

Railtalk Magazine *Xtra*

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Railtalk Magazine *Xtra*

Welcome to the Railtalk Magazine Xtra, which compliments the main Railtalk Magazine and means that we can put even more pages together every month. As always in Xtra, we focus on life outside the UK, and once again we have some excellent shots from around the world. Our "From the UK" section this month has a look at the Great Western Railway Centre at Didcot, where there are many examples of the UK's railway history and an excellent insight into the broad gauge that could have been the mainstay of services in the Western region. Be prepared to stay for several hours during your visit, as there is certainly more to see than you would first think.

This month I've been on a short holiday in the UK and visited amongst other places, the south west and I have to say that I was very impressed with the friendliness of railway staff both on and off the trains. Well done to First Great Western, but with that statement comes a question. If First Great Western are so good, then why are First Transpennine Express so incredibly bad?. After all they do share the same parent company so is company policy not the same throughout?. The main news this month though was the tragedy in Spain with such a huge loss of life, this was a really terrible accident and our thoughts are with all those involved, but it does also open a few questions, such as are the concrete noise walls that are being erected more of a hazard than a help, and should speed limiters be fitted to trains so that they are unable to go in excess of certain limits? Anyway, as always thanks for reading the magazine and remember, if you are going on holiday, don't forget to pack the camera!

David

Once again many thanks to the many people who have contributed, it really makes our task of putting this magazine together a joy when we see so many great photos. This issue wouldn't be possible without: Colin Gildersleve, Steve Madden, Brian Battersby, Paul Godding, Richard Hargreaves, Pavel Kopec, Tomáš Kubovec, Martin Grill, Martin Válek, Mark Pichowicz, Richard Weber, Filip Štajner, Pavel Šturm, Bea Želtvayová, Petr Holub, Pavel Martoch, Honza Štofaňak, BVT, Ivo Rušák, Zdeněk, Mirko, Libor Hyžák, Keith Hookham, Jaroslav Charvát, Matouš Vinš, Martin Hill, Steve Dennison, Ian Leech, Anton Kendall, Laurence Sly, Colin Hart, John Coleman, Steamsounds, David Mead, Piotr Kozłowski, Derek Neesham, Roger Williams, Mark Bearton, Andy Pratt, Derek Elston, Julian Churchill, Enrique Dopico and Dave Felton.

Front Cover: On July 7th, 'Bardotka' No. T478.2078 (the former ČD 749.240), now privately owned by IVK - Ing. Vladmír Kříž, is seen working a three-day railtour around the Czech northern borderlands, mostly in northern and eastern Bohemia, pictured here at Pohoří. [Martin Grill](#)
This Page: DB's Class 218.836 and 218.313 are seen at Neibüll with a Sylt AutoZug Shuttle. [Steamsounds](#)



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Contents

Pg 2 - Welcome
Pg 3 - Pictures
Pg 45 - News and Features
Pg 55 - From the UK
Pg 65 - From the Archives

Submissions

Pictures, articles and news can be entered through the forum, or by email to us at:

entries@railtalk.net

Please include a detailed description and credits.

Railtalk Magazine Xtra

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On May 20th, Class E483.002 passes Ossenigo with a southbound train of scrap metal. [Laurence Sly](#)





PKP locos Nos. ET41-025-B + ET41-025-A
and ET22-872 are seen passing through
Gdansk Glowny on May 27th. [Julian Churchill](#)



Deh 4/6 No. 914 stands at Giswil during the Brünig Bahn 125th anniversary celebrations on June 8th. [Mark Pichowicz](#)





Freight train No. 48863 heading to Verona Porta Vescovo passes Wolf. Traction is supplied by Lokomotion with the leading locomotive Class E185.666, unique in its red and white Zebra livery.
Laurence Sly



Class 2M62-0925 in old Latvian red livery, snakes across the point work on the approach to Daugavpils station yard with a long mixed freight on May 22nd. [Steve Madden](#)





On a rare outing, 1909 built HGe 2/2 No. 2 stands at the summit station of Rochers de Naye (1968 M above sea level) after arriving with a Railway Touring Company charter on June 7th. [Mark Pichowicz](#)



BLS Cargo's new last mile electric, Class 187.002 is seen on display at Frutigen as part of the BLS celebrations on June 29th. [Keith Hookham](#)



Massachusetts Bay Transportation Authority (MBTA)
EMD GP40MC No. 1138 passes the Leonard P. Zakim
Bunker Hill Bridge whilst working train No. 227, 16:13 Boston
North - Haverhill on July 22nd. [Laurence Sly](#)



Class 2TE10MK-3135 pulls out of
Skaista Loops with a loaded coal train
heading for Ventpils Port on May 22nd.

Steve Madden



Top Right: PKP EU07-360 is seen about to work train No. IR18120 to Szczecin Glowny at Poznan Glowny on April 18th. [Steamsounds](#)



Bottom Right: The 13:44 service from Lietzow (Rügen), train No. RE13165, is seen arriving at Sassnitz on April 17th, propelled by DB's Class 112.117. [Steamsounds](#)



Below: DR Class 99.7245-6 awaits the arrival of the 14:55 from Brocken that it will take over for the trains reversal at Drei Annen Hone and head to Eisfelder Talmuhle as the 15:40 departure on June 5th. [Derek Elston](#)



Top Right: Single railcar No. 187.019-5 departs Alexisbad with the 11:33 to Harzgerode on June 7th. [Derek Elston](#)



Bottom Right: HEX local bahn set No. VE805 is seen running parallel to the Selketalbahn having just departed Quedlinburg with the 10:30 to Thale Hbf on June 7th. [Derek Elston](#)



Below: The fireman gives DR No. 997240-7 a quick polish before departing Quedlinburg with the 10:30 to Alexisbad, June 7th. [Derek Elston](#)





DB ICE unit No. 4607 is seen arriving into Koln with train No. 953 from Frankfurt to Brussels Midi, June 9th. [Derek Elston](#)



SBB Re 4/4 II Nos. 11304 and 11132 are seen working train No. IC558 05:06 Chur - Basel (to Zurich) on June 29th. [Keith Hookham](#)



Top Right: CD Class 460.020 is seen working the stopping train No. Os3216 between Vsetin and Jablunka on July 4th. [Ivo Rušák](#)



Bottom Right: 1897 built mallet No. 99.5901 is seen at rest on Wernigerode depot, June 5th. [Derek Elston](#)



Below: On June 3rd, SNCB Class 55s Nos. 5514 and 5512 are seen arriving light engine into Brussels Midi. [Derek Elston](#)



On June 6th, DR Class 99.236 receives
some TLC prior to working the 13:25 to Brocken.



