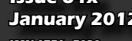
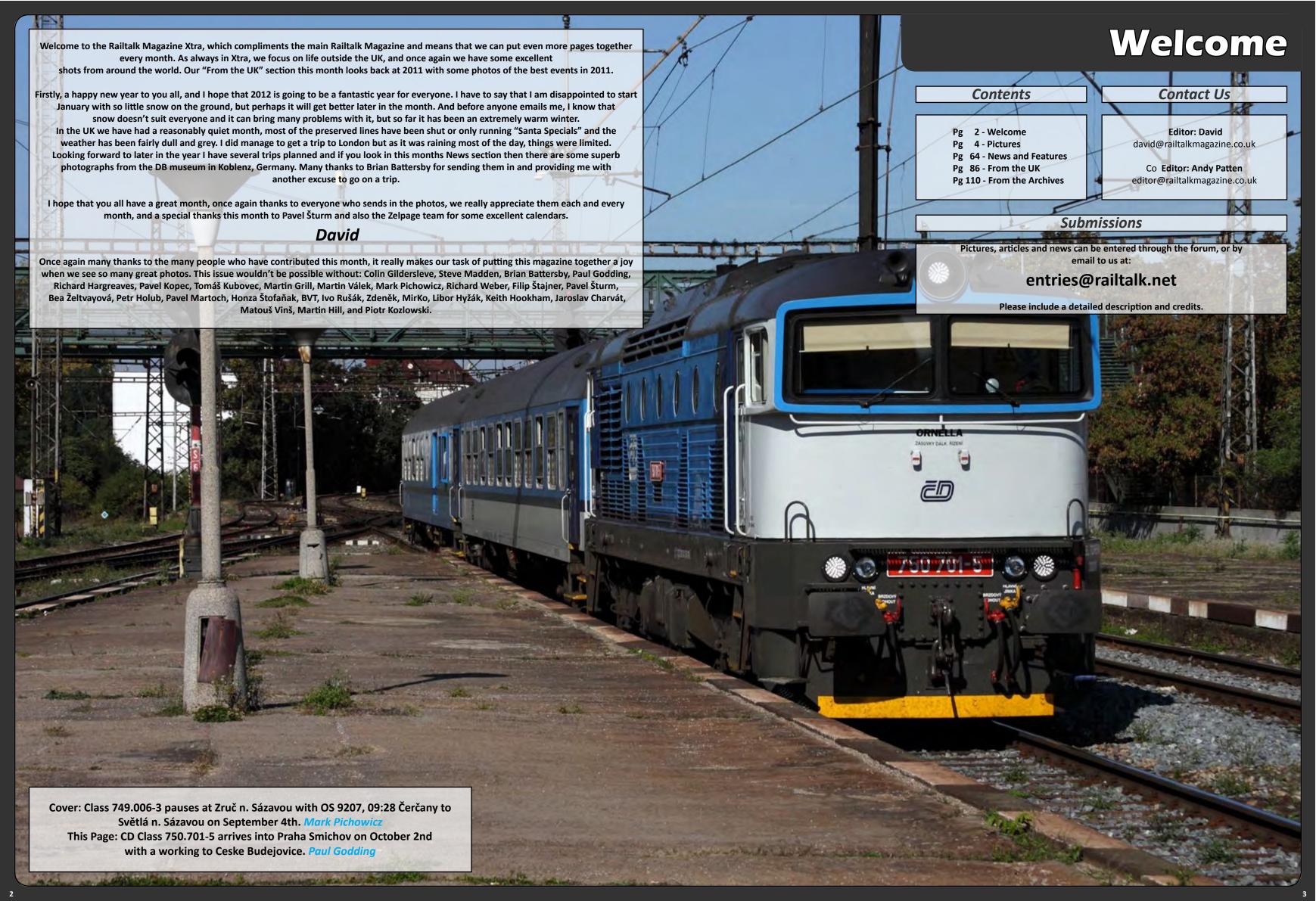
Railtalk

