways. These locomotives are digitally enabled and use cutting-edge technology to deliver fuel efficiency and ensure compliance to international emission standard UIC1. The locomotives' cabs feature ergonomic comforts for the pilots in terms of air conditioning, seats, noise reduction, heated wind screens, urinals, and digital displays.

Indian Railways is using the locomotives extensively for heavy-haul and container operations across the country. The fleet is demonstrating high levels of availability and reliability, which is enabling significant growth in freight revenue.

The Wabtec India Team with Indian Railways and Saran District Administration at the factory in Marhowra, Bihar.

"The successful and timely execution of Marhowra project is a major milestone in the success of the public private partnership," said Sandeep Selot, Managing Director of Wabtec Locomotives Private Limited. "This partnership also helped to operationalize modern service sheds in Roza and Gandhidham. It also has been instrumental in creating jobs and establishing a local supplier footprint, as well as establishing a community outreach program."

The state-of-art manufacturing plant in Marhowra started operations in 2018. It leverages global lean manufacturing processes and has the capacity to deliver 120 locomotives per year. The plant also set a new benchmark in having a diverse and talented workforce from Bihar and Jharkhand.

Additionally, Wabtec's outreach programs in and around the Marhowra factory have fueled vocational training and educational equity enabling community development in the region. The programs have prepared and supported over 600 female entrepreneurs. It also trained engineers from the local polytechnic with smart welding skills needed to secure employment.

Netherlands

Arriva Group announces new bus and rail contract in The Netherlands

Arriva Group has been awarded the Twente-ZHO concession for both bus and rail services in the east of The Netherlands, part of the province of Overijssel, following a competitive tender process. This latest win will further grow the company's footprint and strengthen its position as the largest privately operated regional bus and train operator in the country.

Services are due to start operating in December this year (2023) and the contract will run for four years with an option to extend for another year, up until 2028.

To serve passengers in the region, Arriva will operate over 100 completely new zero emission buses and around nine trains from its existing fleet. The company will also welcome 450 new colleagues to service the contract, which is estimated to be valued at €300 million through the life of the contract.

Arriva was successful in its bid because it will take a holistic view of the transport infrastructure across the region and has plans to introduce changes to the timetable to ensure faster journey times on inter-city connections and focus on improved accessibility for the elderly and those with disabilities, who rely on public transport.

Arriva will also be improving the connection between buses and trains to ensure a seamless transition between modes of transport and is examining walking distances and how public transport connects with cycling routes. All of this will improve the appeal of public transport for wider parts of the community.

Anne Hettinga, Managing Director Arriva Netherlands and Arriva Group board member said: "We have an ambition to grow Arriva in the Netherlands and to boost access to public transport for passengers, so we can encourage people out of their cars and onto our services. Encouraging modal shift to public transport is one of the fastest ways of reducing transport emissions and an important step in caring for our planet. We look forward to continuing to make public transport more and more attractive for the communities in Twente."

As a leading passenger transport company, Arriva wants to help shape a future where passenger transport is considered the best choice. Partnership with passenger transport authorities and municipalities across Europe is at the heart of this ambition.

Arriva recognises that the public transport industry has a very real role to play in transforming towns and cities and helping to address the climate crisis. By encouraging people to leave their cars at home, there will be less congestion in urban areas which will in turn encourage more use of public transport.

Norway

Alstom will supply 25 additional Coradia Nordic regional trains to Norske tog in Norway

Alstom, global leader in smart and sustainable mobility, has been awarded a new contract worth more than €230 million to supply 25 additional Coradia Nordic regional trains to Norske tog. This is the second order resulting from Alstom's landmark €1.8 billion framework agreement with Norske tog, signed at the end of 2021. The first order of 30 regional trains is currently in production, with deliveries expected to begin end of 2025.

Norske tog's new regional trains "Class 77" will operate as a commuter and fast rail service between Ski and Stabekk in the greater Oslo region. The expanding fleet of trains will ensure improved transport services throughout the busy region.

"We look forward to receiving 25 additional trains from Alstom to improve capacity and services to the passengers" says Øystein Risan, CEO Norske tog AS

The Coradia Nordic trains for Norske tog have been specially adapted to meet the needs of the Norwegian rail network and are fully suitable for Norwegian weather conditions. The new trains have a top speed of 200 km/h to ensure a swift and comfortable commute in a spacious and relaxing environment. Each trainset will consist of six single-deck coaches. The trains will be equipped with Alstom's digital ERTMS, a European standard onboard signalling system which provides trains with continuous safe movements and overspeed protection. This cab-signalling architecture removes the need for the driver to read lateral signals and provides onboard failsafe computer that pre-empt drivers actions in case of unsafe conditions.

