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#### Contact Us

#### **Editor**

david@railtalkmagazine.co.uk

**Content Submissions** 

entries@railtalk.net

#### **Technical & Subscription Support**

admin@railtalk.net

#### Content

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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 provided above. 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

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



# Welcome to Issue 165Xtra

After another month of lockdown I am sure many of you are missing those journeys out and about. Whilst many countries are easing restrictions, many train companies are still only allowing essential travel. Lets hope that this will change soon, as most of us are missing all the good weather and the long light nights. However all is not lost, as we have been sent plenty of great photos this month for you all to enjoy together with plenty of archive shots. All the team are very appreciative for everyone's contributions and we hope that all our readers and contributors are staying safe.

In the news this month, a line that we have enjoyed several times in Bulgaria, where national operator BDZ has allocated 4million leva for modernisation of the 760mm gauge diesel locomotives used on the 125km Septemvri – Bansko – Dobrinishte line in the Rhodope mountains. The three classes of four-axle diesel locomotives on BDZ's only remaining narrow gauge line were supplied by Henschel and Romania's 23 August factory between 1965 and 1988. BDZ plans to re-power them with new 825 kW engines meeting EU Stage V emissions standards, and to undertake a renewal of the electrical equipment.

We're not sure that this would be any good in the UK but a start-up branded TieBam is targeting Asian rail enhancement projects with a novel sleeper design produced from bamboo. Following more than five years of research and development activity, US-registered TieBam plans to open a manufacturing facility in Taiwan through a wholly-owned subsidiary later this year. According to Founder & CEO Jason Avraham, TieBam has patented a manufacturing process that 'densifies bamboo to provide aneco-friendly alternative to traditional wooden sleepers'. Because of its rapid growth and distinctive mechanical properties, bamboo can be 'stronger, more durable, longer lasting, and more environmentally-friendly than wood'. The properties of its bamboo sleeper have been validated by a series of tests carried out at the University of Delaware, which runs a course on railway engineering and safety. These confirmed the sleeper's durability, flexibility and strength, the company says.

#### **Front Cover**

On May 19th, Watco Australia's FL220 and HL203 wander throughtheFremantleDocksideamongstthemagnificent Fremantle architecture as they head towards North Quay with another load of export containers. *Mark Bennett* 

TieBam is initially looking to deploy its sleepers in the Middle East, tapping into the wave of railway construction taking place across the region. Southeast Asia is also a logical focus, since this is where TieBam will procure its raw bamboo, providing an important source of income for farmers. Avraham says that bamboo sleepers bring advantages in railway construction and renewal because the material does not require additional after-treatment with substances such as creosote in order to provide long term protection. It is also naturally impervious to insect infestation. This means the risk of soil and groundwater contamination from chemicals is minimised compared to alternative materials.

A potentially large rolling stock order from Switzerland is looming where SBB, Thurbo and RegionAlps have jointly called tenders for the supply of 194 single-deck regional trainsets of a 'tried and tested platform already in use in a European country'. The order worth up to SFr1.5bn which was announced on May 18 would allow the three operators to standardise their regional fleets and to take advantage of common design features. There would be options for a further 316 sets, taking the total to 510 units. The first trains would enter service in December 2025, and deliveries would continue until 2048. Applications to participate must be received by July 3. The prequalification process would run to November 2, after which up to three bidders will be asked to submit tenders by March 26 2021.Contracts for the 194 trains are to be placed in 2022, with 106 sets going to SBB, 70 to Thurbo and 18 to RegionAlps. The trains should be suitable for operation in Switzerland, Germany and Austria, and there is an option to obtain approval for use in France.

David

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Until next month

#### This Page

On May 6th, DB Cargo Class 186.499, with only one tank wagon, heads from Kijfhoek Yard to Antwerp (Belgium). Erik de Zeeuw



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#### HAD-PRINT

Unit 2-4, France Ind. Complex, North Yorkshire YO8 8BE

info@had-print.co.uk | 01757 600211

### With Thanks

Once again many thanks to the many people who have contributed, it really makes our task of putting this magazine together a joy when we see so many great photos.

These issues wouldn't be possible without:RayAnslow,BrianBattersby, Mark Bearton, Mark Bennett, Tim Blazey, Rob Boyce, Keith Chapman, Julian Churchill, Nick Clemson, Derek Elston, Mark Enderby, Tim Farmer, Dave Felton, FrontCompVids, Paul Godding, Richard Hargreaves, Jim Haywood, Keith Hookham, Colin Irwin, John Johnson, Anton Kendall, Mathijs Kok, Jyrki Lastunen, Ken Livermore, Michael Lynam, Peter Marsden, Phil Martin, Denzil Morgan,

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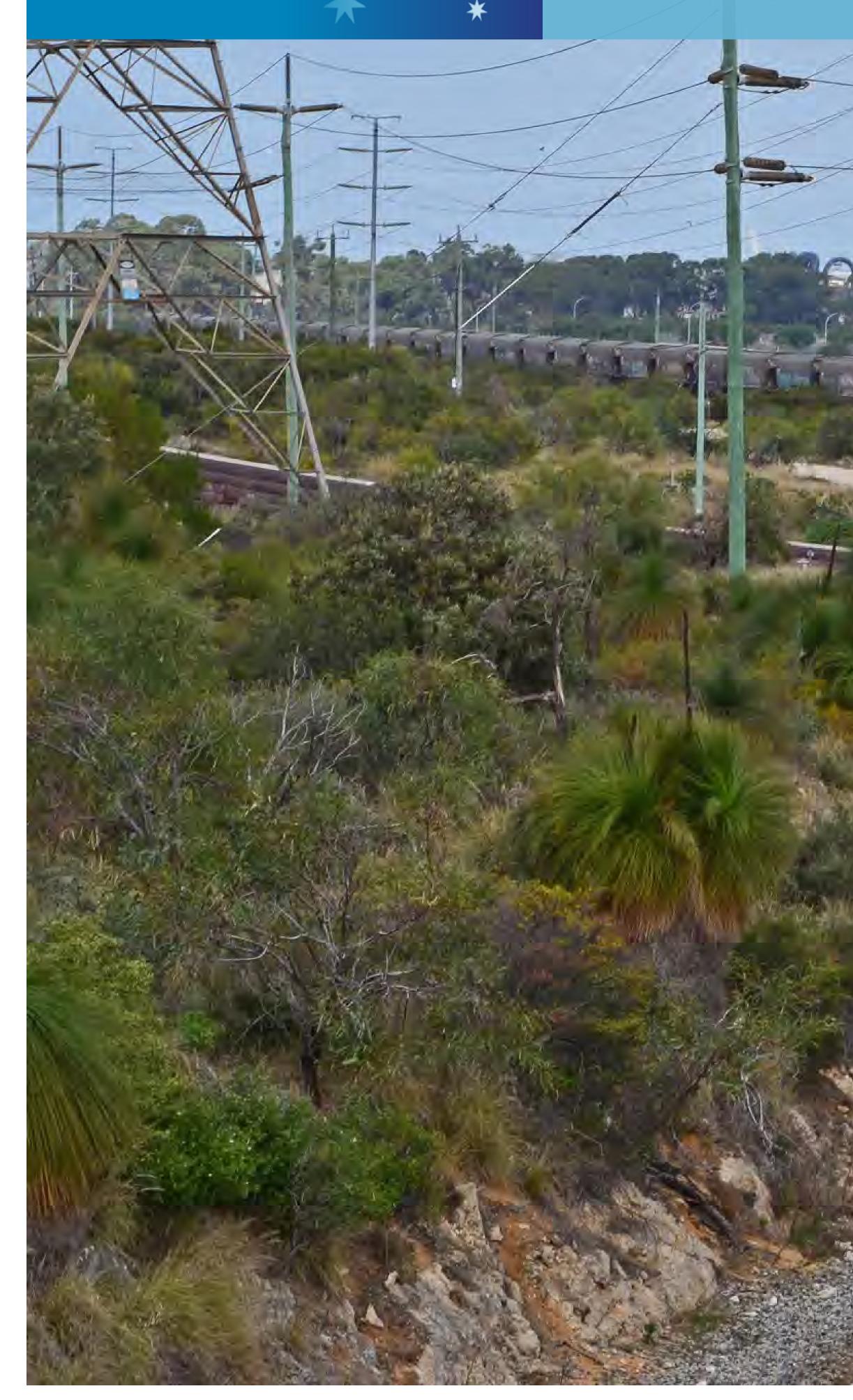


The Watco container service departs Fremantle North Quay on May 15th and weaves through Fremantle on it's way towards Forrestfield. *Mark Bennett* 





On May 16th, Co-Operative Bulk Handling Nos. CBH001 and CBH009 depart Kwinana on a empty grain train after tipping at Kwinana Bulk Grain Terminal. *Mark Bennett* 







On May 18th, ARG's No. Q4010 arrives at Kwinana Industrial Sidings with the Malcolm to Kwinana sulphur train. *Mark Bennett* 



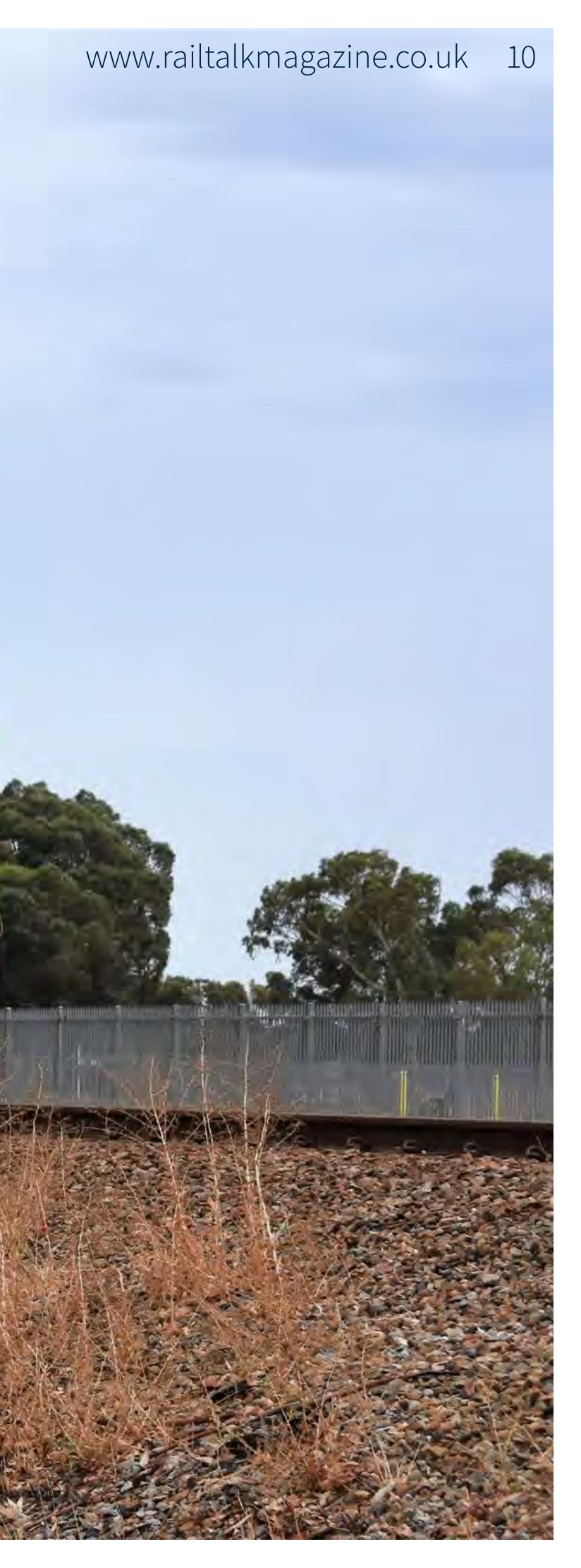
On May 16th, Aurizon's No. S3311 works train No. 7972 with loaded bauxite through Serpentine on it's way to Kwinana. *Mark Bennett* 





With thunder crashing overhead, Pacific National's No. NR52 heads east from Midland with three track recording cars, known locally as the AK cars. *Colin Gildersleve* 





. NR 52

A close up of the CBH Group's CBH017 at Midland running light engine. The CBH class loco is manufactured in the US by Motive Power in Boise Idaho, for the Western Australian grain growers' co-operative CBH Group. CBH017 is a narrow gauge (3'6") version. *Colin Gildersleve* 



Lake Biddy



Havingjustrunthrough a heavy rain storm, Aurizon's No. S3302 is captured running through Mundijong, south of Perth with empty Alumina hoppers. *Colin Gildersleve* 





### New fully digital timber stockyard opened in Amstetten

The Austrian Federal Forests (Österreichische Bundesforste), the State of Lower Austria and Austropapier are opening a new hub for timber logistics in collaboration with the Rail Cargo Group, which is providing logistical support.

