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Contact Us

Editor

david@railtalkmagazine.co.uk

Content Submissions

entries@railtalk.net

Technical & Subscription Support

admin@railtalk.net

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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 194Xtra

Some interesting things discussed this month as the European passenger rail CEOs from the Community of European Railway and Infrastructure companies (CER) and the International Union of Railways (UIC) gathered in Prague for their annual high-level meeting to discuss their long-term vision for customers and passengers. The meeting was attended by Martin Kupka, Minister of Transport of the Czech Republic and Michal Krapinec, CEO of České dráhy, who shared their views on the future of international passenger services. The meeting was an opportunity to exchange on past and future developments and to identify common points of collaboration to increase the modal shift in Europe. The European railway system is a fundamental pillar of the carbon emission goals of the 'European Green Deal', and European railways are committed to actively contribute to its successful implementation.

Their resolution is:

- 1. The participants of the High-Level Passenger Meeting 2022, believe that smart digital ticketing and information solutions will facilitate access to the European railway system for customers and will increase the attractiveness of rail as transport mode.
- 2. The participants, commit to further improve the passenger experience when planning and booking international rail tickets. They confirm their commitment working together with CER, UIC and CIT, for the implementation of the CER Ticketing Roadmap for seamless international passenger rail travel and its milestones. In 2025 Passengers will have a seamless user experience when searching, selecting, buying and using rail services through:
- a. access to simple, reliable and comprehensive online real time information regarding timetables and sales offers for (rail) transport services, both domestic (urban, regional, long-distance) and international, through the implementation of harmonized sector-driven technical solutions.
- b. access to buying international train tickets from six months up to one year ahead from multiple carriers in

one through ticket, allowing seamless international rail journeys.

c. easy acceptance throughout Europe of tickets issued by different railways and ticket vendors.

- d. access to digitalized services to support passengers in case of delays and disruptions, such as the CIT Agreement for Journey Continuation, assistance on how to best continue to their destination, and guidance on passenger rights.
- 3. Ensuring a seamless user experience for international passenger rail travel is a fundamental step towards the modal shift needed to achieve the sustainability goals set by the European Green Deal. To this end, sector-driven solutions, based on the Open Sales and Distribution Model2 (OSDM) have been developed to simplify international ticketing and distribution, harmonizing tariff and timetable information exchange and allowing a full ticket digitalisation. It is also worth pointing out, The European railways are also already delivering with 15 being members of CIT Agreement on Journey Continuation, ensuring passengers reach their destination despite disruptions.
- 4. In order to enhance international rail ticketing, the participants ask the European Commission to take all the necessary steps to support through an adequate regulatory framework the smooth implementation of such solutions including the integration of OSDM in the TAP-TSI Regulation (Telematics Applications for Passengers – Technical Specification for Interoperability) which publication cannot reasonably be delayed beyond 2022 without putting at risk ongoing investment of the sector fulfilment its commitment to deploy corresponding ticketing aspects by 2025. This would help in securing and speeding up the implementation of OSDM within the sector, to which CER, UIC, CIT and their members have committed to and are already hard working on.

Until next month...

David

This Page

Steam loco No. 354.135 stands at Plzen hl.n. with a special on August 25th during the 'Den Zeleznice' being held. Class47

Front Cover

On August 23rd, CD Cargo's Class 742.435-1 waits for the road back into the marshalling yards in Ostrava.

Anton Kendall



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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

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Kevin McCormick, Thomas Niederl,









The Class 1142 was once in use all over Austria, there were 174 built of which only 12 locomotives are operational today. One of them, Class 1142.640 is seen here working train No. Rex2176 from Wien Franz-Josefs-Bahnhof to Sigmundsherberg on a hot July 19th near Ziersdorf. *Thomas Niederl*



The Class 1144 series is the following model to the Class 1142, with 216 locomotives built and most are still in use. Three locomotives have a different, historical livery. Class 1144.040 was painted in orange whilst 1144.092 and 1144.117 were painted in a so-called 'checkerboard' (in German: Schachbrett!) design. Catching both locomotives as a pair in front of a freight train is an absolute rarity. Here Class 1144.117 and 1144.092 hauling freight train No. 55442 from Hall in Tirol towards Wolfurt, is seen near Imsterberg on August 4th. *Thomas Niederl*







The popular Zillertalbahn runs from Jenbach. After a break of several years, freight trains have been running to Fügen-Hart again since 2021. Wood is transported, which is reloaded in Jenbach from standard-gauge freight wagons. Here Zillertalbahn No. D16 with freight train No. 373 is seen near Gagering on September 12th. *Thomas Niederl*



OBB Class 5047.054 arrives at its destination of Traiskirchen Aspangbahn with train No. R7419 from Wien Hbf. The station is one of two remaining stations in Austria where semaphore signals are still used. *Thomas Niederl*

The popular Zillertalbahn runs from Jenbach, here No. D14 with local train No. R143 is seen near Strass im Zillertal on September 12th. *Thomas Niederl*

DBClass 185.221 and 185.267 passes the station of Klaus on the Pyhrnbahn, which runs from Linz to Selzthal, with freight train No. 48931 to Kalsdorf on September 23rd. *Thomas Niederl*







There is a special gem in Tyrol. The Achenseebahn from Jenbach to Maurach is a steam-powered rack railway. Due to some difficulties in corporate management and financing, but also because of Covid, railway operations were suspended for two years. The time was used for renovation and operations resumed in summer 2022. Here the 09:55 morning train from Jenbach leaves the town towards Seespitz with Loco No. 1 which was built in 1889. Thomas Niederl





Alstom's latest generation ETCS technology to equip 120 locomotives in the SNCB fleet

Alstom, global leader in sustainable and smart mobility, has won a contract for the design, delivery and maintenance of the latest-generation ETCS* level 2 signalling system (Baseline 3) for 120 HLE18 locomotives of SNCB in commercial service in Belgium, Luxembourg, France and Germany. The ETCS system will be supplemented by national functionalities to allow the trains to circulate in Belgium (TBL1+) in France (KVB).

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

TheAlstomGroup's signalling facility in Charleroi is a global centre of excellence and will be responsible for the engineering of the various signalling systems and delivery of the on-board equipment. It will also provide maintenance for a 10-year period, including spare parts and repairs. The project launches in October 2022 and will run for 3 years.

"Alstom is pleased to continue its collaboration with SNCB, and to support them in making the digitalisation of its rolling stock a reality," explains Bernard Belvaux, Managing Director of Alstom Benelux." Our signalling expertise is recognised worldwide, and we're proud to put it at the service of mobility and operators in Belgium."

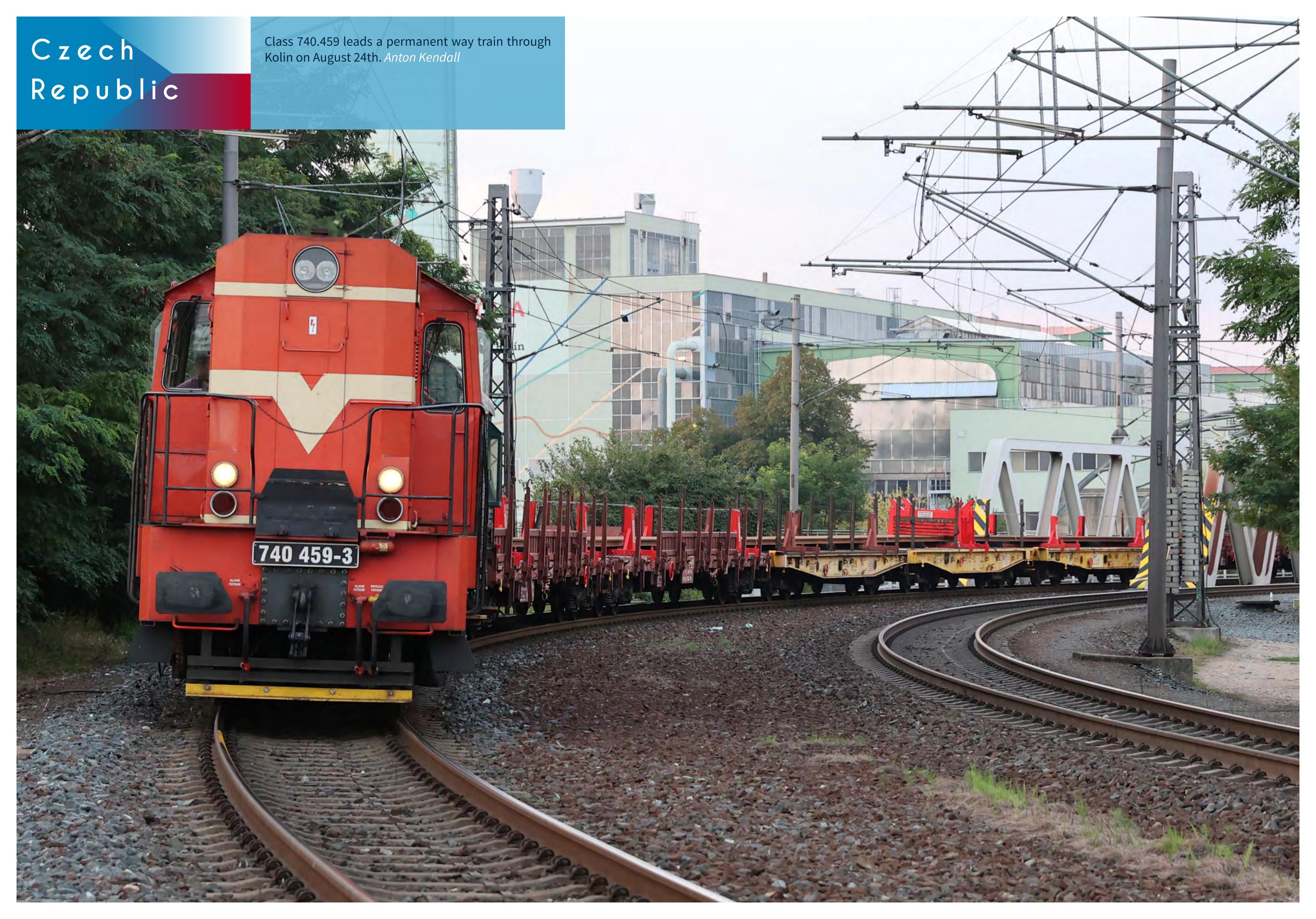
The award of this contract confirms Alstom's leading position in the railway signalling system market. In Europe, over 60% of trains equipped with a European-made ETCS chose an Alstom system. In Belgium, Alstom equips a large part of the SNCB fleet and is actively contributing to the modernization

of the Infrabel rail infrastructure.

This latest-generation Level 2 train control and supervision system is already being successfully implemented by Alstom in Norway and on electric locomotives operated by Ceske Drahy in the Czech Republic. It's now being deployed on the high-speed trains of Deutsche Bahn throughout Germany, and on S-Bahn suburban trains by Alstom and competitors in the Stuttgart region, as well as on various projects in Spain, UK, India, and Australia.

*ETCS: European Train Control System







CD Cargo's Class 122.013-6 heads north on the right bank of the Elbe through Usti nad Labem on a coal train on August 26th. *Anton Kendall*

Operated by RM Lines, Class 121.007-9 leads 140.045-6 on a southbound freight along the right bank of the Elbe through Usti nad Labem on August 25th. *Anton Kendall*

Preserved diesel unit Class 830.159 is seen at Česká Lípa on August 26th. *Class47*





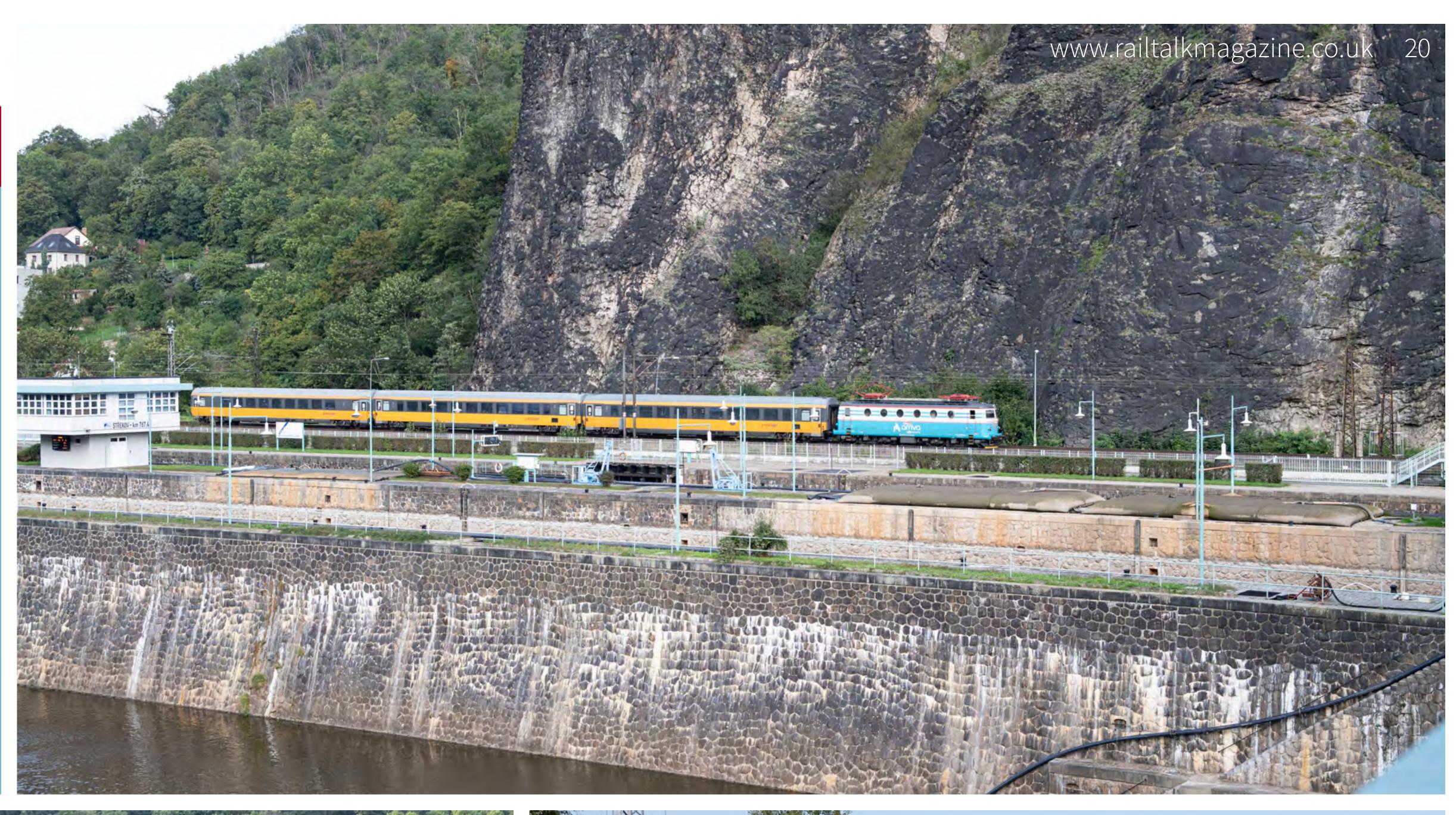


Arriva liveried Class 140.052 passes the Masarykovo dam at Usti nad Labem on August 24th working a Regiojet service to Kolin.