Issue 64x January 2012 Magazine



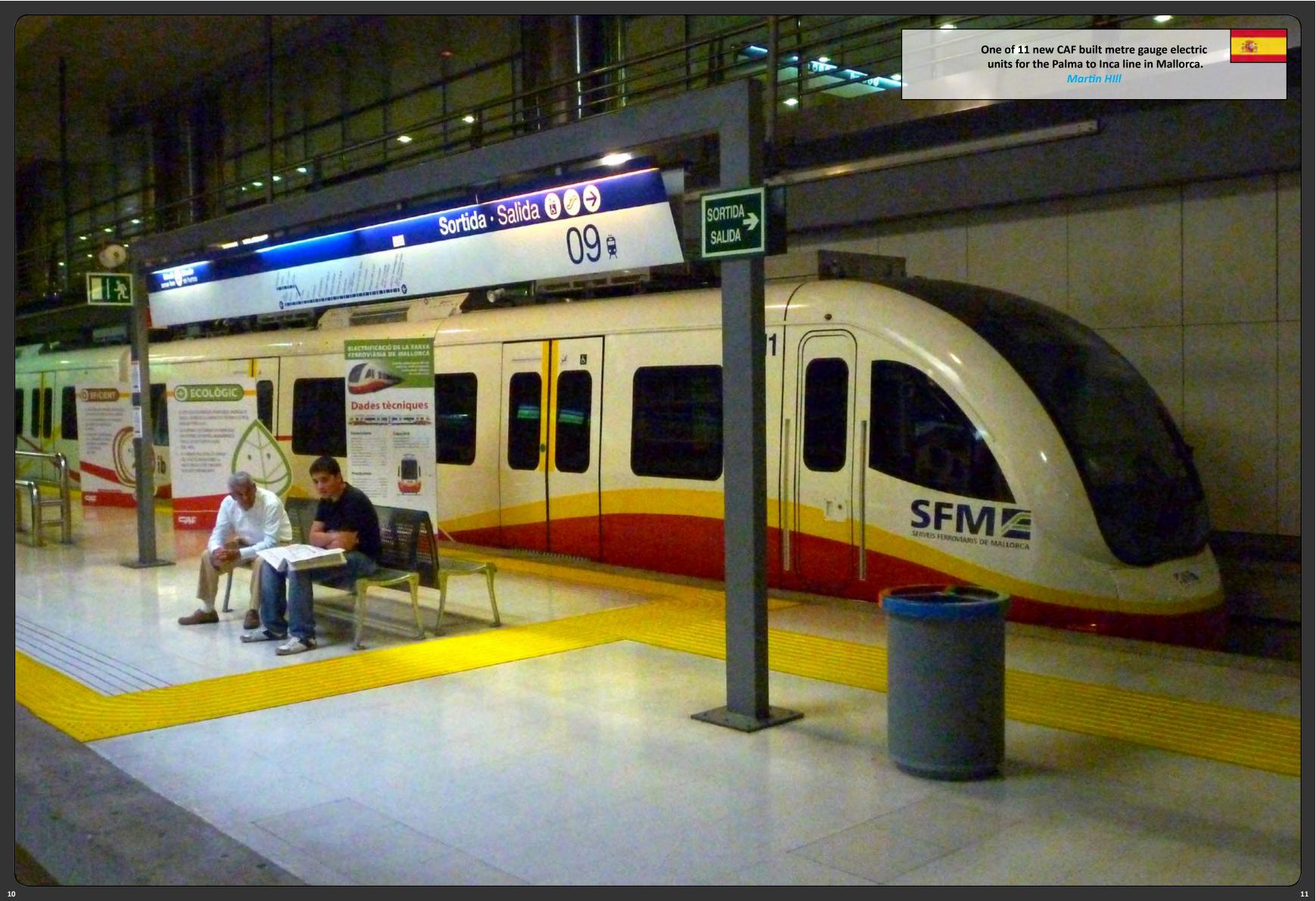




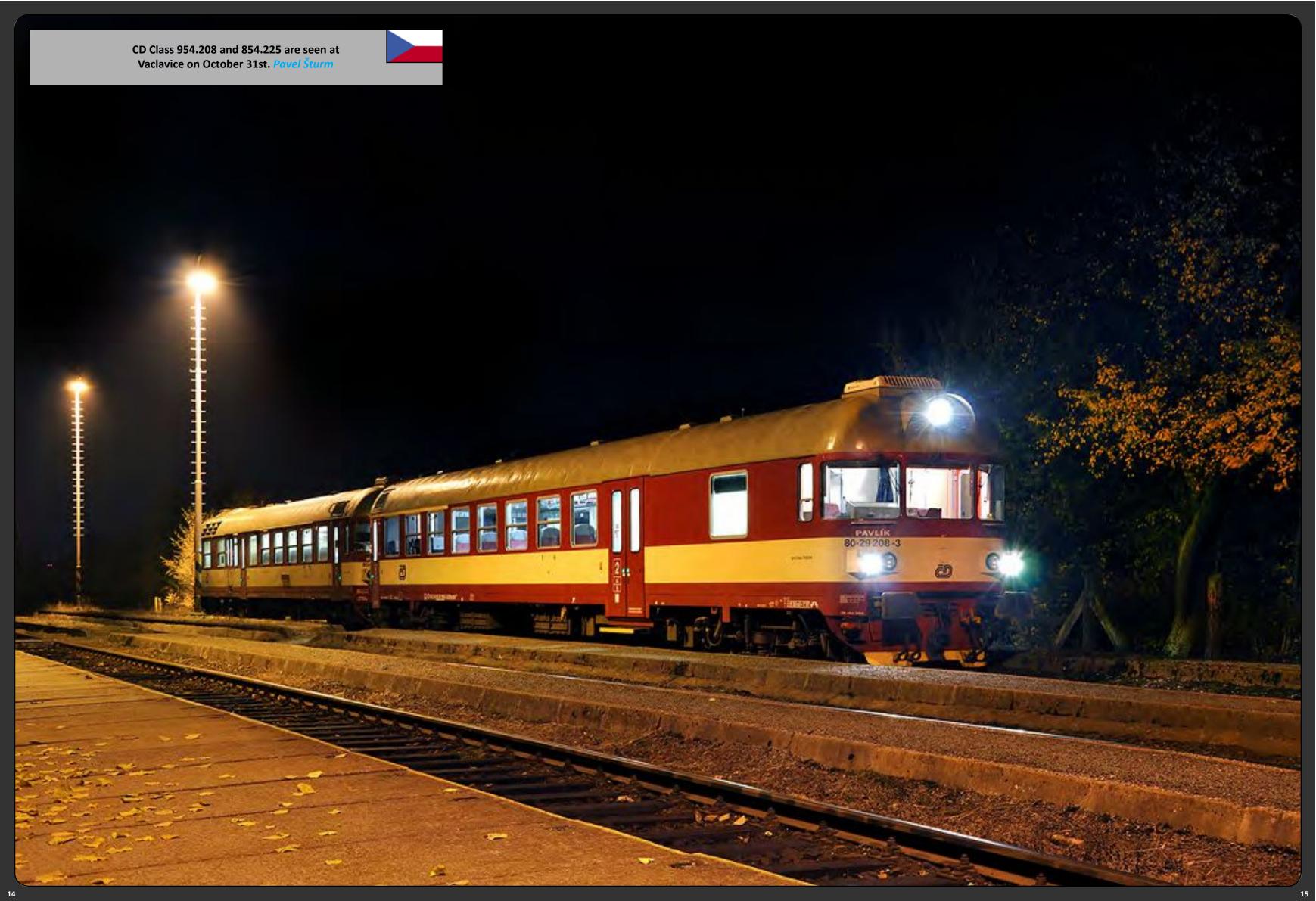












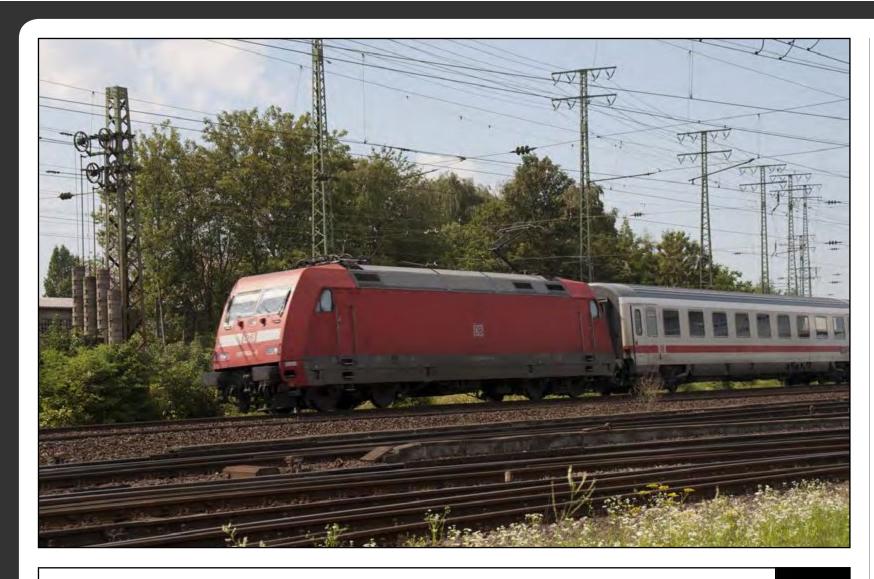


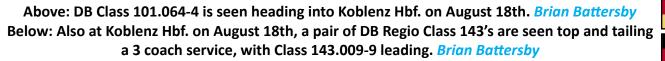










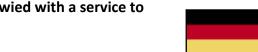






Above: Vossloh HLD77 series shunters, Nos 7800 and 7807 head through Antwerp Berchem on August 8th. *Brian Battersby*Below: On August 15th, DB Class 143.958-7 is seen departing Neuwied with a service to