The trains will thus be capable of operating on both tracks equipped with the Norwegian legacy signalling system as well as on the new ERTMS-fitted tracks currently being rolled-out.

The Coradia Nordic is a state-of-the-art, low-floor, high-performance electric multiple unit. The standardised train is a single, versatile platform which meets demands of regional and intercity transport. A modular design allows operators to choose the configuration and interior that work best for their market and commercial strategy. The platform offers emission-free solutions such as battery or hydrogen for non-electrified lines. In addition, Alstom's sustainable approach to services considers the entire lifecycle of the product, from initial design to end of life, which will maximize the value of Norske tog's assets.
Alstom will assemble the trains for Norske tog at its site in Salzgitter, Germany. Several French Alstom sites are involved in the project, including Tarbes for traction systems, Ornans for the motors, Villeurbanne for signalling systems and Petit-Quevilly for electrical transformers. Norske tog AS is owned by the Norwegian Ministry of Transport and Communications. The company procures, owns, and manages rolling stock for passenger train transport in Norway.

Czech Republic

AŽD completed the first application of the digital intelligent railway system

The Czech company AŽD has completed the full digitization of the Plum Railway between Obrnice and Čížkovice during operation. This is the first application of an intelligent railway with the designation 4.0 on the Czech infrastructure, which thus keeps up with modern world trends in the field of railway management and safety. When AŽD bought the Plum Railway from the state in 2016, it aimed not only to restore daily operations, but also to make this regional railway a testing ground for its existing and developing technologies, including the commissioning of a modern digital railway. "For three years, we intensively developed, invested considerable funds, and then gradually installed technologies that, thanks to digital communication, now make up the intelligent railway 4.0. We are now verifying this from the point of view of safety, reliability and availability in the normal load of regular hourly traffic within the U10 line Litoměřice h.n. - Most," says AŽD CEO Zdeněk Chrdle.
As part of the intelligent digital railway, all technologies produced by the AŽD company are operated in their most modern versions. The entire line is controlled from the technology centre in Třebívlice by fully electronic station interlocking system of the StationSWing ESA series. All stations including outdoor elements are safely controlled from this centre via distributed object controllers. Level Crossing systems are equipped with an intelligent peripherals and are remotely controlled from the centre. Conventional technologies are followed by a fully interoperable system of the unified train control system ETCS in levels L1 and L2 with automatic transitions between both levels. The entire line is covered by the GSM-R/GPRS radio system, and in the sections intended for testing autonomous trains without drivers, also by LTE and Wi-Fi. All operated systems are remotely controlled from the dispatcher's centre in Lovosice under the central supervision of a diagnostic system based in AŽD headquarters building in Prague. Diagnostic information is available online from the data interfaces of the systems. The distribution of digitally processed traffic data to passenger information systems, intelligent stops or to mobile applications with the exact location of trains is a matter of course.

The technological development of the Plum Railway continues with the integration of other systems, such as ATO over ETCS (Automatic Train Operation under ETCS) working with real traffic data, continuous sensory track supervision using optical fibres, autonomous diagnostics of outdoor elements or the communication unit of cooperative management C- ITS for transmitting information about the state of level crossing systems to drivers in moving cars.
"AŽD is preparing for the first foreign installation of the intelligent digital railway 4.0 system as part of our new Hungarian order on the Szeged - Rözske line, which is an integral part of the extensive Szeged railway junction," concludes Zdeněk Chrdle.

Austria

ŠKODA GROUP EXPANDS INTO AUSTRIA

Škoda Group has established a new subsidiary, Škoda Group Austria GmbH, based in Vienna. This company took over 40 employees and part of the assets of Molinari Rail GmbH Austria on February 1st 2023. With this move, Škoda Group is significantly strengthening its position in the field of technical engineering and design. The group is gaining an experienced team that will work on both group and own projects.

"Last year, our group started significant changes to its organisational structure to expand into new markets and broaden its portfolio. This new acquisition is a clear demonstration of our work to strengthen the position of Škoda Group in Western European markets and fits in with our strategy. I am delighted that we have gained a team of 40 highly experienced designers with this acquisition." Mike Niebling, President of Region West at Škoda Group

By taking over the employees and part of the assets of Molinari Rail GmbH Austria, which went into insolvency in November 2022, Škoda Group gains two new locations. The head office of its Austrian subsidiary is in Vienna and the branch office is in Schwaz, Tyrol. The new subsidiary will have a great deal of autonomy in terms of its business and expertise but will also participate in the activities of the entire group.