Class47

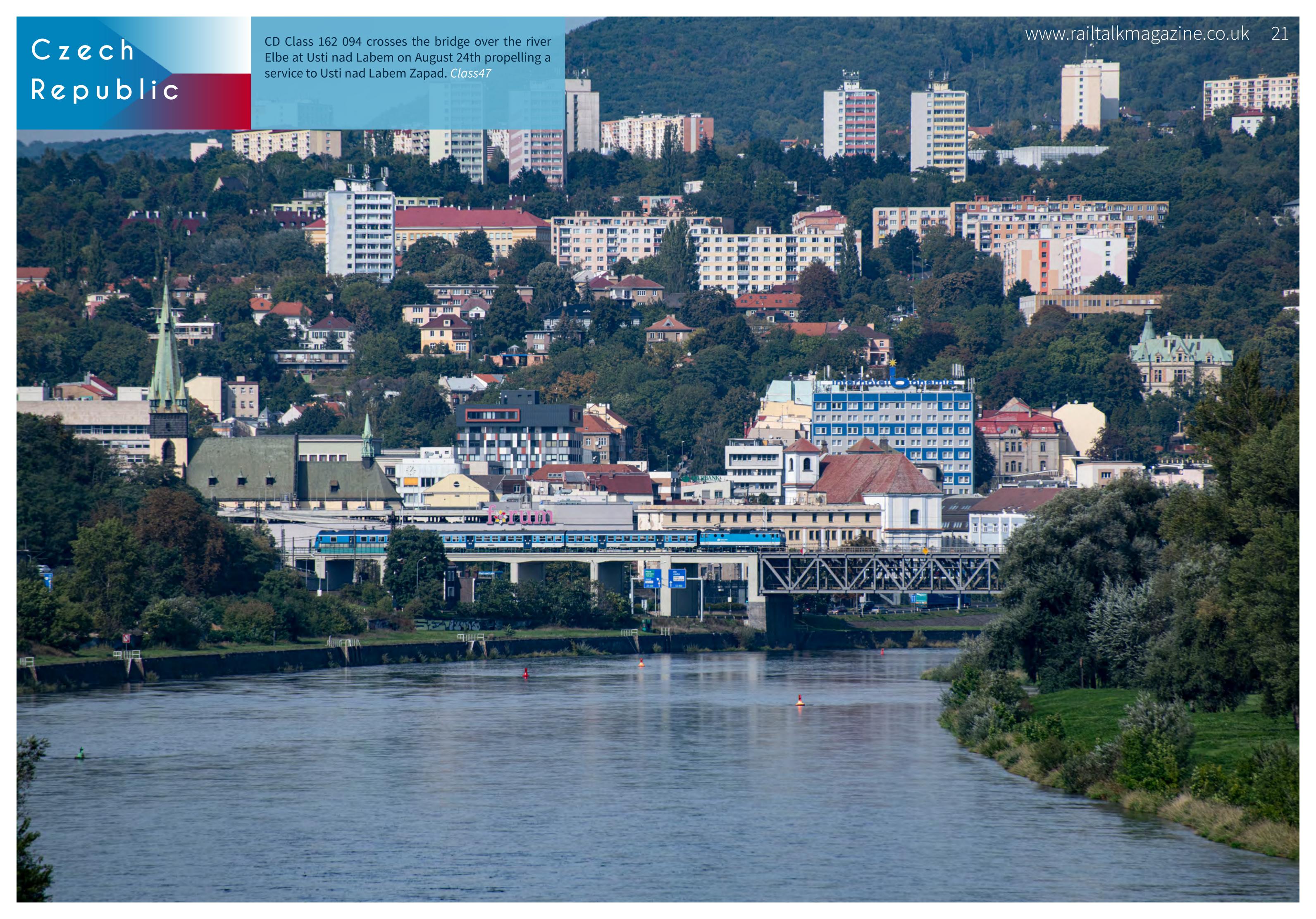
On August 25th, withdrawn Class 242.231 and 242.276 are seen on Plzen depot. *Class47*

Press Class 253.014 speeds away from Usti nad Labem on August 24th with a container working heading to Praha. *Class47*











Leo Express celebrates 10 years and has gifts for passengers: among other things, a 50% discount on the purchase of a second ticket

Leo Express is celebrating 10 years since the first train connection. Since then, it has made more than 56,000 journeys, covered 20 million kilometres and circled the globe 500 times. For the celebration, the carrier has prepared a gift for its passengers: a 50% discount for the purchase of a second long-distance ticket. The company is also preparing a number of accompanying projects and news such as limited editions of useful promotional items or special menus on board, including Spanish cava or Slovácké pate on the train.

Since its beginnings, on the Prague-Ostrava route in late 2012, Leo Express has gradually expanded to other products, routes and countries. Despite major challenges, such as the coronavirus crisis, the vision of founder Leoš Novotný Jr. has gradually come to fruition - to create a strong European mobility provider with the capacity to innovate the ossified rail sector and improve the comfort, efficiency and environmental impact of transport.

At the end of last year, following the entry of the Spanish national carrier Renfe, the Czech carrier became a Czech-Spanish international player with ambitions to participate in the liberalisation of the European rail transport market.

Today, the company is certified and experienced in rail transport in four European countries.

Manel Villalante, President of Leo Express values this tenth anniversary as "an emblematic date to remember all the milestones achieved, but also to project those ahead. These ten years of life of Leo Express would not have been possible without the commitment of the team of workers, nor without the trust of our customers. We are committed with our customers to improve our services and therefore to play an important role in mobility in Europe in the near future".

"For Leo Express, I want to see the company's vision of becoming a leader in the liberalisation of rail transport in Europe come true. For this we need you, the passengers, to continue to keep your loyalty to us," comments Leo Express CEO Peter Köhler.

"To fulfil our plans for the years to come, we have the best team of Leo Express employees on board, without whom it would be impossible to overcome the pandemic and plan for the future of the company. But without you, the passengers, any plans would be useless, so I want to thank you very much for your trust and loyalty, and I believe that with our strong partner we will bring you an even higher culture and reliability in travelling," adds Martin Bala, Leo Express Director for the Czech and Slovak Republic.

Currently, the Leo Express Group offers rail services in the Czech Republic, Slovakia, Poland and continues to operate buses to Ukraine and other EU countries. The company offers both commercial risk and public service obligation, with trains going to Košice, Krakow, Slovácko and Orlice, for example. In its 10 years of existence, Leo Express has shown that it has its place on the rails as a modern, safe and environmentally friendly carrier. It emphasizes nowadays commonplace services such as carefully selected seasonal food, reliable Wi-Fi connection or air conditioning.

ONE TICKET COMES WITH A SECOND TICKET AT A 50% DISCOUNT AND OTHER GIFTS FOR PASSENGERS

To celebrate, the company has prepared a number of special events for its passengers. For example, they can look forward to a 1+1 special offer with a second ticket at a 50% discount on commercial connections, a special menu or new utility promotional items with the Leo Express logo. The gift ticket is ideal to use, for example, for a long weekend in Krakow or for trips around the Czech Republic. When purchasing, simply enter the promo code "LEO10" in the basket and head off.

CER operated and Akiem owned Class 186.361-2 heads north along the right bank through Usti nad Labem on August 25th working a rake of propylene tanks. *Anton Kendall*

On a hot and sunny August 26th, ORLEN Unipetrol's Vectron Class 383.056-9 works a rake of tanks along the right bank approaching Ustinad Labem heading towards Most Litvinov. *Anton Kendall*

OnAugust25th, METRANSownedClass386.027-7 heads south down the left bank through Ustinad Labem on a working from Germany to Praha. *Anton Kendall*











On a dark August 23rd, MRCE's Class 189.155 heads west through Ostrava Marianske Hory on a grain train. *Anton Kendall*

CD Cargo's Class 388.001-0 heads a rake of lime wagons from Germany down the left bank at Usti nad Labem on August 25th. *Anton Kendall*

ORLEN Unipetrol's rebuilt Class 753.611-3 heads a rake of LPG tanks down the left bank through Usti nad Labem on August 25th.

Anton Kendall







CD Class 193.963 pauses at Kolin with an IC service towards Olomouc on September 27th.

Mark Torkington

CD Class 242.240 pulls into Brno hlavni nadrazi with a service to Tisnov on September 27th.

Mark Torkington

On September 27th, CD Class 242.229 calls at Tisnov with a Brno suburban service towards Zdarnad Sazavou. These locos are on borrowed time now with new units being out on test ready to take over. *Mark Torkington*







Regiojet's Class 388.205 blasts through a foggy Tisnov with a freight working on September 28th. *Mark Torkington*

& West Grumpy' was a very successful tour around rare loco hauled track when this photo stop at Sedlejovice happened on the morning of the second day. Sadly shortly after this a serious fuel leak on locomotive Class 751.236 (caused by debris on the track) at Liberec put a spanner in the works and another loco had to be summoned from Prague to get us back.

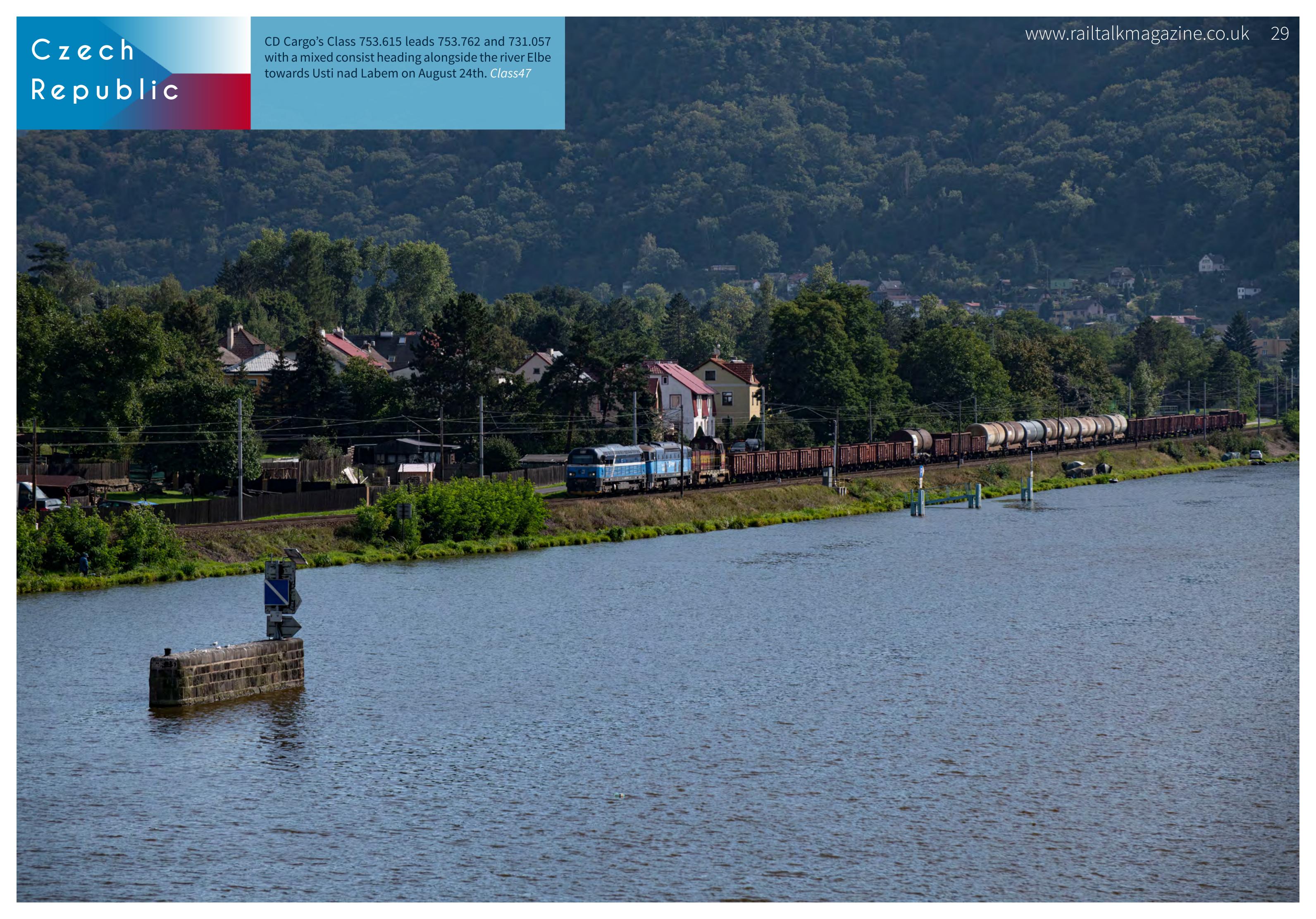
Mark Torkington

After the failure of Class 751.236 on the Grumpy Railtours 'The Bohemian East & West Grumpy' Class 752.069 rescued the tour and is seen at Turnov on September 26th with 751.236 now DIT heading back to Prague. *Mark Torkington*









TRAMS FROM ŠKODA GROUP WILL EXPAND THE FLEET IN BRNO

Not only students at the University of Brno will be able to enjoy a ride in the new Škoda ForCity Smart 45T tram from mid-December onwards, which was produced for the new tram line leading to the university campus by Škoda Group, a Czech manufacturer of vehicles for public transport. In the coming weeks, the tram will run the necessary kilometres, after which it will be put into trial operation with passengers.