Derek Elston



MRCE Dispoloks Nos. ES 64 F4-086 and ES 64 F4-112
pass Matrei am Brenner whilst working a southbound
freight train on May 23rd. [Laurence Sly](#)



Top Right: DB Regio DMU No. 628.502 is seen departing Kolin heading for Kolin-Deutz, June 3rd. [Derek Elston](#)



Bottom Right: Massachusetts Bay Transportation Authority EMD F40PH No. 1005 propels a train of empty coaching stock towards Boston North station on July 22nd. [Laurence Sly](#)



Below: A DSB ICE TD is seen arriving into Rendsburg with a service for Aarhus on April 21st. The Rendsburger Hochbrücke can be seen in the background. [Stearnsounds](#)



Top Right: Former standard gauge locos Nos. 199.871-5 and 199.892-1 are seen stored at Wernigerode Westerntor depot on the Harzer Schmalspurbahnen, June 6th. [Derek Elston](#)



Bottom Right: DR Class 99.7237-3 and 99.236 are seen amongst others on the shed at Wernigerode, June 6th. [Derek Elston](#)



Below: DB Regio Class 648.272 departs Goslar for the short run to Bad Harzburg on June 4th. [Derek Elston](#)



Top Right: Wernigerode Westerntor works shunter No. 199.011-8 is seen within the works complex on June 5th. [Derek Elston](#)



Bottom Right: DB railways Class 143-889-4 is seen arriving at Warnemunde with a service from Rostock. [Michael Lynam](#)



Below: SBB Re 4/4 II No. 11217 is seen in the sunshine at Luzern waiting to leave with a service for Locarno. [Stearnsounds](#)



DB Regio unit Class 612.161 is seen arriving at Goslar bound for Halle (Saale) Hbf, June 5th.

Derek Elston



OBB Class E190.116/1216.016 passes Matri
am Brenner whilst working EuroCity
service No. 87, 11:31 Munich - Venice Santa Lucia
on May 23rd. [Laurence Sly](#)



Top Right: CFL Class 2200 Double Deck EMU No. 2214 is pictured at at Luxembourg Gare on June 15th. [Stearnsounds](#)



Bottom Right: On July 1st, Mariazellerbahn Class 1099.013 pauses at Laubenbachmühle whilst working the 10:35 St Pölten to Mariazell.

[Mark Pichowicz](#)



Below: DB Class 181.213-0 stands at Luxembourg Gare ready to take train No. IC137 to Emden Hbf as far as Koblenz Hbf on June 16th.

[Stearnsounds](#)



HGK's Class 185.588 heads a northbound freight
through Plochingen on June 17th.



Steamsounds





Spiez

10

11

BLS Ae 6/8 No. 208 approaches Spiez with a Frutigen to Basel charter in conjunction with the Lötschberg centenary celebrations on June 29th. [Mark Pichowicz](#)





On June 14th, NMBS-SNCB No. 2835 (Bombardier TRAXX F140 MS No. E186.227) is seen at Brussels-Midi on June 14th with train No. IC1234, the 12:18 to Den Haag. [Steamsounds](#)





111Ed-001

850kN

Lotos operated Gama Loco No. 111Ed-001 is seen passing Subkowy on May 22nd.

Julian Churchill



Class 2M62U-0382 in old Lithuanian
Railways livery passes Sausiai with a grain
train for Vaidotai Yard, May 24th. [Steve Madden](#)





VHE Emmental preserved ex BLS No. 31
is seen working special train No. 30119
from Huttwil - Frutigen for the BLS celebrations
arriving here at Burgdorf on June 29th. [Keith Hookham](#)



OBB's Class E190.109/1216.019
passes Gries am Brenner whilst
working EuroCity train No. 89, 13:31
Munich - Verona P.N. on May 23rd. [Laurence Sly](#)



Trenitalia Class E464.039 is seen at Fortezza/Franzensfeste on June 25th, having arrived with train No. R23820 from San Candido/Innichen. [Steamsounds](#)



With Lac Léman in the background,
SBB Re 6/6 No. 11640 is seen close
to Epesses with a southbound freight, June 7th.



Mark Pichowicz



Class 2M62-0721 is seen working an empty grain train through Spungeni near Krustpils on May 23rd. [Steve Madden](#)



On July 1st, Mariazellerbahn Class
2095.015 arrives at Rabenstein a. d. Pielach
with the 07:53 Mariazell to St Pölten service. [Mark Pichowicz](#)



CD Cargo's Class 363.515 and 363.513 are seen over the border in Slovakia near Bratislava on June 22nd, hauling a lengthy coal train. [Steamsounds](#)



On May 27th, DB Class 143.039 passes
Düsseldorf Volksgarten with empty stock
after working S68 services in the morning rush hour.



Mark Pichowicz



Latvian DMU No. DR1A-2463 passes Upenieki
with a local service from Daugavpils to Riga, May 22nd.

Steve Madden



Top Right: DB Class 101.035 - 4 arrives into Hanover with an Intercity service on June 9th. [Derek Elston](#)



Bottom Right: SBB Ge 6/6 No. 414 approaches Ardez with the 11:20 Pontresina to Scuol during the Bever to Scuol centenary event on June 30th.

[Mark Pichowicz](#)



Below: On June 28th, 760mm gauge No. 498 03, originally from the Bregenzerwaldbahn, and now plinthed in a children's playground at Bregenz is not looking its best these days.