Opening this fully digital stockyard means that wood transport in the immediate vicinity of logging roads in the region of Amstetten can sustainably be

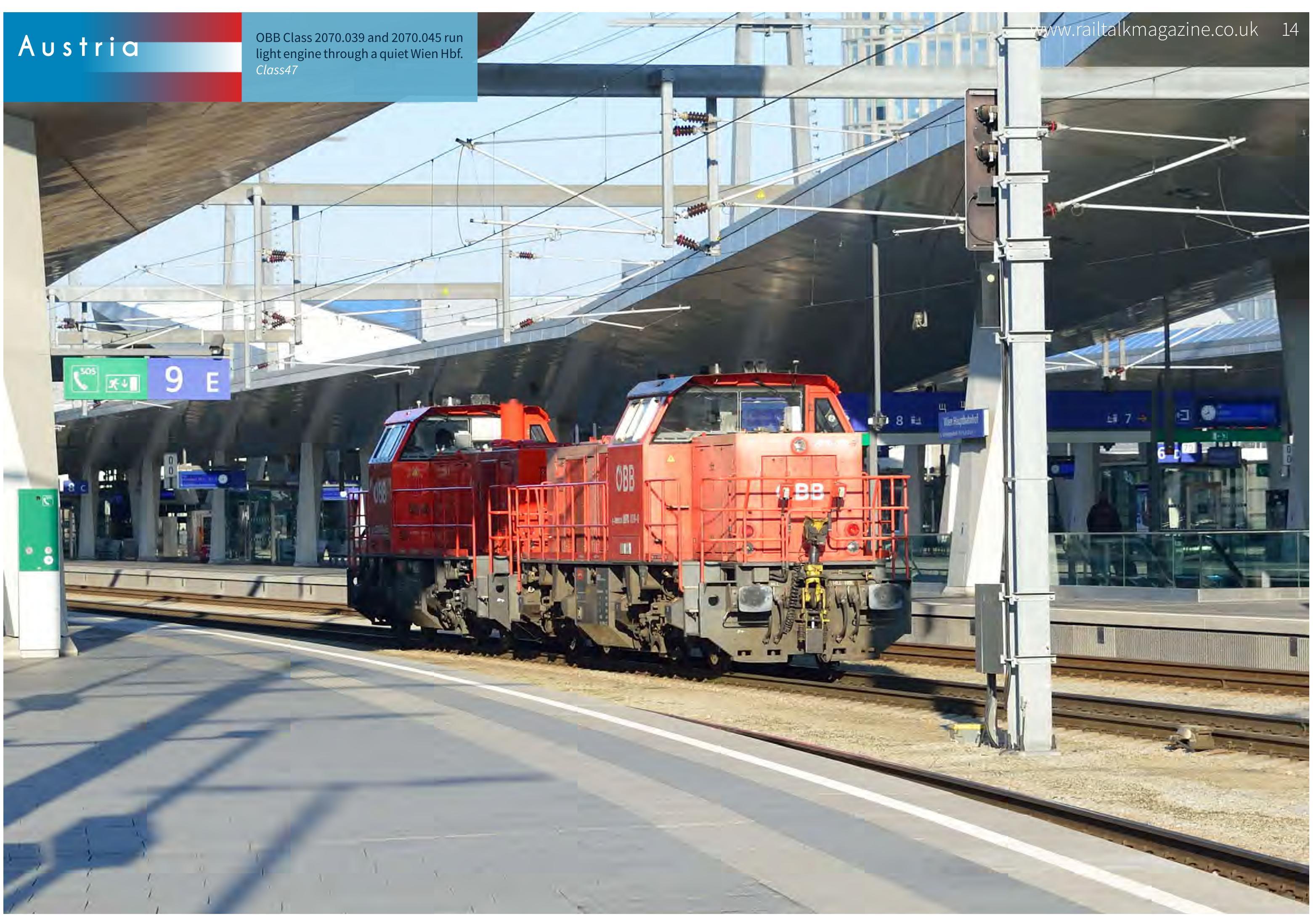


shifted on to the environmentally friendly rails. This new linchpin of timber logistics will not only relieve the market in a region that is severely affected by climate change; it also represents an important mark of solidarity with the entire timber supply chain.

Loading capacities have already increased by 50% thanks to the Smart GigaWood wagons that were developed as recently as 2019. Old railway tracks on the ten hectare site of the former sawmill have been put back in action in order to connect the new stockyard to the Western Railway line. State-of-the-art equipment and the railway line connection mean that up to 40 wagons a day can be loaded when running at full capacity. Successful test runs were carried out a few weeks ago; the new stockyard will be fully operational from July.

#### Rail Cargo Group closes a big gap

The Rail Cargo Group provides environmentally friendly transport services for every stage of the timber supply chain from manufacture right through to woodworking at the workshop, Thomas Kargl, Executive Board Member of the Rail Cargo Group, says: "The 'green' logistics services we provide at the RCG make timber haulage fast and also sustainable. Papierholz Austria has been one of our top customers in the timber industry for 25 years now, and we transport 315,000 tonnes of wood for the Austrian Federal Forests every single year. We are the strong partner for the domestic wood industry – right now and in the future".



### Belgium

SNCB EMUs Nos. 08561 and 08189 are seen arriving at Bruxelles Midi with an S train service. *Class47* 

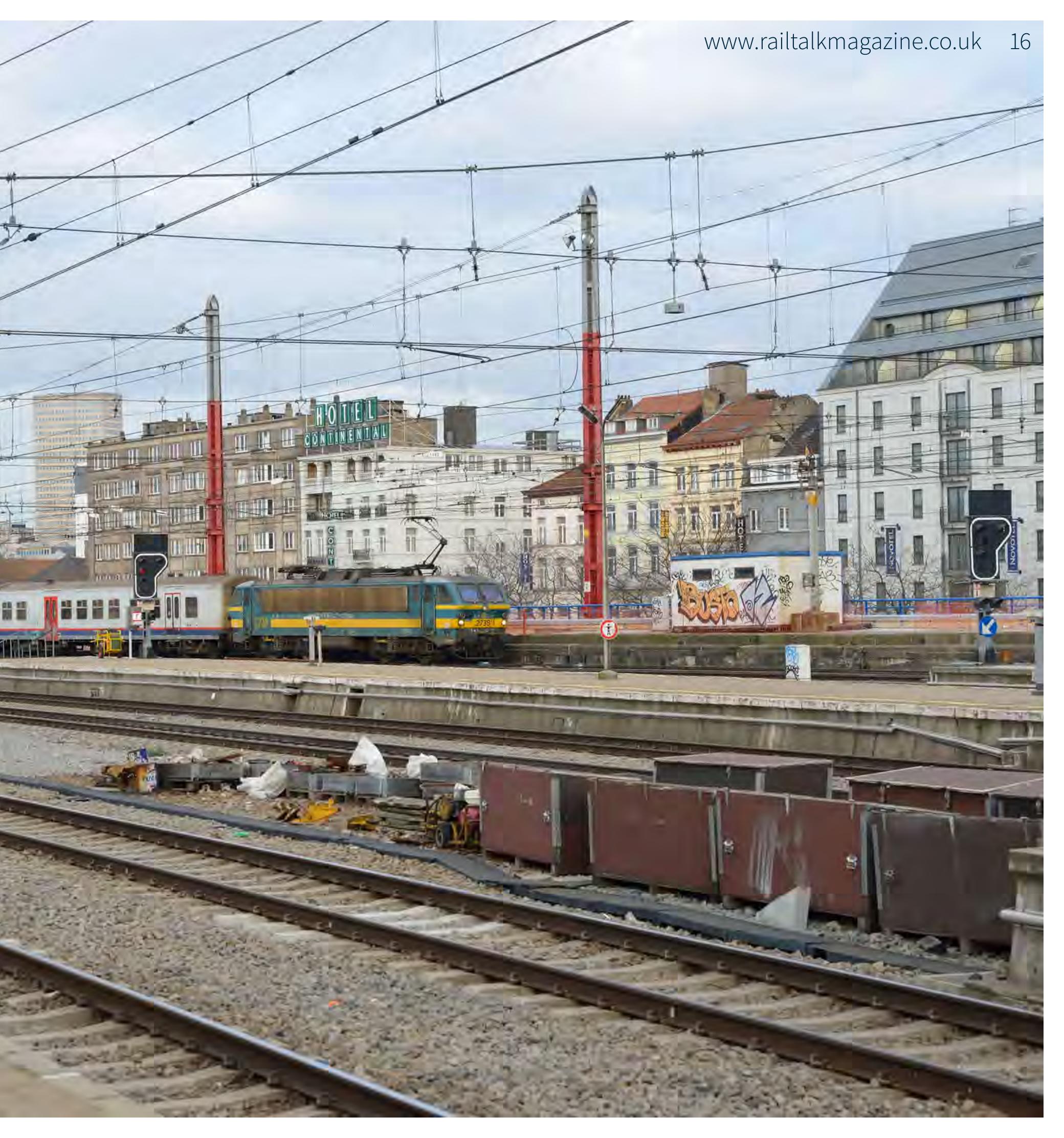
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### Belgium

SNCB Class 27 No. 2738 arrives into Bruxelles Midi with a peak hour evening service. *Class47* 

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# Czech Republic

CD Railjet Class 1216.229 speeds through Pecky with a Praha - Graz Hbf Eurocity service. *Class47* 

CD Pendolino No. 681.002 heads through Pecky with a Praha hl.n. bound service. *Class47* 

Arriva Class 845.101 stands at Vsetaty with a Praha - Tanvald service. Class47







### Správa železnic Increases Security of Dozens Further Crossings This Year

Throughout the country, Správa železnic is increasing the level of security at level crossings, which have been identified as potentially risky in terms of possible collisions between cars and railway vehicles. It includes the addition of warning lights, the installation of barrier crossbars and also new technologies of composite crossbars with LED diodes.

"Správa železnic invests every year approximately one billion crowns in increasing security at level crossings. The installation of the highest level of security will take place this year at more than sixty crossings all over the entire railway network. As part of the test operation we will also increase the number of composite barrier crossbars with LED technology, from which we expect more distinctive reduction in accident frequency at the level crossings concerned," states Jiří Svoboda, Director General of Správa železnic.

Správa železnic is going to supply 52 crossings with barrier crossbars this year, where there were previously only warning lights, and at the same time

to increase the security of more than 70 level crossings marked currently with warning crosses, by installing warning lights or barrier crossbars. LED barrier lighting will be installed in 42 cases.

#### Barrier crossbars with LED diodes

Theflashingcrossbars of the barriers attract the attention of drivers, especially in reduced visibility, when the additional signalling on the barrier crossbar is particularly accentuated. These are LED diodes that run in parallel with the light security equipment of the crossing. The following level crossings will be equipped with LED technology in test operation: one at Dolní Lutyně on the line between Bohumín and Dětmarovice and next two at Jistebník and Polanka nad Odrou in the section between Studénka and Ostrava. Other barrier crossbars with LED diodes will be fasten for example at three level crossings of the Blatná – Strakonice railway line with the I/20 road and at four railway level crossings in Prague, for instance at the crossing of Bubenská street with the railway line to Kladno.

At first sight, the barrier crossbars may surprise some drivers with their mightiness, however, they are constructed of a hollow composite, so that they are easily breakable if the car remains closed between the barriers. In addition, if it is necessary to leave the crossing, the car can lift the round shape of the barrier crossbar more easily. After evaluating the test operation, Správa železnic will decide on their possible more massive expansion on the Czech railway network.

Increase of security at level crossings is one of the priorities of Správa železnic. On its network, there are more than 7,800 intersections with roads of various levels of security, which the infrastructure manager gradually modernises and thus rises the safety.

# Czech Republic

CD 'interPanter' Class 660.101 departs Breclav with a service to Brno hl.n. *Class47* 

# Czech Republic

nástupiště

CD Cargo Class 163.250 approaches Vsetaty with a rake of empty coal carrying containers. *Class47* 

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### **ŠKODA TRANSPORTATION GROUP DELIVERS THE FIRST TRAM TO TAMPERE, FINLAND**

Škoda Transtech, member of the Škoda Transportation Group, handed over the first modern, bidirectional 100% low-floor ForCity Smart Artic tram to Tampere on May 25th Nineteen modern vehicles worth more than 100 million EUR will gradually be delivered to the third largest city in Finland.

"Tampere will receive a modern, technically proven solution suitable for harsh Northern conditions. The trams provide maximum comfort for passengers, for example, thanks to heated floors, double glazing or air conditioning for the summer months. The vehicles are based on proven solutions that we obtained during the manufacturing of vehicles for the capital Helsinki, for which we supplied a total of 72 trams," says Zdeněk Majer, Member of the Board of Directors and Senior Vice President of Sales of the Škoda Transportation Group and added: "Our experienced employees across the entire Škoda Transportation Group worked on the development of trams for Tampere. We are also convinced that this new generation type of ForCity Smart Artic tram has great export potential," Tampere has ordered nineteen tramsforthefirststageofthenewly emerging tram network, including ten-year full maintenance service. The contract also includes three additional options for up to 46 more vehicles. Another 29 trams will be delivered to Finland in the coming years for a new tram line connecting Helsinki and Espoo.

"Given that the Škoda Transtech production plant in Otanmäki does not have the test track required for tests, it is necessary to perform some of them directly in Tampere. Therefore, some parts of the interior, such as upholstery, will be installed only after the installation of electrical equipment so that they do not interfere with measurement, adjustment and other tests. In addition, some of the tests are performed in remote mode, where a group



of software engineers from Plzeň connects to the delivered tram testing the tram systems," explains Juha Vierros, CEO of Škoda Transtech.

The ForCity Smart Artic Tampere bidirectional tram is 37.3 long, has a gauge of 1,435 mm, is fully low-floor and can accommodate up to 360 passengers. The vehicle also offers barrier-free access for wheelchair users and prams. The all-wheel drive and the robust design of the carbody with axles enable trouble-free operation in challenging climatic conditions.

Škoda Transtech is the largest manufacturer of rolling stock in Nordic countries. The company was founded in 1985. In 2015 it became part of the Škoda Transportation Group, and in 2018 it was completely taken over by the Škoda Transportation Group. Its main products include double-decker passenger coaches (operated as PushPull trains), low-floor trams and engineering products. It currently employs over 650 people.

Photo: ©Pasi Tiitola, Tampere Tramway Ltd.