The For City Smarttrams are the ideal vehicles for urban traffic. Their characteristics are perfect for high ride comfort and convenience. Thanks to their technical design, they reduce operating and infrastructure maintenance costs. With its bidirectionality, the Škoda 45T is adapted for use on lines terminated by a switchback.

"The new bi-directional trams are intended primarily for line 8, which is terminated at both ends by a switchback. I believe that people will appreciate both the new vehicle and the new line. One more new tram should arrive in Brno by the end of the year, and for

the remaining three passengers will wait until March 2023," says the Mayor of Brno Markéta Vaňková.

"According to the requirements of the Rail Authority, the trams will run the necessary kilometres without passengers in the next few weeks and some type tests will be carried out on them. After that it will be in trial operation with passengers. We expect to put it into regular operation during December," adds Miloš Havránek, CEO of Brno Public Transport Authority.

The ForCity Smart 45T tram is a bi-directional fully low-floor three-unit vehicle with swivel bogies. Reliable driving characteristics even in bad weather are ensured by full vehicle adhesion. This 31-metre tram comfortably accommodates up to 233 passengers, of which 64 are seated. The maximum operating speed is 70 km/h. Air conditioning and two large multifunctional spaces for wheelchairs, prams or bicycles are also included. The new tram also offers a modern, clear information system with screens and panels. To ensure

safety, the vehicle is equipped with a camera system.

The Brno Public Transport Authority has signed a contract with Škoda Group for the purchase of up to 40 new trams – currently five vehicles have been ordered. The total value of the contract is CZK 2.4 billion.

The new tram has a spacious, air-conditioned interior equipped with stainless steel handrails,

widescreen LCD information monitors and USB chargers. The RIS2 control and information system or EOC2 validators are also included. For transporting multiple wheelchair users, the tram has a total of four tilting platforms. The tram is also equipped with an external and internal CCTV system and partially tinted side windows.

The driver's cab is newly designed. In addition to the clear console, where the emphasis is on simplicity and good visibility, the controls are partially implemented directly in the driver's seat. The windscreens are equipped with heating, the front windscreen with design daytime running lights.

The electrical equipment allows recuperation, i.e., the return of electricity to the grid when braking, which reduces the overall consumption of the vehicle and thus the operating costs.



State carrier PKP Intercity takes delivery of the first six EffiShunter 300 locomotives

The first six EffiShunter 300 locomotives from the ten-piece series have been taken over by the state carrier PKP Intercity. CZ LOKO will deliver the remaining four by the end of the first quarter of next year.

"Wehadseveralprojects in Poland in the past, however this delivery of small EffiShunters is a big and important project for a Polish customer after a long time. We believe that the locomotives will prove themselves in operation and that our cooperation with PKP Intercity will not end with this series of ten units and will continue in the future," says Jan Kutálek, Commercial Director of CZ LOKO.

The EffiShunter 300 is equipped with a CAT

C13B internal combustion engine with a power of 328 kW, meeting the strictest EU Stage V emission standards. Loudspeaker monitoring of the driver's cabin, a semi-automatic coupler and a camera system are also installed at the customer's special request. For operation in Poland, the national SHP safety device and CA vigilance control device are also a must. A digital control system, online diagnostics, the possibility of multiple control and anti-slip protection are a matter of course.

PKP Intercity, which operates long-distance passenger transport, will use light two-axle locomotives primarily for light movement in depots and staging stations. Of the first six locomotives, four went to Warsaw and two

to Krakow. The rest should be deployed in Gdansk and Katowice.

"Thankstothecombinationoflowacquisition and operating costs, together with usability, these vehicles have been in their rolling stock for several years, for example České dráhy, the Railway Research Institute and several other operators abroad," adds Jan Kutálek.

The company CZ LOKO has its smallest locomotive approved for operation in the Czech Republic and Poland as well as in Slovakia and Serbia.

Photo: PKP Intercity - EffiShunter 300. ©Dalibor Palko



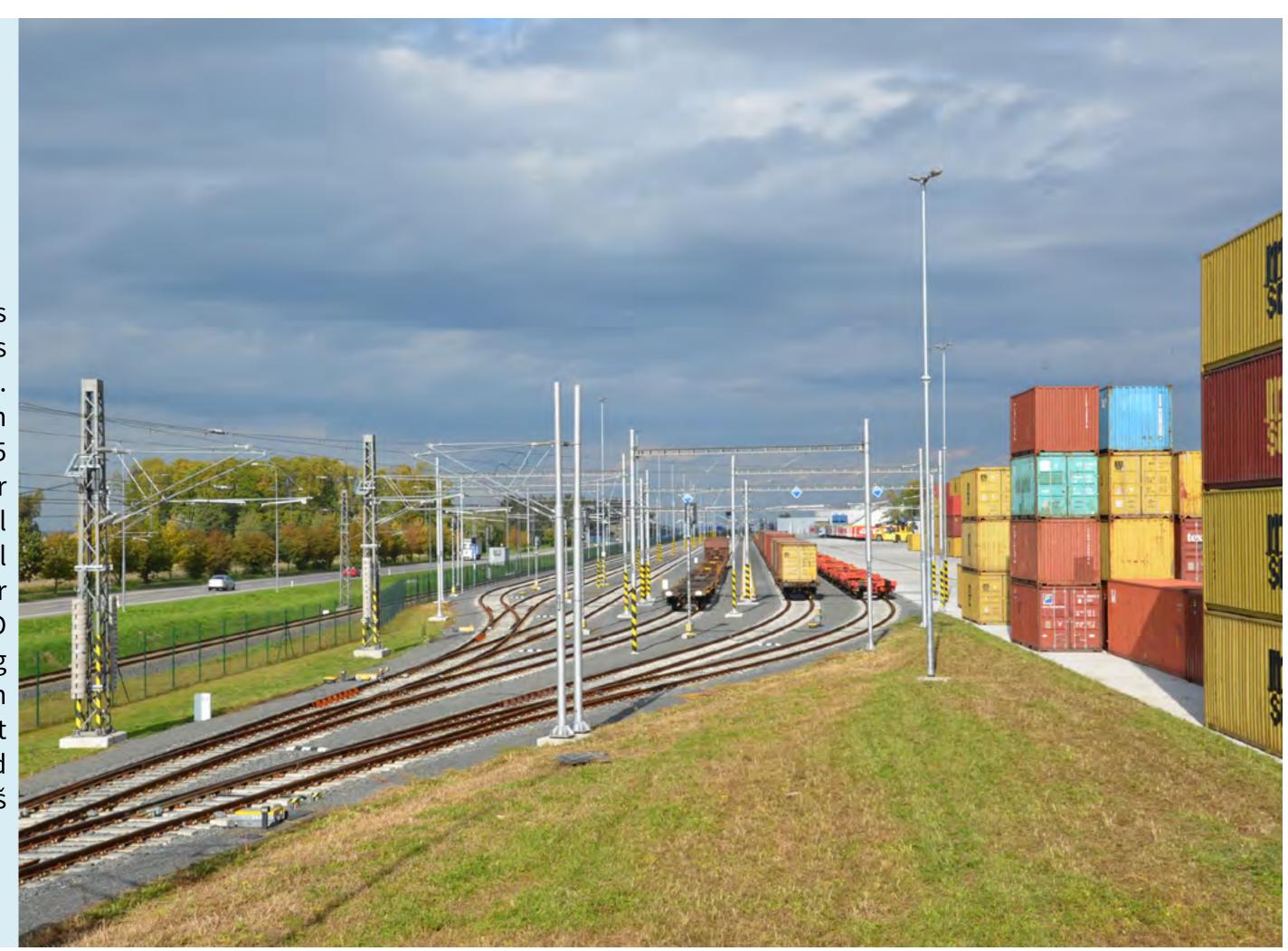
With the participation of Governor of the Moravian-Silesian region, Ivo Vondrák, Mayor of the city of Ostrava, Tomáš Macura and representatives of the owners of important companies in the field of logistics, the operation of the combined transport terminal 'Terminál Mošnov' was ceremonially launched on October 19th. Thanks to its ideal strategic location near the Czech, Slovak and Polish borders, the terminal will significantly benefit the development of the Moravian-Silesian region, as well as neighbouring regions and countries, connecting them to all European ports, both in Northern and Western Europe, and in the Adriatic part of this region.

The Moravian-Silesian region is connecting with European ports

The container terminal is located in an extensive industrial zone, in close proximity to the Leoš Janáček International Airport. Its location allows access to the motorway network and first class roads. It also has a direct electrified connection to the railway corridor. The connection between the terminal and the transport infrastructure is at an excellent level. The new terminal is able to handle ISO sea containers, swap bodies and LKW semi-trailers and meet all the transport and logistics needs of the adjacent regions and customers operating in them. The operator of the combined transport terminal is four partners – Innofreight Czech Republic, Medlog Czech Republic, Budamar Logistics, ČD Cargo Logistics. Its construction was covered by the company Concens.

"For ČD Cargo, intermodality is one of the four strategic pillars on which it is building its future. We have been cooperating with Innofreight for more than 15 years, and I believe that now, after the opening of the new terminal in Mošnov, our cooperation will deepen. In cooperation with our wholly-owned subsidiary ČD Cargo Logistics, we are preparing several new projects in which Mošnov plays a very important role," said Chairman of the board of directors of ČD Cargo Tomáš Tóth at the opening ceremony.

Photo: ©CD Cargo



Celebrating 60 years of military transport

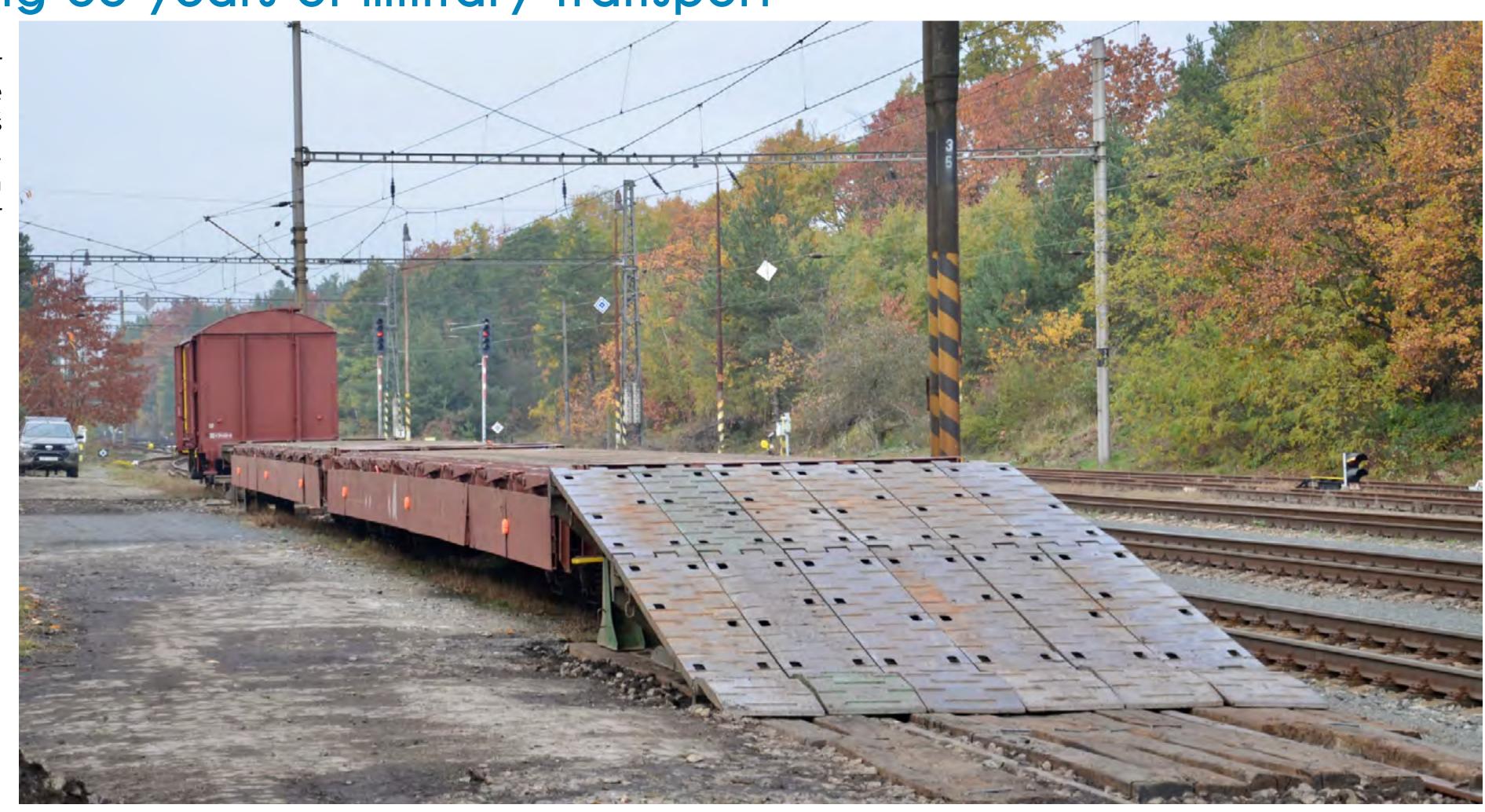
On October 26th, a celebration of 60 years of military transport took place in the Jaslo barracks in Stará Boleslav.

ČD Cargo participated in the celebration as one of the most important partners. The event included a static demonstration of the vehicles used by military operators, including the railway vehicles, as well as a dynamic demonstration of the construction of the UNOR universal steel loading ramp on one of the tracks of the nearby railway station.

As part of the morning program of the celebrations, a number of expert lectures were given regarding both the history of military transport and its current role within NATO. One of the presentations related to cooperation with ČD Cargo in transporting soldiers and their equipment for exercises or foreign missions.

There was also an award ceremony for important figures in military logistics. The chairman of the board of ČD Cargo, Mr. Tomáš Tóth, also received a commemorative medal. "I appreciate the award very much and I'm glad that ČD Cargo is a reliable partner for our soldiers," commented Tomáš Tóth.