[Steamsounds](#)





On July 7th, 'Bardotka' No. T478.2078 (the former ČD 749.240), now privately owned by IVK - Ing. Vladmír Kříž, is seen working a three-day raitour around northern and eastern Bohemia, pictured here between Opočno pod Orlickými Horami and Dobruška. [Martin Grill](#)



Top Right: Class 199.861-6, a former standard gauge loco which has been converted to metre gauge, shunts the stock for the 11:55 to Eisfelder Talmühle into the station at Wernigerode on June 5th. [Derek Elston](#)



Bottom Right: On June 15th, an SBB historic working from Erstfeld in Gotthard rampe, is seen with locomotive Ce 6/5 II No. 14253. [Enrique Dopico](#)



Below: Finnish VR railways loco VR Class Sr1 No. 3091 waits its next duty, sat at the buffers at Helsinki Central Station on June 6th.

[Michael Lynam](#)



DB Class 218.474-5 stands in Goslar
on June 5th, with a service for Hanover, June 5th.

Derek Elston





On June 9th, Ae 4/7 No. 10976 and Ae 3/6 III No. 10264 are seen at St. Maurice during a loco change for a SBB Historic excursion from Lausanne to Bouveret. [Mark Pichowicz](#)



Top Right: In Stockholm, Bombardier Flexity Classic Tram No. 2 is pictured working route No. 7 at the Sergels - Torg terminus in the city centre.

Michael Lynam



Bottom Right: A Tallinn Tram & Trolleybus Company (TTTK) Tatra KT4 tram No. 163 is seen in Estonia old town.

Michael Lynam



Below: Colourful Tallinn Tram & Trolleybus Company Tram No. 155 is seen in Estonia old town, working route No. 4 past the Nordic Hotel Forum.

Michael Lynam



ÖBB: 27% less CO2 emissions since 2006



The most recent calculations of the Federal Environment Agency shows clearly that rail is the most environmentally friendly transport in Austria, and it builds on this position every year with in 2012 the total greenhouse gas emissions of the ÖBB transport sector decreased by a further 4.2 per cent to 387 405 tonnes. Compared to 2006, ÖBB has transported 21 million passengers last year, and still reduced their greenhouse gas emissions by 27 percent - or about 148,000 tonnes of CO2. This volume corresponds roughly to the present inhabitants relative annual CO2 emissions of the entire first district of Vienna.

This saving is possible partly due to increases in efficiency, the use of climate-friendly technologies (eg regenerative braking on the "Taurus" locomotive and the "Talent" railcars) as well as energy-and fuel-efficient driving style of the ÖBB crew.

"If our transport services that we provide in passenger and freight traffic, alternatively carried out on the road, for Austria each year approximately 3 million tonnes would mean to additional CO2 emissions," said Franz Seiser, Board of ÖBB-Holding AG.

Thus ÖBB is making a valuable contribution to climate protection in our country. Up to 12 times more climate-friendly than cars and 15 times more climate-friendly than aircraft.

"Only if people are well informed, they can consciously choose from the different transport. Whoever wants to be climate-friendly and time-saving, take the train," said Herbert Minarik, ÖBB sustainability coordinator.

The Federal Environment Agency's greenhouse gas calculations for 2012 continue to provide large CO2 benefits of the ÖBB over other transport (calculated average utilization):

- The passenger rail ÖBB emit based on average mileage of around 12 times the people less CO2 emissions than a car and around 15 times less than an airplane.
- The CO2 benefits of ÖBB-Postbusflotte can be seen. The CO2 factor compared against the car is here at 1:2.3. That is, an average car per passenger caused a little more than twice as much CO2 emissions as a Postbus.
- The difference in CO2 transport is even higher. Every tonne transported to the ÖBB freight by rail emits to approx. 18 times less CO2 emissions than the transportation of goods with an average truck.

"The ÖBB lie with their high share of renewable energy in the leading group of European railways. Around 92 percent of the current driving our trains come from renewable energy sources," affirms board Franz Seiser. (Actually about 90 percent with 2 percent generated from hydropower renewable energy.) In addition, in 2012 8 percent of the traction power requirements were produced from natural gas.

Photo: ÖBB / Deopito



Trams outside Amsterdam Central on June 15th. [Steamsounds](#)



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Bombardier Unveils Newest Very High Speed Train in Italy



- Europe's fastest commercial speed train is cost efficient and allows easier cross border traffic
- First train ready to begin homologation tests

Rail technology leader Bombardier Transportation recently hosted the world premiere of the Frecciarossa 1000 very high speed train at its Vado Ligure site in Italy. Built by Bombardier Transportation and its consortium partner AnsaldoBreda of Italy, the Frecciarossa 1000 is the newest member of the BOMBARDIER ZEFIRO family of high-speed trains and is known as the V300ZEFIRO model. This first train unit will now begin homologation test runs on the rail line between Genoa and Savona, which is also connected to the Bombardier Vado Ligure site. Regular passenger service is expected for early 2015.

Following the presentation ceremony attended by over 250 guests from Italy and other countries, the first group of passengers including Mauro Moretti, Managing Director, Trenitalia, Claudio Burlando, President of the Liguria Region, Lutz Bertling, President and Chief Operating Officer, Bombardier Transportation and Aldo Cingolani, CEO, Bertone Design, boarded the new train. Lutz Bertling was joined by Bombardier employees, Luigi Corradi, General Site Manager, Vado Ligure, Italy and Anders Lindberg, President, Rolling Stock Europe and Asia, Bombardier Transportation.

The V300ZEFIRO is the fastest train in Europe and is capable of reaching commercial speeds of up to 360 km/h. During test runs the train will reach speeds in excess of 400 km/h. Its advanced high acceleration enables the train to deliver excellent travel times, even on winding routes. It is fully interoperable and will provide cross-border services, taking passengers to other European countries without the need to change trains. It could also be adapted for use on networks in many other countries.

The train is an eight-car Electrical Multiple Unit (EMU) that can run in single operation and multiple operation of two units. It will have a total capacity of 485 across four classes, two additional tip-up seats for passengers with reduced mobility and a bistro.

Lutz Bertling, emphasised Bombardier's commitment to the high speed rail market. He said, "We are delighted to be here to unveil this stunning new train, which is a game changer in the industry. I am confident the Frecciarossa 1000 will become a world reference in very high speed travelling. It is a train that opens a window to a future in which high speed is not just about travelling faster but cost effectively, more comfortably safely and without frontiers. Finally, it is one of the most environmentally friendly transportation solutions."