# Czech Republic

OBB Class 1116.146 heads through Breclav with an empty timber train. *Class47* 



# Czech Republic

IDS Cargo 'Effiliner 3000' Class 365.001 heads south through Vsetaty with a rake of fuel tanks. *Class47* 

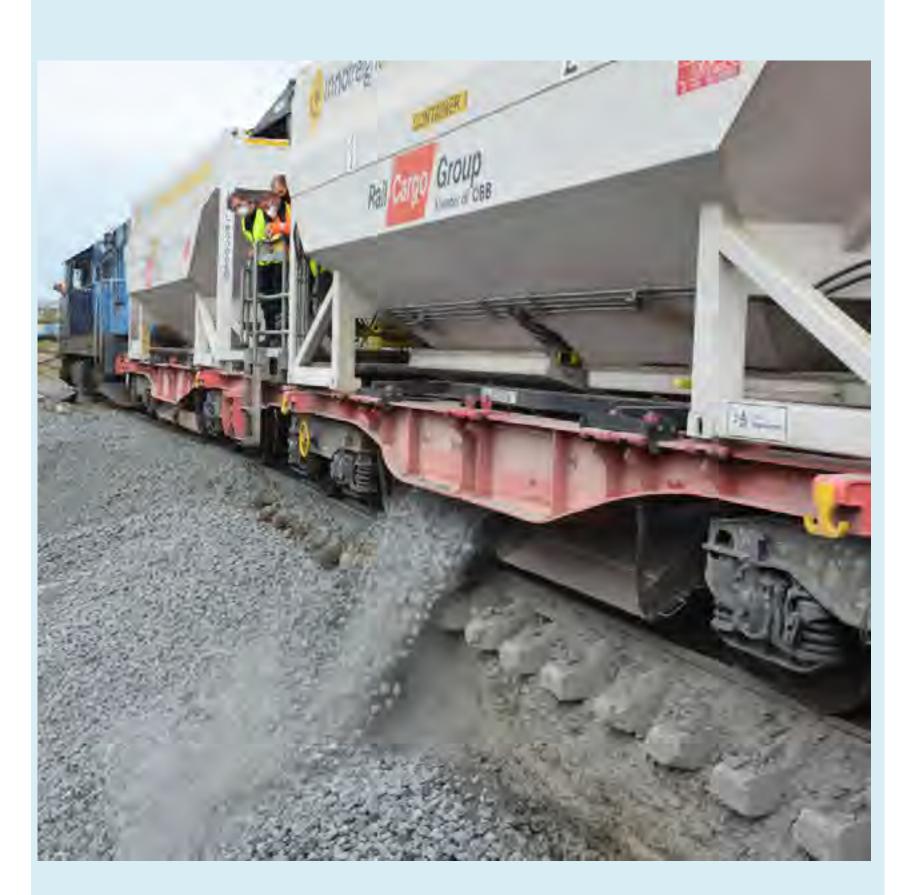
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### New technology for engineering works

In May, a presentation of the new Innofreight technology - the RockTainer INFRA wagon - has taken place in various parts of the Czech Republic. As the name suggests, this is a wagon with superstructures used to transport aggregates of various fractions intended for pouring into the tracks during engineering works.



The technology was presented to the most important contractors of railway constructions, such as Swietelsky Rail CZ, PEDASTA dopravní stavby, Metrostav, Aquasys, Remex CZ, Chládek & Tintěra Litoměřice, N + N - Konstrukce a dopravní stavby Litoměřice, STRABAG Rail and VIAMONT Servis.

The technology consists of the Innowagon Sggrrs series, two RockTainer INFRA superstructures, a covered service platform, two gutters and a cable drum. The advantages of the new system are both the higher loading weight and thus the efficiency of transport, as well as the simple operation of the hydraulic unloading system. This allows a wide range of variants for pouring aggregates.

In the near future, this technology could replace some of the older Faccs hopper wagons.



# Czech Republic

CD Class 362.162 stands at Breclav working a S9 service to Prerov. *Class47* 



CER operated Class 186.356 arrives at Usti nad Labem with a rake of Wascosa/VTG hoppers. *Class47* 

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# Czech Republic

CD Vectron Class 193.292 waits departure time at Decin hl.n. with a Eurocity service from Berlin - Praha hl.n. *Class47* 

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### World-first: Automatic Train Operation for regional passenger trains to be tested in Germany

Alstom lauded by German Federal Ministry of Economics for start of automatic regional rail project

Research project starts in 2021, test operation for first automated trains in early 2023

#### Second innovative mobility solution tested in Lower Saxony after the world's first hydrogen train

The German Federal Ministry of Economics has presented Alstom with the "Innovation Prize for Regulatory Sandboxes"\*, related to a planned test project to implement Automatic Train Operation (ATO) in daily passenger operation of regional trains. The project will begin in 2021 together with the Regional Association of the greater area of Braunschweig, the German Aerospace Center (DLR) and the Technical University of Berlin (TU Berlin).

After evaluation of the selected tracks and the equipment necessary for automated operation, the testing will be carried out with two Coradia Continental regional trains owned by the Regional bahnfahrzeuge Großraum Braunschweig GmbH. Alstom has long been a world-leader in ATO for metro systems, but this test will be a world-first for regional passenger trains.

"In the future, automated trains will optimize regional rail operations, reduce energy consumption, and increase ride comfort. In this way, highly automated driving will make a decisive contribution to climate protection and contribute to the development of a modern, attractive railway system. Following the development and successful testing of the world's first hydrogen train Coradia iLint, Alstom is once again the innovative driver in rail transport with the pilot for regional trains in automated operation," says Jörg Nikutta, Managing Director of Alstom in Germany and Austria For this project, two trains based on Alstom's successful Coradia Continental platform will be equipped with a European Train Control System (ETCS) and additional Automatic Train Operation (ATO) equipment. The equipment will enable the trains to operate automatically, testing different grades of automation (GoA): GoA3 in regular passenger operation and GoA4 during shunting. GoA3 describes a fully autonomous train journey, but with an attendant who can intervene in the operation in case of emergency. GoA4 denotes unattended operation with no staff aboard, but with the possibility of remote control.

Congratulations on the nationwide award of the Innovation Prize were expressed by Lower Saxony's Minister of Economics and Transportation, Dr. Bernd Althusmann: "After the successful operation of the fuel cell train in the Elbe-Weser Triangle, the Alstom site in Salzgitter is once again setting standards for tomorrow's local transportation with this project. The fact that we in Lower Saxony are now able to drive forward the testing and further development of automatic train operation in addition to the test field for automated and networked mobility on the road is a decisive step for the future of passenger transport by rail. The new model project promises a high degree of innovation, which we need for climate-friendly and efficient mobility services. Of course, I am particularly pleased that with Alstom, another company from Lower Saxony underlines our reputation as an important source of innovation".

"ATO, or Automatic Train Operation, is one of the most exciting challenges in the railway industry. It gives us the opportunity to shape and significantly change the operational management of the future. But a lot of research is still needed before this is the case, and I am very pleased to be working with Alstom on this project," said Birgit Milius, Head of the Department of Railway Operations and Infrastructure at TU Berlin. In the project applied for, she will investigate various aspects, including the integration of humans into the technical system. Fritz Rössig, Head of the Transport Department of the Regional Association and Managing Director of Regionalbahnfahrzeuge Großraum Braunschweig GmbH adds: "Artificial intelligence is an important technology for making the local rail passenger transport of the future even more efficient and economical. Against this background, the Regional Association of Greater Braunschweig supports this innovative research project and will make its "ENNO vehicles" available for this purpose".

Jörn Groos, group leader in the technology field of data acquisition and information retrieval at the Institute of Transportation Systems Technology at the German Aerospace Center DLR e. V., adds: "Tests under real conditions are indispensable for the development of practical AI approaches for the optimization of the railway system".

The findings from this important project will contribute decisively to the further development of the legal and regulatory framework that will oversee Automatic Train Operation. Lower Saxony will be at the leading edge and is confident that automatic regional trains equipped with GoA3 will soon be ready for series production. In executing the regulatory sandbox, Alstom can rely on its extensive know-how in automated metros and various other ATO projects. The company is leading the European ATO project in Shift2Rail and is involved in SNCF's automated freight train.

\* About the programme "Innovation Prize for Regulatory Sandboxes" Alstom received the prize for its idea of a regulatory sandbox for highly automated train operation in the category "Outlook". Regulatory Sandboxes are becoming increasingly important for Germany as a means for innovation. As test environments for innovation and regulation, they serve to gather experience with digital innovations under real conditions. New technologies and business models that are only partially compatible with the existing legal and regulatory framework are to be tested in experimental environments for a defined amount of time.



# two hydrogen trains, next project phase begins

After 530 days and more than 180,000 driven kilometres, the successful trial operation of the world's first two hydrogen trains was officially completed at the end of February. Two pre-series trains of Alstom's Coradia iLint model have been in passenger service since September 2018.

From 2022, 14 Coradia iLint series trains will replace the existing diesel multiple units. LNVG was the first company to believe in hydrogen, investing in it with the order of 14 Coradia iLint trains and thirty years of maintenance and power supply. This project showcases the importance of green mobility for the state of Lower Saxony. As one of the leading rail vehicle manufacturers in Europe, Alstom will produce the fuel cell trains for LNVG and will be responsible for the maintenance of the vehicles at its site in Salzgitter. The gases and engineering company Linde will build and operate a hydrogen filling station for the series trains near Bremervoerde station.

"Our two pre-series trains of the Coradia iLint have proven over the past year and a half that fuel cell technology can be used successfully in daily passenger service. This makes us an important driving force on the way to emission-free and sustainable mobility in rail transport", comments Jörg Nikutta, Managing Director for Germany and Austria of Alstom Transport Deutschland GmbH. "We have also obtained valuable data from the trial

operation of the fuel cell trains for the further development of the propulsion technology."

"We are proud that we were the first railway company in the world to be allowed to operate the first two fuel cell trains on the Weser-Elbe network. From the very beginning, our passengers were very curious about the trains and their new propulsion technology. Besides its very low noise level, the hydrogen train was able to score with its emission-free operation, especially in times of climate change. The operation of the iLint was a very special motivation for our train drivers", said Andreas Wagner, head of the SPNV division and authorized signatory of the Eisenbahnen und Verkehrsbetriebe Elbe-Weser GmbH (evb).

Carmen Schwabl, Managing Director of LNVG, adds: "With the successfully completed trial operation, the requirements for continuous operation of the hydrogen trains from 2022 are fulfilled. LNVG thus contributes to the implementation of sustainable, innovative and ecological mobility solutions, especially in rural areas".

"Alstom has made hydrogen history here. The project is of a great importance to industrial policy that goes far beyond Germany. Here, we are witnessing



"The Federal Ministry of Transport is very happy to support the beacon of modern mobility: the hydrogen train in Bremervörde. After all, this project is a flagship for the mobility of the future," says Enak Ferlemann, Parliamentary State Secretary at the Federal Ministry of Transport and Digital Infrastructure. "Hydrogen is a real low-emission and efficient alternative to diesel. Especially on secondary lines where overhead lines are uneconomical or not yet available, these trains can travel cleanly and in an environmentally friendly way. We would like to see more such applications."

the first competitive product of hydrogen mobility at industrial level", says Lower Saxony's Minister of Economics and Transport, Dr. Bernd Althusmann.

#### Made in Munich: Locomotive factory in Munich-Allach delivers to 49 customers in 16 countries

#### Anniversary locomotive goes to Danish State Railways

#### Platform concept enables sustainable and flexible operation

Siemens Mobility has just sold its 1,000th Vectron locomotive. The anniversary locomotive was ordered by Danish State Railways (DSB). The first Vectron was delivered in 2012, and all locomotives have been built at the Siemens Mobility factory in Munich-Allach. The order from DSB is for eight AC Vectrons. To date, a total of 1,003 Vectrons have been sold to 49 customers in 16 countries.

"The sale of the 1,000th Vectron is a success that underscores the longstanding trust and satisfaction of our customers. Designed for operating throughout Europe, the Vectron enables cross-border transport without

changing locomotives. They create transport corridors across borders, ensuring efficient, ecofriendly and reliable European rail transport," said Sabrina Soussan, CEO of Siemens Mobility.

"We are strongly focused on our ability to ensure sustainable public transport with proven electric-based platforms in our modernization of DSB's rolling stock fleet. We are, of course, looking forward to receiving all the Vectron locomotives we have ordered from Siemens Mobility, and the fact that we will receive locomotive number 1,000 shows that it is possible to establish standardized and off-the-shelf products in the railway industry," said Jürgen Müller, Executive Vice President, Strategy and Rolling Stock, DSB.

The Vectron is used for both freight and passenger service. The locomotives can be delivered as a purely electric version operating on either alternating current (AC) or direct current (DC), or as a multisystem (MS) variant. The Vectrons have a power output of 5.2 or 6.4 megawatts. For freight transport in selected countries, Siemens Mobility also has the standard Smartron

ertron

### Vectron – figures of a success story



on traci

fleet kilometres



customers



### Siemens Mobility sells 1,000th Vectron locomotive

locomotive as well as the Vectron Dual Mode, a combined diesel and electric locomotive, in its portfolio.

The Vectron locomotives have already accumulated more than 300 million fleet kilometres of service and are certified for operating in Austria, Bulgaria, Croatia, the Czech Republic, Finland, Germany, Hungary, Italy, the Netherlands, Norway, Poland, Romania, Serbia, Slovakia, Slovenia, Sweden, Switzerland and Turkey. The Vectron has also recently been approved for operating in Belgium.

Including this new order, the Vectron fleet operated by DSB has grown to 42 locomotives. The company ordered its first 34 AC Vectrons from Siemens Mobility in 2018 and 2019. The locomotives will be used for passenger service in Denmark. Deliveries will start at the end of 2020.

# Railway stations in Germany: Tailor-made concept for even more hygiene and cleanliness

Safe travel in times of Corona: With its cleaning offensive, Deutsche Bahn ensures even more hygiene and cleanliness at train stations. 2,000 cleaning staff disinfect the areas that travellers often touch. Special machines are also used. The company also installs dispensers with disinfectants in around 600 train stations.