Monchengladbach Hbf. Brian Battersby







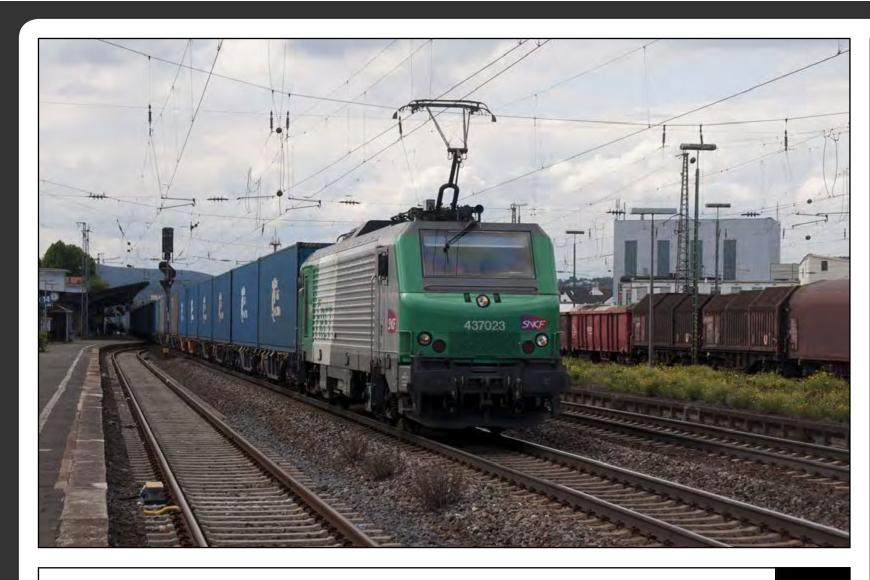


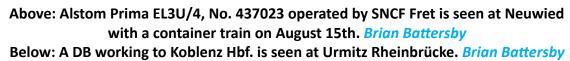
















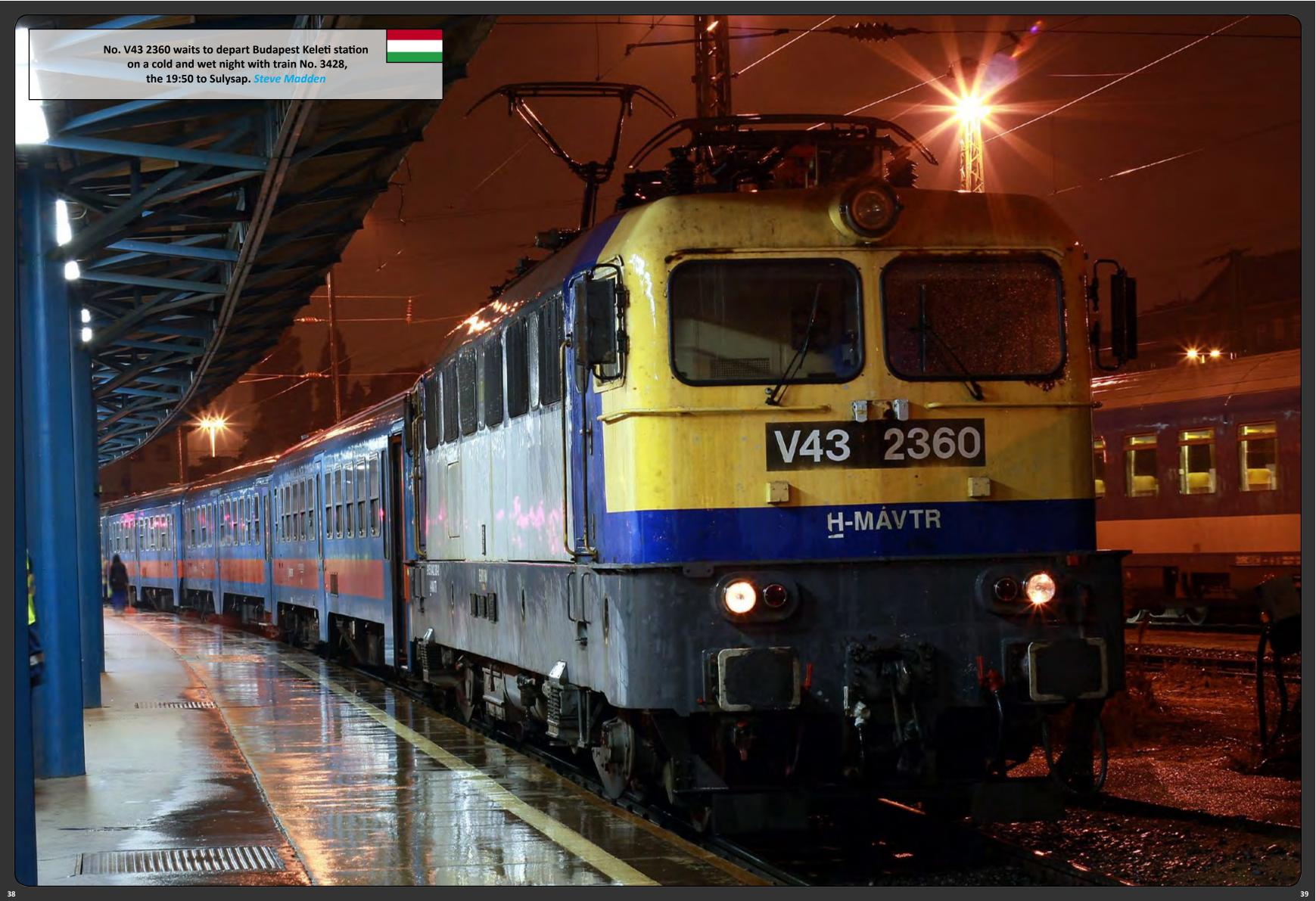
Above: CD Class 151.004-9 arrives into Praha Hlavni Nadrazi on June 26th with a service from Ceska Trebova. *Paul Godding*Below: DB Class 181.220 is seen upon arrival at Trier on August 11th. *Brian Battersby*











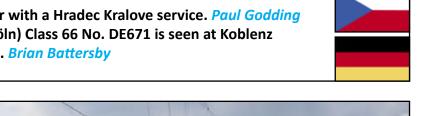


Above: On October 5th, CZ Loko Class 719.701-5 is seen in immaculate condition at Brno. Class47 Below: DB Class 101.016-4 is seen stabled at Koblenz on August 15th carrying rather faded Unicef 60 years livery. Brian Battersby





Above: CD Class 754.050-3 is seen at Jaromer with a Hradec Kralove service. Paul Godding Below: HGK (Häfen und Güterverkehr Köln) Class 66 No. DE671 is seen at Koblenz On August 15th. Brian Battersby