Photo: ©CD Cargo















Class 218.429 and 218.411 stand at Immenstadt on October 23rd with train No. IC2012 09:51 Oberstdorf - Bochum Hbf. The train reverses at Immenstadt and the 218s have just run round the stock and will continue to work the train as far as Stuttgart Hbf where a Class 101 electric is booked to take over. Andy Pratt

DB Regio, Südost Bayern Bahn allocated, Class 218.426 waits to depart München Hbf Gleis 8 with train No. RB27025 10:07 to Mühldorf (Oberbay) on October 22nd. *Andy Pratt*

The driver of Class 218.415 looks back for the 'tip' from the guard to depart Memmingen. Multied up with 218.411, the

rabbits are powering train No. RE2013 to Oberstdorf on October 21st. The train departs Dortmund Hbf at 09:49 as IC2013, but is redesignated a Regional Express (RE) from Ulm Hbf, meaning local transport authority tickets are valid on board. The diesels currently take over from electric traction at Stuttgart Hbf. Andy Pratt











Digital automatic coupling for freight wagons "to go"

The Digital Automatic Coupling (DAK) makes rail freight transport in Europe easier and faster. It speeds up handling, operation and circulation – ultimately, freight trains can roll faster. To achieve this, around 500,000 freight wagons across Europe must be equipped with the DAC by 2030. In order for this to succeed, Deutsche Bahn not only uses the conversion in its own workshops but also installs the DAC in pop-up workshops. With the help of these mobile workshop tents, freight wagons can be equipped with the new technology within a short period of time close to where they are used, for example at industrial customers. The aim is to create temporary and additional conversion capacities and to reduce the times that freight wagons are absent from customers.

Europe's leading freight railway, DB Cargo, successfully completed a first practical test in Bremen.

dr Sigrid Nikutta, DB Board Member for Freight Transport: "During the test drives through Europe, the digital automatic coupling proved that it works in practice. The task now is to find solutions for installing the DAC in freight wagons quickly and efficiently. With our innovative approach of a pop-up workshop, we have proven that this is possible. In just a few steps, we turned an analog freight car into a digital and intelligent one. With the mobile workshops, we will be able to make thousands of freight wagons fit for the digital future in a short time."

When the DAC is introduced, operation must be ensured despite two incompatible coupling systems (screw coupling versus DAC). To do this, the freight wagons are

first prepared to be "DAK ready" during normal workshop visits. The conversion to the DAC then takes place in a few simple steps - similar to a "plug & play approach" - in the pop-up workshops. For this purpose, Deutsche Bahn wants to set up 150 pop-up locations across Europe with partner companies.

The DAC accelerates shunting, increases the capacity

of transhipment stations and increases the capacity of the existing rail infrastructure. For the first time, freight wagons are equipped with continuous power and data lines for the DAK. In particular, it strengthens singlevehicle traffic as a green alternative to trucks.

From 2023, DB Cargo intends to pre-equip its freight wagons for DAC installation as part of regular workshop visits.





Rerouted to rail: new low-water concept goes into operation

With navigability of the Rhine River currently unreliable, DB Cargo BTT and Lanfer Logistik developed a concept at short notice for chemical transports by rail.

It's been in the news for several weeks now: The water levels of European rivers are making navigation difficult. The Middle Rhine Valley is one of the areas of the Rhine with so little water that ships and barges cannot navigate the river with their intended load. For many companies this is causing supply bottlenecks, which are particularly problematic when production processes are tightly scheduled. That is the challenge facing a chemical company in southwestern Germany, which is waiting for its raw materials from Rotterdam.

Ideal connection between water and rail

Normally, fully laden ships and barges make their way from Rotterdam to the customer via the Rhine, but the low water levels have made this connection unavailable. DB Cargo BTT, together with Lanfer Logistik, has come up with a solution which has already been successfully launched and which should also be of interest to other industrial customers.

In a nutshell, the low-water concept looks like this: In the city of Hamm, the product is pumped from the barge into tank wagons or tank containers and transported onward by rail to southern Germany. The ship travels to Hamm from Rotterdam via the Rhine, which is still navigable as far as Wesel. From Wesel, the ship continues along the Wesel-Datteln canal and the Datteln-Hamm canal until it reaches Hamm. These canals are navigable year round, making it possible to reach Hamm at any time.

The first transport in mid-August, with a volume of about 1,000 tonnes, was a success, and up to three deliveries a week can be made in this way. The solution ensures an uninterrupted supply chain and the customer can call off the required volumes of freight as usual despite the low water levels. Both tank wagons and tank containers can be used for the rail leg.

About tank wagons and tank containers

Rail is particularly suitable for transporting dangerous goods and is 42 times safer than road transport in terms of accident frequency. Employees handling transshipment at the Hamm site were given specific training, including

awareness training, by the DB Cargo BTT dangerous goods safety advisors othat safe transport is guaranteed.

Hamm: where everything comes together

The Hamm transport hub plays a major role in the implementation of this concept, which is planned as a short-term measure. The hub offers the appropriate infrastructure for transshipping liquid goods and provides a trimodal connection, linking water, rail and road transport. The successful launch of the low-water

concept demonstrates the need for creativity in time of crisis. Thinking beyond traditional solutions clearly shows what is possible – when all stakeholders work together to find solutions. Altogether a successful pilot project.

Photo: The safest means of transport for chemicals is by rail. ©DB Cargo



Successful completion of the first ammonia test delivery from the UAE to Germany

The first low-carbon ammonia test shipment from the United Arab Emirates (UAE) to Germany was successfully completed with its arrival at multi-metal manufacturer Aurubis. As a leading European logistics group with strong ambitions to drive forward decarbonisation, Hamburger Hafen und Logistik AG (HHLA) handled the test cargo at the climate-neutral Container Terminal Altenwerder in Hamburg.

This pilot delivery sets an important milestone for the medium-term imports of green hydrogen for Germany and Europe. Dr. Sultan Ahmed Al Jaber, UAE Climate Envoy and Minister for Industry and Advanced Technology, Dr. Robert Habeck, German Vice Chancellor and Federal Minister for Economic Affairs and Climate Action, Dr. Peter Tschentscher, First Mayor of Hamburg, Michael Westhagemann, Hamburg's Senator for Economics and Innovation, Roland Harings, CEO of Aurubis and Torben

Seebold, Member of the Executive Board at HHLA, honoured the successful test delivery at an event today. Torben Seebold, Member of the Executive Board of HHLA, on the first test delivery: "We at HHLA are very proud to be part of the joint, successful development of a secure supply chain for hydrogen carriers from the United Arab Emirates to Germany. In order to use hydrogen and its derivatives as an energy carrier on a large scale in the future, we need a reliable, climate-neutral and efficient transport chain from the producing countries such as the United Arab Emirates to the German and European customers. As we can make use of our existing European logistics network, HHLA is optimally positioned for the distribution and transport of hydrogen and its carriers." In March 2022, HHLA signed an agreement with Abu Dhabi National Oil Company (ADNOC) to test the transport chain for hydrogen from the UAE to Germany. The hydrogen supplied by ADNOC was shipped in the

form of the hydrogen derivative ammonia. In September, the first container arrived on a Hapag-Lloyd vessel at the Port of Hamburg and was handled climateneutrally at HHLA Container Terminal Altenwerder. With its seaport terminals, rail connections and intermodal hub terminals across Europe HHLA can ensure the safe import and smooth onward transport of hydrogen and its derivatives. The ammonia of the first test cargo will be used by the Hamburg-based company Aurubis for test runs for the climate-neutral conversion of gas-intensive copper wire production, thus replacing fossil fuel in the long term. In the next months, more test deliveries of low-carbon ammonia will be shipped to other customers in Germany.

Hydrogen as a future opportunity

Two years ago HHLA launched the project HHLA Hydrogen Network to identify the potential of hydrogen in its own business segments and beyond. Hydrogen as an energy carrier can contribute significantly to the decarbonisation of logistics. As a leading European logistics group, HHLA is therefore positioning itself in the area of importing and distributing hydrogen. With its network extending from various seaports to the European hinterland, the company is well positioned to seize new opportunities in the field of hydrogen import and transport.

Furthermore, HHLA is working intensively on the use of fuel cells in handling equipment and in heavy goods transport. The aim of these efforts is to contribute to the sustainable reduction of greenhouse gases and other harmful emissions.



Supply of hard coal by freight train for German power plants is on schedule

DB Cargo is making more than 1,000 freight wagons

DB Cargo is making more than 1,000 freight wagons fit for transporting coal

"Priority corridors" in the rail network are important precautionary measures

DB Cargo brings coal by freight train to the Saarland for the power plant operator STEAG. The Bexbach power plant near Neunkirchen is thus one of the first large power plants to benefit from the new "priority corridors" for supply-related freight trains. With the coal trains to various power plant locations in Germany, DB Cargo is making an important contribution to securing the energy supply. The "priority corridors" created by the federal government are used for transport.

The federal government has stipulated in an ordinance that these freight trains are given priority in the rail network on clearly defined transport routes and with a specific public energy supply. This procedure is regulated by the Federal Network Agency. The Parliamentary State Secretary and Logistics Commissioner of the Federal Government, Oliver Luksic, with Dr. Sigrid Nikutta, Board Member for Freight Transport at DB AG, received one of the first coal trains in Saarland.

In addition, the modernization of more than 1,000 coal wagons is currently in full swing at DB Cargo. Some of these were in storage and are now being reactivated

"Coal for the Saar" - DB Cargo delivers

and also retrofitted with whisper brakes.

For the Bexbach location, DB Cargo has also created a new supply chain for ammonia via the important single-wagon network. Ammonia is imported from the seaports and is used to clean the flue gas

of coal-fired power plants. So it directly benefits the sustainable operation of the power plant in the region. Weekly deliveries of individual wagons by safe rail make it possible to put them back into service.

Oliver Luksic: "We have created the legal framework to be prepared for situations like this. Specifically, it enables energy transport to be prioritized. This is necessary because our rail network is already heavily used. Cancellations or delays can therefore not be seriously excluded. At the same time, we can only succeed in ensuring the supply of the coal-fired power plants if we work together. The locations in Saarland in particular are of great importance for the country's energy security. That's why we rely on close cooperation with logistics

and the energy industry, for example with DB Cargo and STEAG, to provide planning security and implement pragmatic solutions."

dr Sigrid Nikutta: "DB assumes responsibility for the energy supply in Germany. We drive as well, as fast and as much as possible. Supplying the power plants with hard coal is - like so many things at the moment - a new challenge that could not have been foreseen a few months ago. DB Cargo shows once again how quickly we can react to such changes with strong rail freight traffic. Thanks to DB Cargo's European network, we also supply additional power plant locations, such as here in Bexbach in Saarland."

Photo: ©DB Cargo



















New S-Bahn for Berlin: More space for passengers on line S8

With immediate effect, DB is completely converting the S8 line to its newest generation of trains. The modern trains with their distinctive flat front are already reliably operating on three of Berlin's S-Bahn lines. Now, around 60,000 passengers using the S8 will also benefit from better information, more security cameras, and additional space for wheelchair users, strollers and bicycles. Rather than operating with four cars, the new trains have six. In addition, the S8 line has been extended from Birkenwerder to Wildau via Zeuthen during peak traffic periods. Together with the S46, the two lines now ensure environmentally friendly connections to the nearby Studentenstadt.

To celebrate the inauguration of the new trains, Berlin's Mayor Franziska Giffey and Rainer Genilke, State Secretary for Infrastructure and Urban Planning for the State of Brandenburg, each drove a new 483/484 series train a couple of kilometres along the line from Pankow to Treptower Park.

Franziska Giffey, Mayor of Berlin, commented: "Today is a notable day for Berlin's public transport. The new trains are an excellent and attractive advertisement for switching from private to public transport. This marks a further important step for ensuring more climate protection, modern urban mobility, and public participation. Future-proof, inexpensive and comfortable public transport will help us achieve our common goal: a sustainable and resource-conserving city. With DB, Stadler and Siemens, Berlin has three business partners to further drive this development. I want to thank the workers and the engineers who put so much effort into designing and building the new trains for Berlin."

Rainer Genilke, State Secretary for Infrastructure and Urban Planning for the State of Brandenburg: "Our state funds are money well invested here: passengers can look forward to more space, modern comfort, and even better service. Moreover, the S8 line now connects the business and science center Wildau with Berlin. That's very good news for Brandenburg. We're also taking another step toward achieving the mobility transition: With attractive offers, even more people will switch from private to climate-friendly public transport."

S-Bahn CEO Peter Buchner: "Hop on board and feel comfortable: we're getting people excited about the mobility transition with these state-of-theart, comfortable trains. When all the new trains are in service next year, more than half a million passengers in Berlin will enjoy the benefits each day. As of today, the S8 line already offers more space for passengers because we're now running longer trains. Specifically, this means space for 300 additional passengers per train."

Nine new trains are in service on the 59 km long S8 line, replacing the old 485 series trains. The retired trains, around 30 years old and dating back to the days of the GDR, have been parked and will be gradually disposed of in an environmentally friendly manner. Some of the trains will be used for spare parts to maintain the remaining trains of this series that are still in service.

A total of 172 cars from the new series, developed and built by the manufacturers Stadler Germany and Siemens Mobility, are currently in daily service.

Jure Mikolčić, CEO of Stadler Germany: "With their inauguration on the S8 line, service with the new and modern trains began on the third S-Bahn line ahead of schedule. The manufacturing consortium Stadler and Siemens reliably delivers one to two trains every week from the Stadler plant in Pankow to S-Bahn Berlin, where they are proving just as reliable in service. As planned, the delivery intervals are being stepped up so all 106 new trains will be available for the S-Bahn Berlin right on schedule."

Albrecht Neumann, CEO Rolling Stock, Siemens Mobility: "With the punctual introduction of the new S-Bahn trains on the S8 line, the Berlin public can look forward to more seats, an improved ride experience, and greater comfort," said Albrecht Neumann, CEO Rolling Stock at Siemens Mobility. "The trains of the new 483/484 series, manufactured by Siemens and Stadler, are not only impressively reliable, but also feature state-of-the-art, energy-efficient drive technology."

The states of Berlin and Brandenburg have ordered and financed the expansion of S-Bahn services and an increase in the system's capacity. The new trains are part of the transport contract for the Ring sub-network that took effect on January 1st, 2021. The first train entered service punctually at 12:01 a.m. on New Year's Eve 2020/21 – initially on the S47 line (Spindlersfeld - Hermannstraße) and, since the end of June, on the S46 line (Königs Wusterhausen – Westend). Since serial production of the trains is well under way, the S45 line (BER – Südkreuz) can even be temporarily supplied with new trains. In coordination with VBB, previously delivered trains are running on the S45 line before their planned use on other lines.

