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Submissions & Contributions

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

Photographic Contributions

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

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

Welcome to Issue 185Xtra

Well that's January over with and as the nights get lighter and the days warmer, at least in the UK it is, we can all start planning for the year ahead. I have to say though looking at snow reports from Europe, it does look like we in the UK have been lucky, with certain parts of Europe having had snow for weeks now. As I write this, Czech and Austria seem to be having a bad time with the weather.

Anyway moving on to warmer places, and low-cost Madrid-Valencia Avlo high-speed services are set to start in February. From February 21st 2022, Spanish train operator, Renfe, is to begin operating low-cost, high-speed Avlo services between Madrid and Valencia. The Avlo service is Renfe's new low-cost, high-speed train which will offer six daily return services (three in each direction), between both cities. This will make available 2,200 seats per day, with four of the six Avlo trains (two in each direction) to stop at the Cuenca Fernando Zóbel and Requena-Utiel stations. Tickets went on sale from January 20th, starting at a low-cost of €7. Ticket sales will be managed through Renfe's dynamic system that offers the best price available at any time for a passenger's requested trip. The customer can also add additional services onto their ticket, such as seat selection, changes or cancellations and additional luggage. The base price includes a free cabin suitcase and a handbag.

Good news for lovers of LKW Walter services as TX Logistik AB, the Swedish subsidiary of the German rail freight company TX Logistik AG, is adding to its Swedish offering. Starting on Monday, January 31st, the company, which is part of the Mercitalia Group (Gruppo FS Italiane), will run an additional connection between Trelleborg and Eskilstuna, around 100km to the west of Stockholm.
This new service will run as a company train for the Austrian transport company LKW Walter. This new service is a further step in LKW Walter's aim to expand its combined transport operations in Europe. There are to be four trips per week. Each train will be able to carry up to 38 units. with most of the units being trailers. The trains will connect the Swedish port of Trelleborg with the combined transport terminal in Eskilstuna, one of the country's most important inland terminals. The route runs via Frövi. The transit time per journey will be around seven hours. TX Logistik will be responsible for traction, terminal handling and customer service. In Trelleborg, LKW Walter uses the ferry connections to and from Rostock and Travemünde (both in Germany). By shifting these transports from road to rail in Sweden, the two companies are reducing their carbon footprint. TX Logistik has other rail freight customers in Sweden. For example, it transports food products for Coop 20 times a week between Bro and Malmö.

Further east, STM Trading House is supplying Russian port terminals in Khabarovsk and Novorossiysk with its latest TEM14M shunting locomotives. The next generation 8-axle TEM14M locomotive offers a number of improvements on its predecessors, including a new domestic engine; the 6DM-185T. With a total engine power of 1860 kilowatt, this new diesel locomotive can handle trains weighing up to 10,000 tonnes – a first for shunting equipment.
One TEM14M locomotive has already been delivered to Daltransugol, where it will be used to transport coal at the Vanino port in Khabarovsk Krai. STM built the locomotive to a specific configuration for Daltransugol. The driver's cabin is equipped with a video recording system to help with areas of limited visibility, LED lights for local unit lighting and buffer lights. The second locomotive will make its way to the Novorossiysk Commercial Sea Port in the spring. Here it will be used to move oil and urea-ammonia nitrate from ships to storage tanks at IPP's export terminal.

As always a massive thanks for all the excellent photos, please do keep sending them in, until next month....

David

This Page

CP DMU Class 592.059 is seen stabled in Regua. Locally these units are nicknamed Espanholas and Camelos.

Andy

Front Cover

In Hungary, railbus No. 117.348 with two additional trailers heads towards Szendrölad halt on its way from Tornanádaska, a former border station with Slovakia, to Miskolc with train No. Sz35425. *Thomas Niederl*

Rurtalbahn Class 186.229 is seen ready for departure in Blerick with a container shuttle from Venlo to Rotterdam Maasvlakte West on December 20th. *Erik de Zeeuw*

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Nos. CBH15 and CBH009, two of Commonwealth Bulk Handling Group's locos, run light from Forrestfield to Kwinana to pick up their next train and are seen passing through the industrial area of Wattleup. *Colin Gildersleve*

Qube's GML10 is seen at Kenwick with train No. 4142, a transfer Intermodal between Forrestfield and Fremantle Container Port, carrying containerised grain for export. *Colin Gildersleve*

Aurizon's narrow gauge No. S3307 is seen at Oldbury with loaded Bauxite hoppers for the Alcoa Kwinana Refinery. *Colin Gildersleve*

Austria

Wiener Linien presents innovative digital passenger information system for the new X-car

With the introduction of the first new X-car in 2022 on the U1-U4 lines, another innovation will premiere on the rails of the Vienna metro system: the world's first digital passenger information and guidance system of its kind. The dynamic and visual presentation of information in the car will make the use of mass transit in the city even easier and more convenient. Screens inside the car above each train door display provide passengers with real-time information about further routes and connections at the next station.

"With the new X-car, the Viennese are getting a state-of-the-art metro car that provides all the latest information right where they need it: under way. We are proud to be the first public transport company in the world to offer this service," said Alexandra Reinagl, Managing Director of Wiener Linien.

"The X-car is also an important software project: Our digital solutions are bringing fully automated operations and an innovative and worldwide unique passenger information system to Vienna. Passengers are provided with information right when they need it, making public transport even more attractive, efficient and convenient," said Albrecht Neumann, CEO Rolling Stock, Siemens Mobility

The new Passenger Info Plus system was developed by Siemens Mobility and tailored together with Wiener Linien to meet the special public transport requirements in Vienna. The innovative solution was presented to the public at a media event on January 10th, 2022.

Direct displays of relevant, dynamic passenger information
Screens above each door inside the X-car display relevant, continually updated information for the passengers. Screens above doors that will open at the next station show the direction of the station's exits, other lines for transfers, and departure times for those lines. Screens above the doors opposite the platform side display a digital metro network map and the train's current position. The dynamic map shows the train's position, direction of travel, next stop, and important transfer options. Additional information, such as the current status of other metro lines, or out-of-service elevators, can also be displayed on both sides of the car. The new passenger information system delivers all relevant information right when the passengers need it.

The innovative digital passenger information system is being intensively prepared for service. The X-car is currently undergoing extensive tests in preparation for its upcoming operating certification. When the X-car is approved, passengers will be able to board their new metro train for the first time next year.

With its subsidiary Hacon, Siemens Mobility has had an expert in the field of digital passenger information and communication on board since 2017. Day for day, over 100 million passengers worldwide use Hacon's apps and online solutions for door-to-door travel planning – including real-time information systems and customized push notifications.

Czech Republic

Australian coal to Decin by water

On Saturday January 22nd, EVD's Bohemia ship loaded with black coking coal from Australia arrived at the Port of Děčín-Loubí.

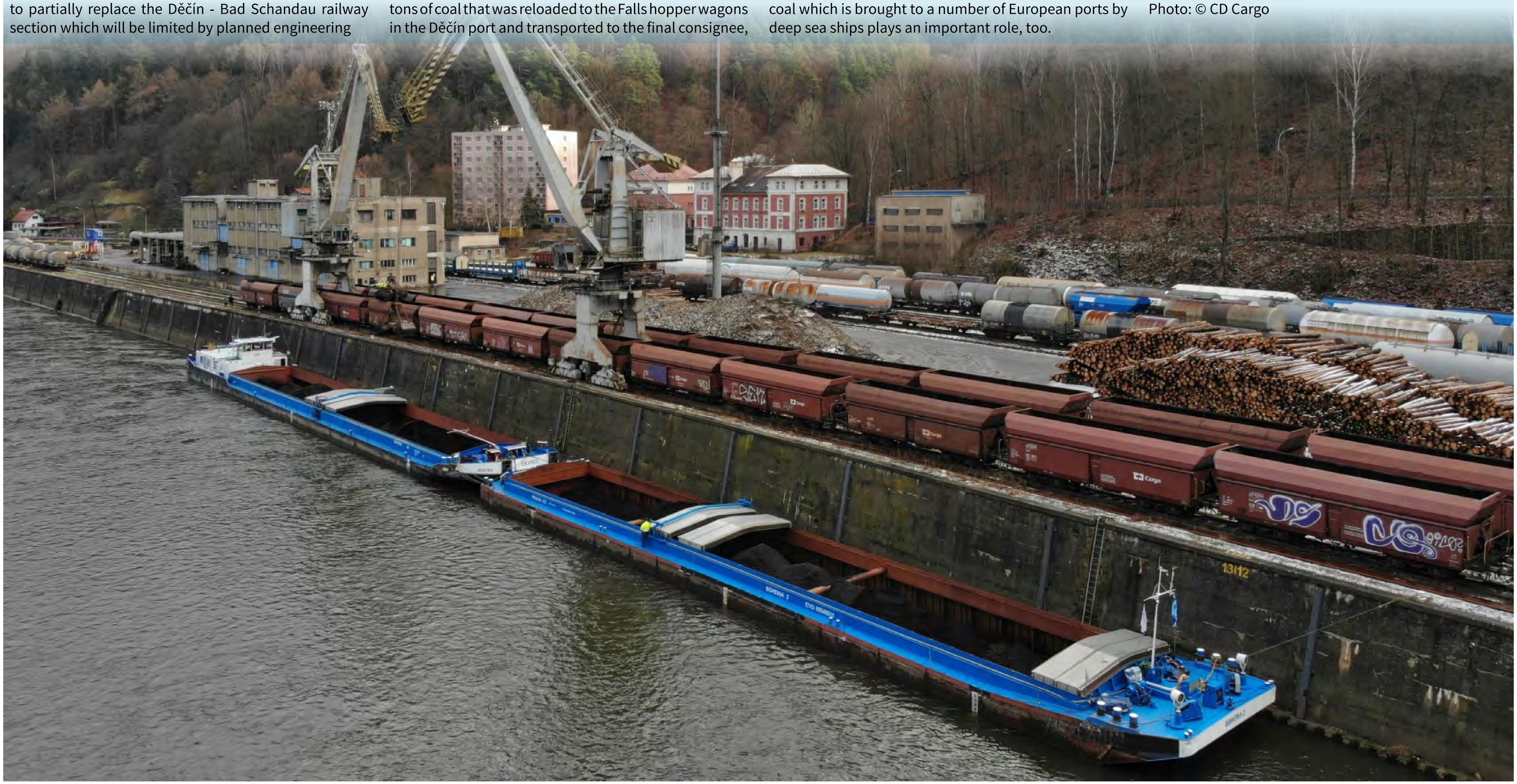
"So far, we have transported coal to our customers directly from Rotterdam. This is the 'first swallow', an attempt to partially replace the Děčín - Bad Schandau railway section which will be limited by planned engineering works and possibly also by the closure in the Port of Rotterdam itself this year," comments Tomáš Tóth, Chairman of the Board of ČD Cargo.

The ship from Rotterdam sailed on the Rhine, the Central German Canal and the Elbe. It brought a total of 1,300 tons of coal that was reloaded to the Falls hopper wagons in the Děčín port and transported to the final consignee, which was the company Liberty Steel in Ostrava.

The importance of coal for energy has been declining for a long time but it is still a very important raw material for metallurgy. With the drop in mining in OKD, it is therefore necessary to import it from various parts of the world. In addition to coal from Polish suppliers, overseas black coal which is brought to a number of European ports by deep sea ships plays an important role, too.