DB Infrastructure Director Ronald Pofalla: "We do everything to ensure that our customers can enter the stations with a good feeling. We have launched a tailor-made cleaning campaign for our large and small stations. Train travel is and remains safe. "

Inorderfortravellerstobeabletocomplywiththedistancerecommendations, DB is introducing new signposting systems in high-traffic locations. Distance markings in front of DB Information, in the travel centres and in front of the shops also help to avoid contact.

On May 28, 2000, the doors opened for the first time to all eurobahn passengers in the East Westphalia-Lippe network

With the lines RB 71, Ravensberger Bahn, and RB 73, the Lipperländer, the eurobahn took off for the first time in the East Westphalia-Lippe network 20 years ago. As one of the first private providers of public rail passenger transport, the company can look back on two eventful decades. "When we think of the beginnings of privatization to this day, a lot has developed in the industry. Together we are working on the traffic turnaround. An improved range of passengers, modern trains and an increase in passenger numbers allow us to look positively into the future of local rail passenger transport. Special thanks go to our passengers, our employees and our industry partners who accompany us every day and stand by our side, "says Magali Euverte, Chief Executive Officer Keolis Germany.

#### **Start station Bielefeld**

The first journey of the two lines started on May 28, 2000 at Bielefeld Hbf. Seven employees of the eurobahn team can still remember the exciting start of operations and also celebrate their 20th anniversary. In addition, the foundation stone was laid for the workshop in Bielefeld-Sieker in 2000, and the inauguration ceremony took place a year later. 20 years later, the company is one of the largest private rail passenger transport companies in North Rhine-Westphalia; operates two of its own workshops, has central locations in Düsseldorf and Hammand has grown to around 1,000 employees. In addition to the initial two lines, there are now 14 further lines in the Keolis Germany portfolio, which are operated with 96 modern traction vehicles.

**Cross-border traffic** With the Maas-Wupper-Express, RE 13, eurobahn has been traveling every day to neighboring Netherlands since 2010. With the takeover of the RB 61 line in December 2017, it will also travel cross-border to Hengelo, the Netherlands. For train driver training, this means not only route knowledge, but also learning the Dutch regulations and language.

#### Training and qualification

In addition to the transportation of travellers, eurobahn focuses on vocational training and qualification. In addition to three years of vocational training as a railroad worker in operational service with a final examination in front of the Chamber of Commerce and Industry, young people are also trained in the training professions as mechatronics technicians and IT specialists in system integration. A total of nine young people will start their vocational training at Keolis Germany on September 1st. In addition, there is the opportunity for interested parties and career changers to learn the job of a train driver within an 11-month qualification on the second training path. The company focuses on equal opportunities and diversity. "For us, female power in the driver's cab or at the management level is no empty phrase, but lived practice. With around 7% of female train drivers, we are above the industry average of 4%, for example. Of course there is still room for improvement, "adds Euverte.

#### History

The company headquarters under the name Rhenus Keolis was at the time of its foundation in Mannheim with a branch in Mainz. The administrative beginnings were started in two offices in a gatehouse of the Gesellschaft für Arbeits- und Berufsförderung mbH. With the separation of Rhenus and

With more than 50,000 posters and information on the monitors and billboards in the train stations, DB provides information on how its customers can best protect themselves. Announcements support the information of the travellers.

DB is also testing innovative technologies. In selected locations, disinfectant paints on elevator buttons and stair handrails should ensure that bacteria and viruses are combated with great effectiveness. In Frankfurt am Main and Düsseldorf, UV-C light disinfects the handrails of escalators. 99 percent of all bacteria and viruses are safely killed.

Photo: An employee at Leipzig Central Station cleans and disinfects contact areas several times a day (Photo: DB AG / Jörg Bönisch)

#### 20 years of eurobahn

Keolis, the head office moved to Berlin shortly after its foundation. The company was managed from the capital for over 15 years. With the start of operations in the Maas-Rhein-Lippe network in 2009, there was the first administrative seat in the Rhineland in Düsseldorf, which has been the headquarters of eurobahn since 2015.

#### Outlook

The anniversary year started eventfully for eurobahn. After a strike-related special timetable on some routes, the company was able to offer its services again within a very short time. In February, the storm lows Sabine and Viktoria mixed up the timetable and caused a standstill in local rail transport. The special timetable within the corona pandemic, coordinated with the industry, followed just a few weeks later.

The first conclusion of the previous five months: "The year has been atypical so far. We would never have expected these events" the Keolis management agrees. "Our goal is always and especially at this time to offer our passengers reliable and stable operation. We are one of the so-called system-relevant companies, our employees are "everyday heroes of basic care". We are proud of our eurobahn team that they are reliable for all our passengers in this challenging time. Now it is important to invite our passengers back on the rails. All occupational safety-related measures are used and the protection of passengers and employees has top priority. Nevertheless, local rail transport remains a reliable and responsible partner on which passengers can rely, even in these special times, "concludes Euverte. The anniversary celebrations and events for passengers will be postponed to May 2021 under the motto "20 +1".



Bayerische OberlandBahn units Nos. VT105 and VT107 arrive at Munich Hbf with a terminating service. Class47



Deutsche Bahn continues to increase its services. As a result, customers have a significantly larger range available from the Pentecost weekend. In addition to the resumption of the tourist ICE and IC lines, particularly popular ICE city connections will also be strengthened: Munich-Dortmund via Nuremberg, Frankfurt am Main and Cologne, Munich-Dortmund via Stuttgart and Cologne, and Basel-Dortmund via Karlsruhe and Cologne. Here, the train uses trains with double the number of seats (double traction). DB's regional transport is also making progress: the nationwide average of timetables is back at 95 percent.

DB Passenger Board member Berthold Huber: "Demand is slowly picking up again. This is a good sign for the entire rail industry and climate protection. Germany needs a wide range of transport with a strong rail, especially during the holiday months. More capacity creates space for distance and safe travel. We are now quickly ramping up our tourist offer again, even want to expand it and win as many travellers as possible in the summer for the environmentally friendly train."

The ICE Sprinter trains between Berlin and Munich are also coming back based on demand, the first from June 2 and another from June 14.



### DB Bahn continues to expand offerings in Germany and abroad

From Frankfurt, Stuttgart and Munich, passengers arrive particularly quickly in the center of Berlin.

DB offers holidaymakers additional trains in summer. An ICE will connect Stuttgart to Binz (Rügen) for the first time via Berlin. Connections abroad are also being expanded. There will be a direct connection between Berlin and Innsbruck. As of now, almost the full range is being driven to Austria and Switzerland. The first trains are also rolling between Berlin and Prague. Depending on the border modalities, further traffic to all neighbouring countries will follow, in mid-June to the Netherlands and Poland, among others.

DB has introduced a new utilization indicator. Customers can see on bahn. de and in the DB Navigator app as soon as a long-distance train is more than 50 percent full thanks to advance bookings. The number of reservations is limited. In the case of trains that are expected to be very busy, ticket sales can also be suspended. Meanwhile, DB continues to invest in the modernization and expansion of its vehicle fleet. In the past twelve months alone, longdistance transport capacity has increased by around 15,000 seats. Around 13,000 additional seats are expected to be added by the end of this year.

Ci 5

### After modernization: New station and more long-distance traffic for the Baltic Sea resort of Warnemünde

The train station of the Baltic Sea resort of Warnemünde has three new features. After extensive modernization, travellers can now reach all platforms without barriers. At the same time, the new digital interlocking completely takes over control of the rail traffic on the route. And Warnemünde will be a long-distance stop all year round, because the new intercity double-decker trains on the Dresden – Berlin – Rostock line end and start in Warnemünde. In total, the federal government, the state, the city and Deutsche Bahn (DB) have invested around 65 million euros in the renovation.

The construction work was associated with an eightmonth full closure. Now the station is back on schedule. Rostock's Mayor Claus Ruhe Madsen and Joachim Trettin, authorized representative of the Deutsche Bahn for Mecklenburg-Western Pomerania, welcomed the first Intercity from Vienna via Berlin at 8.59 a.m. The first Rostock S-Bahn reached Warnemünde station at 4.54 a.m.

"Now the train journey to the Baltic Sea is not only the After extensive planning, construction started in October The travellers reach their destination 47 minutes faster. most comfortable, but also the fastest way," says Rostock 2018. First, the old technology was replaced by a modern The journey from Dresden takes 4 hours and 42 minutes. digital signal box, which now controls the trains between Mayor Claus Ruhe Madsen. "Not only the beach and the Other new long-distance stops along the route are Berlin jetties are only a few hundred meters from the platform. Rostock-Bramow and Warnemünde. The renovation of Airport Schönefeld, Neustrelitz and Waren (Müritz). The Switching to cruise ships is now more comfortable the station began in September 2019. Now travellers change-free connection Warnemünde-Vienna is also than ever. A big thank you to Deutsche Bahn and all the can look forward to new platforms with modern sound new. A train runs once a day in both directions via Berlin, builders involved, who have worked almost daily in the systems, new lighting and digital information systems, Leipzig, Nuremberg and Passau to the Austrian capital. With 16 journeys a day, the new intercity line connects past few months. Now our 117-year-old train station is as well as new weather shelters and signposting systems. again one of the most technologically advanced in the The old pedestrian underpass was dismantled and metropolises and regions in a total of four eastern German states with new quality. The electrically powered replaced by a new, barrier-free transition in the northern country! " intercity double-decker trains from the manufacturer area of the station. Two 370 meter long platforms for "The renovation of the station was hard work, but it was Intercity and ICE trains were newly built. Travellers can Stadler offer 300 seats and are used for the first time in worth it," said Joachim Trettin, Deutsche Bahn Group also easily reach the cruise terminal from platform 5 via Germany. They have WiFi, a reservation system, modern Representative for Mecklenburg-Western Pomerania. three direct entrances. At the same time, tracks, switches, passenger information and space for enough luggage overhead line and telecommunication systems as well as "Now the path from the old to the new stream is barrierand eight bicycles. Drinks and snacks are available in free and with it access to all platforms. With the extension flood protection were improved. With the restart of the the travel cafes. Panoramic windows on the upper and lower decks as well as varied seating areas contribute of the IC from Dresden and Berlin to Warnemünde, Warnemünde train station, long-distance connections the seaside resort is now well connected to the longto the tourist region were also expanded. With new, to a pleasant journey. Passengers with reduced mobility distance network. We thank you very much for the can reach the train via an on-board ramp. There are comfortable Intercity double-decker trains, the Baltic good cooperation with the Warnemünders and for your Sea beach can be reached from Berlin every two hours two wheelchair spaces and a disabled toilet. A signage system in Braille facilitates orientation. in just 2 hours and 27 minutes. patience! "





eutsche Bahn AG | 05/2020



DB Regio Class 146.006 calls at Aachen hbf with a service to Siegen Hbf. *Class47* 





# DB Netz and Správa železnic Call a Tender on a Project Management for a New Line Dresden – Prague.

DB Netz and Správa železnic have published an invitation to the tender for project management in common planning space as a part of the project for a new railway line between Dresden and Prague. Tender fulfilment for the pre-project preparation phase is estimated between 2020-2024.

The public tender is based on an agreement on cooperation in the field of project preparation for the construction of the New railway service Dresden – Prague, concluded by Správa železnic, státní organizace, DB Netz AG and DB Energie GmbH in 2019. The tender is administrated by DB Netz AG.

The project itself consists of three parts, in which the Czech and German methods of project preparation and a specific mode of common public tenders will be combined to a various degree. The subject of the tender is management and coordination of these activities, of all the suppliers of particular parts of the tender and a support of the involved parties during the preliminary planning phase which also includes preparation of the documents for the accompanying tenders through all parts of the project.

Potential suppliers were introduced with the tendering process according to German law already at the beginning of the last year in Prague through preliminary market consultation. A participation of more than 70 interested parties from different European countries confirmed, that the preparation of this project is an issue on a European scale.

The new railway line between Dresden and Prague will increase the supply of regional passenger transport services due to considerably shorter journey times, also it will shift part of the freight transport from the road to the rail and it will connect the Czech Republic to the network of high-speed lines in Western Europe.

Lokomotion's Class 186.443 heads through a dismal Rosenheim with a mixed consist, heading towards the Austrian border. Class47

### Bombardier delivers 200th FLEXITY Berlin tram to Berliner Verkehrsbetriebe

The entire modern tram fleet in Berlin is Bombardier-built and forms the cornerstone of the city's urban transport in Germany's largest tram network

#### The FLEXITY Berlin fleet will grow to a total of 231 trams

Global mobility solution provider Bombardier Transportation has delivered the 200th BOMBARDIER FLEXITY Berlin low-floor tram to Berlin's public transport authority Berliner Verkehrsbetriebe (BVG) which operates the third-largest tram system in the world. 31 more FLEXITY Berlin trams are yet to join Germany's largest tram network.

"For 30 years we've had a very good partnership with BVG, which has reached another joint milestone with today's delivery of the 200th FLEXITY tram. Since 2008, our modern and innovative FLEXITY trams have been running on Berlin's rails and we're proud to make a meaningful contribution towards more sustainable transport in the booming German capital," said Michael Fohrer, Head of Bombardier Transportation Germany.

"Over the years, the FLEXITY fleet has covered 65 million kilometres, enough to go to the moon and back 84 times, it's quite impressive." Dirk Wunderlich,

Head of Sales and Delivery for German Cities at Bombardier Transportation "The FLEXITY Berlin tram was developed in close cooperation with BVG. The result is a reliable, air-conditioned and barrier-free accessible tram that meets the needs of the metropolis and its guests. Over the years, the FLEXITY fleet has covered 65 million kilometres, enough to go to the moon and back 84 times, it's quite impressive," said Dirk Wunderlich, Head of Sales and Delivery for German Cities at Bombardier Transportation.