Škoda Transportation wins tram tender in Bratislava



On July 18th, Škoda Transportation signed the contract for the supply of trams for the Slovakian metropolis Bratislava. It concerns fifteen two-way modern trams for the price of 39 millions of Euros (975 millions of Czech crowns). The tender also includes the option for the supply of other fifteen trams and the option for maintenance of the vehicles for the period of 15 years.

"We see Slovakia as our traditional and very significant business partner. Our most modern locomotives 109 E2 (Emil Zátopek) with push-pull sets are already used in the common traffic on the Slovakian railway. Or I can remind you how our daughter company Škoda Electric concluded a contract for the supply of eighty new trolleybuses for Bratislava for about 1,1 milliard Czech crowns only several weeks ago," says general manager of the company Škoda Transportation Josef Bernard.

"I am glad that we will be able to provide our passengers with high-quality services in new and modern trams. I believe that we will have managed to replace at least a half of the tram rolling stock in Bratislava in four years," said general manager and chairman of the Board of Directors of Dopravní podnik Bratislava Lubomír Belfi.

New trams will contribute especially to the increase of the quality of travelling for passengers. Their comfort will be taken care of to the maximum extent, in particular due to enough space, suitable position of retaining devices and also due to a very quiet operation of the trams. The vehicles will have a complete air-conditioning, including the driver cabin. A sliding platform will be prepared for physically handicapped persons. The vehicles will also include a device for voice communication between the visually impaired and the driver.

"People in Bratislava can look forward to new two-way 5 articulated 30 T, which follow up on the series of two-way vehicles, which have been popular among passengers in the Italian town of Cagliari, American Portland or Polish Wroclav. However, trams for the Slovakian capital will be newly based on modern trams 26 T, which are intended for the Hungarian city of Miskolc. Bratislava trams will have the chassis with wheel gauge of 1000 mm and the first and last chassis will be fully rotary," adds Jaromír Jelínek, commercial manager of Škoda Transportation.

Škoda Transportation has been very successful in the tram market recently. "Besides Bratislava, we managed to

conclude a contract for the supply of 60 low-floor trams for the Turkish city of Konya. We also signed a contract with the Chinese company CSR Sifang Qingdao about the license for technologies for production of low-floor trams of ForCity type. The total value of this contract can reach up to 5 milliard of Czech crowns. Moreover, first trams from 31 in total are currently heading to the Hungarian town of Miskolc," adds Josef Bernard.

"Both inhabitants of Bratislava and its visitors have just received a very positive news. The city can modernise the rolling park of the transport company due to the European financial help. The city has the possibility to buy new and modern trams and trolleybuses in the next few years," as Milan Ftáčnik, mayor of the capital of Bratislava commented on the newly concluded contract.

Basic technical parameters of the 30T trams :

Two-way
Length of the tram: 32,5 m
Low floor: 89 %
Wheel gauge: 1000 mm
Max. operation speed: 65 km/h
Vehicle occupancy: 242 (of which 52 passengers can sit down)



Broad gauge project: feasibility study is commissioned



Economic stimulus through freight between Asia and Europe
Speed freight transportation, eco-friendly shift to rail

The railway bosses in Austria, Russia, Ukraine and Slovakia have signed a “Memorandum of Understanding” to the planned extension of the broad gauge railway to eastern Austria. In a next phase of the project, a feasibility study was conducted and a business model be developed that also includes a proposal for a reasonable cost sharing of the project partners. The expected total cost of the project will be a single-digit billions. The planned extension of the broad gauge railway to Vienna to link the major growth markets of Asia with Europe and allow a faster and greener transport by rail. Traffic forecasts indicate a further strong growth in intercontinental flows of goods, this means that the amounts could double by 2030 almost.

Through the project, around 3,000 jobs could be created in Austria and reached 120 million annual value. More jobs will be created or safeguarded during construction - which also affects the major Austrian railway supply industry. In addition, Austria’s state budget will be significantly strengthened by additional revenues from value-added and income taxes. Depending on the project progress and completion of a positive regulatory and environmental approval processes from today’s point of view, start a terminal in the period from 2025 realistic.

The business location Austria is enhanced by the improved transportation accessibility Christian Kern, CEO of ÖBB Holding AG. “We carry around 113 million tonnes of cargo per year by rail is the broad gauge railway extended to Austria, we could increase this volume by 10 percent and expanding Austria’s position as a leader in the rail freight goods were on their transportation to and stay in Europe at the environmentally friendly railways. Depending on the economic and environmental feasibility could be a Hamburg rail freight Austria. Pending implementation of the project but is still much work ahead of us. “

Why broad gauge train to Vienna?

The Vienna area is ideal because in Vienna three senior railway routes for beginning and end terminal of the broad-gauge railway between Europe and Asia - the TEN axes 17, 22 and 23 - intersect. You will load the goods in a terminal in Vienna, are senior rail routes to the north, west and south are available. Goods may thus be spread in all directions - and remain on track with reduced CO2 emissions. With a terminal in eastern Austria the hub is moved there, where it makes economic and environmental sense. The railway network in Austria and throughout Europe will be better utilized. The transport of goods between Asia and Europe are currently being carried out almost exclusively by boat. Because this high CO2 emissions and that the transport by water requires about 30 days for an extension of the broad gauge railway to Vienna is very attractive: The freight could be handled environmentally friendly transport time is reduced by half to around 15 days. Trains from major Asian cities of Beijing, Shanghai and Vladivostok could also drive up through eastern Austria. The goods are transhipped here in train-to-train-handling terminal on standard gauge trains and distributed throughout Europe. More than 33 countries in Western and Central Europe, Central Asia, Russia and the Far East would benefit from the extension economically.

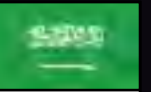
Current Situation

Currently, the Russian railway gauge comes with 1520mm on the Slovak-Ukrainian border on the European track gauge of 1435mm. Therefore, trains cannot go through and only with extremely high overhead between these countries. For the economy of freight transport is complicated and expensive in this form - and thus not an attractive transport option.