"Compared to rail transport from Rotterdam, the new method is slower but it could be cheaper. That is why we will meet with our business partner and evaluate the transport as well as its economy" , adds Tomáš Tóth. And here , you can see how the coal reloading proceeded.

Photo: © CD Cargo



Czech Republic

Coal transports to Mělník in Innos

On January 1st 2022, routine transports of brown coal to the Mělník I power plant started using the Innofreight technology. A stationary unloading device was built in the power plant; shunting of the wagons is, just like in the Chvaletice power plant, ensured by a robotic shifter.

Instead of the Falls hopper wagons, InnoWaggons of the Sggrrs series with MonTainer superstructures will be used on the route from northern Bohemia to the Hněvice station. Deployment of the new technology will significantly increase the efficiency of these transports.

Photo: © CD Cargo

Interesting shipments in Austria and Germany

In January, ČD Cargo has carried out interesting transport of new Innofreight superstructures.

From the Spielfeld-Straß border crossing station via Passau to the Niesky station in Germany, CD Cargo's foreign branches ensured the transport of ten complete trains with newly manufactured superstructures. These will be used by ArcelorMittal Eisenhüttenstadt.

Let us add that this was not the first such transport, in a similar way, for example, the so-called ScrapTainers intended for scrap transport were transported to Germany in August 2019.

Photo: ©Erich Nahrer

Czech Republic

Relocation of drilling rig in Brno

A very interesting business case was realized by ČD Cargo recently. At the request of the company Firesta-Fišer, rekonstrukce, stavby as, we arranged a transport of the drilling rig within the Brno-Maloměřice railway station.

It was the largest machine available to the above company - it is 68 tonnes heavy and 4.5 meters long. It was necessary to transport it to the middle of the station throat of the Maloměřice station, where it will be drilling holes for the location of piles for the middle pillar of the road bridge. It is part of the Great City Circuit under construction.

A Samms railway wagon with the construction loading weight of up to 105.5 tonnes and the locomotive No. 731.032 were used for the transport, or better, relocation of the rig.

As part of this construction, ČD Cargo provided not only the transfer of the drilling rig but also the removal of soil and the transport of material (such as reinforcement baskets) with the help of a special rail conveyor.

Photo: © Martin Bohac

Another business success in the Balkans

ČD Cargo Adria, a 100% subsidiary of ČD Cargo, is celebrating another commercial success. It has recently started transporting containers between the port of Rijeka and Belgrade. It concerns four pairs of trains per week for the Maersk operator. The transports are carried out on ČD Cargo wagons and for the time being ČD Cargo is providing them commercially.

The first transports were carried out by ČD Cargo Adria at the end of last October. The process of obtaining the license to operate rail transport in Croatia is proceeding according to schedule (ČD Cargo already hold Part A of the license) and the start of operation with ČD Cargo locomotives is expected in May 2022 at the latest.

Photo: © CD Cargo

Germany

Alstom and Deutsche Bahn test first battery train in passenger operation in Germany

On January 21st, Alstom and Deutsche Bahn (DB) in cooperation with Baden-Württemberg and Bavaria will open a new chapter in climate-friendly rail operations when they put Alstom's first fully approved battery train to the test with passengers onboard. Starting on January 24th, the Battery Electric Multiple Unit (BEMU) will begin revenue service with passengers in Baden-Württemberg and in Bavaria from February 5th. DB will operate the low-emission vehicle with its regional transport subsidiary DB Regio. The test operation will run until the beginning of May 2022.

"Alternative drives are the future of mobility and our comprehensive solutions will enable more sustainable rail transport across Germany," explains Müslüm Yakisan, President of the DACH Region at Alstom. "Since 2016, we have been working together to develop efficient and cost-effective battery technology to bridge non-electrified gaps on the German rail network. The passenger operation testing will enable us to gather valuable data and demonstrate the viability of our solution."

"Deutsche Bahn wants to be climate-neutral by 2040 and this first battery train in passenger service represents the next big step towards emission-free trains in Germany's regional transport," says DB Regio CEO Dr. Jörg Sandvoss. "With this test, DB Regio wants to gain practical experience in order to master these future technologies in operation and maintenance. The trial operation provides new technical and operational knowledge in handling this innovative climate-friendly drive technology."

Since 2016, Alstom has been developing the battery-electric train together with the Technical University of Berlin and with support from the National Organisation for Hydrogen and Fuel Cell Technology (NOW) and funding from the Federal Ministry for Digital and Transport. The project is intended to be a sustainable solution for Germany's rail network where a total of 450 lines are operated exclusively with diesel trains. Alternative drives enable efficient and emission-free operation and this nearly four-month test on passenger routes in Bavaria and Baden-Württemberg is the next step towards decarbonating German rail transport. In the future, this BEMU technology will be applied to the Alstom Coradia platform.

"We need this future technology on the railways," says Baden-Württemberg's Minister of Transport, Winfried Hermann. "Alternative propulsion technologies in rail transport are important for the transition towards climate-friendly mobility. On lines where the construction of an overhead line is difficult and therefore too expensive, or can only be realized in the future, battery or hydrogen trains will gradually be used and replace the current diesel operation."

"I am delighted that the new era of battery overhead line hybrid technology in Germany is also dawning in Bavaria and that the Free State is helping to push this important initiative forward. Since 2018, we have been targeting such a pilot operation on the Franconian Lake District Railway in the centre of the Free State with the 'Bavarian Electric Mobility Strategy Rail'. I hope that this project will provide important insight, because the Bavarian railway network is virtually predestined for the use of such battery trains and we want to gradually replace our diesel trains with emission-free drives and become climate-neutral in Bavaria by 2040 at the latest," Bavaria's transport minister Kerstin Schreyer explains.

On weekdays the battery-powered train will run in Baden-Württemberg on the Stuttgart - Horb line and on Saturdays and Sundays, on the Pleinfeld - Gunzenhausen line in the Franconian Lake District. This arrangement will maximise the train's mileage while testing a variety of route profiles and battery charging scenarios. While in Baden-Württemberg charging takes place during the ongoing journey, in Bavaria charging can only take place at the electrified destination and departure stations, as the route in between is not electrified. DB Regio will operate the train in Baden-Württemberg and Bavaria. Associated project partners are Nahverkehrsgesellschaft Baden-Württemberg (NVBW) and the Bayerische Eisenbahngesellschaft (BEG).

While Alstom's hydrogen trains are optimised for longer routes, Alstom's BEMUs are suitable for shorter routes or lines with non-electrified sections previously operated with diesel vehicles. Direct connections between electrified and non-electrified network sections are now possible and can be operated emission free, without the need of additional electrification - shortening the travel time between city and country.

Photo: Starting on January 24th, Alstom's first fully approved battery train begins revenue service with passengers in Baden-Württemberg, Germany. © Alstom

ECCO RAIL Class 193.201 passes Kaarst with Millet hoppers from Krefeld Linne (Cargill) to Hegyeshalom (Hungary) on December 8th. *Erik de Zeeuw*

Germany

DB Cargo Class 294.903 is on its way to Neuss Gbf with a rake of tankers as it passes Oberhausen West on December 12th.
Erik de Zeeuw

Germany

On October 13th, SETG Class 487.001 passes Bremen Hbf with a deepsea container train from Duisburg to Bremerhafen. *Erik de Zeeuw*

Germany

Alstom to supply new Coradia Stream trains to DB Regio

High-capacity Coradia Stream to boost passenger capacity on Germany's busy Main-Weser Express line

New vehicles will feature 15 percent more space, greater comfort, easier access and free Wi-Fi

Alstom has won an order to supply 17 modern high-capacity Coradia Stream electric multiple units to DB Regio for the Main-Weser network in Germany [1].

Consisting of 13 four-car and four five-car trainsets, the new trains will run on Germany's Main-Weser subnetwork operating between Frankfurt, Giessen, Marburg and Kassel and will support the planned timetable change on December 15th 2024.

In addition to increasing capacity during peak hours, the new Coradia Stream trains will also enhance the travel experience with additional seating, more space, and free Wi-Fi.

"We are very pleased that DB Regio has chosen our modern Coradia Stream high-capacity train for their RE 30 line between Frankfurt and Kassel to the East. These comfortable trains will provide passengers on the Main-Weser Express with a premium travel experience and additional space," says Müslüm Yakisan, President of Alstom's DACH region. "DB Regio's decision is further evidence that Alstom has precisely the right product to meet our customers' need to increase capacity."

"We are very proud and happy that RMV has chosen DB Regio in the "Main-Weser" award procedure. With the new, modern double-decker vehicles, we are sending a strong signal - for climate protection and strengthening of the railways," says Maik Dreser, Chairman of the DB Regio Mitte Regional Directorate.

The high-capacity version of the Coradia Stream offers passengers on the highly frequented Main-Weser Express line up to 15 percent more space than the vehicles currently in use.
The four-car version consists of two double-deck control cars and two single-deck middle cars, for a total of 420 seats. The five-car version has another double-deck middle car and a total of 540 seats. When operated in a double traction combination of four and five-car vehicles, capacity can be increased to up to 960 seats, more than any regional train previously used on this line.
The modular design of the Coradia Stream high capacity also empowers customers with the ability to individually configure their trains with variable seating, expandable bicycle compartments or generous multi-purpose areas.

Four-seater groups with large wall-mounted tables in the first-class section, compact wall-mounted tables in the second class section in addition to free Wi-Fi and power sockets at every seat, ensures that passengers remain comfortable and fully-connected during their trip regardless what section they choose.

DB Regio's new trains will also provide easy access to passengers. The 600-millimetre access height at all entrances will ensure swift, barrier-free access at nearly all stations, and when compared to other double-deck vehicles that rely on ramps for boarding, the middle cars offer convenient and ramp-free access for passengers with reduced mobility. In addition, the train offers 30 bicycles spaces.

Alstom will assemble the trains for Main-Weser network at its site in Salzgitter, Germany. The project office with project and contract management, product validation and commissioning, documentation, training and warranty will be executed in Germany.

[1] booked in Q4 2021/22

Photo: The high capacity version of the Coradia Stream offers 15 percent more space than the vehicles currently in use on the Main-Weser Express.

Germany

Railpool Class 151.034, rented to DB, crosses Bremen Hbf with a mixed cargo on October 13th. *Erik de Zeeuw*

Germany

Siemens Mobility to deliver 50 dual-mode locomotives to DB Cargo and the DB Bahnbau Group

Last mile without changing locomotives with Vectron Dual Mode locomotives
Sustainable concept thanks to combined electric and diesel power
Production at the Siemens Mobility plant in Munich-Allach

DB Cargo AG and DB Bahnbaugruppe GmbH have together ordered a total of 50 locomotives from Siemens Mobility. The Vectron Dual Mode locomotives will be delivered with specific adaptations for the planned range of service with DB Cargo and the DB Bahnbau Group. The locomotives can be operated with either diesel or electricity. The order is an option taken by DB from a framework agreement concluded in September 2020. With this order, the DB Cargo fleet will grow to 146 Vectron Dual Mode locomotives, and the DB Bahnbau Group will receive four locomotives of this type for the first time.
Delivery of the locomotives will begin in 2026 and they will be produced at the Siemens Mobility plant in Munich-Allach.

"Our Vectron Dual Mode locomotive is supporting DB in the climate-friendly conversion of their fleet. On electrified sections of their routes, the Vectron Dual Mode will operate in a purely electric mode, and on non-electrified sections, it can switch to conventional operation and eliminate the need to change locomotives. This will reduce CO2 emissions, lower maintenance costs, and help DB implement more sustainable supply chains," said Albrecht Neumann, CEO Rolling Stock at Siemens Mobility.