After all the trains ordered from Siemens and Stadler have been delivered at the end of 2023, a total of 106 two-car trains will be in service throughout Berlin. With these new trains, DB is increasing the capacity of the Berlin S-Bahn by 25,000 seats and making environmentally friendly public transport in the capital even more attractive for travellers.

The next milestone for the S-Bahn will be the commissioning of trains for the S41 and S42 Ring lines beginning this December.

The Betriebs-KlimaBahnCard makes travel climate-friendly and inexpensive for employees

BahnCard Business 25 1st class for EUR 49.90 instead of EUR 134 • Price below the non-cash benefit limit of the non-cash benefit • Travel CO2-free with every DB journey

Deutsche Bahn (DB) wants to make travel for employees in Germany even more climate-friendly and cost-effective. That's why the company climate railway card is available from today until December 10th. With this promotional BahnCard, employers can purchase a

particularly affordable BahnCard Business 25 for their employees, which can be used for business and private trips - true to the motto: "Good for the working atmosphere. Better for the climate".

StefanieBerk, Headof Marketing at DBF ernverkehr: "More and more companies want to enable their employees to travel in a climate-friendly and cost-effective manner. That's why we have developed an offer with the Betriebs-KlimaBahn Card, which at a price of

49.90 euros is deliberately below the In this way, for the first time, all employees can benefit from the possibility of a tax-privileged BahnCard."

The Betriebs-KlimaBahnCard is a BahnCard Business 25 1st class and offers a 25 percent discount on saver and flexible prices. The promotional BahnCard costs EUR 49.90 instead of the regular price of EUR 134. It is valid for 1st class, but can also be used for 2nd class travel. The special offer is available to all companies that participate

in the business customer program bahn.business. With bahn.business, all customers travel within Germany CO 2 -free. Further information is available at bahn.de/bahnbusiness

In addition, Deutsche Bahn is calling on all companies and organizations to set an example for the climate together with #StandUpForTheClimate in the social networks (LinkedIn)



New DB timetable 2023: a further step towards the Germany cycle

Deutsche Bahn (DB) continues to invest consistently in new vehicles and attractive connections. With the 2023 timetable, it connects north-west and south Germany faster and more directly. In the future, passengers will be able to travel between Cologne and Munich twice an hour, up to 15 minutes faster than before. At the same time, DB offers more connections to Frankfurt Airport and thus an environmentally friendly alternative to short-haul domestic flights in Germany. In addition, with its European partner railways, it creates other attractive travel opportunities abroad. The new timetable applies from December 11, 2022. DB long-distance passenger transport manager Dr. Michael Peterson: "With the new timetable, we are taking the next step on the way to the Germany cycle and are clearly setting the course for further growth. Our passengers benefit directly from the investments in infrastructure and new vehicles. In 2023, our train fleet will grow by three new ICE trains every month. That's a record."

More and faster connections via the new Wendlingen-Ulm route

With the commissioning of the new Wendlingen–Ulm high-speed line, the travel time between Stuttgart and Munich will be reduced by around 15 minutes. At the same time, the daily service between the two state capitals will increase by around 20 to 90 trips. The DB also connects the federal

states of North Rhine-Westphalia and Bavaria with each other even faster and more frequently via the new route. The existing Dortmund/Düsseldorf-Stuttgart ICE line now runs via Cologne and Mannheim to Ulm, Augsburg and Munich. At 4:15 hours, the travel time on the new high-speed line is almost 15 minutes shorter than before. Together with the existing direct connections via Nuremberg or Stuttgart, passengers can travel between Cologne and Munich twice an hour without having to change trains.

Faster and more direct to Frankfurt Airport

With new direct connections to Frankfurt Airport, DB will be offering other German cities a fast and environmentally friendly alternative to short-haul flights from December. The Basel-Cologne-Dortmund ICE line will be extended to Hamburg, which will further improve the quality of the axis between the cathedral city and the Hanseatic city. This means that travellers from Münster, Osnabrück and Bremen can get to Frankfurt Airport even more frequently without having to change trains. Munich and Augsburg are also faster and more frequent routes to the largest German airport. DB is expanding the number of seats here by up to 60 percent.

From December: The new ICE in action for the first time

The new ICE 3neo will be in daily service between Dortmund, Cologne and Frankfurt for the first time from mid-December. On Saturdays there is a return trip between Dortmund and Munich via the new Wendlingen–Ulm high-speed line. DB will expand this offer over the course of the year with the delivery of further ICE 3neo trains. In 2023, Deutsche Bahn will have 37 new ICE trains which means that the number of ICE seats will gradually increase by around 19,000 by the end of the year. On the particularly high-demand lines such as Hamburg-Basel, DB is using further new XXL ICE 4s with 13 cars. With a length of 374 meters and space for 918 passengers, the XXL ICE can carry five times as many people as a medium-haul aircraft. In addition, further seven-car ICE 4s will strengthen the fleet.

Additional connections to other European countries

Together with its partner railways, DB will be offering even more attractive connections to other European countries from December. From December there will be an additional continuous return trip between Stuttgart and Zurich. In October 2023, the number of direct connections will continue to grow from eight to 13 daily. In addition, six-car KISS trains are used on most journeys. The double-deck intercity trains are characterized by their high quality and great comfort.

ArcelorMittal and DB Cargo: strong partners on the way to green steel

On the way to CO₂-free steel production, DB Cargo AG has reached a milestone in green logistics with the world's leading steel and mining group ArcelorMittal. Thanks to state-of-the-art, partially automated unloading systems in the Eisenhüttenstadt steelworks (Brandenburg), the environment is protected even better against fine dust and emissions. At the same time, lighter wagons and special containers ensure that freight trains are utilized even more efficiently. More than 90 percent of the required raw materials can be delivered in such a climate-friendly way. For the largest East German blast furnace location, this means more efficiency and environmental compatibility. Innovative freight wagons, light, removable containers and large unloading terminals with extraction systems are literally changing the working atmosphere in Eisenhüttenstadt. The materials used in steel production, such as ore, coke and limestone, can be handled with almost no dust formation. In the future, "green sponge iron", a precursor for climate-neutral steel production, will also be transported this way.

By automating the discharging process, emissions are already being reduced today. For modern rail logistics, DB Cargo has invested in multifunctional double wagons

and special containers from the Austrian manufacturer Innofreight, which also designed the unloading system. The new equipment optimizes the loading volume and increases the payload per train by up to 20 percent. Fewer freight trains have to run for the same transport volume. Side effect: The supply of raw materials works faster, the shunting effort on site decreases.

Astheworld's largest steel and mining group, Arcelor Mittal aims to lead the change towards a carbon-neutral steel industry. As part of the XCarb® initiative, under which all decarbonization activities are bundled, the Group has committed to drastically reducing its CO₂ emissions and to saving more than 35 percent CO₂ by 2030 across Europe. By 2050, all production worldwide should be climate-neutral. The supply of the plants and the supply chain are an essential part of the climate balance, especially in the case of steel. ArcelorMittal is planning further investments in Eisenhüttenstadt: Two electric arc furnaces are to be built that will produce crude steel based on recycling scrap and sponge iron made with green hydrogen. The sponge iron is initially to be transported by rail from a plant planned at ArcelorMittal in Bremen to the unloading facilities in Eisenhüttenstadt.

dr Volker Wissing, Federal Minister of Transport and Digital Infrastructure: "In order to achieve our emission targets, the industry must organize all of its processes in a climate-neutral manner. One thing is clear: without environmentally friendly transport and a strong rail network, there can be no climate-neutral industry. The producers of such energy-intensive raw materials as steel have a special role to play, because they are required for many everyday products. It is imperative that companies continue to push ahead with their clean manufacturing transformation plans despite the energy crisis. From a political point of view, we are doing everything we can to support this path."

Hendrik Fischer, State Secretary of the Ministry of Economics, Laborand Energy of the State of Brandenburg: "One of the most modern raw material logistics in Europe is in Brandenburg. The investment in the new unloading station is an important step towards green steel production at the Eisenhüttenstadt site, for which sustainable raw material transport creates the basis. The highly modern steel production in Eisenhüttenstadt secures qualified and well-paid jobs, currently 2,700. The steel site in Eisenhüttenstadt is well on the way to becoming climate-neutral by 2045. It shows that state-

of-the-art workplaces and consistently ecologically oriented production and logistics are not opposites, but mutually dependent."

Reiner Blaschek, CEO ArcelorMittal Germany:

"The new unloading facilities are tangible proof that these investments are money well spent for the future. They accelerate the conversion of our steel production to climate-neutral production and make us independent of fossil fuels in the long term. With our transformation plan, we can save more than 3.5 million tons of CO₂ per year in Eisenhüttenstadt by 2030."

drSigridNikutta, Member of the DB Board of Management for Freight Transport and CEO of DB Cargo: "Goods belong on the rails. The green transformation of the German and European economy succeeds with the environmentally friendly railway. It is the basis for green supply chains and for reducing CO₂ emissions in production. With the new logistics concept, DB Cargo is securing the supply of raw materials for one of the largest German steel locations until 2031 and is accompanying ArcelorMittal on the way to climate-neutral steel production."



Northrail structures sale-and-lease-back transaction with DB Regio

Northrail initiates and structures a sale and leaseback transaction for 29 Coradia Stream High Capacity double-deck regional trains from Alstom. The lessor is a special purpose company of DIF Infrastructure Fund VI and the senior debt was exclusively arranged by MEAG. Northrail will also take over the lease and asset management until at least 2041 and will be the contact for the lessee DB Regio AG (DB Regio), the financiers and all other contractual partners.

"We are pleased to have successfully implemented in these difficult times a very innovative transaction together with our project partners DB Regio, DIF and MEAG," says Volker Simmering, Managing Partner of Northrail, and adds: "The state-of-the-art double-deck regional trains from Alstom are an excellent investment. The railway being on a growth path, needs such energy-efficient high-capacity trains to cope with the strong increase in passenger

volumes in the future."

Henrik Luerssen, Senior Director at DIF Capital Partners adds: "With this transaction, we have not only gained a valuable cooperation with very strong and professional partners – DB Regio, MEAG and Northrail – but also took the steps for a modern and efficient infrastructure solution for many thousands of commuters. The investment in the Kinzigtal project, as well as rail projects in general, make an important contribution to reducing greenhouse gases. We are therefore very much looking forward to the start of the operations in December 2025."

Benjamin Hemming, Head of Infrastructure Debt at MEAG, further adds: "We areverypleased to make another important contribution to the modern of public transport in Germany with our exclusive debt arrangement for the

Kinzigtal network. The new trains which will operate on the line will not only make commuting by train more convenient but will also contribute to reducing emissions. With this innovative private placement we enable our institutional clients to participate in a long-term and sustainable financing at attractive terms."

The fleet is composed of 4-, 5- and 6-car double-deck multiple-unit regional trains with a capacity of between 420 and 660 seats. The vehicles are ecologically friendly and provide high passenger comfort. DB Regio will operate the trains on the Kinzigtal network between Frankfurt am Main, Hanau, Fulda and Bebra from December 2025. The trains will be maintained at the DB Regio workshop in Kassel and Griesheim.





FS Group, Logistics Hub: more connections between the European Quadrant and Southern Italy

As of October 17th, Verona-Giovinazzo will see an increase from 12 to 18 freight trains per week connecting the Quadrante Europa and the terminal in Puglia, one of the major logistics hubs for Southern Italy.

The offering thus increases by 50%, responding to a growing demand and the appreciation that the Italian and European market is expressing for a service that the Logistics Hub (FS Italiane Group), led by CEO Gianpiero Strisciuglio through its subsidiary Mercitalia Intermodal and in partnership with Lugo Terminal SpA, launched in

January 2021 along one of Italy's busiest routes.

This rise in frequencies was also made possible thanks to the technical performance and reliability offered by Mercitalia Rail, which developed the traction service by availing of latest-generation locomotives and wagons.

Indeed, this service is characterised by the highest performance levels permissible by the national railway network today, with a load capacity of 1600 tonnes, a length of 550 metres and a loading gauge aligned with

the highest European standard (P400).

The new schedule of 18 trains per week represents a further step towards achieving the objectives of the European Green Deal regarding the reduction of CO₂ emissions, by ensuring that around 27,500 Intermodal Transport Units (ITUs) – including semi-trailers, swap bodies, tank containers and sea containers – are taken off the road each year to save on more than 1,200 tonnes of CO₂ annually.

The Logistics Hub, through its subsidiaries and with initiatives such as this, confirms its leading role in the revitalisation of the rail transport and logistics sector as a system operator.

Alstom signs a framework agreement with Rete Ferroviaria Italiana to supply ERTMS signalling system for central and southern Italy

Alstom, global leader in smart and sustainable mobility, has signed a framework agreement worth around 900 million euro [1] with Rete Ferroviaria Italiana (RFI) to design, deliver and commission an ERTMS[2] system (the most advanced train supervision and control system available today), on a large scale in Italy.

Alstom will provide the latest ERTMS Baseline 3 Level 2 signalling system with GSM-R[3] and digital interlocking ACCM[4] on 27 lines managed by RFI in the regions of Sardinia, Molise, Puglia, Umbria, Lazio, and Campania. The system proposed by Alstom meets the technical specifications for interoperability required by the European Union and the CENELEC[5] standards for railway safety, guaranteeing the highest safety standards.

"With this new contract, Alstom reaffirms itself as the reference player in the railway sector in Italy. Being selected by RFI for the second time for one of the key projects of the Italian National Recovery and Resilience Plan is a source of immense pride for Alstom. It also demonstrates Alstom's commitment to providing Italy with innovative technology aimed at improving the country's rail infrastructure and providing smart and sustainable mobility solutions that will benefit its passengers," explained Gian Luca Erbacci, Europe Region President at Alstom.

The "South-Centre" lot is part of a 2.7-billion-euro tender, launched by RFI for the implementation of ERTMS throughout the country. It represents the final portion of the technical projects to be financed within the framework of the NRRP and will transform a total of approximately 4,800 kilometres of railway lines.

ERTMS is the latest and most advanced traffic management system for railways across Europe. It constitutes a major industrial project that will make rail transport more fluid and more competitive across the continent.

ERTMS ensures interoperability of the national railway systems, reducing the purchase and maintenance costs of signalling systems, as well as increasing the trains regularity and capacity of networks.