Bombardier will deliver a total of 231 FLEXITY Berlin low-floor trams to BVG. While BVG continues to add more trams to its fleet, around 1,000 FLEXITY trams already operate in 42 German cities and over 5,000 Bombardier trams have been ordered or are already in successful revenue service in cities around the world.

As Bombardier delivered the 200th FLEXITY Berlin low-floor tram to BVG here are some interesting facts and figures:

• 200 consecutive FLEXITY Berlin trams have a length of around eight kilometres. This corresponds, for example, to the distance from Zoologischer Garten to the Eastside Gallery





Berlin TV tower (3,500 tons)

• 4,800 kilometres of cable have been installed in the trams so far, which corresponds to the route from Berlin to Dubai

• Around 5,000 tons of steel are used in the 200 trams – more than in the

### Hungary

RTI Railtrans International Class 242.543 passes through Heygeshalom witn a mixed consist. *Class47* 

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### Hungary

Train Europe Class 193.741 is seen stabled for the weekend in the yard at Heygeshalom. *Class47* 

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## lreland

Irish Rail 201 Class No. 222 with a Dublin - Cork Mk4 set, is seen south of Thurles. *Paul Quinlan* 



### lreland

In the Irish midlands, Bord na Móna operates a 3 ft gauge system that is one of the largest industrial railways in Europe. No. LM 410 crosses the River Shannon into Shannonbridge power station, bringing another load of peat off the bogs. *Paul Quinlan* 



### ltaly

SUMS (EAN) 9 (ESS) Autor - States

At Villa San Giovanni, Trenitalia Class D145.2033 is seen with the 07:26 Roma Termini - Palermo Centrale and D145.2023 with the 10:20 Siracusa -Roma Termini. *FrontCompVids* 





## ltaly

Trenitalia No. D445.1076 stands at Inglesia with the 14:18 from Cagliari. *FrontCompVids* 

Iglesias





### ltaly

10

Trenitalia Class E656.435 stands at Messina Centrale with the 10:00 from Palermo Centrale. *FrontCompVids* 

€656

# Messina C.le



NS ICM EMUs Nos. 4092 and 4077 are seen ready for departure in Gouda on May 12th working a service from Leeuwarden and Zwolle to Rotterdam. *Erik de Zeeuw* 



On May 6th, RTB Cargo Class 193.791, with the slogan 'Together through Europe' passes Dordrecht with an ethanol train to Germany. *Erik de Zeeuw* 











At the height of America, SBB Cargo Class 189.282 passes with the GTS-Shuttle from Terminal Intermodale Milano Segrate to Rotterdam Botlek. *Erik de Zeeuw* 









NS Class 1700 No. 1752 and a sister locomotive No. 1746 pass the village of Tricht on their way to the workshop in Maastricht on March 25th. *Erik de Zeeuw* 



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AMetransservicecrossestheliftbridgeinGoudawith a container shuttle from Prague to Rotterdam on March 25th. Metrans is owned by HHLA (Hamburger Hafen und Logistik AG). *Erik de Zeeuw* 

On March 27th, Arriva GTW trainset No. 388 passes Smakt working a service from Nijmegen to Roermond. *Erik de Zeeuw* 

On March 27th, NS ICE International No.4652 is seen near Hegelsom working a service from Amsterdam Centraal station to Frankfurt (M) Hbf (Germany). In connection with work on the railway in Emmerich the train was diverted via Venlo. *Erik de Zeeuw* 







Empty stock with NS Nos. 186.008 and 186.004 (top'n'tail) is approaching Dordrecht on May 6th. *Erik de Zeeuw* 

RTB Cargo Class 186.425-5 is captured in the arch near Willemsdorp on May 6th with the Blerick-Shuttle from Rotterdam Maasvlakte-West to Venlo. *Erik de Zeeuw* 

BLS Cargo Class 475.407-3 provides traction to a rake of tank cars heading to Switzerland through Dordrecht on May 6th. *Erik de Zeeuw* 







JETHICITATION CONTRACTOR

Class 383.109 departs Bratislava hl.st. with a service to Kosice. *Class47* 

CIENTER I

712

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### Slovakia

5

BURNING (58.1)

ZSSK Class 362.012 reverses its stock into the platform at Bratislava hl.st. *Class47* 



## Switzerland

RhB Ge 4/4ii No. 621 with an evening passenger service is seen near Madulain, heading towards Samedan. *Paul Quinlan* 



### India

### Alstom's first Prima electric locomotive delivered to Indian Railways begins operation

On May 19th, the first of the 12000-horsepower, Prima T8 electric locomotives was put into commercial service by Indian Railways. Built by Alstom and certified by the Ministry of Railways and Commissioner of Railway Safety/RDSO, the electric locomotives – known locally by the designation WAG-12 – are the most powerful locomotives to run on Indian rails. The 2015 contract will see a total of 800 locomotives built for Indian Railways.

Set to revolutionise freight logistics in the country, the e-locos will allow faster and safer movement of heavy freight trains, capable of hauling 6000 tonnes at a top speed of 120 km/h. Planned for deployment on Dedicated Freight Corridors (DFCs), they will increase the average speed of freight trains in India by approximately 25 km/h. Equipped with Insulated Gate Bipolar Transistors (IGBT) propulsion technology, the e-locos will also allow considerable savings in energy consumption thanks to the use of regenerative braking.

"Alstom is very pleased to be delivering these electric locomotives to Indian Railways. The introduction of the Prima locomotives into the IR fleet demonstrates our commitment to the country. This revolutionary product which will be faster, safer and more environmentally friendly, and it will help write a new chapter for India's sustainable mobility journey. We are immensely proud to be a partner in this," said Ling Fang, Senior Vice President of Alstom Asia-Pacific. In line with the Make-in-India mandate, all the 800 Prima locomotives are being manufactured locally. Designed at Alstom's Engineering Centre in Bengaluru, the Prima T8 WAG-12 are being built in one of India's largest integrated greenfield manufacturing facilities at Madhepura in Bihar.
Railways and Alstom signed a contract worth €3.5 billion (INR 25,000 crore) and created a joint venture for the project. The contract allowed for the manufacture of 800 double-section, 12000-horsepower electric locomotives for freight service and associated maintenance for a period of 11 years.
The scope also included the set-up of a manufacturing plant at Madhepura (Bihar) for building the e-locos and two

Spread across 250 acres, with a production capacity of 120 locomotives per year, the Madhepura site is built to international standards of safety and quality. Two ultra-modern maintenance depots in Saharanpur and Nagpur will ensure the high service availability of the locomotives. The Saharanpur depot is already operational and the

### Singapore

# Alstom and SMRT Trains sign services partnership for driverless train control system for the Circle Line in Singapore

Alstom and SMRT Trains, with support from the Land Transport Authority (LTA), have signed an agreement that will ensure the continued reliability and availability of the driverless train control system[1] installed by Alstom on the larger Circle Line (CCL) network. This long-term services support (LTSS) agreement is the first of its kind for a Singapore Mass Rapid Transit (MRT) line, with a contract length of 16 years which also includes performance guarantees for the entire contracted term [2].

Leveraging Alstom's long experience in train control solutions and maintenance, the programme will see Alstom provide spare parts, repairs, obsolescence management and technical support for the CCL system until the year 2035. During this period, a local team of Alstom experts will work closely alongside SMRT Trains' CCL team to maintain the availability and security of the train control system. Such localisation of dedicated onsite resources, including the adoption of advanced diagnostic tools, offers operational flexibility and efficiency to ensure safe and reliable service for CCL commuters. "We are proud to support our customers in Singapore where and when it matters most. With this LTSS contract we will strengthen Alstom's service portfolio in the Asia Pacific region and enhance the localisation of key competencies in Singapore. It also reinforces the trust that SMRT Trains places in our technical, operational and maintenance expertise. We look forward to this long-term collaboration that will ultimately benefit passengers on the line," said Guillaume Denis, Vice President of Alstom Digital Mobility in Asia Pacific.

MrLeeLingWee, ChiefExecutiveOfficer, SMRTTrains, said: "This collaboration will allow SMRT to maintain the performance of CircleLine's signalling system through long-term spare support, shorter repair turnaround time and access to Alstom's technical expertise."

Alstom's Communications Based Train Control (CBTC) solution Urbalis first entered service on the CCL network in 2009, enabling the first automated operations of metro and suburban rail networks. It gives operators precise control of train movements, allowing more trains to run on the line at higher frequencies and speeds in total safety, with or without drivers.

one in Nagpur is under construction. Equipped with the latest features, these depots will play a critical role in maintaining India's most advanced freight locomotives at significantly lower costs.

As part of the largest Foreign Direct Investment (FDI) project of Indian Railways, in 2015 the Ministry of Railways and Alstom signed a contract worth €3.5 billion (INR 25,000 crore) and created a joint



The scope also included the set-up of a manufacturing plant at Madhepura (Bihar) for building the e-locos and two maintenance depots at Saharanpur (Uttar Pradesh) and Nagpur (Maharashtra). A true embodiment of India's vision, the project will create more than 10,000 direct and indirect jobs in the country (primarily in the states of Bihar, Uttar Pradesh and Maharashtra).

Alstom has been present in Singapore for over 20 years and is a major supplier of integrated metro systems, digital train control systems, rolling stock, infrastructure and services for Singapore's MRT lines. The CCL system itself was fully designed and built by Alstom in consortium with local companies. Alstom is currently supplying the signalling system and 23 Metropolis trains (69 metro cars) for the CCL Stage 6.

[1] Digital Train Control or Signalling entails the optical, acoustic or electronic signals that transmit information in the form of signal terms during railway operations.

[2] Booked in Q4 of the 2019/20 fiscal year.



### lreland

## CAF AGREES MAINTENANCE CONTRACT EXTENSION WITH THE NORTHERN IRELAND OPERATOR TRANSLINK

CAF has concluded an agreement to extend the maintenance contract that the Company has been performing on the Class 3000 diesel train fleet for Northern Ireland's public rail operator, Translink, for the past few years. This new contract came into effect this April, amounting to over €60 million.

CAF Rail UK, a subsidiary of the CAF Group which began operations in 2004, will continue rendering this service for a term of 15 years. Maintenance work will be performed on these units in the workshops in Belfast City, more specifically, in the workshops at York Road and Adelaide, which are owned by the Irish operator.

The units to be maintained under this contract consist of the entire Northern Ireland rail network, with the main lines being those that connect Belfast to other cities such as Derry/Londonderry, Portadown and Bangor, amongst others. These trains are fitted with the Continuous Automatic Warning System (CAWS) which is used in the Republic of Ireland. Using this system means that the trains can be used for special cross-border support routes.

The number of Irish operator's passengers has been steadily growing 10% per year on average since the Class 3000 was commissioned in 2004. It now stands at 16,000,000 passengers per year, which represents an increase of almost 115% over 15 years.

It should be pointed out that CAF's first project for Translink started in 2002 with the supply of 69 Class 3000 diesel cars which were commissioned for revenue service in 2004 with CAF performing their maintenance from the onset. Later, CAF concluded a new contract in 2009 comprising the manufacture of a further 60 Class 4000 cars, and their maintenance for 15 years.

### Arriva CEO on why public transport needs to stay front and centre of efforts to tackle climate change

Manfred Rudhart, Arriva CEO: At a recent meeting with the EU Commission Vice-President, Frans Timmermans, and public transport operators, the continued importance of modal shift was discussed as vital to achieving the EU's climate targets. Whilst we have seen transport emissions and air pollution levels drop significantly during the pandemic, these are only short-term changes if society goes back to its old ways. Even before the coronavirus crisis, there were plenty of reasons to change transport priorities. With more than 4 in 5 domestic passenger journeys in Europe made by private car, it was clear that a different approach was needed to reducing carbon emissions, as well as tackling urban congestion and improving air quality.

Lockdown measures across Europe enabled many of us to witness a different world with normally busy streets unclogged of traffic. In London, one of the most congested cities in Europe, emissions nearly halved on some busy roads. In Milan, one of the cities worst affected by coronavirus, traffic congestion dropped by up to 75% in some places, with a corresponding fall in pollution too.

Having had a taste of what decongested streets and cleaner air could look like, it is not surprising that some cities in Europe are now using the opportunity to take a different approach to urban transport and city planning. Temporary measures that were put in place to encourage social distancing - including road closures and pop-up cycle and bus lanes - are now being considered as part of wider efforts to avoid a resurgence in car use.

As we come slowly and safely out of lockdowns across Europe, the imminent priority for public transport operators is to continue to ensure passenger safety and rebuild customer trust. It will take some time, but with the right safety measures in place, and by working in partnership, I am confident that people can be encouraged back to public transport. However, society should not just go back to the way things were. Instead, we should move forward and dare to reimagine mobility. Transport planners and policy makers have an opportunity to use the coronavirus crisis to lock-in some of the environmental gains made in recent months by adopting permanent sustainable travel options. Let's expand bus rapid transport systems and rail networks to increase capacity. Let's look at reclaiming on-street parking and reallocating road space in favour of wider pavements, and dedicated cycle and bus-only corridors. Let's embrace the anticipated growth in active travel options, which can play a useful solution for first and last mile journeys in urban and rural settings.

Across Europe, we need to work in partnership, with local authorities, mobility providers and operators, to redesign our transport networks. Changes which facilitate active travel, and provide additional space for more efficient public transport, must be made permanent. This is the only way we can encourage modal shift, achieve the EU's climate targets and create clean, sustainable mobility systems, fit for the future.

CAF is currently in the course of manufacturing an additional 56 intermediate cars. This option was provided for in the above mentioned contract dated 2009 and was enforced by Translink one year and a half ago. Consequently, this new agreement further confirms and extends the close relationship between both organizations in recent years.