Even though the main railway lines in Germany are already electrified, the so-called last mile can usually only be operated using internal combustion locomotives. The Vectron Dual Mode offers a sustainable and economical replacement for conventional diesel locomotives.

To date, Siemens Mobility has sold 195 Vectron Dual Mode locomotives to 18 customers. The locomotive is based on the proven Vectron platform and components. It is designed to operate on a 15-kV AC voltage system and is equipped with the PZB train control system.

Stadler to deliver up to 504 tram-trains to German-Austrian project consortium

Stadler has been awarded the largest contract in the company's history with a total volume of up to four billion euros: it has won an international tender held jointly by six transport companies from Germany and Austria for up to 504 vehicles as part of the "VDV Tram-Train" project. In addition to vehicle production, the framework agreement also includes a maintenance contract lasting up to 32 years. Part of the framework agreement is a fixed order quantity of 246 CITYLINK vehicles representing a volume of around 1.7 billion euros. There is also an option to order up to 258 more vehicles. The award of the contract marks the beginning of a long-standing partnership between Stadler and the project consortium, consisting of Verkehrsbetriebe Karlsruhe (VBK), Albtal-Verkehrs-Gesellschaft (AVG), Saarbahn Netz, Schiene Oberösterreich, the State of Salzburg and Zweckverband Regional-Stadtbahn Neckar-Alb. Over the next ten years, Stadler will produce 246 CITYLINK vehicles for the six operators. The first four vehicles will be delivered to the Saarbahn in 2024.

"We are proud to have won this international tender with our proven vehicle concept. The construction of a tram-train requires experience, and this particular tender also necessitates the ability to combine individual solutions with standard products. Stadler has always been at home in both areas and is a pioneer in the industry. With CITYLINK, we are looking forward to providing our six customers with a mobility solution that will connect the city and the surrounding area without passengers having to change trains, thereby developing travel in a sustainable and comfortable way," says Peter Spuhler, Chairman of the Board of Directors and Group CEO a.i. of Stadler.

CITYLINK – the best standard for individual solutions

All vehicles will be supplied in a three-part design. The length of the vehicles, the number of doors, the boarding and coupling height as well as the configuration of the CITYLINK versions will vary depending on the delivery location and the customer. All the vehicles will have certain features in common: they will be fitted with an HVAC system for the passenger compartments and driver's cab, and have spacious multi-purpose areas with two wheelchair spaces that can be flexibly configured. The tram-trains will be individually equipped to suit the place of use. For example, the vehicles for the Albtal-Verkehrs-Gesellschaft will have a toilet as well as facilities for cycle racks, while Schiene Oberösterreich has opted for luggage racks as an extra feature. The CITYLINK from Stadler is a clever design of tram that can also be used as an inter-city train if configured accordingly. Taking into account the VDV framework agreement, Stadler has now made over 650 sales in six countries.

One project – six customers

Providing one type of vehicle for six operators is unusual. "On the project team, we spent hours developing a common set of specifications. We defined a standard with up to five further versions to meet the operator-specific requirements such as boarding height, coating and place of use," explains the overall project manager Thorsten Erlenkötter from Verkehrsbetriebe Karlsruhe. Verkehrsbetriebe Karlsruhe is in charge of the overall project management and, following the tendering phase, is now also coordinating the implementation of the project. "We are very happy that in Stadler, we have found a reliable and experienced manufacturer for this extraordinary project. A procurement concept like the one we have implemented here is unique worldwide to date. The six operators are united by their belief in the concept of tram-trains that can link large cities with their respective regions according to the Karlsruhe model and that can bring people directly into the centre quickly without having to change trains," says Christian Höglmeier, technical managing director of Verkehrsbetriebe Karlsruhe.

Germany

New climate-friendly locomotive fleet on the way
DB Cargo is becoming even more modern and efficient

New orders for 200 locomotives with forward-looking drive technology at the turn of the year • DB Cargo boss Dr. Sigrid Nikutta: "We will grow and help to achieve the climate goals in transport"

The DB Cargo locomotive fleet is becoming even more modern and efficient. All previous diesel locomotives are gradually being replaced by modern, climate-friendly machines with alternative drives. There are currently 300 new shunting and dual-powered locomotives for DB Cargo. The first locomotives are to be used as early as next year. The long-term goal is to replace around 900 older-type diesel locomotives.

"We are investing in our locomotive fleet because we are going to grow. With state-of-the-art technology, we help to achieve climate goals in transport. With our modernization program, around 14 million litres of diesel can be saved every year," says Dr. Sigrid Nikutta, DB Board Member for Freight Transport and Head of DB Cargo.

Michael Theurer, Parliamentary State Secretary and Federal Government Commissioner for Rail Transport: "The new locomotives not only ensure that freight railways are even more climate-friendly, but also that operations are much more efficient and therefore more attractive. Thanks to further technical developments, even the heaviest loads can now be moved over the last mile or in shunting operations without having to replace personnel and technology. With modern technology and green electricity, we create clean supply chains."

The largest European freight railway already uses 95 percent of its traction power in the route network with climate-friendly electric locomotives. Shunting services in the freight yards and the "last mile" to the customer will soon be provided by vehicles with dual-power or hybrid technology. Goods by rail have a CO_2 footprint that is up to 80 percent lower than road transport.

The farewell to the diesel locomotive at DB Cargo is based on three pillars:

1. At the turn of the year, Vossloh Locomotives GmbH was able to convince with a new type of hybrid shunting locomotive in a Europe-wide tender. The new machines are designed as plug-in hybrids, but also have sufficient engine power with the latest exhaust gas cleaning to move freight trains weighing several thousand tons in shunting service. The drive systems have a modular structure and can be easily replaced if the technology develops accordingly. The federal government is supporting the introduction of this innovative technology with a total of 15 million euros via the guidelines for the promotion of alternative drives in rail transport from the Federal Ministry for Digital Affairs and Transport. The 50 locomotives are to be used by DB Cargo from 2024.

2. Dual power locomotives offer the best of both worlds. With a powerful electric drive, heavy freight trains can also be moved "under the contact wire" over long distances. If this electric contact wire is missing on branch lines or when delivering to the customer's premises, neither the locomotive nor the driver has to be changed, only the drive has to be switched over. More than a year ago, the manufacturer Siemens Mobility was able to win a DB tender with Vectron Dual Mode locomotives. The first delivery will now be increased from 100 to around 150 locomotives from 2023. To this end, 46 additional locomotives will be equipped with specific modifications for the range of applications planned by DB Cargo, and the DB railway assembly group will take over four machines.

3. The third pillar of the new strategy is the procurement of Toshiba HDB 800 hybrid shunting locomotives. A total of 100 of these locomotives, manufactured in Rostock, are to be used at DB Cargo. The first rollout is planned for 2024.

Germany

Despite the pandemic: DB will train even more in 2022

Deutsche Bahn (DB) is hiring even more junior staff this year. Also in the third Corona and now seventh year in a row, the group is increasing its training capacities and wants to bring around 5,200 trainees and dual students on board. In the previous year, DB awarded around 5,000 places to young talents, in 2020 there were a good 4,700. Overall, Deutsche Bahn wants to give at least 21,000 hiring commitments to new employees this year. In 2021 there were 22,000. With the personnel offensive at a record level, the rail mode of transport is to be further strengthened in line with the Group strategy.

DB HR Director Martin Seiler: “We sense that the competition on the labour market is increasing and will therefore train and qualify even more. Personnel power is needed for the mobility turnaround. That’s why we’re adding a lot more to our offer for trainees and dual students. We train the specialists of tomorrow ourselves.”

The corona pandemic has recently resulted in a massive slump in the number of training contracts concluded nationwide. DB, on the other hand, is sticking to its growth course even in economically challenging times and offers a wide range of entry opportunities with around 50 apprenticeships and 25 dual study programs.

Young professionals 2022 in the main training occupations:

- Dispatcher: around 770
- Electronics technician: around 740

- Train drivers: around 740
- Mechatronic technician: around 390
- Traffic service clerk: around 290
- Industrial mechanic: around 250
- Track builders: around 220
- Protection and safety specialist: around 140

The appointment for 2022 is already under way. Interested parties do not need a cover letter for an application, for the DB it is not very meaningful. In the selection process, the group is instead relying on a new, practical online test. Here the applicants can prove their skills apart from school grades.

Apprenticeship at DB

With more than 13,000 trainees in total over all training years, Deutsche Bahn is still one of the largest training companies in Germany. On board the DB, the young professionals can look forward to numerous additional benefits in addition to modern training facilities and qualification methods. In addition to a basic guarantee of being taken on if you successfully pass the final exam, this also includes attractive travel discounts and a tablet at the start of your training, which supports the increasingly digital learning in vocational training. In October 2021, the magazine “Capital” recognized DB as a top training company. Among other things, various learning and teaching methods as well as the supervision of junior staff in the company were evaluated - even in Corona times.

Digital revolution in freight transport: test train starts to travel through Europe

Digital revolution in rail freight transport: A train with innovative digital automatic couplers has started a practical test lasting several months. The Federal Minister for Digital and Transport, Dr. Volker Wissing gave the train the symbolic departure signal for its journey across Europe.

The Digital Automatic Coupling (DAK) is an essential part of the digitization of freight trains. It is therefore a key lever for making rail more competitive than road. The DAC makes it possible to couple freight wagons automatically, ie without manual work. The car connections for the brakes are also made automatically. For the first time, freight wagons will be equipped with end-to-end power and data lines. The DAC makes faster, automated shunting processes possible. Overall, the capacity of transhipment stations increases significantly. Freight trains can become longer and heavier with the new coupling technology. Even more important: You can travel at a higher speed than before and thus “swim along” better in rail traffic. This increases the capacity in the rail network. The DAC will make a significant contribution to meeting the European climate targets.

dr Volker Wissing, Federal Minister for Digital Affairs and Transport: “Bringing the growing volume of transport into line with our climate protection goals is one of the greatest challenges of our time. Rail is the key to this – even if we have to catch up in freight transport. True to our motto ‘Dare to make more progress’, we will solve a problem that has existed for more than 70 years with the EU-wide introduction of a standardized automatic coupling system and catapult more than half a million freight wagons into the 21st century. A much-needed transformation that cannot wait another day.”

dr Daniela Gerd tom Markotten, DB Board Member for Digitization and Technology: “This coupling is a revolution; you own the future. The DAC makes freight wagons smart and fast: when coupling, but also when driving. With this technology, not only can more freight cars run on the rails; it also enables rail traffic to be densified, which benefits everyone. Without the DB engineers and their know-how, this coupling would not exist. We make them ready for series production together with the manufacturers. We’re getting the DAK on track!”

dr Sigrid Nikutta, DB Board Member for Freight Transport: “The new coupling fundamentally changes freight transport on rails and gives us the speed we need to save the climate. And it changes the previous hard work at the freight yards: around 70,000 times a day, our employees in shunting operations have to balance the coupling brackets, which can weigh up to 20 kilograms, to shoulder height in order to couple trains. Digitization and automation of train operations are a strong signal to our logistics customers: Goods belong on the rails. Each of our trains saves 80 to 100 percent CO2 compared to road transport. And with the DAC we are making the rail system much simpler and faster.”