DB Class 143.658 is seen departing from Leipzig Hbf with a service for Halle. [Steamsounds](#)



Bombardier to Deliver Technology for New Metro Line in Riyadh



Rail technology leader Bombardier Transportation has announced that, as a member of the ArRiyadh New Mobility Consortium (ANM), it has won a contract to deliver technology for the new metro line 3 in Riyadh, Kingdom of Saudi Arabia. The contract involves system interface management, project management and design, as well as the delivery of 47 two-car driverless BOMBARDIER INNOVIA Metro 300 trains equipped with BOMBARDIER MITRAC propulsion technology. The total value of the consortium’s contract is approximately \$5.9 billion US (4.5 billion euro) with Bombardier’s share valued at approximately \$383 million US (289 million euro).

The customer is the High Commission for the Development of Arriyadh represented by the Arriyadh Development Authority (ADA). The new Riyadh Metro system will comprise six metro lines totalling approximately 176 km, which will form the backbone of the city’s new world class public transport network. All six lines are to be implemented over five years.

Line 3, also known as the Red Line, is a turnkey project that includes the civil construction of the 40.7 km alignment, including 22 stations, electrical and mechanical (E&M) equipment and rolling stock. The consortium comprises two groups that will design, build, construct and commission Line 3. The electrical and mechanical equipment for the driverless metro system will be delivered by the Electrical Work Group (EWG) whose members are Ansaldo STS and Bombardier Transportation. System infrastructure will be delivered by the Civil Work Group (CWG) whose members include Salini-Impregilo, Larsen & Toubro, and Nesma.

The new INNOVIA vehicles will be equipped with Bombardier’s proven MITRAC propulsion technology that provides highly reliable and safe operation with low life-cycle costs. Passenger-friendly interiors will provide three classes of accommodation: First Class, Family Class and Standard Class, with inter-car walk-through for comfortable passenger flow, as well as advanced security features. An integrated strategy to design, test and deliver the rolling stock together with Ansaldo STS’s Automatic Train Control (ATC) system for driverless operation has been devised. It includes the use of Bombardier’s Kingston Test Track facility in Canada.

Cotentin Coast Tourist Train



The 'Train Touristique du Cotentin' is a heritage line which runs between Carteret and Portbail (French Normandy) on part of the former SNCF line from Carteret to Coutances. The line closed to passengers in the 1970s but part of it re-opened in 1990 from Carteret to Portail. There was a few years when a small portion had been run at the southern end of the line but had now been abandoned. Generally the trains run Sundays, Tuesdays and Thursdays during July and August.



Above: Loco No. BB63069 – Built 1955 by Brissonneau and Lotz in Creil – waits at Carteret on Tuesday July 23rd with the 10:00 "Market Day" service to Portbail. The service provides local transport to the street market and allows 105 minutes at the destination. The rolling stock used dates from the 1930s.

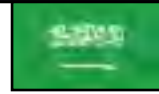
Left: Inside the cab of BB63069.

Top Right: Looking out along the line at one of the many crossings, from the cab.

Bottom Right: The station building at Carteret with coastal bus link vehicle. This was the original SNCF station. However the heritage train now departs just south of the station in a field and has no platform access. After departure the train calls at a local station – Barneville. There are two other halts on the line which may be used if required by passengers. The total length of the journey is 9km each way and the adult fare charged is 9 euros. All text and photos: [David Mead](#)



Alstom awarded a turnkey metro project by the city of Riyadh in the Kingdom of Saudi Arabia



Alstom, as a member of the FAST consortium, has received a letter of award by the Riyadh Development Authority (ADA) to provide a complete automatic and driverless metro system to equip three of the six lines to be built by the city. The total value of this project, which is financed by the Government of Saudi Arabia through the Public Investment Fund, amounts to €6 billion of which Alstom's share represents more than €1.2 billion. The project also includes also an option for 10 years of maintenance services. Contract signature should occur within 2 to 3 months.

Riyadh counts almost 6 million inhabitants with an expected population explosion in 2030 set to increase the population to more than 8 million. The city has decided to build six new subway lines in order to reduce traffic congestion, enhance the economic dynamism of the Saudi capital and improve its inhabitants' quality of life. One of the largest turnkey metro projects ever launched in the world, this fully automatic driverless network will be 170 km long and will include 87 stations. The network is scheduled to enter commercial service in 2018.

Alstom will provide the city of Riyadh with its fully integrated metro solution that combines company's state-of-the-art metro sub-systems. It includes the rolling stock (69 Metropolis trains), Urbalis signaling, the energy recovery system, HESOP, as well as the fast track laying technology, Appitrack – a technology that installs tracks three times faster than traditional methods.

Each train is composed of two cars and is 100% motorized. It is about 36 meters long and 2.71m wide. This metro has three levels of comfort: First class, Family and Single. To minimize delays between trains, the Metropolis trains will be controlled by two operational control centers equipped with the Urbalis driverless system. In order to optimize energy consumption, the traction power system will be equipped with HESOP, Alstom's innovative reversible substation solution, which allows the energy recovered during braking to be re-used by the network.

"We are honored to have been selected by the city of Riyadh to support this major project, which will allow thousands of people to travel every day in clean, comfortable and safe conditions," said Henri Poupart-Lafarge, President of Alstom Transport. "Alstom remains dedicated to supporting upcoming projects to answer to the increasing demand for urban mobility in the country", he added.

This project is the first reference for Alstom Transport in the Kingdom, where other metro opportunities are coming up. Alstom has a leading historical position in the market, having built 25% of the world's metro lines. Metropolis trains and the infrastructure components for Riyadh will be produced at Alstom Transport's sites in Europe.



Another order from Norway – new trams for Bergen and extension of maintenance contract until 2026



- Stadler will continue to maintain Bybanen's tram fleet until 2026
- Bybanen has also signed a contract for the delivery of eight additional Variobahn trams

All the contracts for Stadler's further commitments to its Norwegian customer Bybanen (Bergen Light Rail) in Bergen have been signed in mid July, exercising options from an existing contract. By 2017, Stadler will deliver a further eight seven-carriage Variobahn trams to Bergen and extend the existing fleet of 20 vehicles from five to seven carriages. The extension of the maintenance contract until 2026 is also an important element of the contract. The entire order is worth a total of more than EUR 100 million.