Alstom has been manufacturing trains in Italy for 160 years and Image: ©Alstom SA 2022

providing signalling and electrification solutions for 90 years. Today, with 10 sites throughout the country and more than 3,500 employees, Alstom significant local employer recognised as a leader in the Italian rail market.

[1] The signature of this framework agreement does not constitute an order intake. Firm batches as per this framework agreement will be ordered progressively, with first tranche expected during H2 2022/23

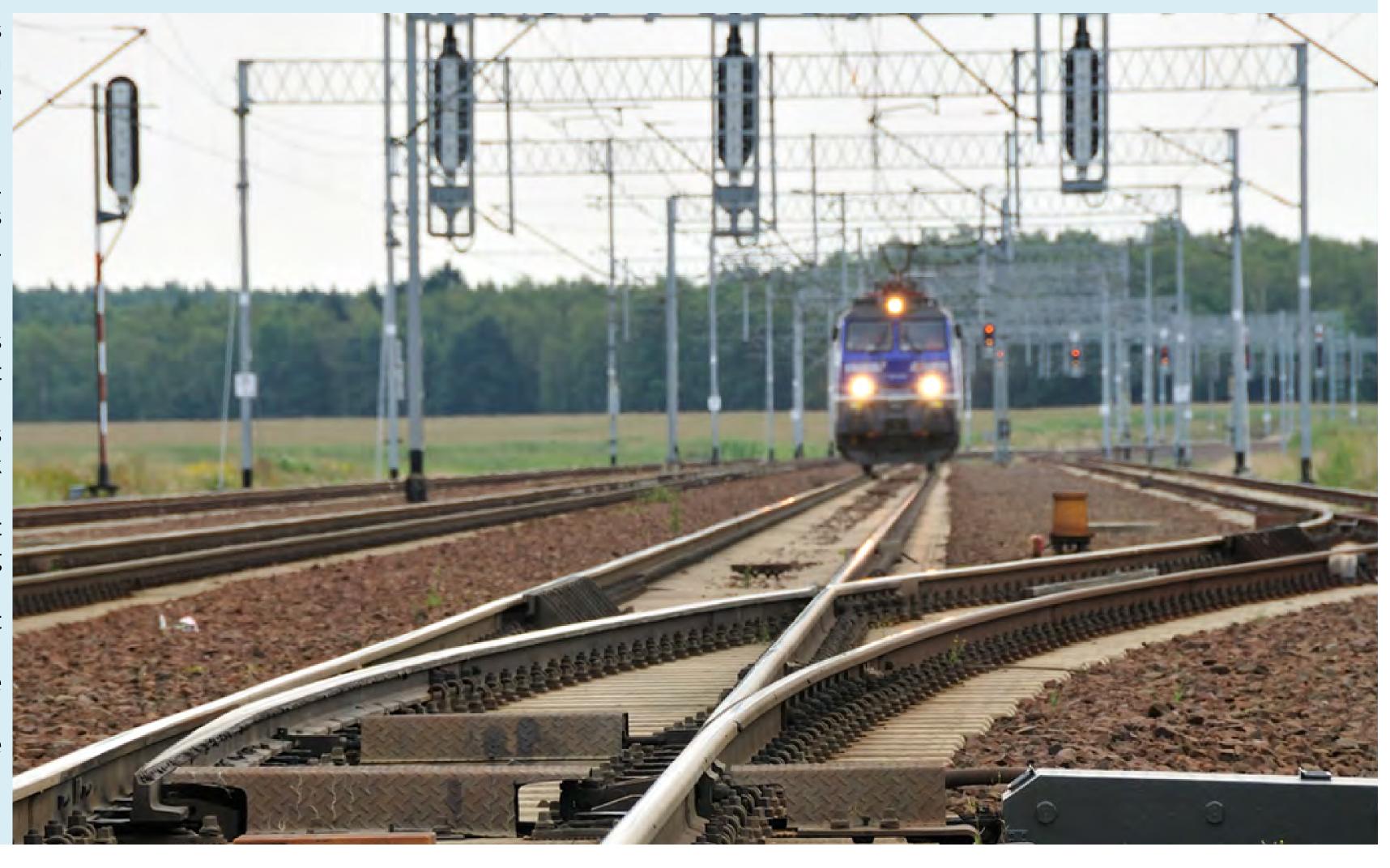
[2] European Rail Transport Management System

[3] Radio system for voice and data communication between the track and the train

[4] Multi-station Central

Computer Equipment

[5] European Committee for Electrotechnical Standardization





Ireland

Iarnród Éireann/Irish Rail Class 071 No. 085 is seen at Limerick Junction on September 19th. *John Balaam*

Irish Rail Class 201 locomotive No. 215 'River Avonmore' stands at Limerick Junction with the 09:25 Cork Kent to Dublin Heuston service on September 21st. *John Balaam*

Iarnród Éireann/Irish Rail Class 071 Nos. 083 and 071 are seen departing Portlaoise on September 23rd. *John Balaam*







Ireland

Irish Rail Class 201 locomotive No. 219 'River Tolka' calls at Portlaoise with the 17:00 Dublin Heuston - Cork service on September 22nd.

John Balaam

Dublin tram No. 5003 is seen in O'Connell Street working to Brookbridge on September 19th.

John Balaam

Dublin tram No. 3018 departs Connolly with a service to Saggart on September 21st.

John Balaam











On September 17th, RAILEXPERTS and Foundation '2454 CREW' plan U No.151 (on a private charter) is seen visiting the tracks in the harbour basins of Amsterdam Westpoort with a group of railway lovers from Germany ('DGEG Bahnen und Reisen Bochum AG'). *Erik de Zeeuw*









Portugal

CP Class 1400 No. 1432 arrives at Mosteiro with train No. R21861 08:20 Porto Sao Bento to Pocinho on September 10th.

Mark Pichowicz

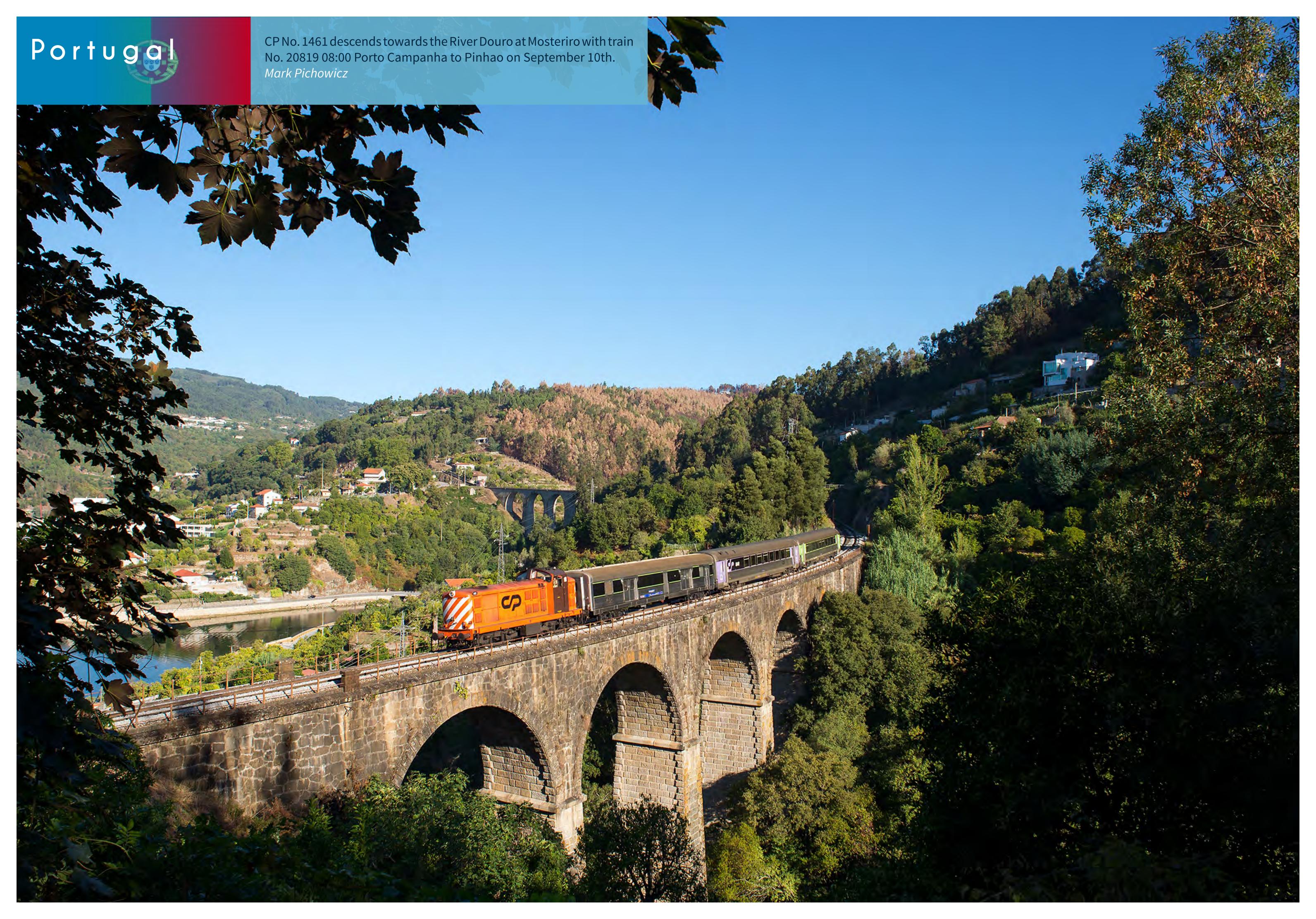
CP Class 1400 No. 1438 arrives at Pinhao with train No. R21860 15:12 Pocinho to Porto Sao Bento on September 11th. *Mark Pichowicz*

On September 9th, Class 1400 No. 1424 departs
Pinhao working train No. R868 13:08 Pocinho
to Porto Campanha. *Mark Pichowicz*















FS EMU No. ETR104.083 calls at Taormina on October 17th. *Mark Enderby*

Class D145.2045 and a couple of former Czech Class 753s are seen at Messina Centrale on October 24th. *Mark Enderby*

FCC single car unit No. ADE23 is seen at Giarre on October 21st. *Mark Enderby*









Class E464.281 brings up the rear of train No. ICN1959 to Siracusa at Catania on October 21st. *Mark Enderby*

FS EMU No. ETR104.115 departs Taormina on October 24th. *Mark Enderby*

Class E652.095 and dead D345.121 on a southbound freight pass through Giarre-Riposto on October 21st. *Mark Enderby*









Class D145.2034 shunts the Palermo-Roma train at Messina Centrale on October 24th. *Mark Enderby*

Class E464.371 on a Siracusa bound train arrives at Giarre-Riposto on October 21st.

Mark Enderby

Redundant FCE stock seen stored at Catania Borgo on October 21st. *Mark Enderby*











On October 24th, No. D145.245 and another D145 are seen shunting at the ferry terminal at Messina Centrale. *Mark Enderby*

ATM tram No. T12 is seen at Messina Centrale.

Mark Enderby

FS Class E464.334 arrives at Messina Centrale with a Palermo-Roma service on October 24th.

Mark Enderby

























Swiss and SBB add tourist destinations Lucerne and Interlaken to their «SWISS Air Rail» network.

Swiss International Air Lines (Swiss) and the Swiss Federal Railways (SBB) work continually to further expand their joint product and service portfolio. As the latest result of the collaboration, Lucerne and Interlaken – two popular tourist destinations that also serve as an excellent base for exploring other regions – will be added to the partners' «Swiss Air Rail» network from December 11th. The new «Swiss Air Rail» services can be booked now for travel on or after December 11th.

Following this summer's addition of Munich as its first international destination along with selected new intermediate points in Switzerland, «Swiss Air Rail» will thus now undergo further expansion. Lucerne and Interlaken will bring the intermodal «Swiss Air Rail» network to 11 destinations.

"As part of our strategic partnership with SBB, we are steadily expanding our «Swiss Air Rail» network, not least by adding attractive new tourist destinations," explains SWISS Chief Commercial Officer Tamur Goudarzi Pour. "As a result, our inflight guests from elsewhere in Europe and all over the world can now travel swiftly and smoothly to some of the most appealing places in Switzerland. It's seamless intermodality, to the benefit of all our customers."

A new direct rail service between Zurich Airport and Interlaken

In co-offering the new «Swiss Air Rail» services from and to Interlaken and Lucerne, Swiss is providing customers in new Swiss regions with enhanced connections to and from its flight network. At the same time, the cities are two of the most popular destinations among visitors to Switzerland, who will also feel the benefit of these fast and direct rail services.

SBB will offer a new direct service between Zurich Airport and Interlaken (with no change of train required) from the start of the new rail timetables on December 11th 2022.

"With these further expansions to our «Swiss Air Rail» network, we are making it even more attractive for air travellers to Switzerland to reach their final Swiss destination by train, with all its traffic-free comfort and convenience," says Véronique Stephan, Head of Passenger Services Markets at SBB. "Thanks to our new direct rail services from and to Zurich Airport, Interlaken and Lucerne can now be reached from Tokyo, New York or São Paulo with just a single change en route."

As with all «Swiss Air Rail» destinations, Swiss travellers to and from Lucerne and Interlaken will be able to book their entire journey in one simple step. The Swiss rail ticket is included in the fare for the SWISS flight, and the

entire trip can be booked on swiss.com via any travel agency.

Travellers need also only check in once to receive all their boarding passes directly from SWISS and the rail ticket is integrated into the flight confirmation. As further features of its partnership with SBB, SWISS also offers its customers a wide selection of SBB rail services, flexibility in their choice of train and guaranteed connections in the event of a delay.

If they are Miles & More members, their «Swiss Air Rail» tickets will also earn Swiss customers both award and status miles, with the precise mileages credited depending on their flight and class of travel. Swiss First and Swiss Business passengers are further entitled to first-class rail travel on their SBB connection.

Rhaetian Railway successfully breaks world record to run longest passenger train in the world

On Saturday, October 29th, Rhaetian Railway successfully made its world record attempt at being the longest passenger train in the world, travelling on the UNESCO World Heritage route from the Albula Tunnel in Preda to the famous Landwasser Viaduct near Filisur. Rhaetian Railway first announced that it would be making such an attempt in June this year.