The freight train of the future will first travel from Germany to Austria and then to Switzerland. Other EU countries will then follow. The DAC is being tested in different driving situations than would be possible in Germany. These include steep inclines, tighter curves or other climatic conditions. The test drive should lead the DAC to series production. The practical test is to be completed at the end of this year. In the past few months, there have already been line trips in Germany and coupling tests at marshalling yards.

The test train is part of a research project funded by the Federal Ministry for Digital Affairs and Transport (BMDV) with 13 million euros. A consortium of six companies is involved. In addition to DB and its subsidiary DB Cargo, these are the Swiss and Austrian freight railways SBB Cargo and Rail Cargo Austria as well as the wagon keepers Ermewa, GATX Rail Europe and VTG. The goal is the EU-wide introduction of the DAC.

Germany

State-of-the-art battery-powered trains expand Alpha Trains fleet

Battery-powered trains leased for first time
31 vehicles leased to Niederbarnimer Eisenbahn GmbH long-term
Operation in East Brandenburg network for Verkehrsverbund Berlin Brandenburg

Alpha Trains is among the first lessors in Europe to offer battery-powered trains on lease – once again playing a pioneering role in providing 'green' mobility concepts. The 31 battery-electric Siemens Mireo Plus B multiple units are not only a welcome addition to the existing fleet of the Luxembourg-based lessor – they also send out a strong signal for sustainability.

Niederbarnimer Eisenbahn GmbH (NEB) will lease the vehicles, which are financed by the Alpha Trains Group, and intends to operate them on ten lines in East Brandenburg between Berlin and the Polish border. Operations are planned to begin at the end of 2024, which means Verkehrsverbund Berlin-Brandenburg (VBB) will be deploying battery-hybrid multiple units on its routes for the first time.

Apart from the KfW IPEX-Bank and Nord/LB, the European Investment Bank (EIB) is also involved in financing the multiple units and the project fully meets its sustainability targets. The project is also being supported by the European Commission via the Connecting Europe Facility (CEF) for transportation projects, which is also supplemented by funds from the European NER300 programme.

These state-of-the-art multiple units draw the electricity needed to charge their lithium-ion batteries from the overhead lines along the electrified sections of track as well as from recovered braking energy. On routes where the external power supply ceases, the vehicles utilise the energy from their charged batteries, which provide a range of more than 90 km. Additional charging stations will be built along the routes in order to fully secure operations going forward. The power drawn from the electrified lines and the charging stations will be generated entirely from renewable sources and the trains will run on a carbon-neutral basis. The new multiple units are expected to save more than four million litres of diesel fuel per year, thus reducing local carbon emissions by more than 11,000 tonnes and making an important contribution to minimising particulate matter emissions.

The NEB was already awarded the transport contract put out to tender by Verkehrsverbund Berlin Brandenburg (VBB) in June 2021, following a Europe-wide tendering process. In addition to the competitive leasing concept and the eco-friendly drive technology, the new battery-powered vehicles also provide extra space as well as greater comfort and convenience for passengers. The additional seating and increased frequency make them particularly attractive for commuters. Based on a commitment to continued use provided by the public transport authorities, these innovative vehicles will enhance the quality of transport on the East Brandenburg network until the end of 2048.

Shaun Mills, CEO of the Alpha Trains Group comments: "Alpha Trains offers solutions that are both sustainable and affordable. The battery-electric trains for NEB are the best example: competitive leasing offers and eco-friendly propulsion systems are key factors in driving the transition to green mobility forward."

"We are proud that Niederbarnimer Eisenbahn GmbH, which has been our customer for many years, has placed its trust in us to support them with our experience, technical expertise and passion in this ambitious, forward-looking project," says Thomas Schmidt, Managing Director of Alpha Trains Europa GmbH.

"The purchase of 31 battery-electric trains for the East Brandenburg network is a major step towards zero-emission mobility. We are pleased to be pursuing this new technology in the transport transition together with our long-standing partner Alpha Trains," says Detlef Bröcker, Managing Director of Niederbarnimer Eisenbahn.

EIB Vice-President Ambroise Fayolle welcomes the exemplary green transport project: "We are pleased to be able to take such a big step on the road to carbon-neutral regional transport in the surrounding area of Berlin. Attractive regional trains are essential for the transition to climate-friendly mobility as they encourage commuters to switch from road to rail, thus avoiding the CO2 emissions and congestion caused by the use of private transport."

European Commissioner for Transport Adina Vălean said: "Solutions such as innovative regional railways that combine the use of overhead contact lines and battery power are helping to make rail transport in Europe even more sustainable. As this initiative demonstrates, by combining EIB loans and Connecting Europe Facility funds, we can maximise the impact of our investments in achieving this objective."

Image: State-of-the-art battery-powered trains expand Alpha Trains fleet - Climate-friendly and sustainable mobility. © Alpha Trains

Some trains of the Pannónia Interregio line from Szombathely to Pécs are still hauled by a Class 418 loco and carriages instead of a modern Desiro DMU. Here is seen Class 418.328 calling the station of Barcs with train No. IR8902, which should be a Desiro duty, but there were non available. Barcs station is located next to the river Drava (German: Drau) which is the border with Croatia. The spacious and now unused tracks testify to the one-sided importance of this former junction station. *Thomas Niederl*

Desiro DMU Class 426.020 departs the station of Szigetvár with a service to Barcs. The Hungarian Desiro DMUs are 100% similar to the German ones, even the livery and seat moquette. *Thomas Niederl*

Train No. Sz7722 Szeged - Békéscsaba is seen arriving in early morning sunshine at Orosháza behind Class 418.163. *Thomas Niederl*

At Kisköre, three Class 117 railbuses wait for departure with Class 117.193 working train No. Sz36516 to Kisújszállás and Class 117.240 and 117.194 working train No. Sz36515 to Kál-Kápolna. *Thomas Niederl*

Hungary

At Kál-Kápolna is seen one of the rare all stations stopping services between Füzesabony and Vámosgyörk. In recent years, this train and the Füzesabony - Eger shuttle were the last trains operated by these ancient push-pull sets. Now, refurbished sets called “Fecske” (English: Swallow) from the Budapest suburban network are used. Class 431.362 is seen with train No. Sz5085 at Kál-Kápolna. *Thomas Niederl*

Netherlands

VTG retrack Class 189.211 ‘Patrick’ wends its way along the harbour railway with a deepsea container train from Rotterdam to Duisburg (Germany) on December 30th. Temporary loco user is RFO.
Erik de Zeeuw

On December 15th, TCS Class 101003 passes Groenekan with a rake of Taoos hoppers from Nedmag Industries, Veendam to Lhoist in Hermalle-sous-Huy (Belgium) via Sittard. Train Charter Services offers a platform to develop unique customer experiences, built around traveling by open access or chartered, dedicated trains. *Erik de Zeeuw*

ELL Class 193.739, under license of Rurtalbahn, is seen in Rotterdam with the 'Weil am Rhein' shuttle to Germany on December 30th.
Erik de Zeeuw

On January 12th, Rurtalbahn Cargo Class 193.485 'LOKSPITZE.COM' passes Holten with a PCC shuttle from Poland to the CTT terminal in Pernis.
Erik de Zeeuw

Netherlands

LINEAS No. 1511 (Class 1275) runs light engine to the Waalhaven Yard on November 19th. *Erik de Zeeuw*

On November 19th, DB Cargo Class 189.054 passes the RSC Terminal with an Albatros Express from Rotterdam ECT Delta, World Gateway & Euromax to Duisburg Trimodal Terminal & KTL Kombiterminal Ludwigshafen in Germany. *Erik de Zeeuw*

Netherlands

On January 12th, Rurtalbahn Cargo Class 186.423 'RUNNING LIKE CLOCKWORK' is seen near Bathmen with a PCC Intermodal from Rotterdam to Frankfurt/Oder (Germany) & Kutno, Brzeg Dolny, Gliwice, Kolbuszowa and Poznań in Poland. *Erik de Zeeuw*

Netherlands

At sunrise, Captrain No. 1375 takes care of the 'Vienna shuttle' from Venlo to Geleen Lutterade on December 20th. *Erik de Zeeuw*

NS EMUs Nos.4042 and 4065 passes Loo with Intercity service No. 1747 from The Hague to Enschede on January 12th. *Erik de Zeeuw*

At the height of Griendtsveen, boxXpress Class 193.836 passes with the Wörth shuttle from Contargo Wörth-Karlsruhe (Germany) to the ECT Delta-terminal in Rotterdam on December 20th. *Erik de Zeeuw*

On October 23rd, Train Charter Service Class 189.105 makes a stop in Rotterdam with the Night train No. 13491 ‘GreenCityTrip’ (saves 93% Co2 emissions) from Breda to Prague in the Czech Republic. *Erik de Zeeuw*

DB No. 6440 passes the RSC Terminal with deepsea container train No. 62050 from Barge Terminal Tilburg to Rotterdam on November 23rd.
Erik de Zeeuw

DB ICE4 No.4685 ‘Schwäbisch Hall’ works train No. IC127 from Amsterdam to Frankfurt/Main Hbf (Germany) passing Loenersloot on January 7th. *Erik de Zeeuw*

Portugal

CP Class 2600 No. 382605 is seen arriving at Porto Sao-Bento on November 28th. *Andy*

CP Class 1400 No. 1415 is seen at Pochino on November 28th. *Andy*

Spain

Alpha are delighted to see their EURO6000 locomotives on Iberian tracks!

Alpha Trains' long-term customer @CAPTRAIN España has started commercial services with the @Stadler EURO6000 on the Spanish Iberian gauge network.

The assets mark a milestone for freight transport in Spain: As the most powerful locomotives ever to run on the Iberian Peninsula they will increase the amount of transported goods on tracks drastically. The EURO6000 will also permit connecting Asturias with the rest of the Iberian Peninsula through the new Pajares railway tunnels, thanks to the multi-voltage system (3,000V, 25kV) installed in the locomotive

The new EURO6000s are part of a framework contract signed between Captrain España and Alpha Trains for the lease of up to 21 Stadler EURO6000 units, of which fourteen units have already been confirmed.

Photo:WearedelightedtoseeourEURO6000 locomotives on Iberian tracks!
© Alpha Trains/Stadler

France

SNCF Connect: the new all-in-one digital service to simplify all journeys in France

SNCF Connect & Tech, a subsidiary of SNCF Voyageurs, has launched SNCF Connect, an all-in-one travel service consisting of an app and a website - www.sncf-connect.com - to simplify all passenger journeys. SNCF Connect allows users to find, book and manage both short and long journeys by integrating all passenger information. SNCF Connect is part of the SNCF Voyageurs strategy of making life simpler for passengers and thus contributing to increasing rail modal share in France. With a range of technologies, this new service was designed and developed by SNCF Connect & Tech, the digital subsidiary of SNCF Voyageurs, a leader in digital technologies and e-commerce in the transport sector in France.

An innovative service for all travel and for all of France

SNCF Connect allows all travellers to rediscover the best of OUI.sncf as well as new features for planning all of their short- and long-distance journeys, such as:

- planning, buying and exchanging train tickets;
- a choice of the best urban routes throughout France, from the first to the last mile;
- traffic info and real-time alerts;
- buying and renewing cards and regional subscriptions.

SNCF Connect has been designed specifically to simplify train travel each step of the way and to facilitate access to alternatives to private cars. At launch, the service encompasses all SNCF Voyageurs services: TGV INOUI, OUIGO, Intercités, TER, public transport in the Greater Paris region, including Transilien, Thalys, Eurostar, TGV Lyria, as well as all bus, car-sharing and passenger information services. It will soon include soft and shared mobility services in all of the regions.