"Only recently, the customer praised us publicly for the availability of our fleet, which is in excess of 99 per cent. For us, this is an indicator of the excellent quality of our vehicles and the commitment of our maintenance team, which has now been on site since 2009," explains Michael Daum, Director of Stadler Pankow GmbH. "We set up the tram depot and established the maintenance site in conjunction with our contract partners."

The full-service maintenance contract until 2026 incorporates both preventive and corrective maintenance and guarantees a daily minimum availability of the vehicles.

"The maintenance of vehicles is becoming increasingly important in the rail industry," Michael Daum continues, "A guarantee of high availability is of real economic interest to the customer. This is something we have found both in the tram sector and also in the railway industry in the case of our FLIRT and KISS vehicles, where we have also signed vehicle maintenance contracts."

Further trams are required to serve Phase 3 of the line extension between the city of Bergen and the airport, where a new terminal has been added. As facilities such as a health centre, a university campus and shopping centres are being built along the route, the number of passengers per day is set to rise from its current 25,000 to 30,000.

Because of the high passenger numbers on the trams, Bybanen decided to extend its current vehicles by two modules and go straight to seven-carriage trams for the new order. The seven-carriage Variobahns are 42.14 m long and have five doors on each side. The trams can accommodate 280 passengers, with 98 seats (including tip-up seats) and standing room for 182 passengers. The interior design will be unchanged from the existing vehicles.

Alstom to supply the country's first tramway system to the city of Cuenca



Alstom, leader of the consortium CITA Cuenca, has been awarded a contract by the city of Cuenca to supply 14 Citadis trams, along with electrification, power supply and system integration. The part for Alstom is worth approximately 70 million Euros. The 10 kilometre line will be the first tramway system in Ecuador. It will include 20 stations and will cross the historical city centre over 4 kilometres. The line - which will be inaugurated in 2015 - will be able to carry up to 120,000 passengers per day.

Cuenca, the third largest city in Ecuador, is a UNESCO World Heritage Site. To preserve its architectural heritage, the city chose Alstom's APS3 technology, a catenary-free solution with a 10-year success record that powers the tram through a third rail embedded in the ground between the running tracks.

Cuenca will be the first city in the Americas to obtain a catenary-free tram, already in service in several French cities as Bordeaux, Reims, Angers and Orleans and soon in Tours as well as Dubai in United Arab Emirates.

The Citadis tram for Cuenca is about 33 meters long and can accommodate around 300 passengers. Its full low floor and wide doors enable easy passenger access, especially for those with reduced mobility. Additionally, Citadis features large central aisles allowing passengers to move inside.

"This project and our Citadis will improve the urban mobility of Cuenca, home to about 500,000 inhabitants, with one of the



cleanest, most efficient and most comfortable means of public transportation. It is also an opportunity to show other Latin American countries that similar projects can be developed in their cities" says Michel Boccaccio, Senior Vice President of Alstom Transport in Latin America.

The trams and the infrastructure components will be produced at the Alstom Transport sites in France (La Rochelle, Ornans, Vitrolles, Saint Ouen). The project is mainly financed by the French Treasury through the ECR (Emerging Country Reserve) loan scheme⁴. Alstom has already sold nearly 1,700 Citadis trams to 41 cities around the world.

A pair of Prague trams are seen at Náměstí Republiky. [Steamsounds](#)



Number of passengers in Deutsche Bahn trains rises again



Deutsche Bahn (DB) has recorded a further rise in the number of its passengers in Germany during the first half of 2013. The number of passengers travelling in domestic trains rose by 10 million to 991 million. While revenues posted for the first six months remained mostly stable at € 19.37 billion (0.6 percent less), earnings before interest and taxes (EBIT) fell notably by 22.9 percent to € 1.02 billion. DB was primarily affected by gloomier economic conditions around the world. Furthermore, higher costs for personnel and energy, the hard winter, the effects of flooding in Germany, as well as the ongoing shortage of vehicles were additional negative factors for DB. "Our DB2020 strategy serves as our compass, especially during difficult times. Above all else, we made noticeable progress towards achieving our goals of becoming a top employer and environmental leader," said Dr. Rüdiger Grube, CEO and Chairman of the Management Board of DB AG, during today's presentation of the first half results in Berlin.

Net capital expenses rose substantially during the first half of the year by € 190 million to € 1.6 billion. Net financial debt increased by 3.8 percent to just under € 17 billion. DB CFO Dr. Richard Lutz noted: "The second half of the year will still be marked by great uncertainties arising from the economy and the aftermath of the floods. However, DB's good position remains unchanged. This is why we will forcefully tackle the current challenges and keep the Group on its sustained course with our DB 2020 strategy."

During the period under review volumes sold reported by rail passenger transport rose by 0.9 percent, or 387 million passenger kilometers (Pkm), to slightly more than 43 billion Pkm. The total number of passengers carried by DB's bus business increased by 3.7 percent, or 37 million, to 1.05 billion. Volumes sold recorded for the bus business in Germany, however, declined by 3 percent or 130 million Pkm to 4.26 billion Pkm. Declining numbers of school children and the trend towards greater urbanization had a sustained effect on the number of passengers travelling by bus in Germany.

Rail freight transport reported lower figures for the first half of the year as the volume of goods carried fell from the same year-ago period by 2.8 percent, or 5.6 million tons, to 196.7 million tons. Volumes sold slipped by 4.4 percent to 51.6 billion ton kilometers (tkm).

The number of shipments carried by the DB Schenker Logistics business unit in the European land transport sector fell slightly by 1 percent to 47.3 million. The volume of air freight shipments declined by 2 percent, while the volume of ocean freight shipments also fell slightly by 1.6 percent. The positive development noted for the contract logistics business continued into the first half of the year as revenues rose by 6.9 percent to € 887 million.

Volumes produced by the rail network fell in first half of the year 2013 by 1.3 percent to nearly 512 million track kilometers (Trkm). Non-Group railways accounted for 23.5 percent, or 120.4 million Trkm, as their share rose further.