The train was comprised of 25 four-car Capricorn multiple units manufactured by Stadler and measured 1,906m in length. The train was assembled Friday to Saturday night before departing from Preda at 2:20pm. Shortly after 3:30pm the record-breaking train reached its destination: the spectacular Landwasser Viaduct. The total journey was just shy of 25km.

In total, the train covered 789.4m of altitude across 48 bridges and through 22 tunnels. The Landwasser Viaduct is 142m long and sits at a height of 65m. The longest tunnel on the route has a length of 698m. A total of 4,000kWh of energy was produced during the attempt via regenerative braking. The train travelled at 30–35km/h. It weighed 2,990 tonnes. There were seven train drivers and 21 technicians on board to drive the train. Communication within the train was established by a field telephone almost 2km in length, which was provided by civil defence. GUINNESS WORLD RECORDS™ officially confirmed the success of the attempt on site. The whole event was accompanied by a railway festival attended by around 3,000 visitors who wanted to witness the attempt.

Renato Fasciati, Director of RhB, said: "After intensive preparation, we are overjoyed to have achieved this world record. Not only did we have a wonderful railway festival here in Bergün, but we were able to present ourselves around the world as a fascinating and innovative mountain railway thanks to our dedicated partners, sponsors and incredibly dedicated team."

The line's normal timetable resumed on October 30th.

Photo: Rhaetian Railway successfully breaks world record to run longest passenger train in the world. ©RhB





Egypt

As a global leader in smart and sustainable mobility, Alstom is committed to addressing the challenges facing society today, from global warming to rapid urbanisation. COP27 is an opportunity to showcase the progress and options available to decarbonise the transport sector, as well as exchange on green transport solutions for the future. Alstom has over 20 years of expertise in low carbon technology, and has been participating in the conference since #COP21 in Paris.

A delegation from Alstom will be attending the 27th United Nations Climate Change Conference, to be held from November 6th to 18th in Sharm El Sheikh, Egypt.

During the second week of the conference, Alstom will participate in transport focused events with other inspiring changemakers, where meaningful discussions about sustainable mobility and the importance of women's roles in transforming and decarbonising transport, will take place. Alstom will promote the critical role public transport, specifically rail mobility solutions will play in any country's sustainable development efforts to address climate change issues.

Alstom to demonstrate the key role rail can play in global decarbonisation efforts at COP27

Moreover, Alstom in collaboration with Ernst & Young (EY) will publish a position paper as a contribution to COP27, on how urban rail transport is critical for Africa to address its sustainability needs, demonstrating its environmental, social, and economic benefits for Africa's growing cities. "Strong investment in rail will enable the decarbonisation of transport, in addition to many other benefits essential to sustainable development such as equal access to transport, social progress and economic development. Transport accounts for more than a quarter of global energy consumption; it is one of the human activities that continues to cause C02 emissions to rise. COP27 is an opportunity for Alstom to showcase its commitment to support Net Zero mobility by building innovative, sustainable solutions with a lower carbon footprint, while actively contributing to public debates on sustainable development policies," said Cécile Texier, Vice President Sustainability & CSR, Alstom.

Alstom's mission is to accompany its customers during their transition towards sustainable transport systems by designing and delivering innovative and environmentally-friendly solutions. Thanks to Alstom's

capacity to innovate and a strong R&D programme, the Group offers the best value proposition for its customers, based on the most complete and high performing portfolio in the industry. The portfolio includes both new and refurbishment options.

Today, the Group is the only rail player that offers the entire scope of green traction solutions and in-house fuel cell technology, and also has battery and hydrogen trains in passenger operation.

Alstom is a member of a number of organisations and initiatives working towards a greener future including: Transport Decarbonisation Alliance, European Clean Hydrogen Alliance, UNIFE - The European Rail Supply Industry Association, UITP-International Association of Public Transport, ITF - International Transport Forum, Hydrogen Council, Hydrogen Europe, Rail Europe, United Nations Global Compact and SLOCAT Partnership on Sustainable, Low Carbon Transport among others.



France

The rail industry has always placed a keen emphasis on safety – ensuring that every ride is as safe as possible, posing no risk to passengers or employees.

But rail systems have evolved significantly since their inception – particularly in the past decade, which has seen the rise of connectivity as a critical component of rail infrastructure and rolling stock. This evolution, which has made trains more efficient, comfortable and safe than ever before, is not without its challenges. Namely, the need to refocus industry attention on security – especially cybersecurity – alongside standard safety practices.

Safety vs security

Safety and cybersecurity share the same goal: to keep passengers and employees safe and the trains running as scheduled. But to conflate the two is to address them

Full steam ahead for the future of railway cybersecurity

insufficiently. For railways, safety generally refers to the protection of passengers and systems from unintended harm – a rusted mechanism, a broken signal light, bugs in the system, etc. Cybersecurity is the protection of people and infrastructure against intended harm – bad actors with malicious intent.

As opposed to mechanical safety, which rests on time-tested tenets, cybersecurity never rests on its laurels – it must always stay one step ahead of increasingly sophisticated hackers. So, in order to remain cybersecure, the rail industry must constantly be improving and evolving its cybersecurity solutions to meet the next emerging threat.

One critical hurdle to effective railway cybersecurity is the difficulty in finding the balance between tried-andtrue safety protocols and cybersecurity systems that must be constantly updated.

The state of cybersecurity in rail operational environments

The recent classification of railways as "critical infrastructure" has accelerated the adoption of standardized rail-centric cybersecurity solutions. New protocols and other regulatory initiatives are pushing the industry to become even more cybersecure – frameworks like CENELEC TS 50701 (based heavily on IEC 62443) and recent TSA Directives in the U.S.

But such standardization is complicated by the fact that the rail industry is made up of a diverse set of actors: operators, integrators, component suppliers, and thirdparty vendors providing solutions across various corners of the supply chain. Fortunately, players throughout the rail industry are looking to address the growing cybersecurity concerns through innovation and the development of new products and services.

But even with cybersecurity a high priority throughout the rail ecosystem, we cannot underestimate the challenges ahead – necessary cultural changes, the long lifecycle of rail products, and the growing complexity of railway systems, to name a few.

Poland

Alstom in Poland will employ 200 people at its new site in Nadarzyn and triple production capacity for train bogies in Poland

Cost of investment coming to more than €10 million

Production capacity of up to 3000 bogies a year

First and only high-speed train bogies service center in Poland soon to be opened there

Alstom in Poland has launched the production of bogies for regional trains, metros and trams at a new site in Nadarzyn near Warsaw.

Two hundred people will be employed at the new site, with the cost of investment coming to more than €10 million.

The first bogies have already rolled off the production line. In the near future the site will also perform the maintenance of high-speed train bogies (up to 250 km/h). It will be the first high-speed train bogies service center in Poland.

The new site will take over the production of bogies from the existing Alstom sites in Piaseczno and Wrocław.

A production hall with four cranes and office spaces have been built on the area of over one hectare. The site in Nadarzyn will employ fitters, mechanics, electricians, turners, painters, quality control specialists and administrative staff.

"Our new Nadarzyn site is an example of further investments being done by Alstom in Poland. Ultimately in Nadarzyn we will hire 200 people and we are aiming at producing 1800 train bogies a year, that is three times more than today in Piaseczno.

Technically, we will be able to produce up to 3000 bogies a year," explains Sławomir Cyza, CEO and Managing Director of Alstom in Poland, Ukraine and Baltic States. Alstom has been gaining expertise in the construction of bogies in Poland for many years. In Piaseczno, it has been performing the overhauls of Pendolino bogies and has produced bogies for regional trains.

Bogies produced in Poland are parts of Coradia Stream electric multiple units assembled, among others, in Chorzów; most of them are being exported.

Egypt

Alstom puts into service four stations on Cairo Metro Line 3 - Phase 3A

Alstom has successfully supplied, tested and commissioned the signalling, centralised control and driving modes for Cairo Metro Line 3 – Ph3A with a total of 4 stations from Attabato Kit Kat. The Minister of Transport Mr. Kamel El Wazir, have inaugurated the line with Gen/Eng. Sherif Leil the Chairman of National Authority for Tunnels (NAT), H.E Ambassador Marc Baréty, The French Ambassador to Egypt, Mr. Ramy Salah, Egypt Managing Director, Mr. Mohamed Ali, Customer Director at Alstom Egypt, Mr. Rufino Ortega, Egypt Systems & Infra Managing Director and Mr. Mena Azer, Project Manager of Alstom Egypt.

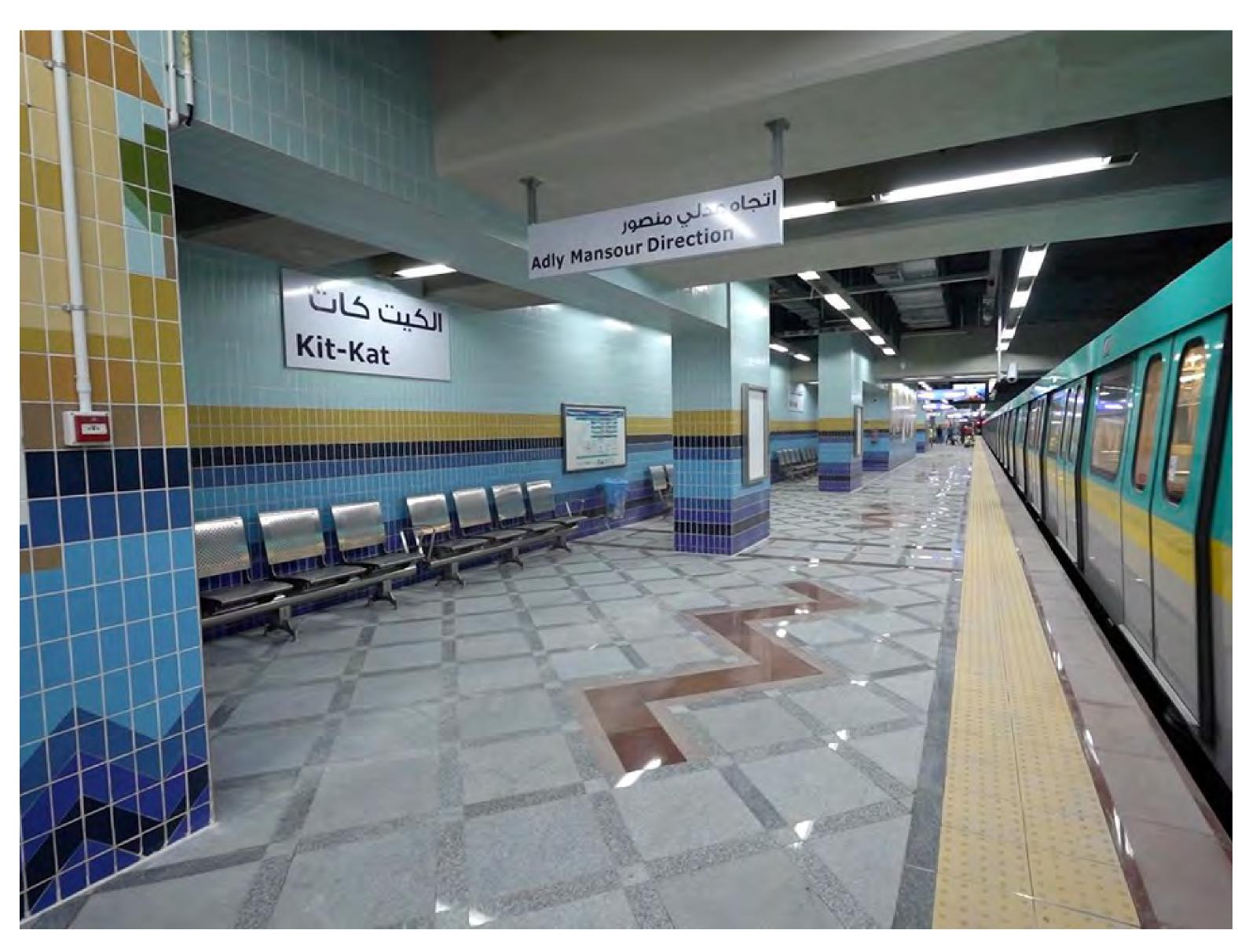
In November 2015, NAT awarded Alstom a contract to provide system and subsystem design, manufacturing, installation, testing / commissioning, training, maintenance for signalling, driving modes, centralised control and telecommunication systems for Cairo Metro Line 3 Phase 3. On the same date, NAT awarded Alstom, as a member of the G3 Power Supply Consortium, a contract for the design, supply, installation, testing, commissioning, training, maintenance of power traction system and depot equipment.

"Alstom is proud to have provided its Urbalis signalling solution for line 3 of the Cairo Metro, phase 3A. We are committed to meeting our customer's expectations and pursuing our long-term partnership with the National

Authority for Tunnels. We strive to provide to the country state-of-the-art signalling solutions," said Ramy Salah, Managing Director of Alstom Egypt.

Urbalis is an advanced signalling system that helps operators to ease commuter congestion. Constantly upgraded, the solutional day and capacity while providing standard supervision and control supporting their operational needs. Designed for heavy ridership metros, the system offers a considerable range of functions that improve headway and average speed performance.

Alstom has been present in Egypt for over 40 years and has contributed to support the strong trend of railway infrastructure development in the country. Over decades, Alstom Egypt has developed a local talent pool that is today in charge of a centre of excellence related to signalling, Power Supply and Depot Equipment which is supporting our projects within the AMECA region. It is this heritage that has allowed Alstom Egypt to make a significant contribution to Egypt's rail industry development.





Alstom wins major UK train services contract with Govia Thameslink Railway

Alstom, global leader in smart and sustainable mobility, has announced that it has signed a new contract with Govia Thameslink Railway (GTR) – one of the UK's most significant rail franchises – for a services contract worth around €300 million (£256 million)[1].

The Technical Support and Spares Supply Agreement (TSSSA) will run from October 2022 for a period of five years, five months to align with the duration of GTR's National Rail Contract. That means that Alstom will continue to support the Derby-built Class 377 and Class 387 Electrostar fleets in operation on Southern, Gatwick Express and Great Northern services into London's Victoria and King's Cross stations. Alstom has been a long-term trusted partner to GTR, having already serviced the fleets for nearly 20 years.

Along with Alstom's unique material supply facility in Brighton, Alstom and GTR teams located across GTR's four major depots in Battersea, Brighton, Hornsey and Selhurst will work together to support a total fleet of 1,210 cars and ensure the highest standards of train

availability, reliability and safety for some of the UK's busiest commuter routes.