Remaining as close as possible to the people of France, SNCF Connect covers the entire country and aims to become a digital reflex for sustainable and shared mobility in all of the territories. The launch of SNCF Connect facilitates access to trains and to sustainable mobility and is a tangible contribution to the SNCF Voyageurs objective of winning over new passengers to increase rail modal share.

CEO of SNCF Voyageurs Christophe Fanichet said: "SNCF Connect is the realisation of our desire to make the lives of our customers easier, facilitating access to all trains and to sustainable mobility. Taking passengers' expectations as a starting point, we are proud to offer this innovative all-in-one service, which brings purchases, timetable consultations, after-sales and subscriptions together in a single place using the latest technologies, such as artificial intelligence. It also demonstrates our company's excellence in terms of its ability to innovate thanks to the skills of our team, and I congratulate them on this fantastic achievement. Finally, SNCF Connect reflects our choice of a name that combines our pride in the SNCF brand with this wonderful idea of connecting with each other through digital technologies and mobility."

Anne Pruvot, Managing Director of SNCF Connect & Tech, said: "After just a year at SNCF Connect & Tech, I am proud to deliver SNCF Connect to the people of France to simplify all of their journeys. This is a unique service for its scale, developed thanks to our team's expertise. Thanks to their unreserved commitment and courage, we have been able to deliver an all-in-one application and website with a strong technological and innovative bias, developed with and for our customers to support them with both short and long journeys. It is also a means of bolstering the French tourism and digital ecosystems and will take its rightful place as an e-commerce leader".

A fluid and straightforward transition for all users

Now French users are automatically redirected from the OUI.sncf website to the new SNCF Connect site, www.sncf-connect.com. If the user has already installed the OUI.sncf application, it will be updated so that it becomes SNCF Connect on iOS and Android. Otherwise, passengers can find it in the app stores.

For customers who have purchased tickets on OUI.sncf for an upcoming journey:

- If the customer has already activated their customer account, "Mon Identificant SNCF", they will automatically see all of their current bookings on the application and on the SNCF Connect site.
- If the customer does not have an active account, they will find their current bookings on SNCF Connect via the booking reference in the OUI.sncf order confirmation sent by email.

Czech

Správa železnic has renovated more than 70 station buildings last year

Modern passenger check-in areas, barrier-free accesses and new technical facilities. These are not the only benefits that more station buildings across the country can boast now. Správa železnic has completely reconstructed 73 of such premises in 2021. The financial costs spent on construction and maintenance will exceed CZK 2 billion.

Správa železnic reports completion for example from Milevsko, Havířov, Hanušovice, Protivín, Strakonice, Pačejov, Žihle, Sušice, Kolinec, Nýrsko, Blovice, Horažďovice, Hrušovany nad Jevišovkou-Šanov, Dětřichov nad Bystřicí, Louny, Křižanov, Třebíč, Sklené nad Oslavou, Kadaň, Mnichovo Hradiště, Ivanovice na Hané, Ostrov nad Ohří, Kunčice pod Ondřejníkem, Holice, Šumperk, Kroměříž, Praha-Zahradní Město, Lhotka nad Bečvou, Litvínov, Krnov-Cvilín or Skrochovice.

Several major renovations of listed station buildings are also nearing completion. “We will finish laying the handmade flooring inside the building of the railway station in Hradec Králové in February, construction works are also at the final stage in the case of the station building reconstruction in Beroun, we want to be done during the summer holidays,” describes the Director General of Správa železnic Jiří Svoboda and adds: “The reconstruction of the České Budějovice railway station is also moving forward significantly, where the renovated departure hall will be opened to passengers by the end of the year.”

Furthermore, in 2022, work will continue on listed buildings in Pilsen and Pardubice, where the first phase of construction concerns the high-rise building Sirius. The builders will also continue renovating the interior of the Fanta’s building at the Prague Main Station. Another important project that Správa železnic expects to start this year is the reconstruction of the historic building at the station in Teplice v Čechách. In the first stage, the builders will focus on repairing the facade and the adjacent 1st platform.

Completely new buildings will be erected in some stations. New facilities will be available to passengers in Praha-Radotín, where the construction of a new single-storey structure will be ready to commence in 2022. In Vsetín, a new terminal for train and bus transport will replace the current station building, and at the same time, the track facility will be overhauled. Moreover, a new check-in hall is growing in Praha-Vysočany as part of the modernisation of the entire station and the adjacent section to Mstětice.

More projects on station buildings will be prepared for implementation this year in Střelice, Nové Město pod Smrkem, Adamov, Tlumačov, Kdyně, Kostelec u Jihlavy, Rybniště, Hostinné, Blatná u Jesenice, Čejetice or Podivín as well. Projects will also take place in Bohumín, Tachov, Opava West, Prachatice, Velim, Veselí nad Lužnicí, Nová Paka, Velvary, Libina, Studénka, Balkova Lhota or Třinec.

Latvia

Historical train station buildings get new life as business, cultural and social life venues

The historical building of the train station in Vaivari, a neighbourhood of Jūrmala, which was looking for tenants last summer, has found one – a pizzeria will be operating in the building from mid-January. This is one of the many examples when a building that no longer serves its original purpose continues to exist in a new form.

The Vaivari Station building could no longer be used for the needs of railway passengers, which is why, as part of the station modernization project, this historical station building was preserved as a cultural and historical architectural monument and moved further away from the railway; now the building is located on Skautu Street in Jūrmala.

SJSC Latvijas Dzelzceļš has a lot of properties to take care of, and railway stations, which were constructed in different historical periods and in different economic conditions, are definitely the most prominent of these. Many of these buildings still perform the function of a railway station, but there are also many rail stations at dismantled railway lines and lines that are no longer used for passenger transportation, or where trains no longer stop as there are very few passengers.

Buildings that are currently not necessary for the provision of Latvijas Dzelzceļš services are put up for rent or auction. As a result, buildings, which are often also cultural and historical monuments, are properly managed, new jobs are created for local residents, and such buildings become centres of public life, cultural centres, or tourist attractions. Private individuals, businesses and local governments all have the right to rent or purchase these buildings.

For example, there is now a private guest house and a museum located in the historical building of Airīte Station. The former Ērgļi Train Station building is also being revamped into an attractive destination for local and foreign tourists, which will offer various types of educational and recreational activities. In turn, the building of Ķeipene Station has become Cinema Station – the brainchild of Augusts Sukuts, the author of the idea of the film forum Arsenāls.

Multiple local governments have also taken over the station buildings in their municipalities with the aim to order to improve residents’ social life, attract more tourists, and for other purposes. An art gallery has been set up at Dubulti Train Station in cooperation with Jūrmala City Council, while Gulbene municipality has set up educational interactive centre Railway and Steam in the local station building. There is now a community centre at Smārde Station building, and various cultural activities are also organized at Kangari Train Station. Cēsis Train Station has been entrusted to the local government, even though the building remains property of SJSC Latvijas Dzelzceļš. There is a post office, a bus station and several private businesses operating at Cēsis Station now. The historical building of the terminal station at the narrow-gauge railway in Alūksne belongs to the municipality and is home to a catering business.

A number of other historical station buildings have been purchased by private individuals or businesses, and it is currently unknown what they will be used for in future.

Italy

Alstom to supply new Traxx locomotives to Railpool

Latest order will increase Railpool's Traxx fleet to more than 250 locomotives
Order for 15 vehicles will include proven Last Mile function and be used in Italy, Norway, and Sweden

Alstom has received an order from leading European rail vehicle leasing company Railpool to supply 15 Traxx locomotives. In addition, there is also an option for five additional units. Manufactured at Alstom's Kassel (Germany) and Vado Ligure (Italy) sites, the 15 Traxx locomotives are intended for use in Norway, Sweden, and Italy.

Torsten Lehnert, CEO of Railpool, said, "Ordering these 15 locomotives will expand our fleet of Traxx locomotives to more than 250, underlining our long-standing, close partnership with Alstom. We are also pleased to be able to offer our customers in Scandinavia and Italy additional, modern locomotives together with our proven full-service concept. All locomotives will be equipped with the proven Last Mile function, which significantly expands the range of applications for our locomotives."

Kevin Cogo, Head of Traxx Locomotive at Alstom, added, "Railpool is one of our largest customers in the locomotive sector with whom we have a long and successful partnership. We are delighted to be able to contribute to making freight transport in Northern and Southern Europe more efficient and sustainable with these additional Traxx locomotives for the Italian, Norwegian, and Swedish markets."

The Traxx 3 platform is the most modern platform for four-axle locomotives in Europe. The three models, Traxx AC3, Traxx MS3 and Traxx DC3, offer a supporting diesel engine for bridging non-electrified sections with the optional Last Mile function. With more than 2,400 vehicles sold, the Traxx locomotives are the most successful platform in Europe.

Norway

Alstom wins landmark contract to deliver up to 200 regional trains in Norway

Framework agreement with Norske Tog worth at least €1.8 billion to provide up to 200 Coradia Nordic trains
First firm order of 30 trains worth €380 million

Alstom, global leader in smart and sustainable mobility, has signed a framework contract with Norske Tog (NT)[1] allowing for the provision of up to 200 Coradia Nordic regional trains. Valued at over €1.8 billion, the contract constitutes the most significant rail procurement in Norway's history. The first firm order of 30 trains is worth €380 million.

Delivery of Norske Tog's new "Class 77" regional trains is scheduled to begin in 2025. Once in service, this new fleet will begin operations as a suburban and fast rail service, connecting Ski and Stabekk in the greater Oslo region. "We look forward to being able to offer improved capacity, comfort and mobile coverage to our commuters," says Øystein Risan, Managing Director of Norske Tog.

"We are truly pleased that Norske Tog has selected Alstom to build their future fleet of trains. We are proud to contribute to increasing capacity on busy lines in the Oslo and Viken area. The chosen Coradia Nordic trains are fully suitable for Norwegian weather conditions. Furthermore, this order confirms Alstom's leading position in Norway, as we are already equipping the entire Norwegian fleet with a new signalling solution," says Rob Whyte, Managing Director of Alstom Nordics.

The Coradia Nordic for Norske Tog has been specially adapted to meet the needs of the Norwegian rail network. Its top speed of 160 km/h ensures a swift and comfortable commute in a spacious and relaxing environment. Each trainset will consist of six single-deck coaches for a total capacity of 778 passengers, offering 40% higher capacity than the trains they replace.

The new trains will be equipped with the latest ETCS[2] signalling system. The system will feature a world-first advanced odometry solution designed for the harshest winter conditions. Coradia Nordic is a state-of-the-art, low-floor, highly versatile family of electric multiple unit trains designed to meet the demands of regional and intercity transport in Nordic countries. A modular design allows operators to choose the configuration and interior that work best for their market and commercial strategy. In addition, Alstom's sustainable approach to services considers the entire life cycle of the product, from initial design to end of life, which will maximize the value of Norske Tog's assets. Nearly 300 Coradia Nordic trains have been delivered to customers in Nordic countries so far.

Alstom will assemble the trains for Norske Tog at its site in Salzgitter, Germany. The project office with project and contract management, product commissioning, testing, documentation, training and warranty will be executed within Norway.

Alstom's Coradia range meets today's demands in regional and intercity transport and features trains that have proved themselves in operation for over thirty years. To date, Alstom has sold 3,300 Coradia trains worldwide. The Coradia range offers electrical and diesel traction, along with other innovative emission-free solutions, such as battery and hydrogen powered traction, for non-electrified lines.