The CAF Group remains fully committed to expanding its train maintenance business. It should also be noted that this department is currently managing over 100 maintenance contracts in 16 countries, providing maintenance for 7,500 railway vehicles, all realised by a workforce of over 4,000.

### Sweden

## Siemens Mobility to deliver rail electrification for major extension of Stockholm Metro

### Siemens Mobility has been appointed to supply the rail electrification system for Region Stockholm Extended Metro Administration

### Major rail electrification contract with a volume of 21 Million Euros

Siemens Mobility has been selected by Region Stockholm Extended Metro Administration to deliver rectifier stations and network stations for the new Stockholm Metro extension. The project is an expansion of the metro with a yellow line that will run from Odenplan to Arenastaden and extensions of the Blue line to Barkarby in the north west and to Nacka and Söderord in the south east. In addition, the Blue Line will be connected to the green Hagsätra branch, and a new section will be built between Fridhemsplan and Älvsjö. The project is worth about 21 Million Euros. Work will start immediately and will take several years to complete. Delivery will take place in stages during the construction period.

### "A well-functioning metro system is an important factor in

Scope of the project is as follows:

- auxiliary power systems.
- and 750V cable at Akalla-Barkarby.

Below: Map of the new metro for the Stockholm region

everyday life for the residents of the Stockholm region. When the yellow and other line extensions are in place, even more people will be able to use this efficient sustainable and mode of transport, Siemens and Mobility is pleased to be part of such a comprehensive and important project, which will enhance passenger service experience." and says Michael Peter, CEO Siemens Mobility.



• Design, installation, delivery, control, testing, commissioning and documentation for a total of 15 rectifier stations, 28 network stations and a cable contract for fully operational installation.

• The rectifier station consists mainly of 36kV switchgear, rectifier units, DC switchgear 750V, control equipment and

• The network station consists mainly of 36kV switchgear, transformer 33/0.42 kV and control system.

• The cable contract includes shafts and cable laying of 33 kV

Functional responsibility for all components.

### Russia

Russian export centre at the Economic Forum in Rail Cargo Group and FESCO Transport Group have jointly organized the first multimodal Krasnoyarsk, Siberia. transport of rapeseed oil in containers equipped with flexi-tanks from Krasnoyarsk, the third First transport services up and running largest city in Siberia, to the Chinese port of Nantong.

Comprehensive logistics packages with end-toend logistics solutions are becoming increasingly important on the Chinese market. After all, the Chinese market is one of the most up-andcoming when it comes to the export of Russian goods, especially food. This is why the Rail Cargo Group in Russia also relies on international rail, container and truck transport to Russia, Turkey and even to China. And for every industry. In order to implement sustainable and efficient logistics solutionsandtoexpandenvironmentallyfriendly container transport services from Siberia to China, an agreement was signed last year with both FESCO Transportation Group, the largest intermodal transport company in Russia and the



### RCG and FESCO puts rapeseed oil on rails

The first batch of goods were sent in March. Along with our partner, FESCO Integrated Transport, Ltd., we organized a container transport with a volume of 216 tonnes from Krasnoyarsk, located on the Trans-Siberian Railway, to the port of Nantong, Jiangsu province in China. The ten containers and the rapeseed oil loaded in flexi-tanks were first transported by rail from the terminal in Krasnoyarsk to the Port of Vladivostok on the Pacific coast of Russia. The regular sea line FESCO China Express then took the containers to the Port of Shanghai, where they were transported by barge on the river to the Port of Nantong. The rapeseed oil reached its destination on 17th March after 35 days in transit. Both business partners aim to create further stable and reliable transport services.

### France

## Alstom delivers the 300th Coradia Polyvalent train, produced in Reichshoffen, to France's Occitanie region

Alstom delivered the 300th Coradia Polyvalent train for Régiolis in the Occitanie region on Thursday 7 May. After 6 years of operation, the total delivered fleet of Coradia Polyvalent trains has covered more than 107 million kilometres with a level of reliability and availability in line with the expectations of SNCF Voyageurs and the French Regions.

"This 300th train is an important milestone for the Reichshoffen site. It

symbolises Alstom's ability to meet the different expectations of the regions, from the same platform, thus combining industrial excellence with a tailored response to the legitimate expectations and requirements of each public transport authority," said Jean-Baptiste Eyméoud, CEO of Alstom in France.

With their modular architecture, the Coradia Polyvalent trains can be adapted to the requirements of each public transport authority as well as to the different types of operation - suburban, regional and intercity. The trains, which can travel at 160 km/h, are available in three lengths (56, 72 or 110 metres) and offers optimal comfort to passengers, whatever the length of the journey.

Coradia Polyvalent trains are both ecological and economical thanks to their low energy consumption and reduced maintenance costs. Operation in multiple units of up to four trains makes it possible to adapt flexibly to dense traffic or peaks of up to 1,000 passengers.

In response to the hydrogen plan initiated by the French Minister for the Ecological and Inclusive Transition and the Minister for Transport in June 2018, Alstom is now proposing to incorporate a dual-mode electrichydrogen version into the Coradia Polyvalent range.





On May 29th, Vossloh AG finalized the sale of the Locomotives business unit to CRRC Zhuzhou Locomotive Co., Ltd., Zhuzhou, China (CRRC ZELC), a subsidiary of China Railway Rolling Stock Corporation Ltd. (CRRC), effective May 31, 2020. With the approval by the Bundeskartellamt (German Federal Cartel Office) on April 27, 2020, all official approvals required in Germany and abroad for the execution of the transaction have been granted.

Oliver Schuster, Chief Executive Officer of Vossloh AG, said, "The sale of our Kiel-based locomotive business is an extremely important milestone in Vossloh's strategic development. It marks the end of a fundamental realignment of our company over several years. From now on, Vossloh's focus will be entirely on rail infrastructure products and services. I am delighted that in CRRC ZELC we have found a strong, reliable and above all long-term buyer for our former Locomotives unit. We are convinced that the future prospects of Locomotives will improve significantly with CRRC ZELC as new owner."

The first Coradia Polyvalent trains entered commercial service in April 2014 in Aquitaine, Grand Est and Occitanie. To date, 387 trains have been ordered as part of the contract awarded to Alstom by SNCF in October 2009, including 27 cross-border trains between France and Switzerland (AURA region for LEMAN Express), and 30 cross-border trains between France and Germany (Grand Est region). The design and manufacture of projects stemming from the Coradia Polyvalent platform secures more than 4,000 jobs in France for

Alstom and its suppliers. Six of Alstom's twelve sites in France are involved: Reichshoffen for the design and assembly, Ornans for the engines, Le Creusot for the bogies, Tarbes for the traction chains, Villeurbanne for the on-board systems and Saint-Ouen for the design.

Photo: Coradia Polyvalent Occitanie. © Antoine Darnaud – Région Occitanie

### Vossloh completes the sale of its locomotive business

With Locomotives, following its decision on the strategic focus on rail infrastructure, Vossloh is selling the last of originally three business units of the Transportation division. The former Rail Vehicles and Electrical Systems business units were sold in 2015 and 2017. The Locomotives business unit, which is headquartered in Kiel, develops and produces diesel-electric locomotives and offers all the maintenance and repair services that they require. CRRC ZELC was founded in 1936 and is a subsidiary of the largest manufacturer of rail vehicles in the world, CRRC.

### Bulgaria

### Siemens Mobility delivers ten Smartrons to Bulgaria

### **BDŽ orders ten Smartron locomotives**

Delivery: February to May 2021

### The Smartron concept: One version, one contract, one price

Bulgarian State Railways (BDŽ) has ordered ten Smartron locomotives from Siemens Mobility. The Smartron is a preconfigured locomotive that combines all the advantages of a standard product with the proven platform technology of the Vectron locomotives. "The Smartron locomotive offers our customers a powerful and reliable product that has been standardized to ensure a simple purchase process and fast delivery. With this order, BDŽ is investing in a locomotive fleet that provides cost-effective service with high operational reliability," said Sabrina Soussan, CEO of Siemens Mobility.

The locomotives ordered by BDŽ are intended for passenger service in the country. Delivery of the ten units is scheduled for February to May 2021. BDŽ is the third Smartron customer from Bulgaria after PIMK and Bulmarket. The Smartron is available in the countries of Bulgaria, Germany and



of Bulgaria, Germany and Romania and is based on the proven components of the Vectron, which has already demonstrated its reliability in over 300 million kilometres of service. The Smartron operates on a 1,435 mm gauge and weighs around 83 tons.

The Smartron designated for Bulgaria will operate on a 25-kV AC power system. The locomotives will be delivered in their standard colour Capri Blue. Locomotives will be foiled and branded after delivery in Bulgaria in accordance to design schema of BDŽ.

Atotal of 13 customers have ordered Smartrons since the locomotive's launch in the spring of 2018.

### Europe

### Eurostar volunteers sharing language skills with schools

Eurostar, the high-speed passenger rail service linking the UK and mainland Europe, has developed a scheme to provide support for language students during school closures brought on by the coronavirus pandemic.

French speaking colleagues from across Eurostar's business are involved in the initiative, stepping away from their day jobs\* in areas as varied as train driving, customer service, marketing, operations and finance. The scheme provides support for the community, taking advantage of the wide range of language skills within Eurostar to offer a unique resource for language students.

Volunteers are hosting a range of online sessions for pupils between year groups 8 and 13, aimed at increasing their confidence in French conversation, and maintaining their skills while they study from home away from their regular French teachers.

Eurostar is working with three schools initially, local to its depot in Walthamstow, and St Pancras International in London.

David Dogué, French Teacher, Sir George Monoux Sixth Form College, said: "This project with Eurostar has enabled my A-level students to develop their language skills in a rewarding way by joining conversations with native French speakers.



The opportunity to speak with someone from outside the school helps boost to their confidence whilst they are dealing with the challenges of having to study from home."

Mary Walsh, Director of Communications, Eurostar, said: "This initiative brings together the language skills of our teams, with students who may not have access to French speakers at home. It's a great opportunity for our colleagues to support the local community and help build the confidence of French students."

\*Employees are volunteering whilst part of the government job retention scheme

### Germany

Globallogistics service provider DB Schenker supports the people of northern Italy in containing the coronavirus and delivering a total of 186 containers with medical protective equipment from China to healthcare facilities in the badly affected Lombardy region. The delivery includes protective overalls and glasses and will be transported by train in the upcoming weeks. Twenty containers arrived recently at the Hangartner Terminal of DB Schenker in Verona.

"It is a difficult time for everyone, but we have managed to continue providing uninterrupted services to our customers. This has been possible only thanks to the commitment of our coworkers and the solidity of our network", says Federico Girgenti, CEO of DB Schenker in Italy.

With an expected ridership of 800,000 a day, India's first semi-highspeed rail corridor will connect Delhi, Ghaziabad and Meerut with a new 82km line

Travel time be reduced by 75 per cent enabling passengers from Delhi to reach Meerut in less than 60 minutes

### India's first rail project to include maintenance scope as part of rolling stock tender process

Rail technology leader Bombardier Transportation has received a Letter of Award from India's National Capital Region Transport Corporation (NCRTC) to build and deliver regional commuter and intracity transit trains with comprehensive maintenance services for the Delhi-Ghaziabad-Meerut semihigh-speed rail corridor under Phase 1 of the Regional Rapid Transit System (RRTS). The project scope involves supplying 30 regional commuter trainsets of six cars each and 10 intracity mass transit trainsets of three cars each, together with 15 years of rolling stock maintenance. The Letter of Award is valued at approximately INR 2577 crore (314 million euro, \$340 million US) and the customer has a provision to exercise an option of additional 90 cars and two years of maintenance.

"This project award for India's first and most advanced semi-high-speed regional trains, together with maintenance services, reaffirms Bombardier's pioneering position in India's rail industry." Rajeev Joisar, Country Leader for India at Bombardier Transportation

Mr. Vinay Kumar Singh, Managing Director at NCRTC said, "Finalization of the Rolling Stock bid process is an important milestone in the implementation of India's first Regional Rapid Transit System (RRTS) project. Our partnership

with Bombardier Transportation to supply 100 per cent locally manufactured train sets for the entire Delhi-Ghaziabad-Meerut RRTS with over 83 per cent local content will be a shot in the arm for the Make in India initiative of the Government of India. We are confident that together we will deliver this transformational project in time to fulfill the aspirations of the residents of the National Capital Region contributing to improvement in their quality of

Rajeev Joisar, Country Leader for India at Bombardier Transportation, said, "We are proud to be chosen to deliver India's flagship regional rapid transit system project which will expand public transport in the national capital and connect adjoining fast-growing cities. Our new trains will be truly designed and manufactured in India, and they will enhance passenger comfort and safety." He added, "This project award for India's first and most advanced semi-high-speed regional trains, together with maintenance services, reaffirms Bombardier's pioneering position in India's rail industry. This is also the first project in India for regional and local transit services operating on the same network, progressively realizing India's vision for the multi modal integration of transport networks."

The project will be executed in accordance with Indian Prime Minister, Narendra Modi's flagship 'Make in India' guidelines, with the commuter and metro cars being manufactured at Bombardier's Vadodara sites in India. The rolling stock will be designed at the Global Engineering and Technology Centre in Hyderabad, India and local teams will provide maintenance services through two project and maintenance depots established by our customer in Duhai and Modipuram. It is the first project in India to include maintenance services as part of rolling stock tender process and Bombardier will deliver globally proven maintenance solutions to ensure the safety, availability and reliability of the trains.

life."

In total, the supply includes more than 1300 tons of protective overalls and goggles from various manufacturers in Shanghai and Hubei for hospitals in the Lombardy region. DB Schenker picks them up by truck at the production sites.