"We are looking forward to working with our new colleagues, who will certainly bring new thoughts and ideas thanks to their know-how. They will be challenged by the fact that they will be working on projects within the group as well as on projects they have already developed for their other customers. Our aim is also to work on contracts that were in negotiation stage at the time of acquisition," adds Andreas Maroschik, Senior Vice President Rolling Stock Development at Škoda Group.

France

Wabtec, Fret SNCF and RDT13 to expand freight rail in Europe through the MONITOR Project

Wabtec Corporation, French national operator Fret SNCF and regional operator RDT13 (Régie des Transports des Bouches du Rhône) have launched the MONITOR Project, the first innovation project of the French Rail Freight of the Future (4F) coalition to accelerate the development of the rail freight industry in Europe.

The MONITOR Project consists of equipping railcars with sensors to monitor and prevent the risks of derailment, untimely brake applications and to reduce train preparation time. Ultimately, it could help reduce maintenance costs and contribute to the European Union's goal of achieving carbon neutrality by 2050.

The MONITOR Project focuses on four key technologies, brought together for the first time: radio communication between cars along the train; brake monitoring; bogie monitoring; and automated brake testing. This project was funded by the French State as part of France 2030 operated by ADEME, the French agency for ecological transition. It will last three and a half years. The solutions will be developed by Wabtec based on needs established by the Consortium, before being tested in real conditions on the rolling stock of the SNCF and RDT 13. For Wabtec, this project will generate new jobs in France with high added value.

"The MONITOR Project has the potential to transform the development of freight rail in Europe," said Lilian Leroux, President of Wabtec Global Transit and Freight Europe. "We are delighted to bring our experience of innovative railway technologies to develop fully digitalized freight train operations. By developing the attractiveness of rail in Europe, we will contribute to the European Union's goals of doubling the modal share of rail to 30% by 2030, helping to reduce CO2 emissions."

"The digitalization of freight represents a major opportunity for rail operators in terms of operating safety, productivity, attractiveness of our professions and improvement of working conditions, said Frédéric Delorme, president of Rail Logistics Europe at SNCF. "Fret SNCF is playing a major role in the MONITOR Project, an essential brick in preparing the autonomous freight train of tomorrow, by sharing its expertise and feedback on freight train operations, and by testing new solutions in real conditions on board its locomotives and the wagons it operates."

"Rail freight uses six times less energy, emits eight times less pollution and nine times less carbon than a comparable journey by road, said Paul Sillou, CEO of RTD 13." We are proud to contribute to this innovative project that will bring major benefits to French and European rail."

MONITOR is the latest in a series of freight innovation projects involving Wabtec in Europe. The company is also a founding member of Europe's Rail Joint Undertaking (ERJU), a major project aimed at developing fully digitalized, interoperable, high-capacity, sustainable rail freight operations.

From left to right: Frédéric Delorme, President Fret SNCF; Paul Sillou, CEO RDT13, Lilian Leroux, Wabtec Transit President

From the Archives

China

C2 No. 32 is seen on the short Weiyuan coal railway on January 28th 2005.
Mark Enderby