[1] Norske Tog AS is owned by the Norwegian Ministry of Transport and Communications. The company procures, owns, and manages rolling stock for passenger train transport in Norway.
[2] European Train Control System, Baseline 3 Release 2

Image: Norske Tog's new Class 77 regional trains. © Alstom

Israel

CAF GROUP WINS TEL AVIV TRAM PURPLE LINE PROJECT

NTA (Metropolitan Mass Transit Systems) has chosen the transport consortium made up of the CAF Group and the construction firm Shapir for the Tel Aviv LRV Purple Line. NTA is the company in charge of providing the most appropriate solutions to meet transport demands in the Tel Aviv metropolitan area. It is currently building the main public transport system in the Gush Dan area, the largest transport project ever undertaken in Israel, in terms of both volume and complexity.

The Purple Line project forms part of the Gush Dan ambitious plan for the Israeli metropolis, consisting of the design, construction, financing and maintenance of the city's LRV system for a term of 25 years. The investment volume is estimated to be in excess of €1.015 Billion.

The new line will cover 27 kilometres connecting a planned total of 45 stations, and will also include a depot where maintenance work will be carried out on the fleet of vehicles. The Purple Line will run from Complex 2000, in the centre of Tel Aviv next to the Arolozorov train station, to connect the city centre with the eastern part of the metropolitan area, with the end section of the line branching off to the Bar Ilan University area in one direction and to the neighbouring city of Yehud-Monoson in the other.

Aside from the construction of the line, the scope of the contract also includes the design and supply of 98 new low-floor Urbos trams, each consisting of 5 modules, spanning a length of almost 35 metres. There is also an option to extend the contract for a further 32 units in the future. The scope of the project for the awarded consortium also includes the supply of the signalling, energy and communication systems, as well as maintenance of the line for a term of 25 years.

The CAF Group's portion of this project exceeds €525M and consists of the design and production of the new units, the supply of signalling, energy and communication systems in addition to project integration. The Group will also have a 50% stake in the SPV company that will manage the maintenance of the line. The new line is expected to be fully operational by 2027, providing one of the most cutting edge and efficient public transport networks for the inhabitants of the Tel Aviv metropolitan area.

Qatar

Lusail Tramway enters commercial service

Alstom's first tramway in Qatar has entered commercial service. With a network length of 28km, this is the largest tramway system project in the Gulf region which also includes 7 km underground. The new transportation system will serve Lusail, a new city located north of Doha, by providing an environmentally friendly mobility option for residents. It has 25 stations within Lusail and connects to the Doha Metro.

The network is operational with 28 Citadis X05 new generation trams which have a capacity of 209 passengers each.

In 2014, Alstom, as part of LRTC Consortium[1] along with QDVC, was awarded a contract by Qatar Railways Company to supply a turnkey tramway system that is catenary-free above ground.

"As Qatar welcomes the World Cup this year, we are proud to deliver the first catenary-free tramway in the country and a system that will provide efficiency, availability, and easier maintenance. Alstom is committed to Qatar's economic growth and development, and will continue to support the National Vision 2030, through the enhancement of infrastructure and the supply of sustainable solutions such as the Lusail Tramway," says Tamer Salama, Managing Director of Qatar and UAE at Alstom.

Alstom's role in the consortium was to provide the design, manufacturing and commissioning of 28 Citadis trams, track works including hardscaping, power supply equipment (Bulk and TPS substations, catenary and APS), and Urbalis 400 CBTC signaling as well as platform screen doors. The Citadis X05 model offers innovative options in terms of dimensions and configurations. The vehicle is 98% recyclable.

Each Lusail 32-m long tram is composed of five modules per single unit. The design and colour are inspired by the traditional Qatari boat, the Dhow, on the side of the rolling stock, we also note a pearl - historical symbol in Qatar. The vehicles are fully low floor to enable easier access for all passengers. The Lusail tramway turnkey system offers passengers a high level of comfort, and it includes passenger information and security systems both at station level and on-board. The trams are eco-friendly and equipped with a full electrical braking system and LED lighting.

Several Alstom sites were involved in the project including Aix-en-Provence, Le Creusot, La Rochelle, Ornans, Tarbes and Villeurbanne in France and Barcelona in Spain. More than 3,000 vehicles of the Citadis range have been sold in 60 cities worldwide. Citadis trams have covered over 1 billion kilometres and transported nearly 10 billion passengers since the first tram entered service in 2000. Along with Lusail, Citadis X05 has been sold in cities such as Sydney, Paris, Nice, Avignon, Caen, Athens, Frankfurt, Cologne and Casablanca.

With over 50 years' experience and 80 systems in commercial service worldwide, Alstom is a trusted partner to deliver integrated turnkey rail systems customised for every mobility need.

[1] LRTC Consortium composed of Alstom and QDVC, a Qatari shareholding company in charge of civil works (51 % Qatari Diar Real Estate Investment Company & 49% VINCI Construction Grands Projets)

Photo: Alstom's Citadis trams in the city of Lusail, Qatar. © Alstom

Latvia

Long-term development priorities of SJSC “Latvijas dzelzceļš” infrastructure: customer convenience, speed, safety, environmental protection

In order to build a sustainable and integrated transport system that promotes passenger and freight mobility, official documents determining the policy of the Latvian transport sector have defined the railway as the backbone of public transport. In order to successfully achieve this, SJSC “Latvijas dzelzceļš” has developed a concept for infrastructure development until 2035, which defines railway infrastructure development priorities and projects to be implemented to improve customer convenience, increase train speed, improve railway safety and reduce its impact on the environment.

The increasing passenger numbers in Latvia and other European Union member countries, as well as activities aimed at the development of railways as the most environmentally friendly, efficient and sustainable mode of transport have created confidence that railways will become increasingly more popular in the coming years. SJSC “Latvijas dzelzceļš” Chairman of the Board Māris Kleinbergs: “Passenger transportation by rail is currently under scrutiny at the public, state and municipal levels, and the demand for multimodal transport solutions is constantly growing. The European Union’s Green Deal also focuses on railways as the most environmentally friendly mode of public transport, which can be integrated with other modes of transport, such as bus and bicycle transport. We expect that after the end of the pandemic, the intensity of passenger transport could quickly recover and even exceed the current levels, and in Latvia this trend will be facilitated by extensive modernization of railway infrastructure launched by LDz, replacement of the current, obsolete passenger rolling stock with new, comfortable trains, and implementation of the Rail Baltica project.”

Increasing train speed and traffic volume

The speed of passenger transport by rail is one of the most important factors determining whether people choose railway, another mode of public transport or their own personal car for daily commuting.

In recent years, “Latvijas dzelzceļš” has already implemented infrastructure upgrades in certain railway sections in order to increase the maximum speed of trains and therefore shorten the time passengers spend on trains. At present, the maximum speed of passenger trains in Latvia is 120 km/h.

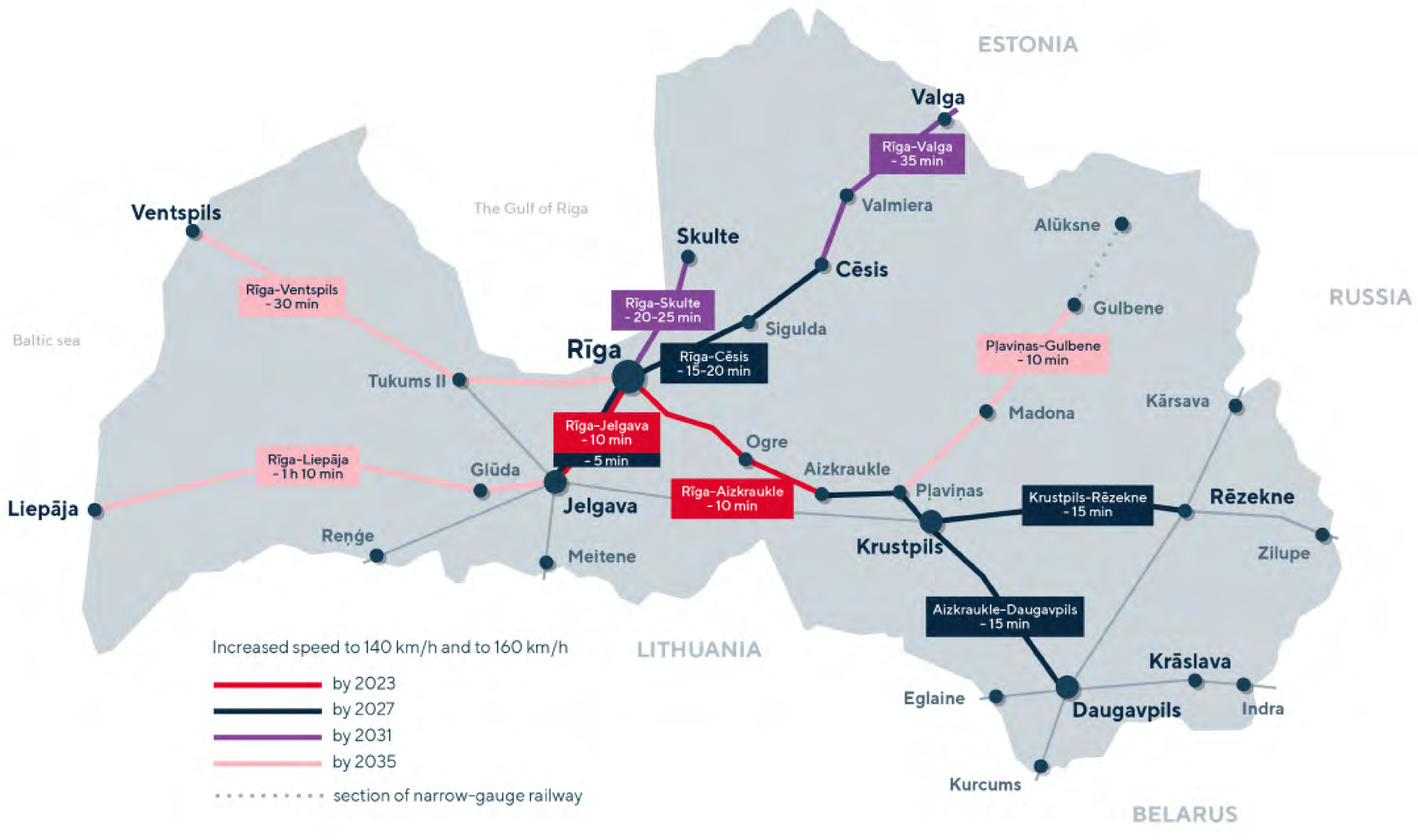
By the end of 2023, a project will be implemented to increase train speed to 140 km/h in Riga-Aizkraukle and Riga-Jelgava sections, improving traffic safety at level crossings and liquidating spots where train speed is limited.

By the end of 2035, train speeds will be gradually increased, section by section, up to 160 km/h, which will be made possible by electrifying railway lines, reconfiguring tracks, increasing traffic safety at level crossings, as well as proposing amendments to the relevant laws and regulations.

One of the reasons why residents choose trains for daily commuting is how often trains run, especially in more densely populated areas. That is why SJSC “Latvijas dzelzceļš” is planning is to attain such quality of the railway infrastructure, especially on Pieriga railway lines, so that passenger trains could run every 12-15 minutes.