At the container terminal in Xi'an, the freight is loaded onto the China train, which DB Schenker and DB Cargo operate in close cooperation as the Trans-Eurasian land bridge. After only twelve days and a journey of more than 10,000 kilometres via Kazakhstan, Russia and Belarus, the train reaches Kaliningrad.



## 186 containers against Coronavirus: DB Schenker supplies protective equipment for Lombardy

From there, the containers are transported by ship to Rostock, from where they are again taken by train to DB Schenker's intermodal terminal in Verona. In total, DB Schenker was able to reduce the transit time to just 15 days.

After customs clearance, the containers are finally distributed to health facilities in Milan, Bergamo and Brescia, among others, by truck in DB Schenker's full-load service.

This means that the complete door-to-door delivery, including packaging, customs clearance and documentation for the customer, is provided from a single source. The first seven containers already left Xi'an on 15 April.

### Bombardier wins contract to supply 210 commuter and metro cars for the Delhi-Meerut Regional Rapid Transit System

The 82-kilometre Delhi-Ghaziabad-Meerut RRTS will boast a 180 kmph design speed for the commuter trains and will be implemented in phases between the cities. It will have 22 RRTS stations, of which 16 will be regional stations and the other six stations will be in Meerut. The trains will reduce travel time on the Delhi to Meerut line by 75% to around 62 minutes and the daily expected ridership is around 800,000 passengers. The 18-kilometre long metro stretch between Modipuram and Meerut South stations with 12 stations on RRTS infrastructure will meet the local mobility needs of Meerut citizens and will provide efficient regional connectivity.

Photo: Bombardier's Savli site near Vadodara in India will manufacture the new RRTS trains



## Bombardier to supply 28 additional BiLevel commuter rail cars to US West Coast transportation authorities

The most popular double-deck commuter rail car in North America, there are currently almost 1,400 BOMBARDIER BiLevel cars in operation across the continent

U.S.A.

### BiLevel cars are known for their innovation and adaptability, notably the latest car design with a Crash Energy Management system and other advancements

Global mobility solution provider Bombardier Transportation has signed contracts for 28 BOMBARDIER BiLevel commuter rail cars with two US West Coast transportation authorities in a procurement led by the Central Puget Sound Regional Transit Authority (Sound Transit) in Seattle, Washington. The total combined value of the contracts is approximately \$108 million US (99 million euro).

"We are very happy to serve our valued, long-term commuter rail car customers as they expand and improve their fleets to meet ridership needs and enhance the passenger experience." Elliot G. (Lee) Sander, President, America's Region, Bombardier Transportation

The two contracts represent a combination of eight cab cars and 20 coaches and include options for 33 additional rail cars. The cars will be built at Bombardier's manufacturing site in Thunder Bay, Canada and deliveries are scheduled to begin in the fourth quarter of 2021.

### **BiLevel commuter rail car**

Firstintroducedin1978, the BiLevel caristhemost popular doubledeck commuter rail car in North America and is in operation at 14 transportation authorities across Canada and the United States. One of the keys to the BiLevel car's success has been its ability to adapt to meet changing needs and requirements. The latest steps in that evolution include BiLevel cars equipped with a Crash Energy Management system, full width cab, upgrades to door and air conditioning systems and enhancements to passenger amenities. A more aerodynamic cab car and new lighting will reduce fuel consumption and increase energy efficiency. While fully complying with U.S. Federal Railroad Administration (FRA) and American Public Transportation Association (APTA) standards, the BiLevel car is the lightest and most cost-efficient double-deck car in North America.



### Germany



Global mobility solution provider Bombardier we achieved this important milestone. I am Transportation announced today that it has happy that these modern and energy efficient received authorization for their BOMBARDIER FLEXITY high-floor trams can now commence FLEXITY trams to begin operation in the passenger service," said Michael Fohrer, Head Düsseldorf and Duisburg network. This means of Bombardier Transportation Germany. have that Rheinbahn can now start using the trams worked hard and cooperated to ensure we for passenger service within the Düsseldorf achieved this important milestone." metropolitan area in Germany.

"Passengers can look forward to air-conditioned "We are delighted to have reached this trams with large gangways and generous multiimportant commissioning milestone. This will purpose areas. The new trams are also equipped support our efforts to condense tram traffic with technologies which ensure reduced energy cycles in Düsseldorf, planned for this year. With consumption and low noise emissions," added the new HF6 vehicles for the Rheinbahn, we Dirk Wunderlich, Head of Sales and Delivery for are offering our passengers more services and German Cities at Bombardier Transportation. more comfort. We are working closely with our supplier Bombardier Transportation to ensure Bombardier will deliver a total of 59 newly developed FLEXITY high-floor trams to that the other 56 vehicles are also authorized for passenger service as quickly as possible," Rheinbahn in Düsseldorf. Around 1,000 FLEXITY said Michael Richarz, Member of the Board of trams from Bombardier operate in 42 German cities and over 5,000 trams have been ordered Management for Technology and Operations at Rheinbahn AG. or are already in successful revenue service in cities around the world.

"Wecanlookbackonalong-lastingandincredible constructive partnership with Rheinbahn. I am very proud that our teams have worked hard and cooperated to ensure

## Bombardier's FLEXITY high-floor trams authorized for the Düsseldorf network

On February 19th 2008, Alco RSD39 No. 652 approaches Las Heras with a Lobos to Merlo service. *Mark Pichowicz* 

### Argentina





# Archives





Alco RSD39 No. 653, operated by TBA, is seen at Escobar on February 21st 2008. *Mark Pichowicz* 

### Argentina





On June 16th 2008, No. VL10-1610 rescues a crippled wagon close to the Georgian border. *Mark Enderby* 

### Armenia

## B/10-1610

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From the narrow gauge line between Obergrafendorf - Mank - Ruprechtshofen - Wieselburg - Gresten called 'Krumpe', the route got its name from the crooked, winding route. The route starts at the train station in Obergrafendorf, which is located on the famous Mariazellerbahn, where here on May 29th 1995, No. 1099.01 arrives with train No. R6809 from St. Pölten with lots of passengers which wait for their connection to Ruprechtshofen. At this time, 1099.01 was the oldest ÖBB engine built in 1910 and was used in regular service until 2013. *Walter Niederl* 

### Austria





Another from the narrow gauge line between Obergrafendorf - Mank - Ruprechtshofen - Wieselburg - Gresten route. This is diesel engine Class 2095.011 hauling train No. R6846 near the halt of Reisenhof-Lehen, which is located between Ruprechtshofen and Wieselburg. The photo was taken on May 25th 1995 when on Sundays only one train in each direction was offered in this section of the line. So its no wonder, that no passengers can be seen on this service. Walter Niederl

### Austria



On the Wieselburg - Gresten part of the 'Krumpe' line, passenger services were withdrawn years ago due to a very high number of freight trains. Here standard gauge wagons are seen carried on special vehicles. The line is now rebuilt as standard gauge, but there is freight traffic only. Here, No. 2095.04 is seen passing the station Steinerkirchen am Forst. The 'Krumpe' was closed in parts, except the rebuilt section mentioned, and today there is just a sad remnant but the first 4 kilometres from Obergrafendorf to St. Margarethen-Rammersdorf are preserved. *Walter Niederl* 



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### Austria

On May 23rd 1995, OBB Class 1042.014 has just passed the closed halt at Unterwinden, near to St. Valentin, with stopping service No. R2031 from St. Valentin to Wien Westbahnhof. *Walter Niederl* 



OBB Class 1044.100 arrives the station of St. Valentin with their Intercity train No. 660 'Montfort' from Wien to Bregenz on May 23rd 1995. *Walter Niederl* 

### Austria



On June 3rd 1989, a pair of OBB Class 1042s haul a mixed freight through Bischofshofen. *Mark Enderby* 

### Austria

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OBB Class 1161.022 is seen at Bischofshofen on June 3rd 1989. *Mark Enderby* 

and the second

### Austria





# China

A pair of DF4Bs are seen at Linxi, Inner Mongolia on January 30th 2005. *Mark Enderby* 

DF4D No. 4228 stands at Jinzhou, Lianoning on February 5th 2005. *Mark Enderby* 

On February 4th 2005, DF4B No. 1618 is seen at Yangjiazhange, Liaoning. *Mark Enderby* 









The Siefel private locomotive works was housed in the former SNCF steam locomotive shed at Mitry Claye north east of Paris. At this time it was dealing not only with industrial loco repairs but also with the refurbishment and overhaul of former DB V100 locos sold out of services to French infrastructure firms, particularly TSO. On 28th October 1992, the yard contained ex DB 211.275, 211.105, two refurbished examples in TSO yellow livery and, on the right, the depot shunter a Moyse petrol shunter built in 1924. *John Sloane* 

### France

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GE CRONIMET FRANCE SA 211.105-2



AlineupofSNCF'FlatIrons'atBobigny stabling point on October 29th 1992 with Nos. 12106, 12061 and 12101 identifiable. *John Sloane* 

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BB-12108

### France

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SNCF Nos. 66091 and 66227 haul a short freight past Jeumont on June 8th 1999. *Mark Enderby* 

# France



SNCF Nos. 67504 and 67503 on the southbound 'Chevenol' pass Laveyrune on August 27th 1987. *Mark Enderby* 

### France

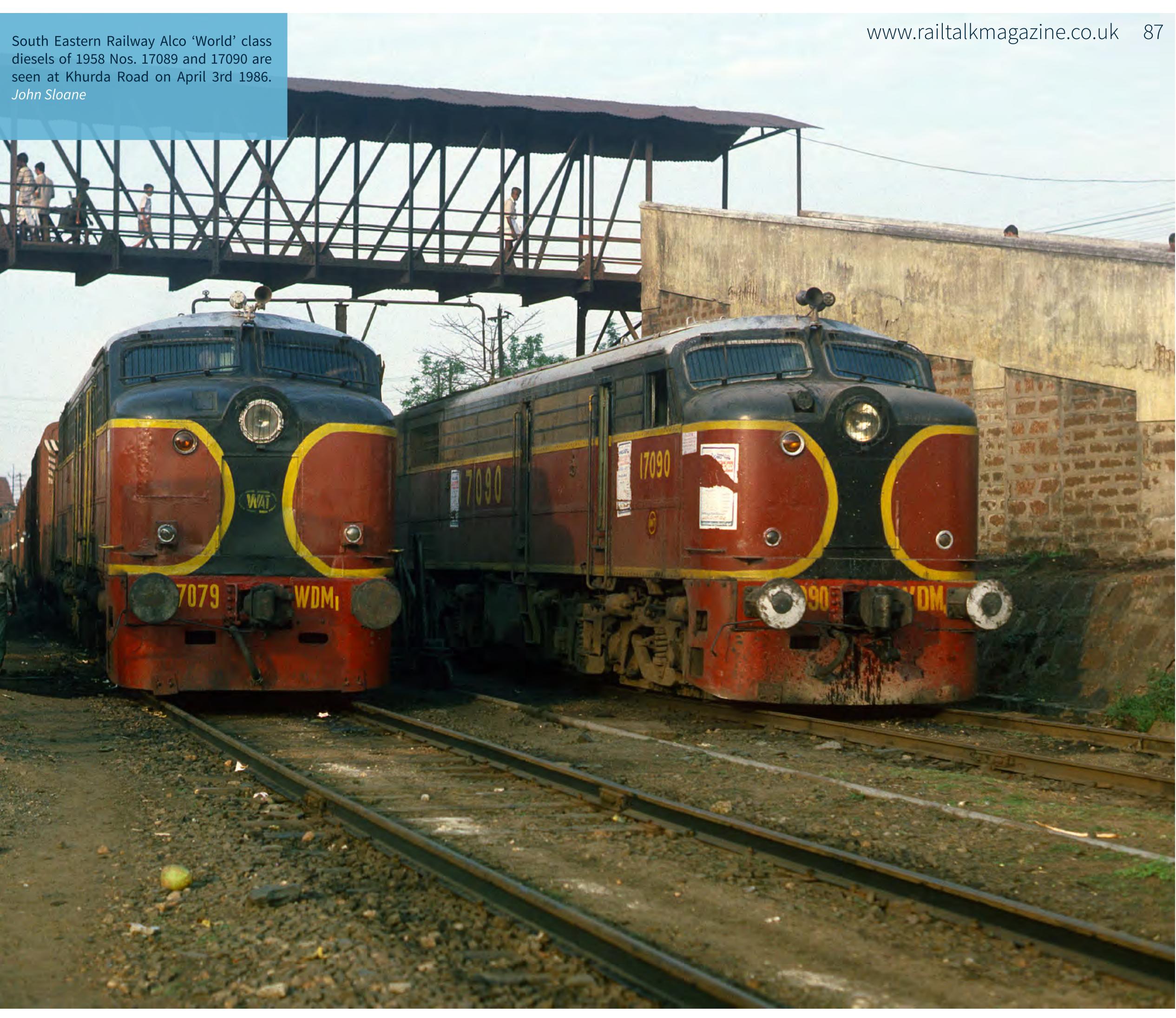






lndia

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Central Railway WCM5 No. 20101 hauling the inbound 'Punjab Mail' to Bombay VT is seen passing Parel (CR) on November 12th 1977. John Sloane

### lndia

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Central Railway SLM 1928 built C-C Crocodile No. 20025 is seen at Poona on November 13th 1977. John Sloane

India



### lreland

CIE No. 148 working the 15:55 Limerick - Rosslare is seen at Limerick Jct. on March 27th 1998. *Mark Enderby* 

CIE No. 072 stands at Cork station on July 28th 1990. *Mark Enderby* 

CIE No. 128 stands at Limerick Jct. station on March 27th 1998. *Mark Enderby* 





### lreland

No. 206 working the 13:20 Dublin -Belfast service passes Clontarf Road on March 25th 1998. *Mark Enderby* 