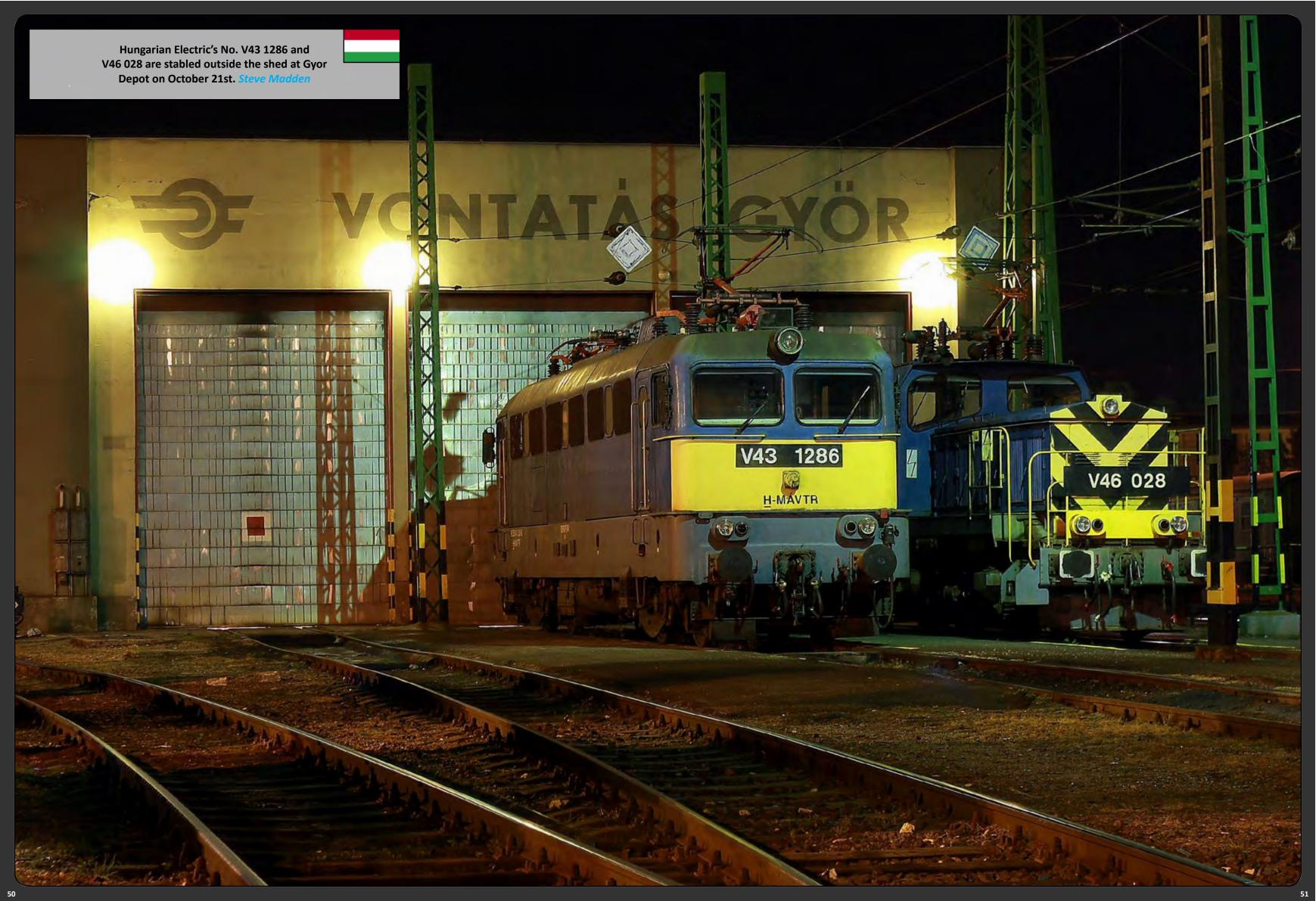


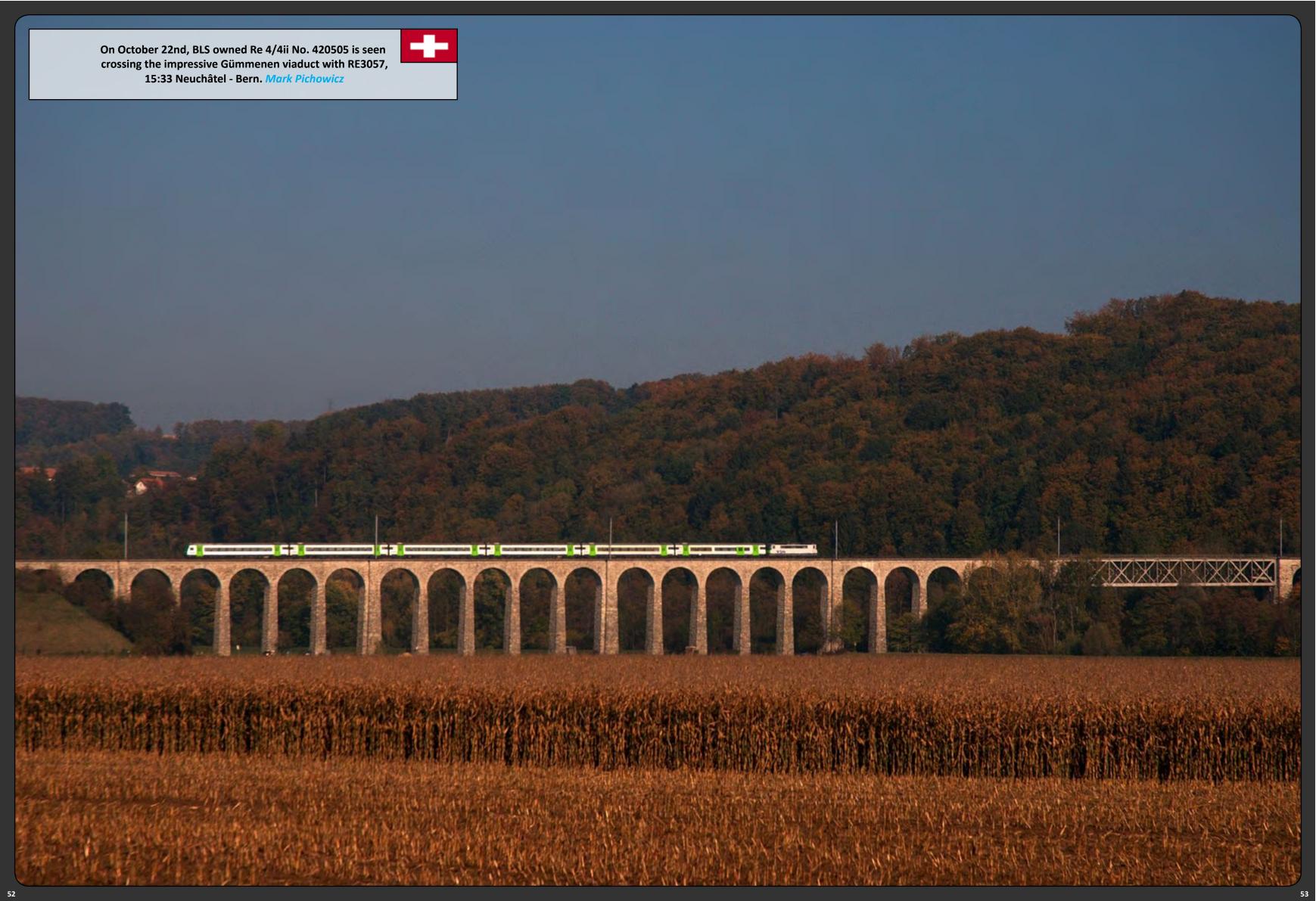
























The DB Museum, Koblenz, is housed in the former goods wagon repair shop (Ausbesserungswerk) in the Koblenz district of Lützel. The site was built in 1905 as part of the rebuilding and expansion of Lützel goods station into the Koblenz-Lützel locomotive depot (Bahnbetriebswerk). Originally the facility included a large roundhouse with two turntables, where the goods locomotives were stabled, as well as a wagon shed in which goods wagons were repaired until 1995. Today it accommodates the vehicles belonging to the DB Museum at Koblenz. The old Bahnbetriebswerk was dismantled bit by bit up to the early 1980s. Here are some photos taken during a visit to the museum in 2011. *All: Brian Battersby*



News and Features



Top Left: The Series E18 locomotives were intended for hauling heavy trains at high speeds.

Bottom Left: Built in 1952, this class was for express trains on the German Federal Railway.

Top Right: Series E10 was for years the most important locomotive series in the West German express trains

Bottom Right: Series E40 locomotives were purchased for the freight train operation as successor to the Series E94/E44.









Top Left: Locomotives of the Series E41 were designed to carry light freight and passenger trains.

Bottom Left: Deutsche Reichsbahn procured Series E44 locomotives as a universal locomotive for passenger and freight. Top Right: Class 181s were bought by the German Federal Railways for cross-border traffic with Luxembourg and France. Bottom Right: The Class 217 (until 1968 known as Class V162) were bought between 1965 and 1968 and still used today.





Top Left: V160 family, which was designed as a single-engine large diesel locomotive designed for moderate line service.

Bottom Left: The DB Series Köf III (331-335 Series since 1968) consisted of light-axle shunting locomotives.

Top Right: Series E69 described the German Reichsbahn (DRG) as a Passenger - Electric locomotive.

Bottom Right: The V60 is a series originally developed for the German Federal Railways.









Top Left: The first series (E16 01-10) was delivered in 1926, the second (E 16 11-17) 1927.

Bottom Left: Series E60 were conceived as an electrical shunter and worked from 1927 to 1983.

Top Right: The electric locomotives of the Series E93 (from 1968: DB-193 series) were designed for freight service.