From the Archives

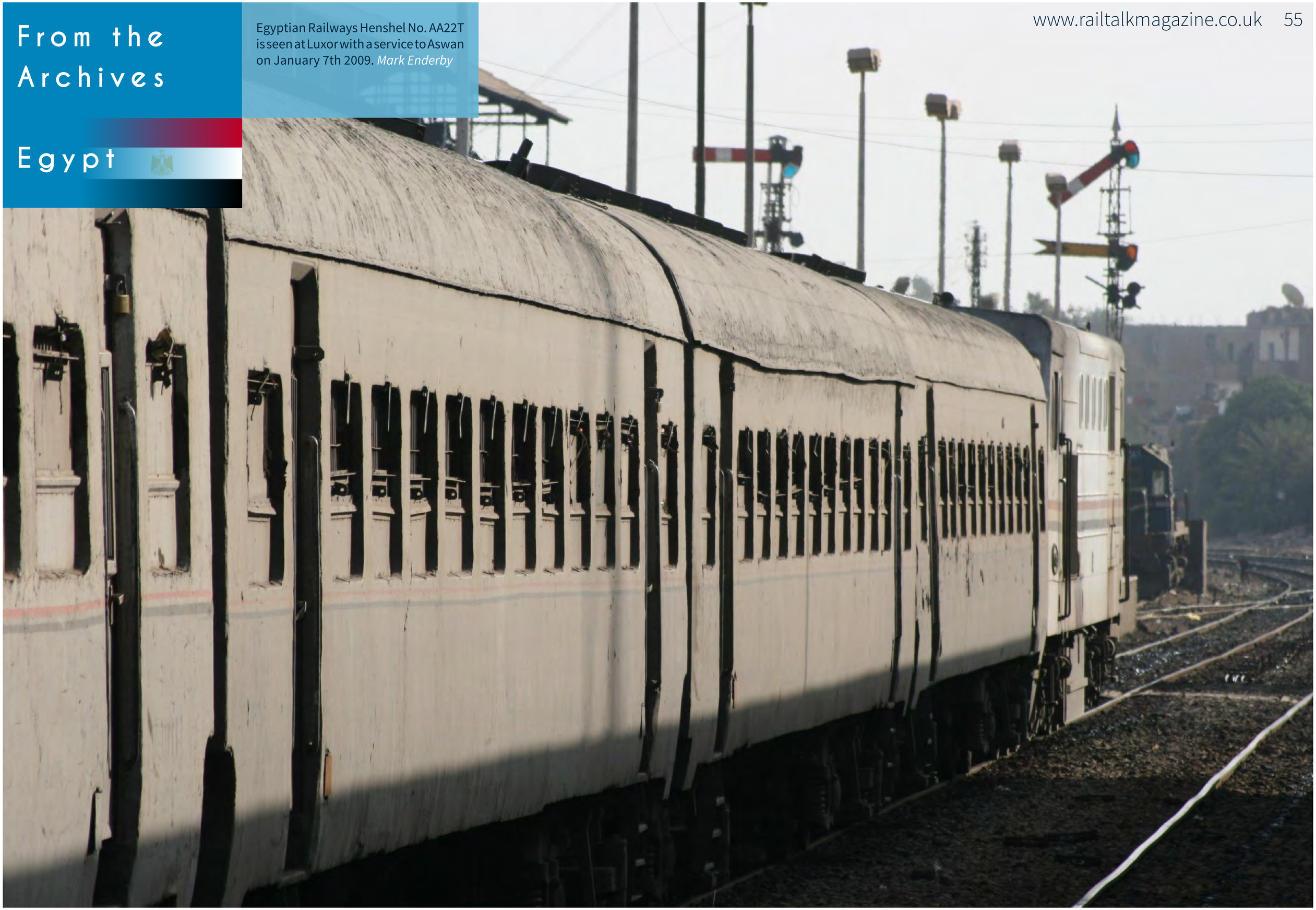
Eire

CIE No. 079 stands outside Cork Glanmire Road shed on April 2nd 1996. *John Sloane*

From the Archives

Egypt

Egyptian Railways Henshel No. AA22T is seen at Luxor with a service to Aswan on January 7th 2009. *Mark Enderby*



From the Archives

Germany

HSB dampflok No. 99-7245 is seen in the forest near Eisfelder Talmuhle on a train to Quedlingburg on April 29th 2010. *Mark Enderby*

From the Archives

Germany

A Berlin S-Bahn Class 460 approaches Berlin Ostbahnhof on April 29th 2012.
Mark Enderby

From the Archives

Greece

SEK metre gauge 2-8-2 No. D7120 is seen on arrival at Olympia with the early morning train from Pirgos on August 23rd 1973. *John Sloane*

From the Archives

Hungary

MAV V43-2373 is seen at Budapest Nyugati on September 11th 2008.
Mark Enderby

From the Archives

India

Indian Railways YP No. 2777 is seen at Kharwahandra on August 17th 1991.
Mark Enderby

From the Archives

India

Indian Railways ZDM3 No. 156 is seen at Shimla on November 22nd 2005.
Mark Enderby

From the Archives

Italy

A narrow gauge SFS Sunday train from Alghero has arrived at Sassari and leaves the dual gauge track in the station for the SFS depot on August 6th 1972. *John Sloane*

From the Archives

Japan

A JR 700 bullet train has just departed Tokyo Central for the south and is passing Yuracucho station on December 11th 2010. *John Sloane*

From the Archives

Luxembourg

GM 1954 built Bo-Bo No. 805 is seen at Luxembourg station on October 28th 1986. *John Sloane*

From the Archives

Myanmar

No. DF.2043 is seen arriving at Rangoon with a train from Mandalay on January 25th 2006. *John Sloane*

From the Archives

Peru

Enafer Peru Central line Nos. 606 and 601 stand at La Orroya on December 8th 1981. *John Sloane*

From the Archives

Portugal

Alco built No. 1508 is seen on the seafront on the approach to Faro with a westbound freight on August 9th 1974. *John Sloane*

From the Archives

Serbia

Class 441.507 is seen at Belgrade terminal on May 28th 2007.
John Sloane