No. 207 working a Belfast - Dublin service is seen at Malahide on March 28th 1998. *Mark Enderby* 

No. 225 hauls an ammonia train through Cherryville Jct. on March 28th 1998. *Mark Enderby* 







### ltaly

Unrebuilt Class E444.045 stands at Milan Greco depot on August 23rd 1990. John Sloane

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No. 9208, in the old Kenyan Railways blue livery, sits at Dandara with a morning commuter train into Nairobi on August 28th 2012. *Mark Torkington* 



On September 5th 2012, No. 510 rests at Limbe station in the city of Blantyre after working a freight. *Mark Torkington* 

### Malawi





# Archives

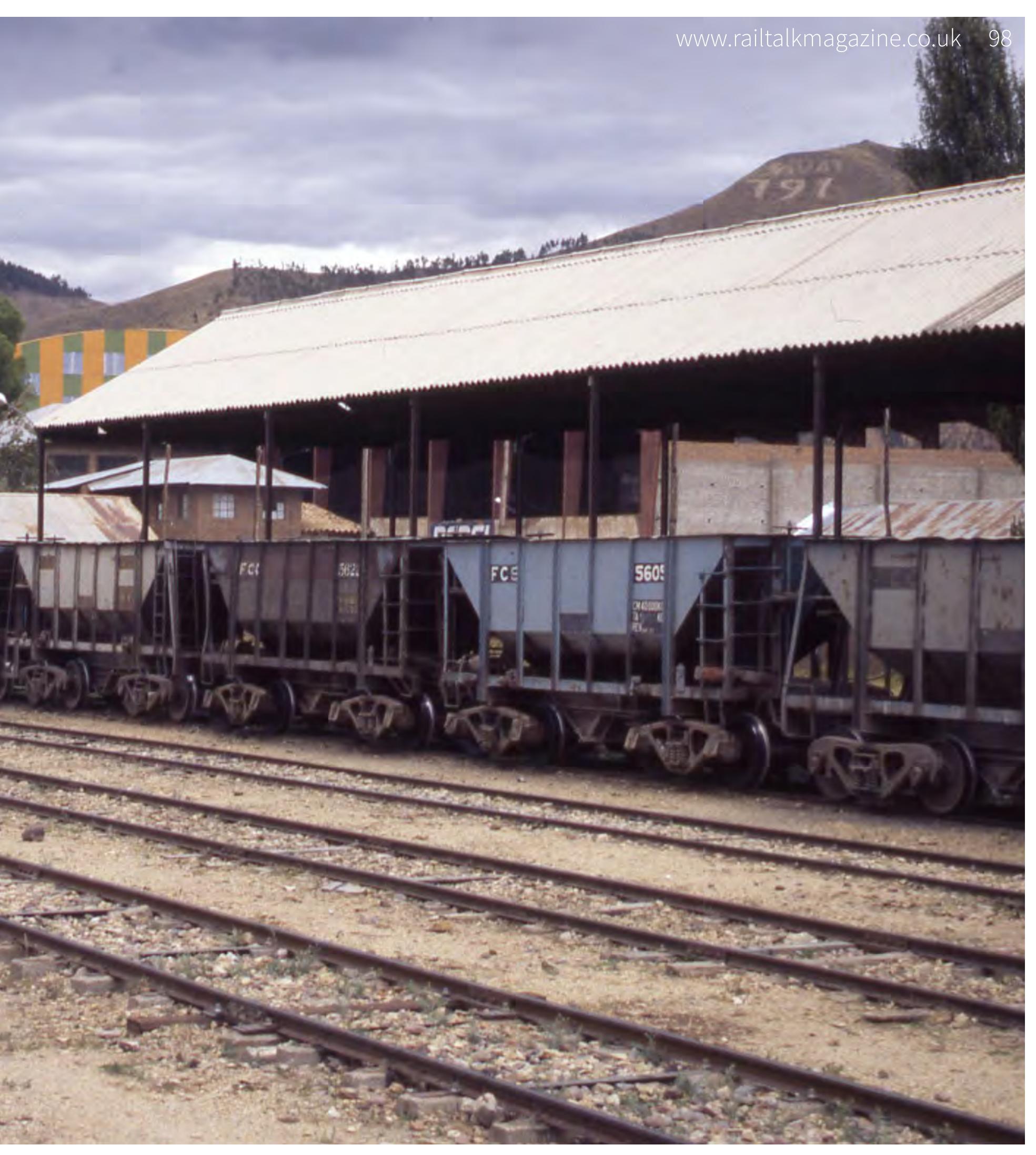


Perurail No. 555 is seen on a pw train at Sicuani on November 23rd 2000. *Mark Enderby* 

Peru







### Poland

Pacific Pm36-2 'Beautiful Helena' stands at Leszno on February 9th 2007 after arriving with a working from Wolsztyn. *Mark Pichowicz* 

Pm 36 - 2





### Portugal

CP No. 1936 is seen with a passenger service at Faro on July 8th 1998. Mark Enderby

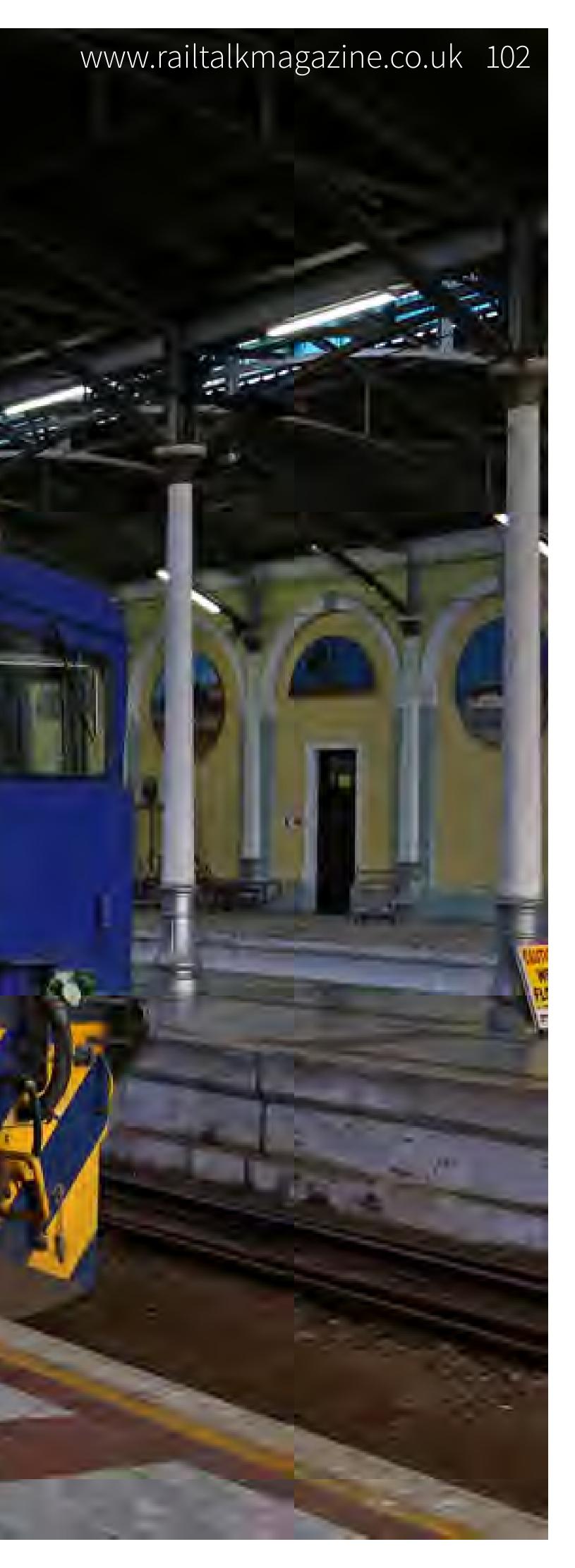
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On April 10th 2014, Spoornet Nos. E7003 and E7014 on arrival at Port Elizabeth have been uncoupled from their train, the twice weekly Johannesburg to Port Elizabeth 'Shosholoza Meyl' passenger service. Unlike the 6E locomotives, these are DC current. *Mark Torkington* 

# South Africa



E7003



# South Africa

GE U26 No. 34.004 stands at Port Elizabeth on April 10th 2014 with one of the regular Metrorail local trains to Uitenhage. *Mark Torkington* 

# Spain

RENFE No. 276.130 is seen stabled at Huelva Termino on April 5th 1980. John Sloane



# Spain

RENFE No. 352.006 'Virgen Santa Maria' stands at Malaga with a Talgo service to Madrid on April 11th 1980. John Sloane

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On July 2nd 2015, SBB Re 4/4ii No. 11193 heads north round the Wattinger curve at Wassen with a northbound IR working. *Mark Pichowicz* 

# Switzerland

I I I I



On July 4th 2015, Re 10/10 Nos. 11331 and 620.069 head through the closed station at Wassen as they coast down the Gotthard nordramp. *Mark Pichowicz* 

# Switzerland



On July 2nd 2015, SBB Class 460.052 climbs past Meitschligen with a southbound IR service over the Gotthard to Locarno route. Mark Pichowicz

# Switzerland





### Thailand

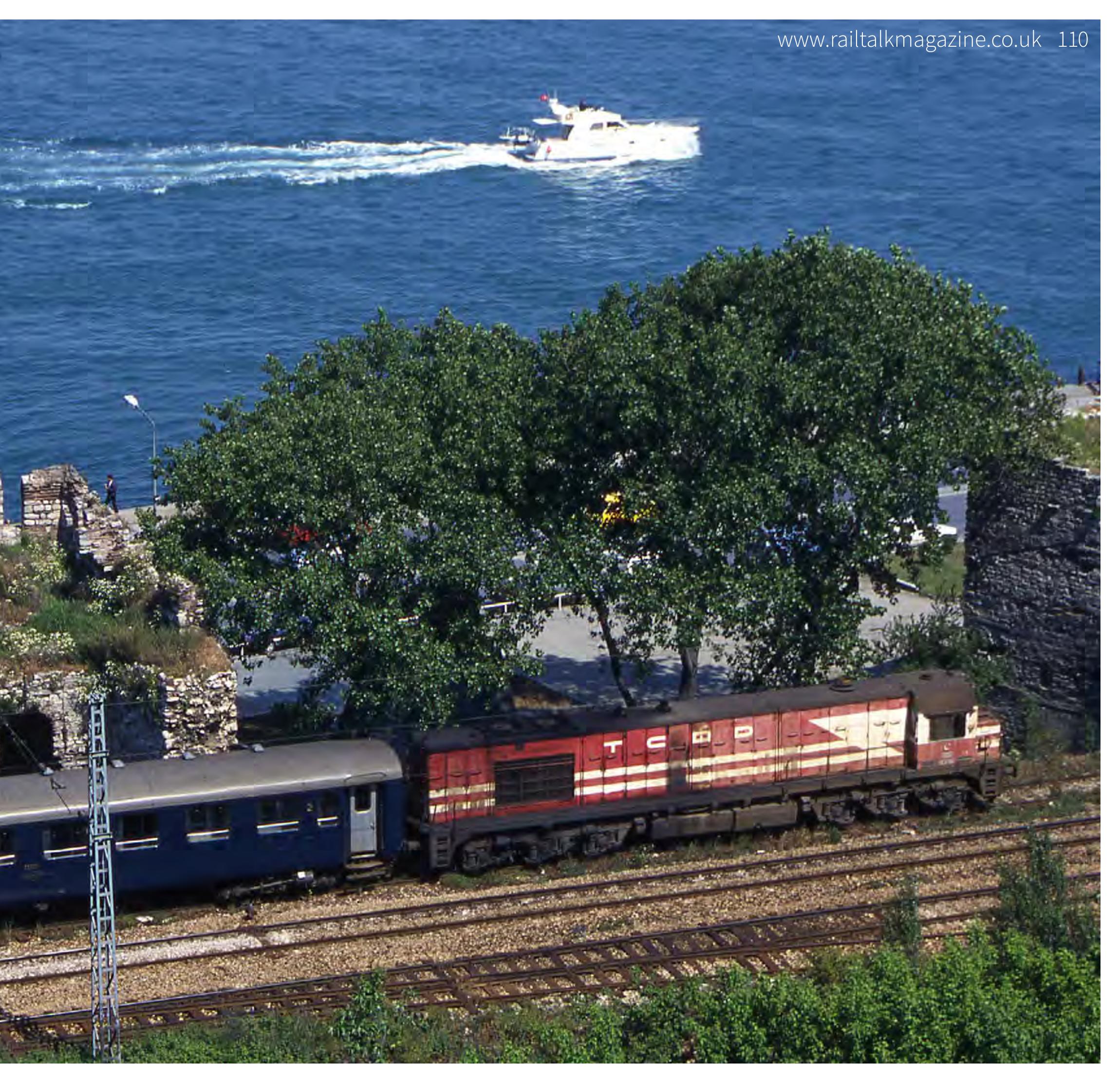
On October 26th 1994, No. 4201 on a train to Bangkok, calls at Ayuthaya. *Mark Enderby* 



Turkey 🗡

TCDD DE24xxx skirts the Bosphorous with a train from Istanbul Sirkeci station on June 1st 1997. Mark Enderby

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The Bombardier built DP class (a dual cabbed development of an MLW MX620) were the mainstay of standard gauge passenger services in the country for many years and No. DP142 is seen here at Jendouba after arrival with a train from Tunis Ville on September 29th 2011. *Mark Torkington* 

# Tunisia (K





# Tunisia (K

GE veteran No. DJ123 rests on the blocks at Tunis Ville having worked in with a service from Bizerte on September30th2011.*MarkTorkington* 