Bottom Right: The twin-engine electric locomotives of Series E71 was designed by the Prussian state railways for freight.









Commuter trains of the 430 series from the successful electric multiple unit family will soon be in operation in the Rhein - Main - Verkehrsverbund (RMV) network

Bombardier Transportation has received an order for 90 electric multiple units of the 430 series from DB Regio AG. The order value totals around 500 million euros (648 million US dollars). To date 87 trains of the same series 430 have already been ordered for the Stuttgart region and production of these is underway.

DB Regio won a European-wide tender from the Rhein-Main-Verkersverbund (RMV) in November 2011, securing the transportation contract for the Rhein-Main rapid transit network. The new 90 four-car electric multiple units of the 430 series are to be used in the suburban-network Kleyer, covering more than 7.2 million train kilometres a year, from December 2014 onwards. The trains are able to accelerate rapidly and can reach speeds of up to 140 km/h during operation.

The electric multiple units of the 430 series have 24 electric swivel-sliding doors, enabling easier and more rapid passenger flow. The trains will also provide a spacious multi-purpose area to ensure greater convenience for passengers travelling with bicycles. Energy-saving indirect LED lighting integrated in the luggage racks enhances the interior ambience. All coaches are joined together by convenient walkways. Information on connecting trains is displayed in real-time via a modern passenger information system with a monitor in each of the entrance areas.

Video monitoring cameras, combined with an open layout which allows a clear view of the train interior over its entire length, help increase safety and security for all passengers. The vehicles will be built in Germany by Bombardier and by Alstom prior to final delivery in 2014.

"The sleek, modern design of the new multiple mean we can provide mobility for the future, while ensuring the highest level of reliability combined with comfort and hospitality. That's just the concept tomorrow's regional transit has been looking for," said Dr. Klaus Baur, Chairman of the Management Board Bombardier Transportation Deutschland



Launch of the construction "DOZ Česká Třebová - Přerov"



Přerov, 13 December 2011 – The implementation of the construction dealing with the remote traffic control system and running of technological equipment in the track section Přerov (excluding) – Česká Třebová (excluding) including links to the current signalling and information systems has been officially launched. The traffic control centre for this controlled section will be set up in the new building of the Centralized Traffic Control workplace (CTC) in Přerov. The investor of the construction is the Railway Infrastructure Administration, state organization.

The construction is a follow-up to the earlier implemented constructions of the modernization and the optimization of the connecting branch of I and II Railway Transit Corridor in the section Přerov (excluding) – Česká Třebová (excluding). Within the scope of these constructions, modern signalling, telecommunication and supply equipment was also installed; it allows the section control and creates a basis for the traffic control. It is a follow-up to the earlier implemented constructions "DOZ Přerov (excluding) – Břeclav (excluding)" and "DOZ Přerov (excluding) – Polanka nad Odrou".

One of the built CTC halls in Přerov will house new workplaces comprising units of workstations arranged in three rows. Relevant levels will be reciprocally raised. Three workplaces of the section traffic controllers will be set up in the hall, of which two are considered for the subsequent integration of the control of railway station Olomouc, two workplaces of chief traffic controllers and three workplaces of operators. The telecommunication technology will also be supplemented and expanded by the traffic control of the line Přerov – Česká Třebová.

Technological rooms in the relevant stations will be modified. The modification will mainly include software upgrade in the technological units of the signalling and telecommunication systems and partial rearrangement of the dispatcher's desk. The stations will be equipped with camera surveillance systems to monitor selected areas of the station premises and the traffic control calls for an upgrade of the telecommunication equipment in the stations. Further to the camerasurveillance systems, where it is necessary to ensure the connection of cameras on platforms to the telecommunication infrastructure as well as their power supply. Necessary cables will be added to the current cable routes.

The level crossings on I-class to III-class roads will be equipped with cameras integrated in the surveillance camera system so that CDP traffic controller will be able to check the situation on those level crossings. The electric switch heating will also be partially supplemented.

The national funds have been provided by the State Fund for Transport Infrastructure (SFTI). The core section has been co-funded by the European Union from the Cohesion Fund under the Operational Programme Transport. The EU contribution may represent up to 85 % of the eligible costs.

Europorte Channel gains authorisation for Class 92s to operate on HS1



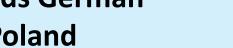
Europorte Channel, which provides traction services for rail freight trains through the Channel Tunnel and international haulage from Spain and Italy to the UK, has been granted approval for the use of its fleet of Class 92 locomotives on HS1 between London and the Channel Tunnel.

Access to HS1 means that Europorte Channel can haul larger gauge and higher speed freight traffic between destinations across the continent and London, through the Channel Tunnel, with the journey time from the Tunnel to London being reduced from 4 hours on traditional routes to just 70 minutes.

Europorte Channel train drivers are currently being trained to drive on the new route and it is expected that new commercial services will start early in 2012. Europorte Channel can now use its 16 Class 92s throughout the UK network and through the Channel Tunnel, meaning that there is only one locomotive change necessary when arriving in France, where the Class 92s are still unauthorised.

John Smith, Managing Director of GB Railfreight, stated "This is very good news for the future of rail freight in the UK and internationally. The extra speed and increased size of wagons that can be carried on HS1 bring significant advantages to rail freight transportation and we hope that this move will pave the way for further expansion of rail freight through the Channel Tunnel".

DB Schenker Rail expands German seaport traffic to Poland



As of December 11th, DB Schenker Rail is offering end-to-end container transportation services from the Hamburg and Bremerhaven seaports to Poland.

DB Schenker Rail has been running container trains out of Hamburg and Bremerhaven to the classification yard at Poznan Franowo, Poland, since 1991. Until now, the trains were always handed over to Polish State Railways' PKP Cargo at the border in Frankfurt Oder. The block trains were split up in Poznan Franowo. The cars were then recombined into new consists to supply the business centers of Warsaw, Lodz, Wroclaw and Katowice.

Together with its customer Polzug Intermodal, which is the market leader in intermodal traffic between Western Europe and Poland, DB Schenker Rail has come up with a new approach to operations for direct shuttle trains. "We expect the new system with direct shuttle trains to yield faster transit times and greater reliability of our services," Dr. Alexander Hedderich, Chairman of DB Schenker Rail, explained.

A new hub terminal, specially built for and now operated by Polzug in Gadki, about 20 kilometers southeast of Poznan, has a pivotal function in the new service. The trains from Germany still arrive here but are no longer split up. Instead, the containers are transshipped onto waiting PKP Cargo block trains at the new hub terminal. These trains then carry the freight to Polzug terminals in the Polish business centers.

DB Schenker Rail runs the cross-border service itself as far as Gadki. Five new multi-system locomotives, able to operate on both the German and Polish networks, are used for the Polzug transportation service. "The new approach to operations adds a whole new dimension to our container traffic. The new system with departures scheduled to meet industrial needs optimally combines loading resources during the day shift with locomotive resources during off-peak hours. We see this as the future of competitive services in intermodal traffic," Walter Schulze-Freyberg, CEO of Polzug Intermodal, explained.

Strategic partnership between Deutsche Bahn and Qatar Railways enters a new phase



Deutsche Bahn, with its subsidiary DB International, is the major strategic partner in the development and construction of a transport network for the Emirate of Qatar in the Persian Gulf.

An important part of this project is the planned subway network in Doha, which will connect the airport with the city center and the soccer stadiums that will host the 2022 World Cup. This will greatly improve the transport situation in the capital. The "Railways Steering Committee", under the chairmanship of the Qatari Prime Minister, has been established for the organizational development and coordination of the entire project. The Qatar Railways Company (RAIL), the Qatari railway, has also been restructured. To shorten the decision-making processes, the tasks originally assigned to the planned Qatar Railways Development Company (QRDC) will in future be handled directly by Qatar Railways. The experts from DB International, who have already been working on site since 2008 on the development of the planned transport network, will be seconded to RAIL.