SNCF exercising entire option involving 40 Alstom Euroduplex very high speed train sets



SNCF has confirmed it was exercising the entire option for 40 Euroduplex trains, Alstom's double-decker very high-speed train, called for in a contract signed by both companies in 2007. The contract involved a firm batch of 55 trains and an option on another 40, now fully confirmed. Delivery of the 40 trains is expected to be spread over the period from 2015 to 2019.

Extending train capacity is the most appropriate response both in economic and operational terms for handling increases in passenger traffic and saturated corridors on the high-speed network. The latest Euroduplex trains will hold up to 560 seats in total. They are fully compliant with European interoperability technical standards (TSI2, ERTMS3). The trains also feature drive equipment suitable for the various power voltages in use in Europe; this allows them to travel across the continent's entire network.

To date, there are 21 Euroduplex trains travelling on France's high-speed lines (Paris to the East, Paris to the South-East, Rhine to Rhône) as well as Germany's (Frankfurt, Munich, Stuttgart). In the near future, the trains will also travel in Spain (between Paris and Barcelona) and Switzerland (between Paris and Zurich). Since December 2011, they have already travelled over 6 million kilometres.

Every day, there are 1,000 people working on high speed sector within nine Alstom facilities located in France, generating 4,000 jobs throughout the country.

The La Rochelle facility – which manages the whole project - performs the studies, the assembling and the fitting of the passenger cars. The other sites involved are Belfort for the locomotives, Reichshoffen for the end car bodyworks, Ornans for the traction motors, Le Creusot for the bogies, Petit-Quevilly for the power transformers, Tarbes for the power converters, Villeurbanne for the on-board computer systems and passenger information, and Saint-Ouen for the overall design.

Photo ALSTOM Transport / TOMA – M. Genel



Alstom delivers the first Régiolis train in Aquitaine



Régiolis, the first next-generation regional train, was delivered on July 12th to the Aquitaine Region in the presence of Regional Chairman Alain Rousset, SNCF Chairman Guillaume Pépy, and Alstom Transport Président Henri Poupert-Lafarge. The first trainset will be presented to elected officials and association chairmen at the Bordeaux Saint-Jean station, prior to travelling from Bordeaux to Langon. It will also be presented to the general public at the Bordeaux train station.

The amount of passengers using regional trains – or TER1 s - in France rose by 55% since 2002, and the trend was further confirmed in 2012 with an additional 5% passengers. There are a million passengers daily taking the roughly 7,000 TERs that are circulating in the national rail network. To meet that demand, the Regions have invested €2.6b in next-generation regional trains from 2002 to 2012. As of today, 182 Régiolis trains have been ordered by 12 French Regions, as part of the contract signed between Alstom and SNCF in 2009.

The first Régiolis trains have so far travelled over 200,000 km and will have completed their dynamic test phase in September 2013. They will be put into service as soon as they receive their Commercial Operation Authorisation (AMEC - Autorisations de Mise en Exploitation Commerciale), to be issued by the French Rail Safety Public Authority (EPSF). Alstom teams will take part in training the drivers and maintenance teams. Thanks to the hard work of all players in France's railway sector, close to 100 Régiolis trainsets will be delivered by late 2014. Trainsets in Alsace, Aquitaine, Lower Normandy, Lorraine and Picardy regions will be made available starting in 2013. Initial commercial operation will begin in 2014.

Régiolis trains stem from Alstom's Coradia range. They are modular: they come in three lengths (56, 72 or 110 metres), feature four degrees of comfort in accordance with the distances being travelled (suburban, regional, inter-city, and trains for nationwide balance), and are equipped with a bimodal (diesel/electric) or electric engine. This is an ecological, cost-saving train thanks to its low energy use and reduced maintenance costs. Lastly, it is available to all for it has an

integral low floor matching the height of the platforms.

The manufacturing of Régiolis trains generates more than 4,000 jobs in France at Alstom and its suppliers. 6 out of 10 Alstom facilities in France are taking part in the project: Reichshoffen for the design and the assembly, Ornans (motors), Le Creusot (bogies), Tarbes (traction systems), Villeurbanne (on-board computer systems) and Saint-Ouen (design).

Photo: The first Régiolis trainset arriving at the Bordeaux Saint-Jean station. Copyright: Alstom Transport / A.Février





Evening scene at Koblenz Hbf. [Steamsounds](#)



CAF WINS A CONTRACT TO SUPPLY 35 UNITS TO THE BRAZILIAN CITY OF SÃO PAULO



Compañía Paulista de Trens Metropolitanos (CPTM), the railway transit company of the São Paulo State has awarded CAF a contract for the supply of 35 8-car units (280 cars), for an amount close to €380 M which will be funded with the São Paulo Government's own funds. CAF was the successful bidder of the tender ahead of the Korean-Brazilian consortium IESA- Hyundai Rotem and the Chinese company Changchun Railway Vehicles Co., with the first units being scheduled for delivery in early 2015.

The São Paulo City, capital of the most active and industrialized State in Brazil, is one of the largest conurbations in the world, with more than 20 M inhabitants. CPTM is a company associated with the Secretary of State of Metropolitan Transport which manages the railway transit of 22 towns in the Metropolitan Region of São Paulo carrying more than 2.6 M pax./day. This new contract adds to the process of extension and modernization of the City's transit network.

This project combines with other recent projects implemented by CAF in Brazil, among which the Units supplied for the São Paulo Metro and the various contracts for the supply of suburban units to CPTM stand out. Furthermore, CAF is also executing a number of contracts in this country, such as the supply of 26 additional units for the São Paulo Metro, 15 electric trains which will run in the Brazilian city of Recife, as well as the turnkey project for the construction of the civil works, electromechanical systems and the supply of 40 7-module units of a new tram in the metropolitan region of Cuiabá, capital of the Mato Grosso State, in a consortium with local civil works companies.

In addition, it should be noted that in late 2012, the FROTA BH Consortium, led by CAF, won the award of a contract for the supply of 10 trains for the Brazilian city of Belo Horizonte, in combination with another contract for the manufacturing of bogies for 15 new trains for the city of Porto Alegre.