LDZ

Development of the Latvian railway infrastructure for increasing speed of passenger trains



New Zealand

CAF SIGNS A NEW CONTRACT FOR THE SUPPLY OF 23 ELECTRIC UNITS IN AUCKLAND

CAF has signed a contract for the supply of 23 new electric units for the city of Auckland, in New Zealand.

The contract, worth in excess of €130M, includes the maintenance of the trains until the end of 2025 and has an extension option for up to 5 additional units.

In 2011, Auckland Transport awarded CAF the supply of 57 electric units and their maintenance for 12 years and in 2017 a further 15 units were purchased. All 72 supplied units are currently in revenue service in Auckland.

CAF's reliable fleet has completed a mileage in excess of 33 million kilometres and has played an essential role in the increase in passenger numbers using public transport across Auckland.

The units will be similar to the 72 previously supplied to the same customer, consisting of three cars, two cabbed end motor cars and one intermediate trailer car, with a total capacity for 380 passengers. The car structure is made of stainless steel and each car is equipped with two passenger access doors per side.

Also, the intermediate car is low floor to facilitate access for persons with reduced mobility and wheelchair users.

This contract consolidates CAF's presence in the region as in addition to the previous contracts for Auckland Transport, the company has been awarded a significant amount of projects in Australia since incorporating its subsidiary there in 2010, including the most recent ones of Parramatta Light Rail and Regional Rail Bi-Mode units in New South Wales.

Romania

Alstom to provide full maintenance services for Bucharest metro fleet for the next 15 years

The contract is valid until 2036 and has an estimated value of €500 million
Alstom has been providing uninterrupted full maintenance services since 2004 increasing train availability from 56% to 99.96%
Alstom has more than 50 maintenance contracts with a duration of 20 years or beyond, covering more than 35,000 vehicles worldwide

Alstom and Metrorex, Bucharest's metro network operator, have signed a contract for maintenance services for a period of 15 years, following the conclusion of a public tender. The total value of the contract of €500 million, is based on an estimated number of kilometres covered by trains in circulation. The services cover preventive and corrective maintenance as well as overhauls for a total fleet of 82 trains at contract signature.

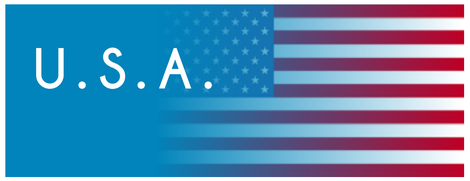
"With this new long-term contract, Alstom will be providing maintenance services to the Bucharest metro for the next 15 years. This latest contract with Metrorex is a proof of our customer's confidence in our services and we are proud to have been selected as a long-term service partner. Today, Alstom has more than 50 maintenance contracts worldwide with a duration of 20 years or beyond, covering more than 35,000 vehicles. We are committed to deliver maintenance services at the highest standards to provide passengers with safe, reliable and comfortable journeys," said Gian Luca Erbacci, Alstom Europe Region President.

Alstom has been providing uninterrupted maintenance services for the Metrorex rolling stock since 2004, overhauling both the new and the old fleets. The company has performed over 60 different types of refurbishments throughout the trains lifespan, improving both their performance and passenger comfort. The 82 trains totalling 492 cars have run on average a total distance of 8.5 million km on an annual basis. Over 350 people work to perform the maintenance activities.

Following the delivery of the new trains for Metro Line 5 as a result of a tender awarded last year, the fleet will be supplemented with at least 13 new Alstom Metropolis trains starting 2023, and the maintenance contract will be extended to this additional fleet, with additional jobs to be created.

Alstom is a global leader in maintenance services, with approximately 15,000 Alstom employees working in maintenance operations, in more than 40 countries. Alstom has been active in Romania for almost 30 years and is a market leader in railway electrification and signalling solutions. The company is responsible for implementing signalling or electrification solutions on more than 75% of the northern branch of the Rhine-Danube railway corridor in Romania. The first CBTC urban signalling solution in the country is under implementation by Alstom on Bucharest Metro Line 5. In December 2020, Alstom signed a contract for 13 metro trains, with the option of another 17, for the same Line 5.

[1] The order has been registered in December 2021, during Alstom's third quarter.



Union Pacific Railroad Makes Largest Investment in Wabtec's FLXdrive Battery-Electric Locomotive

Union Pacific Railroad (NYSE: UNP) has announced the purchase of 10 FLXdrive battery-electric locomotives from Wabtec Corporation (NYSE: WAB). The order, which marks the largest investment in battery technology by a North American railroad, will upgrade Union Pacific's rail yard infrastructure and support its commitment to significantly reduce greenhouse gas emissions.

"As an industry leader, Union Pacific is pioneering a major application of battery power in its rail yards," said Rafael Santana, President and CEO for Wabtec. "Battery power is an ideal solution to reduce the environmental impact and costs of yard operations. Using the FLXdrive in the rail yard can significantly improve local air quality, as well as reduce noise by up to 70% for neighbouring communities."

The approximately 2.5-MWh locomotives are each powered solely by 7,000 battery cells, providing Union Pacific a zero-emission solution for its yard operations. The 10 FLXdrives will enable the railroad to eliminate 4,000 tons of carbon annually from its rail yards, the equivalent of removing 800 cars from the highway. The new locomotives will be manufactured in the United States with the first units being delivered to Union Pacific in late 2023.

"Railroads are already the leader in low emissions ground transportation, and we believe battery-electric locomotives are the next step in our journey to eventually reach net zero," said Lance Fritz, Chairman, President and CEO of Union Pacific. "This first phase of testing will further enhance the technology, and, ultimately, benefit the entire industry."

Union Pacific published its first comprehensive Climate Action Plan in December 2021, outlining its efforts to significantly reduce emissions within its operations. As part of that commitment, Union Pacific will reduce absolute Scope 1 and 2 GHG emissions 26% by 2030 and achieve net zero greenhouse gas emissions by 2050.

About Union Pacific
Union Pacific (NYSE: UNP) delivers the goods families and businesses use every day with safe, reliable and efficient service. Operating in 23 western states, the company connects its customers and communities to the global economy. Trains are the most environmentally responsible way to move freight, helping Union Pacific protect future generations.

BHP Group Orders Wabtec's FLXdrive Battery Locomotives

Wabtec Corporation (NYSE: WAB) has announced an order from BHP Western Australia Iron Ore (WAIO) for two FLXdrive battery locomotives. The deal builds momentum in the market for the world's first 100-percent, battery-powered locomotive and supports the Australia-based natural resource company's plan to decarbonize its rail network.

"The FLXdrive battery-electric locomotive represents the future of sustainable rail operations," said Rogerio Mendonca, President of Freight Equipment for Wabtec. "The rail and mining industries are on the cusp of technological advancements to equip customers with zero-emission locomotive fleets. The FLXdrive is a major step toward eventually achieving that vision. It will provide BHP with the tractive effort, fuel savings, emissions reductions and reliability to cost effectively run their rail operations."

BHP will receive the newest version of the FLXdrive battery-electric locomotives in 2023 with an energy capacity of 7 megawatt hours (MWh). Based on the topography of the route and BHP's rail operations, the FLXdrive is anticipated to reduce the company's fuel costs and emissions in percentage by double digits per train.

"WA Iron Ore is significant within BHP's global operations, and I am pleased we can play a leading role in helping to develop new and innovative solutions with potential to shape our business for a cleaner future," said Brandon Craig, BHP Asset President Western Australia Iron Ore (WAIO).
"Rail is the fundamental link in our pit-to-port value chain, and the power required to deliver fully-laden iron ore wagons from the Pilbara to Port Hedland is significant. Trialing battery-electric locomotives in collaboration with Wabtec has great potential to support our operational emissions reductions targets and goals."

BHP currently uses four diesel-electric locomotives in a consist to pull trains comprised of approximately 270 cars carrying 38,000 tons of iron ore.

The FLXdrives will join the diesel locomotives to form a hybrid consist, and recharge during the trip through regenerative braking. Wabtec's next generation energy-management system will determine the optimal times to discharge and recharge the batteries along the route ensuring the most fuel-efficient operation of the entire locomotive consist during the trip.

"This order speaks to BHP's proactive approach to sustainability and cost-effective operations," said Wendy McMillan, Senior Regional Vice President, South East Asia, Australia and New Zealand for Wabtec. "BHP is among the industry leaders in this region who are demonstrating their commitment to addressing climate change by investing in transformative technologies like the FLXdrive battery locomotive."

The FLXdrive battery locomotive is part of Wabtec's initiative to develop the next generation of zero-emission locomotives. The company has a clear path to power new locomotives – and repower existing locomotives – with batteries, hydrogen internal combustion engines, and hydrogen fuel cells.

It is part of Wabtec's vision for the rail industry to play a key role in building a clean energy economy and will enable the reduction of up to 300 million tons of global carbon emissions per year.

China

Vossloh wins order from China to supply world's first zero-emission high-speed grinding trains

Vossloh, a long-established and world-leading supplier of rail infrastructure products and services, was awarded a trendsetting contract for the supply of three high-speed grinding trains (HSG-city) for use in the metro network of the southern Chinese metropolis of Shenzhen at the beginning of this year. By coupling to the electric traction unit, the newly developed grinding train draws its power from the conductor rail and can therefore be operated completely emission-free.

"With our portfolio of innovative products and services for the rail track, we as a company make a major contribution to sustainable mobility worldwide. True to our guiding principle 'enabling green mobility', the development of an emission-free HSG-city is another consistent step on our green path. In this way, we want to contribute to leaving future generations an ecosystem that is as intact as possible," explains Oliver Schuster, CEO of Vossloh AG.

HSG (High-Speed Grinding) technology is used for preventive maintenance of the rail network. Based on a grinding process that is unique worldwide, Vossloh maintenance machines can be used at a speed of 80 km/h on mainline lines or up to 60 km/h on urban transport lines. This means that maintenance work can be carried out during ongoing operations without the need for timetable adjustments or even line closures. Regular use of the HSG machines effectively prevents rail defects, significantly increases rail service life and clearly reduces rail noise.

Especially in China's fast-growing mega-metropolises, the expansion of local public transport is progressing at a rapid pace. Rail networks are being extended and traffic density is increasing. Demand for highly efficient maintenance technology from Vossloh is rising accordingly. More than 17 million people currently live in the Shenzhen metropolis and the metro registers up to 7 million passengers daily. The local rail network covers more than 400 km and is to be extended to over 1,000 km in the long term.

"China is and remains a particularly important market for us, also in the service business. Including the three HSG-city's for Shenzhen Metro we have received orders for the delivery of a total of eight HSG-city's and one VTM compact milling machine from China in the last 12 months. I am very pleased about this great success and the confidence of our customers, which is an impressive proof of our technology leadership," says Jan Furnivall, member of Vossloh's Executive Board.

Poland

Another carrier chooses PESA locomotives

In December, Rail Capital Partners completed negotiations with PESA Bydgoszcz on the supply of another batch of four-axle locomotives. As a result, the Company was able to meet the expectations of its customers by delivering vehicles at the beginning of 2022 of another four modern GAMA 111Ed locomotives with the Marathon access system.

"We are extremely pleased that the group of our business partners is constantly growing, which proves the trust of our clients in the services provided by our company. We wish LTG Cargo Polska as much success as possible. We believe that our cooperation will bring tangible benefits and development to both companies for each party," emphasized Ireneusz Kozłowski, President of the RCP Management Board.

LTG CARGO is the largest rail operator in the Baltic States and the eighth largest carrier in the EU.