In addition, DB International is taking over the on-going engineering services, as well as the technical consulting and perspective training and qualification of the Qatari staff. The contract for these services was signed in Doha recently.

'We are relying on the globally recognized know-how of Deutsche Bahn, and are looking forward to the continued collaboration with our partners from DB International," said the CEO of RAIL, Saad Al Muhannadi. The Chairman of the Management Board of DB International, Niko Warbanoff, added: "The expertise of our German engineers is in great demand, and our on-site team is providing vital support for our Qatari partner."

The next step of this ambitious project will be the international invitation to tender for the various project components.

Stephen's snowy railway scene is picture perfect

An Edinburgh-based train driver has won a European transport photography competition for his stunning photograph of a passenger train near Ballencrieff.

Stephen Gorman of CrossCountry has won the Arriva Photo of the Year 2011 award for his dramatic image taken looking east towards North Berwick, with North Berwick Law providing stunning background terrain.

His image of the CrossCountry train was judged alongside other finalists' images from across the Arriva group for the annual award. His eye for a picture has netted him a total of £675 in prizes from Arriva's photo competition this year. Stephen, aged 44, is from Gullane, East Lothian. He said:"I can remember that day was very cold and I was standing in a foot and a half of snow to get the photo."

Stephen has been interested in photography for 20 years, starting after a friend introduced him to the hobby. He favours a Nikon D3 camera, however his winning image was taken with a Nikon D200 with a telephoto lens.

Arriva chief executive, David Martin, said: "The standard of photography that the competition attracts is extremely high.

Stephen's image is a very worthy winner and is testament to his photographic tenacity."

The competition, open to all 47,500 Arriva employees across 12 countries, receives hundreds of entries every year from staff across Europe.

James Dark of New Transit magazine, which judged the competition, said: "Congratulations to the finalists on your powerful and beautiful pictures. It was no easy task to pick a winner, but for us Stephen's image just stood out. "We felt that the impression of the train powering through the snow at a time when transport in many parts of the country was at a standstill conveyed the strength of the rail network. And of course the picture captured perfectly the glorious surroundings that can make travelling by train a real joy."



SCT Transport signs agreement with Hector Rail for transports Gävle -- Göteborg



From January 1st, Hector Rail will again run trains between Gävle and the Port of Göteborg. The customer is SCT Transport who has been appointed by Maersk to transport the overseas volumes of Tetra Pak produced in the Korsnäs paper mill in Gävle to the Port of Göteborg. The cargo will be loaded in containers and the frequency will be five round trips per week. The agreement is for three years. Hector Rail also ran this operation during the years 2008-2010, at that time for another customer. A change in the new operation is the increased train weight, now up to 2000 tons. The operation with modern locos with recuperative brakes is another improvement. This makes it possible to regenerate the break energy to the electric network. This will improve the environmental performance of the transports.

In addition to the line haulage Gävle – Göteborg, Hector rail will also perform shunting activities at the Granudden terminal in Gävle. The contract will employ one main line locomotive for the transports between Gävle and Göteborg and one shunting locomotive in Gävle.

Rail freight companies present their requirements for the most important European Corridor: Rotterdam-Genoa

In Berlin the CEOs of four rail freight companies – DB Schenker Rail (Germany), TX Logistik (Germany), SBB Cargo (Switzerland) and BLS Cargo (Switzerland) – presented their requirements for the development of the European rail freight transport corridors defined by the European Commission. Under the impulse of the Community of European Railway and Infrastructure Companies (CER), the four companies agreed on a joint position which will be actively promoted to policymakers and national infrastructure managers.

Given that the growth forecast for European rail freight mainly concerns cross-border corridors, for example the Corridor Rotterdam-Genoa, it is important to eliminate infrastructure bottlenecks along those routes. On the Rotterdam-Genoa Corridor, bottlenecks are in Oberhausen, Basel, Chiasso and Milan. Dr. Dirk Stahl, CEO of Swiss company BLS Cargo commented: "The new infrastructure of the Betuwe line, the Lötschberg Tunnel and the Gotthard Base Tunnel must be linked to create an efficient end-to-end corridor. Furthermore, capacity bottlenecks need to be alleviated."

According to Dr. Alexander Hedderich, CEO of DB Schenker Rail, the biggest European rail freight company, "improving the corridor's efficiency involves numerous infrastructure investments. Construction works and information about these works must be coordinated on an international level to maintain the best possible quality of service." Furthermore, capacity can be increased if priority is given also to freight trains, if operational processes are harmonized, and if train paths are constructed based on market needs." In addition to these operational challenges, it is absolutely essential that cost burden are set in a way to guarantee the competitiveness of the rail mode," stressed Karl Michael Mohnsen, CEO of the rail company TX Logistik.

Keeping in mind the objective to improve economic efficiency, any new infrastructure should generally be designed to accommodate 1,500-meter trains. Moreover, there is a need to simplify and improve processes in order to minimize the number of operational stops.

Interoperability in particular is essential for rail companies to remain competitive with road transport. "Railway operators continue to struggle with different national rules, such as complex homologation procedures and different safety systems," said Nicolas Perrin, CEO of Swiss company SBB Cargo. "This results in additional costs which reduce the advantages of rail in cross-border transport. This clearly goes against the objective of market opening in Europe and puts rail at a disadvantage to road transport," he added.

EU Regulation No. 913 concerning a European rail network for competitive freight, which entered into force in November 2010, aims to increase the competitiveness and quality of international rail freight. The network should be organized in such a way that the most important economic centers are linked in a more reliable and faster way, allowing more volumes to be transported. Nine international rail freight corridors, giving more priority to freight trains, are to be established by 2015.

Corridor 1, also known as ERTMS Corridor A, connects Rotterdam (Netherlands) and Zeebrugge (Belgium) with Genoa (on the Italian coast) via Cologne, Duisburg, Mannheim, Basel, and two parallel routes in Switzerland. This corridor is one of the most important routes in the European rail network. It was therefore selected for investigation by the four rail operators.

Dr. Johannes Ludewig, CER Executive Director, concluded that the four companies' recommendations are groundbreaking with regard to the implementation of the EU Regulation. "CER has started and driven the political corridor discussions with former EU Transport Commissioner Loyola de Palacio back in 2003. Since then, a lot has happened on the operational as well as on the legislative side. CER strongly believes that operators' involvement is paramount in shaping corridor developments. The corridor concept will only be successful if operators are directly addressing the corridor-management with their concrete market-oriented requirements. The signal sent in Berlin is thus a very important step."

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Czech Railways has started the reconstruction of the station building at Usti nad Labem hl.n.

Reconstruction of the station building main station in Usti nad Labem is one of the most important investment projects of Czech Railways. The main reason for its implementation is the optimal entry into a new subway leading to the

waterfront and the Elbe station building modifications to meet the demands of one of the busiest railway station.

The main railway station in the regional capital passes 1.5 million passengers a year and the station is from this perspective in tenth place in the Czech Republic.

Part of the original historic building will be maintained and modernized, the remaining part of the station entrance to the subway will form a new glass terminal building by the architectural design AP Studio, Ltd. The project deals sensitively blending with original new designs. The restored station will provide at the end of 2012 passengers in addition to increased clearance culture and other services, especially in the lobby patio overlooking the Větruše and

operation station.

The reconstruction was implemented on a tender BM Construction Company Ltd. The total investment cost in the reconstruction of the station building will reach 45 million CZK.