Steve Lammin, Engineering Director at GTR, said: "This contract renews our association with Alstom, securing the continued support our excellent teams require to maintain our fleet."

"We are very pleased to have secured this very large and important services contract with our long-term customer GTR. This is a recognition of the outstanding work done by our services teams across the country, and particularly those at our Brighton facility and the teams based at Hornsey and Selhurst depots," said Peter Broadley, Managing Director, Alstom Mainline Services Director UK.

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[1] Booked in Q2 of the 2022-2023 fiscal year



Poland

Rail contract signed in city of Toruń with representatives of the Kuyavian-Pomeranian Voivodeship region
New contract begins in 2023 and will run for eight years up to 2030
Contract secures Arriva's position in the Polish rail market

Arriva Group has signed a new contract in Poland for rail transport in the mid-north of the country's Kuyavian-Pomeranian Voivodeship region.

The new contract will see Arriva transport passengers in the region for the next eight years, starting from 2023 and running up until 2030. At the signing, local government representatives were present alongside Arriva's management team.

Arriva Group signs new rail contract in Poland

The contract was awarded in recognition of the strength of Arriva's tender which responds to the needs of the passenger transport authority in the region and, most importantly, for passengers who will enjoy continuity of service with Arriva.

Arriva acknowledges that its experience in the region would have been a positive factor in the decision to award this new contract. Commenting on the recent win, Sian Leydon, Arriva Group's Managing Director for Mainland Europe, said:- "I'm delighted that Arriva has been successful in winning this contract in Poland. We have demonstrated long-standing success in rail operations in the region and this award provides continuity for passengers and for our colleagues within Arriva. We look forward to working closely with the local government to share our expertise in passenger transport across Europe and ensure sustainable growth of rail transport in this part of Poland".

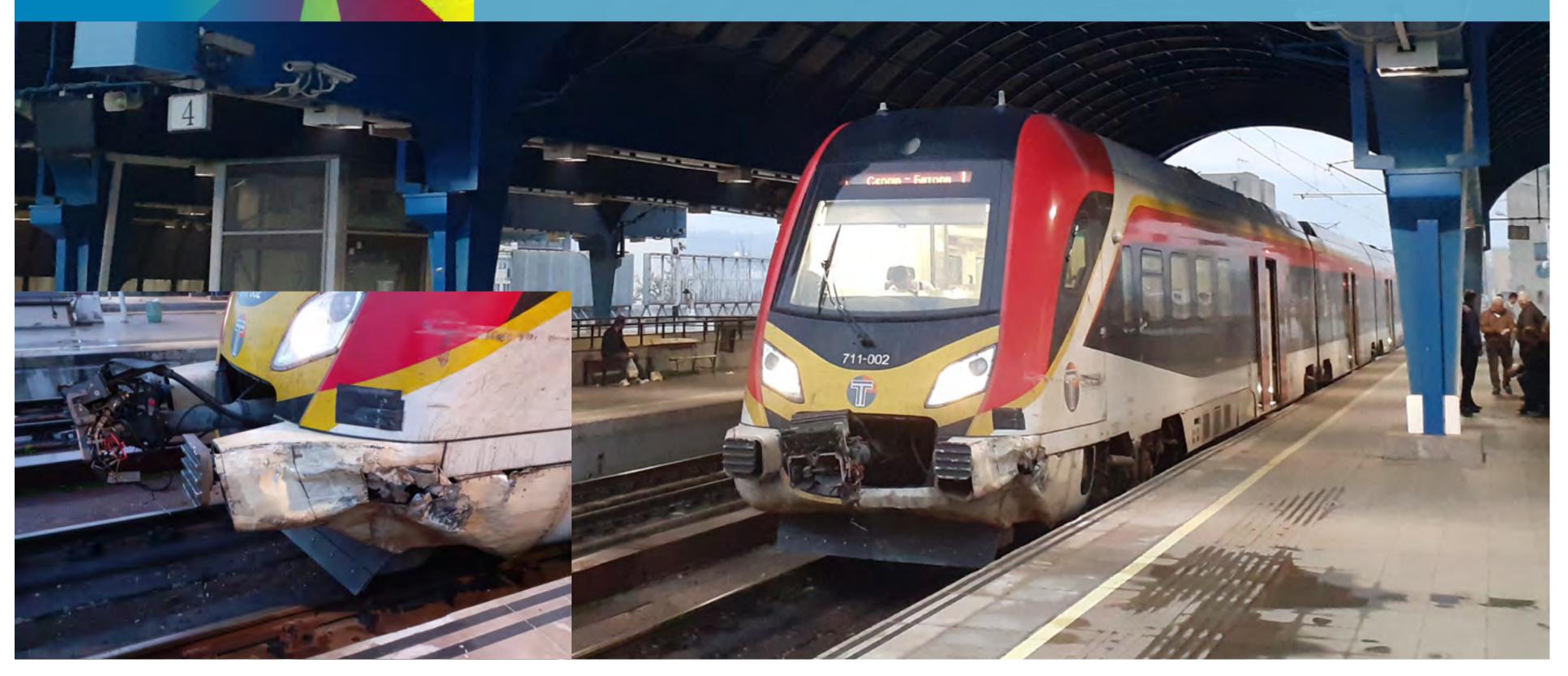
The region of Kuyavian-Pomeranian Voivodeship was the first in Poland to open up the passenger rail transport market to competition. Over the last 15 years, Arriva has worked in close co-operation with the local government, demonstrating how effective a public/private partnership can be, especially when both organisations share a vision for effective transportation which connects communities in the right way.

Arriva has always prided itself on delivering high levels of commitment which comes from a great working culture. Employees demonstrate this commitment in their day-to-day roles and take pride in the service they provide to passengers. Furthermore, punctuality and modern standards of transportation are amongst the reasons why Arriva remains a popular choice and amongst the best-rated in Poland.

Arriva expects to intensify its growth activities and continue to invest in passenger service initiatives. The contract brings stability and continuity for the years ahead.



ŽRSM (Railways of the Republic of North Macedonia) Chinese built unit No. 711.002 stands underneath the minimalist station roof at Skopje waiting to depart with train No. 641, the 06:53 to Bitola on October 11th. The unit has hit an obstruction on a previous run and the close up shot shows the damage to the front end and coupling. *Andy Pratt*





RENFE AWARDS CAF THE SUPPLY OF 28 ELECTRIC BATTERY-EQUIPPED TRAINS

RENFE have reported that The Board of Directors has awarded CAF the contract to supply 28 electric trains that will operate on the Spanish operator's medium distance services. The contract also includes the supply of any corresponding spare parts, as well as comprehensive maintenance services for 17 of these units for a term of 15 years. The total volume of this operation for CAF amounts to close to 300 million euros.

The agreement includes possible options for future expansion, including the manufacture of up to 42 additional trains.

This project sees RENFE continue to pursue its ambitious investment plan, which includes upgrading a significant part of its fleet of trains, as well as opting for more environmentally friendly units in order to achieve a more sustainable transport system.

The train which CAF will manufacture reaches a maximum speed of 200 km/h, one of the stand out features of the unit is its capacity to run short distances autonomously, i.e. on sections of the network where there is no catenary or when a power cut occurs, and this is all down to the batteries the units are equipped with. The incorporate of this

technology on a number of its latest projects is testament to CAF's firm commitment to developing zero emission solutions to address passenger rail transport decarbonisation.

This new contract is yet another testament to the trust that RENFE has placed in the CAF Group, further strengthening the close relationship established between both companies over the course of their long standing relationship. The latest example of this is the project for the supply of 37 narrow gauge trains which was awarded in mid-2020 and which CAF is currently undertaking for the railway operator.

It also provides CAF the opportunity to collaborate with RENFE in upgrading its rolling stock, developing trains that will feature cuttingedge on-board technology, on-board passenger accessibility and comfort, and will provide access to people with reduced mobility, as well as being fully adapted for persons with visual or hearing impairments

Germany

France

Wabtec partners with Akiem on service contract to maximize locomotive availability in France and Germany

Wabtec Corporation has signed a services contract with Akiem, a leading European rolling stock leasing company, to provide maintenance of critical equipment for locomotive fleets in Europe. The deal will improve safety, reliability, and availability of rolling stock for Akiem's customers.

The agreement, which runs for the next five years, covers brake components, pantographs, and HVAC for the company's PRIMA and TRAXX fleets in France and Germany. The objective for Wabtec and Akiem is to maximize asset availability for the operator's customers.

"This crucial equipment maintenance partnership with Akiem sees Wabtec working directly with the owner of the rolling stock," said Sameer Gaur, President of Wabtec Transit Services Group. "Akiem's key role in this value chain means it fully measures the value of robust and reliable equipment. We share their commitment to maximize train safety and reliability and are looking forward to supporting this major actor in European rail to achieve its goals."

Wabtec's European footprint was a key enabler in building this relationship. The proximity of Wabtec's teams to Akiem's maintenance sites will allow for optimal equipmentmonitoring. Anadditional factor was Wabtec's expertise and leadership in the products covered by the contract.

These should provide key building blocks to further the support of Akiem for both – overhauling their equipment as well as optimizing the fleets while in service with their customers.

"We are confident this long-term partnership with the Wabtec team regarding the revisions of components will enable Akiem to secure and shorten our maintenance operations on half our current fleet, to the direct benefit of our customers," said Maxandre Garzino-Fréchot, Purchasing Director of Akiem. "Wabtec's flexibility along with the possibility to acquire new spare parts, or even extend the scope of services will indisputably be a source of a successful partnership."

The two parties will also work together to develop innovative services, including additive manufacturing, remote diagnostics, and more sustainable HVAC refrigerants, to optimize efficiency and environmental performance.





Stadler presents tri-voltage locomotives to Renfe

Stadler Valencia has presented four of twelve high-power electric locomotives ordered by Renfe Mercancías for freight operations in Spain.

The presentation was made during Isaías Táboas, President of Renfe Operadora's visit to the Stadler factory in Valencia.

Under the contract signed between Renfe and Stadler, four of the twelve high-power multi-system EURO6000, Iberian-gauge units should be delivered before the end of 2022. However, Stadler anticipates that it will exceed this timeframe and deliver six of the vehicles this year.

The ordered locomotives have a traction capacity of 1,800 tonnes. They will be Trivoltage (25kV AC, 3kV DC and 1.5kV DC) and will have six axles.

Renfe Mercancías aims to deploy these zero-emission vehicles to strengthen its operations through the new Pajares tunnel, as they will provide greater load capacity and better levels of reliability.

They will be powered by 100% renewable electrical energy and will operate with a low level of internal and external noise.

Photo: The EURO6000 vehicles are part of the Stadler EURODUAL family of locomotives. © Renfe



Poland

PESA RANGE MARATHON FOR CARGOUNIT - CONTRACT SIGNED!

CARGOUNIT and PESA have signed a contract for the supply of 10 electric locomotives with a coaster engine with an option for the supply of another 20 locomotives. The first 20 Gama Marathon locomotives are to be delivered to the market leader in locomotive rental in Central and Eastern Europe by the end of December next year.

CARGOUNIT is one of the largest locomotive rental companies and a leader in this type of service in Central and Eastern Europe. The company, which has a fleet of almost 200 locomotives, has signed a contract with PESA providing for the delivery of ten vehicles, with an option for the delivery of 20 more locomotives.

"We chose locomotives with a PESA commuter module because they perfectly fit the needs of our customers. One locomotive, which can drive trains under electric traction, and then, using the same locomotive, perform shunting works in ports or terminals, is a solution that not only reduces costs, but also allows you to save time and increase the efficiency of transport. What is equally

important, it is an ecological and environmentally friendly solution, because the use of a modern electric locomotive with a diesel module meeting Stage V emission standards at the ends of the line means reducing CO2 emissions." said Łukasz Boroń, President of CARGOUNIT.

The Marathon range is an electric locomotive with a diesel module. The power generator, driven by an additional, modern and ecological engine, enables the locomotive to move on the sections without a traction network. This additional drive, used and appreciated by carriers, intended mainly for manoeuvring works, allows to drive a freight train with a weight of 3,200 tons on an elevation of up to 7% per mile. It is also useful in emergency situations, allowing the train to get to its destination despite a sudden power outage.

"The decision of CARGOUNIT, a partner with an established position on the railway market, is a reason for our satisfaction and a confirmation of the quality of our locomotives. The interest in them is constantly

growing, and in order to meet the expectations of our clients, we are working on further improvement of the Gama family." added Maciej Maciejewski, Vice President of the Management Board of PESA Bydgoszcz.

The portfolio of new vehicles offered by PESA will include locomotives - multi-system (3kV / 15kV / 25 kV, 200 km / h, multisystem), two-drive (3kV / 25 kV, 160 km / h, dual mode stage V) and electric locomotives with a diesel engine (3 kV / 25kV, 160 km / h, last mile, stage V).

PESA is also developing a project of a hydrogen shunting locomotive, apart from SM42-6Dn, it is also working on a new locomotive powered by hydrogen cells, which is to be a response to the demand reported by freight and intermodal carriers operating, among others, in "green ports" and intermodal terminals striving for zero emissions.

The CARGOUNIT strategy assumes development in the Three Seas countries by offering railway carriers modern electric locomotives in response to the growing demand

resulting from the increase in rail transport and the need to replace the used locomotives with modern ones.

"We made the decision to choose the Gama Marathon platform from PESA Bydgoszcz after a thorough analysis of the needs of our customers and the locomotives approved on the Polish market. The Gama Marathon locomotives have gained recognition among railway carriers operating on the Polish market thanks to a strong commuting module, which eliminates the need to use an additional diesel locomotive for shunting works.

An additional factor that determined the choice of electric locomotives produced by PESA Bydgoszcz was the speed of delivery. The new Gama Marathon will be delivered to CARGOUNIT as early as February next year under the contract with PESA, and a total of 20 Gama Marathon locomotives may be delivered to CARGOUNIT customers by the end of December 2023." said Łukasz Boroń, President of the Management Board of CARGOUNIT.









From the Archives

France

SNCF No. 16012 is seen at Paris Gare du Nord on May 14th 1996. *Brian Hewertson*

A couple of SNCF twin car DMUs are seen at Le Mans station on May 14th 1996.

Brian Hewertson

Eurostar E300s Nos. 3218, 3003 and 3108 are seen lined up at Paris Gare du Nord.

Brian Hewertson

