"The commencement of cooperation with RCP is the next step and confirmation of the long-term development strategy of the LTG CARGO Group on the Polish market. We hope to expand our cooperation in the near future and implement new rolling stock projects," said Michał Szlendak, President of the Management Board of LTG CARGO Polska.

"The fact that LTG CARGO Polska chose a PESA locomotive to perform its services is a reason for satisfaction and confirmation that the range with a commuter engine perfectly meets the needs of carriers. We are counting on the development of cooperation between LTG CARGO and PESA in subsequent projects." said Piotr Rościszewski , PESA Sales Manager .

The Marathon range is a four-axle electric locomotive with a diesel shunting engine, thanks to which carriers do not need additional locomotives for shunting and unloading works on non-electrified line sections in ports or on freight sidings.

The engine with a power of 5,600 kW allows for trouble-free operation of all sidings. The Marathon range is tailored to the needs of users. The cabin, console and social facilities were created with the participation of train drivers and instructors. Taking into account the needs of users, the locomotive has been equipped with a toilet and a functional cooker (fridge, microwave, cordless kettle).

Poland

All PESA Twists are already in Silesia

PESA signed a contract with Silesian Trams in June 2018. After the completion of the basic order for 35 trams, TŚ exercised the right of option and ordered another 5 vehicles, which were to be delivered by the end of September 2022. Meanwhile, all of them have already arrived in Silesia.

“ All Twists are already in Silesia, have been positively tested and received by the client. This means that we finished deliveries 8 months ahead of schedule. We are glad that 70 modern PESA trams are already carrying passengers in the Silesian-Zagłębie agglomeration,” said Marcin Grzyb, PESA’s Sales Director for light rail vehicles.

New Twists for Silesia are low-floor trams, equipped with air conditioning, facilities for the disabled, WiFi, electronic passenger information system, WiFi and USB chargers for mobile devices. They use swivel bogies, which are characterized by better cooperation with the track, especially on curves.

In total, PESA has so far delivered 70 trams to Silesian Trams - 30 first-generation Twists and 40 new ones.

Argentina

Alstom signed three maintenance contracts in Argentina

EMOVA and Trenes Argentinos entrust their maintenance services to the company

Alstom, a global leader in smart and sustainable mobility, has been awarded three new contracts that will contribute to the improvement of Argentina’s transit infrastructure – track, signal systems, bridges, tunnels, vehicles and stations – which will help ensure safe, dependable and accessible services. Signed at the end of 2021, these maintenance contracts will allow for greater system availability and safe and reliable transit operations for customers.

One of the agreements is with EMOVA, the new operator and maintainer of the Buenos Aires metro network, for the overhaul of 15 Metropolis 100 series metro cars originally manufactured by Alstom in Brazil.

The overhaul of these cars will help ensure not only dependable service for 15 more years but also provide new LED lighting and a more comfortable and enjoyable passenger experience, following the updating of the interiors (paint, upholstery) and equipping the cars with air conditioning. Once refurbished, these cars will serve the E line of the city of Buenos Aires’ metro network.

The other two contracts are with Trenes Argentinos for the general overhaul of 40 wide-gauge bogies and 16 narrow-gauge bogies, including wheel replacement, which will extend the useful life of the bogies for 10 additional years. This will guarantee the quality and safety of the trains and a smoother ride for passengers.

“We are pleased to have been entrusted by EMOVA and Trenes Argentinos and partner with them to optimise passenger rail infrastructure in Argentina,” said Ernesto Garberoglio, CEO of Alstom Argentina. He added, “For almost 30 years, Alstom has been committed to the development of safe and quality transport and mobility in the country.”

These maintenance contracts reinforce Alstom‘s 28-year presence in Argentina as a service partner committed to its customers’ success. Since 1993, Alstom has supplied signalling systems for the subway of Buenos Aires and the Belgrano Norte line of the suburban rail network, as well as maintenance and modernisation of the subway and suburban rail lines.

Alstom has also been involved in the maintenance and modernisation of locomotives and cars for both cargo and passenger services.

From the Archives

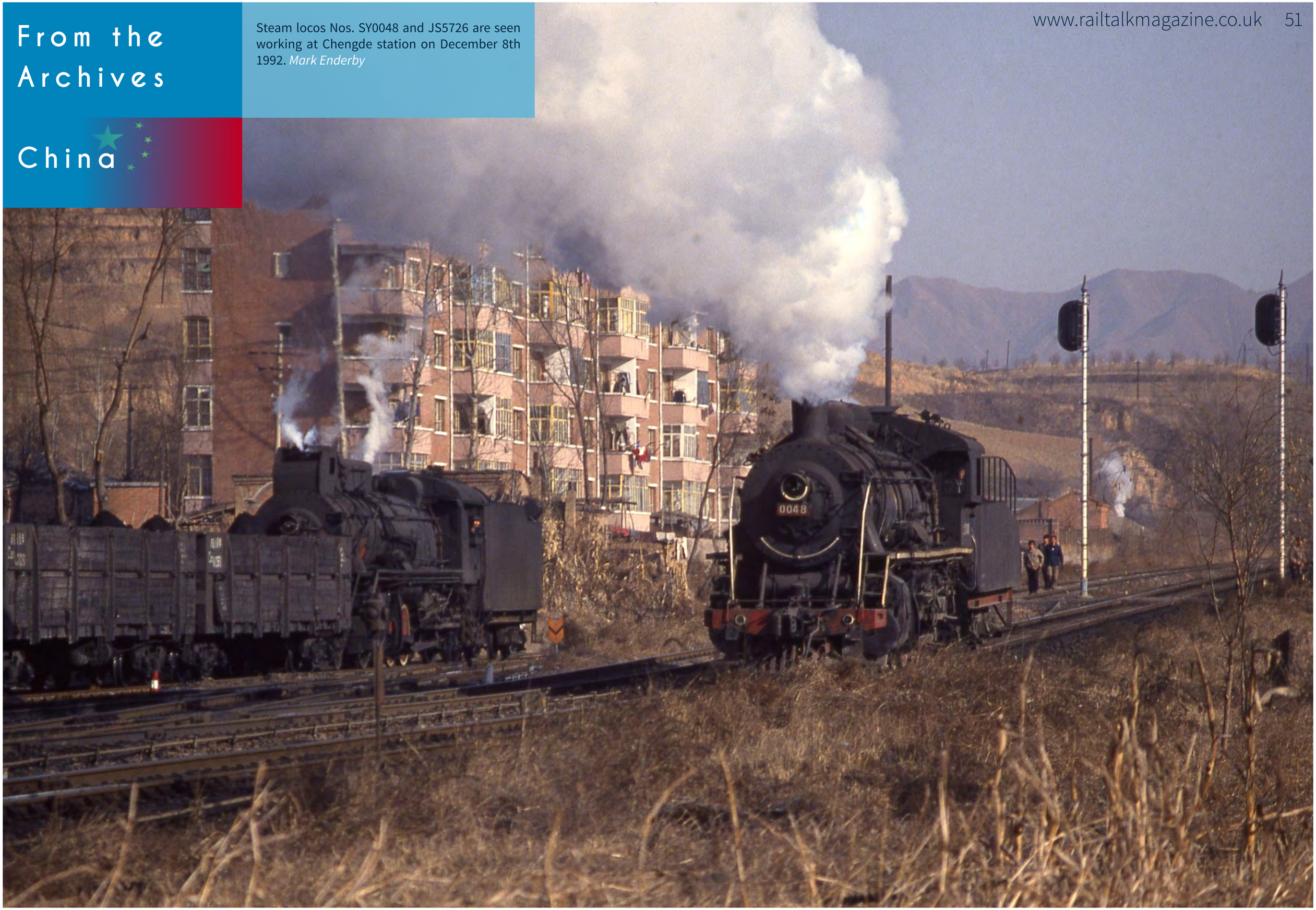
Bulgaria

BDZ Skoda built No. 44.202 stands outside the electric shed at Gorna Orjahovica depot on May 4th 2011.
John Sloane

From the Archives

China

Steam locos Nos. SY0048 and JS5726 are seen working at Chengde station on December 8th 1992. *Mark Enderby*



From the Archives

Cuba

Alco 2-8-0 No. 1590 works the Trinidad tourist train on May 13th 2011. *John Sloane*

From the Archives

Cuba

Russian M62 No. 61602 stands at Havana railway museum on May 6th 2011. *John Sloane*

From the Archives

Egypt

Egyptian Railways Henschel AA22T loco is seen on sugar cane empties near Idfo on the Nile on January 7th 2009. *Mark Enderby*

From the Archives

France

Vintage SNCF Baldwin diesel A1A-A1A No. 62044 is seen stabled at Thionville depot on October 28th 1986. *John Sloane*

From the Archives

France

SNCF No. BB-8139 stands at Narbonne depot on April 2nd 1991. *John Sloane*

From the Archives

France

SNCF railcar No. X2468 is seen at Montlucon shed on a gloomy March 29th 1970. *John Sloane*

From the Archives

Germany

DB Class 111.177 arrives at Wurzburg on July 27th 1989. *Mark Enderby*

From the Archives

Germany

DB Class 203.006 passes through Koln West with a short rake of ballast wagons on May 5th 2005.
Mark Enderby

From the Archives

Germany

DB Class 185.061 crosses the Mosel at Ediger-Eller on May 7th 2005. *Mark Enderby*

From the Archives

Germany

On the Harz railway, No. 99-5902 heads for the Brocken as it departs Drei Annen Hohnen on April 28th 2010. *Mark Enderby*

From the Archives

Germany

DB Class 223.040 is seen just south of Calbe (in the Harz) on April 27th 2010. *Mark Enderby*

No. 119.018 arrives at Bertsdorf on the Zittau railway on May 1st 2012. *Mark Enderby*

From the Archives

Germany

Harz steam loco No. 99-7234 is seen at Wernigerode on April 27th 2010. *Mark Enderby*

From the Archives

Germany

DB Class 180.019 with a SB intermodal working is seen at Schona in the Elbe valley on April 24th 2008. *Mark Enderby*

From the Archives

Germany

SBB Class 10019 arrives at Dresden Hbf on April 24th 2008. *Mark Enderby*

From the Archives

Hungary

MAV M44.439 is the station pilot at Budapest Nugati station on September 13th 2007. *John Sloane*

From the Archives

Hungary

MAV 4-8-0 No. 424-053 stands forlorn awaiting restoration or spares donation in the long abandoned section of Istvantalec Works in Budapest on September 13th 1977. *John Sloane*

From the Archives

Italy

FS Three Phase electric loco No. E554.001 is seen at Alessandria shed on April 26th 1973.
John Sloane

From the Archives

Italy

FS Class E424.333 is seen with a passenger service at Naples Centrale on August 29th 1993. *John Sloane*

From the Archives

Spain

On the Andorra - Escatron railway, steam loco 4-8-4T 'Andorra' (Jung/1953) is seen working at Andorra mine on April 18th 1979.
John Sloane

From the Archives

Spain

RENFE (Altaria) Class 252.023 is seen stabled next to Bilbao Abando station on May 30th 2012. *John Sloane*

From the Archives

Switzerland

SBB Ae3/4 No. 10656 is seen at Winterthur depot on July 31st 1985. *John Sloane*

From the Archives

Switzerland

SBB Crocodile No. 14276 sits inside Basel shed on July 31st 1985. *John Sloane*

From the Archives

Turkey

TCCD EMU No. 8007 is seen at Istanbul Sirecki station on June 13th 1997. *Mark Enderby*