Reconstruction will take place in two stages and the traveling public will always be available to only half the space station building. The first stage will begin in January next year and will last until July, the second phase will begin in August and ends in December 2012.

Left Wing (when viewed from přednádraží) - the original building: the establishment of shops with input from přednádraží from the hall, replacement of

windows, facades and roof insulation, new wiring inside wiring, lighting, heating, paving, tiling

Right Wing:

- demolition of the building for the establishment of entry into the subway, the preservation of masonry structures and railway ticket offices.
- portal of entry to the subway and construction of new halls with glazed patio over cash registers accessible from the 1st platform and lift the terminal building
- building insulation, flat roof, new wiring electrical installation, lighting, underfloor heating buildings, paving, tiling

Czech Railways in 2005, along with the Ústecký Region, town of Usti nad Labem, the Railway Infrastructure Administration, the State Fund of Transport Infrastructure, the Ministry of Transport and the Ministry for Regional Development concluded a memorandum of co-ordination of key buildings in the locality of the railroad area. The intention was to ensure reconstruction of the station building links projects with the city (přednádraží and waterfront) and the Railway Infrastructure Administration (subway) to the revitalization of urban centers in Usti nad Labem, conducted a coordinated manner. The station building at Usti nad Labem was built in 1850.

Euroduplex inaugurates the Rhine-Rhône LGV high-speed rail line



Euroduplex – the third generation of TGV Duplex – went into service on 11 December 2011 when the SNCF inaugurated the Rhine-Rhone LGV high-speed rail line. Euroduplex is the only double-decker, interoperable high-speed train capable of running on European networks while transporting up to 1,020 passengers (multiple units) at speeds of 320 km/h in total safety.

Building on the success, quality and reliability of previous generations of Alstom's high-speed double-decker trains (138 Duplex trainsets already sold), the new Euroduplex trainsets draw on a unique body of experience that helps reduce their cost of acquisition and operation, including maintenance costs. Since they were launched in 1996, these trains have travelled nearly 500 million kilometres without a major incident. On the strength of these results, Euroduplex offers the best operating costs per corridor and the highest return per seat.

There are a number of technical developments in this new generation that meet new needs in terms of interoperability, passenger comfort, operations and the overall cost of acquisition. Intended for use on the French, German, Swiss and Luxembourgish rail networks, Euroduplex trains use signalling systems that is compatible with all these European networks and are equipped with traction systems compatible with the voltages used in Europe. Some of these trains can also run in Spain. The TGV Duplex trains sold in Morocco are based on the same technology platform.

When it comes to comfort, a major effort has gone into passenger information systems:

- new external displays placed near each door make it easier to read the car number, train number and destination.
- on-board screens display in several languages the names of the stations along the route and the final destination, as well as information on the journey (time, geolocation and train speed)
- seats are equipped with digital reservation displays indicating the sections of the journey for which they are occupied.

Staff can issue announcements from control consoles to keep passengers informed during the trip. These messages are replicated on-screen for the hearing impaired.

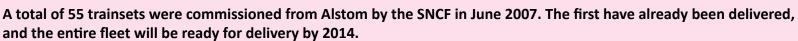
Accessibility has been optimised for people with reduced mobility (PRM). 50 specially-outfitted areas – accounting for over 10% of the total capacity of the trains (509 seats) – are reserved for PRM. Wheelchair-user areas are larger (especially the toilets) and wide aisles make it easy to move around on board.

The ground-to-train connection systems also offer new prospects for communication by:

- disseminating information on train connections,
- updating the train's occupancy map after departure
- alerting ground crews about a malfunction for immediate remedial work

Passenger safety on these new trains has also been enhanced

- the trains are designed for video surveillance equipment,
- in compliance with the most stringent fire safety requirements, trains that run in Spain will have fire doors installed in gangways and cabins, and fire detection systems have been introduced in new areas such as the toilets, nurseries, luggage areas, electrical cabinets and machinery areas.



The Euroduplex is designed and assembled at Alstom sites: the passenger cars in La Rochelle, the locomotives in Belfort and the end cars in Reichshoffen. Other Alstom sites involved in the manufacture of rolling stock include Ornans for the traction systems, Le Creusot for the bogies, Tarbes for the electrical units and traction equipment, Villeurbanne for the electronic control systems, Montreal for passenger information systems, and Charleroi for auxiliary inverters. A total of 1,500 people work daily at these sites to further high-speed rail. The project's main French suppliers are Faiveley Transport, Alstom GRID Logitrade, COMECA, CEIT, TFCM and Association Bretagne Atelier. Together with other SME manufacturers in the French rail sector, they employ some 6,000 people in France.

Photo: Euroduplex ©Alstom Transport - A. Février

ÖBB: Strong in the winter - fit for ice and snow

Winter maintenance is a team effort. Good preparation and team spirit to ensure the safety of customers.

The winter will arrive and already the next snowfall is predicted, although the time being "only" at higher altitudes. The ÖBB are certainly well prepared. Because the work is already taken care long before the winter season. Checks has been including the operational readiness of snow removal equipment and switch heaters, sections were exposed to snow fences erected and controlled avalanche protective structures. In short - the ÖBB are equipped for frost and snow.

Up to 2,000 people in the track and turnout area

In shifts if necessary to provide up to 2,000 people for the navigability of the route network. Especially in densely populated urban area, such as the Vienna S-Bahn, the ÖBB on switch heaters have very high quality, well to the main tracks of the main axes. Winter service is "handmade": removing snow from switches, de-icing of bridges and tunnels, shovel up or cleaning of platform roofs made of ruts at railway crossings manually. If necessary, the evacuation of rail-mounted snow clearing equipment such as snow plows, blowers and brushes made.

Point heater can melt snow and ice

Wide Austria have over 10,000 points with point heaters - a total of around 15,000 points. When snow and ice threaten to paralyze important crossovers, switch heaters are activated automatically and bring the snow to melt in the turnout area. In addition, adverse weather conditions with wind and cold, the dispatcher also the possibility to induce the so-called "drifting snow" button for a specified time, a "continuous heating", so that course remain free of snow and ice.

Winter services to over 1,000 stations and stops

Already in the early morning hours in the case in winter service companies in operation and freeing more than 1,000 stations and stops of ice and snow. Only among the traffic stations an area of approximately three million square meters will be kept free of ice and snow. Moreover, is carried out at ÖBB-control buildings, a thaw.

Natural Hazard Management - 50 employees assess avalanche danger

Avalanche lines for the Alpine region are typical. Defined on sections of ÖBB-avalanche warning service assessed with approximately 50 employees, the avalanche danger for railway operations. Back in the summer shelters are inspected and repaired. In winter, the ÖBB supports the local avalanche warning Commission assesses the current snow conditions and sets appropriate action.

Precise weather forecasts and continuous improvement

Crucial for the activation of the forces is the weather forecast. The ÖBB have for some years, a clear-weather warning system (snow, wind, temperature). Accordingly, the willingness to organize and mobilize the staff if necessary. The ÖBB work on the continuous development of the winter performance of all the relevant railway infrastructure. For example, there are working groups that analyzed during the winter, weaknesses, consider improvements and bring before the next winter season, it and implement (eg where is it useful / necessary to install additional switch heaters, which need additional checks on equipment exercises, etc.)

Basically, a 100% failure-free in winter at the meeting of snow, ice, wind and cold is not possible. But the ÖBB have best prepared for the worst. In case of failure all available staff are on duty to resolve this as quickly as possible - and switch if necessary to make even manually.

Photo: © ÖBB Talent in the winter



Bombardier Wins Fourth Order from Frankfurt/Main

Bombardier Transportation has won an order to supply an additional 78 BOMBARDIER FLEXITY Swift high-floor light rail vehicles (LRVs) and 10 FLEXITY Classic trams to the Frankfurt Transport Authority, VGF in Germany. The new LRVs are scheduled to be delivered between January 2014 and June 2017; the new trams will arrive in Frankfurt/Main between August and December 2012. The orders, which are options under two contracts signed with VGF in March 2006 and June 2002, are valued at approximately 191 million euro (\$249 million US).

The new LRVs mark a further step in Bombardier's commitment to increased passenger comfort and operational flexibility, offering a novel mass transit experience at peak times in the German finance hub. The 25 m long vehicles are designed so that they can be combined into 50 m long units, with passengers able to walk from one end all the way to the other. The first two vehicles capable of being combined into one long unit have already been delivered for testing and are due to begin operating in February 2012.

"Our significant investment in these new vehicles supplied by Bombardier is absolutely essential," said Michael Budig, Managing Director of VGF. "It enables us to offer our passengers a metro and tram operation of the highest standard, one that meets the requirements of VGF and the city of Frankfurt."

This is the fourth order which VGF has placed with Bombardier Transportation, bringing the total number of vehicles ordered to date to 299. Following an order for 60 FLEXITY Classic trams in December 2001 and an additional five vehicles in January 2005, 146 FLEXITY Swift high-floor LRVs were ordered in March 2006.

"This fourth order demonstrates VGF's trust in our business as well as in our FLEXITY vehicles and continues our long-standing and successful partnership," said Germar Wacker, President, Light Rail Vehicles, Bombardier Transportation. "The availability of our products, Bombardier's know-how and VGF's positive experience with our FLEXITY vehicles offer the ideal basis for these new trams and LRVs to demonstrate their reliability and efficiency in Frankfurt."

The reliable FLEXITY Swift LRVs have been in successful revenue service on Frankfurt's high-floor network since 2008 and received the Universal Design Consumer Favorite 09 award. The uni- and bidirectional vehicles are equipped with the reliable BOMBARDIER MITRAC propulsion system. They are 25 m long and 2.65 m wide, accommodating 184 passengers with 48 seated passengers. Air conditioning and spacious multi-purpose areas provide greater passenger comfort, while security cameras ensure a safe ride.

The FLEXITY Classic trams have proven their reliability on the Frankfurt tram network since 2003. The trams are 30 m long and 2.4 m wide. Conventional wheel-set bogies ensure a smooth ride and reduce the wear and tear of wheels and tracks. With a capacity for 179 passengers the vehicle is ideally suited to the city.

Both vehicle types are produced at Bombardier's site in Bautzen, Germany. The electrical equipment will be provided from its site in Mannheim, the bogies from its site in Siegen, also in Germany.

Bombardier offers the industry's most complete portfolio of light rail solutions with a strong reputation for performance and reliability. To date, more than 3,500 Bombardier trams and LRVs are in revenue service or on order in approximately 100 cities across Europe, Australia and North America.



Stadler successful in Helsinki

Stadler Rail has received an order for an additional nine FLIRTs (Fast Light Innovative Regional Trains) from Junakalusto Oy in Finland. This is an option from the 2006 contract to buy 32 FLIRTs for the Helsinki suburban railway system. The first vehicles have been operating successfully for three years now. The trains are especially robust in severe winter conditions such as those experienced in Finland. The total order value is EUR 54 million. The vehicles, construction of which is due to be completed in 2014, are mainly for use on the new circular line to the airport.

Junakalusto Oy was founded as a rolling-stock company in 2004 by the cities of Helsinki, Espoo, Vantaa and Kauniainen (total of 65%) and Finnish Railways VR Ltd (35%). It buys and maintains rolling stock and makes it available to VR Ltd for operation. A new line connecting the city centre with the international Helsinki Airport is currently under construction. As of December 2014, there will be an additional suburban railway line, known as the circular line, operating along this route and connecting the centre and further parts of the greater Helsinki area to the airport. This current order increases the fleet of 32 FLIRTs to 41 in order to serve this line.

Peter Spuhler, CEO and owner of Stadler Rail Group, is pleased about the follow-up order from Finland: "The fact that this option for more FLIRTs has been exercised is evidence that the customer is very happy with the trains that have been in everyday use for three years now. We are proud of our broad-gauge FLIRT with its excellent resistance to severe winters. This vehicle is a perfect example of how innovative Stadler can be."



High tolerance to winter conditions – innovations from Stadler

Because of the wide 1524 mm gauge used in Finland, the greater clearance and, most importantly, the climatic conditions in Finland that can reach –40 degrees Celsius, the FLIRTs used in Helsinki are slightly different from the normal-gauge FLIRT. In order to improve tolerance to harsh winter conditions, insulation is increased by 50–100% and the windows are triple-glazed. A heat recovery system has been added to the tried and tested air-conditioning system used in many FLIRTs. The warm air extracted from the passenger compartment is used to preheat the cold, fresh air that is sucked in. This results in a substantial energy saving. At the same time, heaters have been fitted in the door areas in order to keep the temperature inside as constant as possible when passengers embark and disembark.

Vehicle characteristics

The four-carriage trains have 260 seats, a good 80% low-flooring level, an accessible toilet and a multifunctional area for wheelchairs, prams or bicycles. The Finnish carriage width of 3.2 metres (compared to around 2.9 metres in most countries in Europe) easily allows comfortable 3+2 seating. A state-of-the-art information system with 11 flat-screens provides information about the timetable, connecting trains or the weather. Six emergency contact points allow passengers to contact the driver or conductor. The train can achieve speeds of 160 km/h and will initially be operated using the Finnish EBICAB train control system, with plans for an upgrade to the European Train Control System (ETCS) at a later date.

Hessische Landesbahn acquires a further four FLIRT regional multiple-unit trains from Stadler

Introduction of FLIRTs from December 2014, between Schwalmstadt-Treysa and Kassel
Order volume around EUR 15 million

Hessische Landesbahn GmbH (HLB) has acquired four 3-unit electric low-floored FLIRTs from Stadler Pankow GmbH, significantly expanding its existing vehicle fleet with this order worth around EUR 15 million. Nine FLIRTs have already been in use by HLB on the Frankfurt–Giessen–Siegen and Giessen–Marburg routes since 2010.

"Like our passengers, we are extremely pleased with the FLIRTs in use in the Main–Lahn–Sieg network," explains HLB Managing Director Veit Salzmann. "Easy access for passengers is particularly important to us." Three 3-unit and six 5-unit electric FLIRTs (Fast Light Innovative Regional Trains) are currently in use in Hessen, and the newly ordered four 3-unit trains will travel between Kassel and Treysa from December 2014.

"We are delighted to be producing more regional trains for Hessische Landesbahn," comments Michael Daum, Director of Stadler Pankow GmbH. "With accessible mobility becoming increasingly important, the new FLIRTs will provide not only passenger accessibility and a large, easily accessible toilet but also a bridge plate at every door." The electric trains offer >90 per cent low-floor space, plus enough space to transport two wheelchairs and 12 bicycles, and meet technical EU standards of interoperability concerning persons with reduced mobility, known as TSI PRM. The needs of these individuals are taken into account particularly in seating and door areas, passenger information, lighting and toilet facilities.

FLIRT regional trains provide seating for 180 passengers and standing space for up to 209 passengers. They reach a maximum speed of 160 km/h and have low energy consumption. FLIRTs from Stadler are also a success internationally, and are in operation in countries such as Norway, Finland and Switzerland.



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