The aggregate of these Brazilian projects, amounting to more than €2000 M, consolidates CAF as the largest rolling stock manufacturer in Brazil. It should be borne in mind that the Company operates a manufacturing site in Hortolandia (São Paulo State) which is the most modern rolling stock manufacturing plant in Latin America.

Combined with the 2013 awards of several contracts for the cities of Tallinn, Freiburg and Kaohsiung in Taiwan, this new project reinforces the position of the company at global scale, with a backlog at the first quarter end of this year amounting to €4866.3 M, with more than 85% exports.

Rail tender win for Arriva in Poland



European transport group Arriva has won a tender to operate trains on four electrified lines in the Kujawsko-Pomorskie Voivodship in northern Poland.

Arriva will begin operating the two-year contract from 15 December this year and will run 12 existing units on four lines - from the medieval city of Toruń Główny to Ława and Kutno, and from the largest city in the region, Bydgoszcz, to Tczew and Piła. It will serve around 50 railway stations.

The contract, worth €22 million Euros over two years, will see Arriva integrate the new services with existing Arriva rail operations in Poland, as it already runs 21 units within the same region. The contract will see Arriva employ some 80 people and increase its annual train kilometres in Poland by 67 per cent, to 4.1 million train kilometres.

Dominic Palleschi, director – central and eastern Europe at Arriva, said: "We will provide a number of non-stop services which are beneficial to the economy in northern Poland as they link larger towns and cities quickly and efficiently. We will offer value for money ticketing options for customers, and aim to encourage more people to travel with us more often, and to sustain this growth in passenger numbers."

Arriva will be consulting with its customers and stakeholders regularly to improve the current service level and to ensure services are performing to the highest standards.

Bombardier Transportation Wins UK Rolling Stock Contract



- UK train operator Southern Railway orders 116 cars with an option for a further 140

Rail technology leader Bombardier Transportation has won a contract for new rolling stock from Southern Railway, which provides services in London and the south east of England. A Spares Supply Agreement has also been signed which will allow Bombardier to support the new trains when they enter service. The contracts have a total value of approximately £180 million GBP (206 million euro, \$274 million US).

The new cars will be designed and manufactured at Bombardier's Derby facility. The vehicles will initially be used on the Thameslink route and in the longer term will be cascaded onto other routes. The rolling stock contract includes an option for 140 additional vehicles which, if exercised, would bring the total number of vehicles ordered to 256 and the total value of the order to approximately £385 million GBP (441 million euro, \$585 million US).

Bombardier will supply Southern with the latest version of the BOMBARDIER ELECTROSTAR family of electrical multiple units, capable of 110 mph operation. The ELECTROSTAR has a well proven track record for reliability and environmental performance and is in daily passenger service with other UK train operators, including c2c, Southeastern, London Overground, and Stansted Express. The Gautrain railway in Johannesburg, South Africa, also operates ELECTROSTAR trains.

Over 800 Bombardier trains serve London every day, supported by 700 employees on 12 sites. This is the latest in a series of contract wins and successful projects for the company in London. On the Underground, Bombardier delivered the Victoria Line upgrade project on time and under budget, and is in the process of delivering upgraded trains for the sub-surface lines. Bombardier has also delivered all the new rolling stock for the London Overground service, and provides a maintenance service for those trains at Transport for London's New Cross Gate depot.

During the London 2012 Olympics, Bombardier maintenance teams and support functions worked around the clock to deliver increased reliability and ensure that Bombardier trains on nine key routes serving London were able to meet the unprecedented demand from the record number of passengers travelling on the network.

OBB Rail Ad's 2013



Station columns on a diet, a sawed bus and a train with wheels - these are just some of the spectacular submissions to ÖBB's RAIL AD 2013. Due to the great success in the past two years, the advertising price of ÖBB is being held for the third time and a new record in the number of submissions has been reached.

More than 100 ideas in five categories are selected by public vote. From 25th July to 2nd September voting is available at www.oebb-railad.at where votes can be cast in the categories of station, train, bus, dialogue and interaction and innovation. "Dozens of submissions demonstrate how intensively Austrian advertising agencies have dealt in recent weeks with the Out-of-home advertising opportunities at ÖBB," said Kristin Hanusch-Linser, Head of ÖBB Group Communication. "With the ÖBB RAIL AD, we also want to point this year on the variety of forms of advertising along Austria's largest mobility network."

"A Record-breaking 106 projects were submitted this year for ÖBB RAIL AD. Compared to the previous year, this is an increase of about 25 percent. Thus, the ÖBB RAIL AD has developed a real creative award in the domestic outdoor advertising industry. Due to the number of different ideas you can now say that it will be a "vintage year" Manfred Oschoung, Managing ÖBB Advertising GmbH.

The awards ceremony for the ÖBB RAIL AD 2013 will take place on 3rd October in Franz Josef station Vienna, where the winners will, in addition to the coveted ÖBB RAIL AD trophy, have € 10,000 out-of-home advertising time on areas of the ÖBB.

ÖBB-Werbung GmbH offers all facets of modern outdoor advertising - the rental of advertising, the implementation of production, assembly and disassembly, and the development of customized solutions in the exterior and transit advertising. ÖBB-Werbung GmbH Austria widely marketed around 18,000 billboards and counts as the exclusive sales of advertising space ÖBB the largest domestic full-service providers in the out-of-home advertising.

All photos ©OBB



Great Western Railway Centre, Didcot

Didcot Railway Centre, located in the town of Didcot in the English county of Oxfordshire, is based around the site of a comprehensive "engine shed" which became redundant after the nationalisation of the UK railways, due to the gradual changeover from steam to diesel motive power. Today, the site is a railway museum, home to many steam and diesel locomotives, passenger coaches and rolling stock. The site is also home to several active locomotives which are used for visitor train-rides.

Great Western Railway 6000 Class No. 6023 'King Edward II' is seen in the magnificent BR blue livery outside the centre, giving rides to visitors on June 29th. [Richard Hargreaves](#)





Built in 1931, GWR 4900 Class No. 5900 'Hinderton Hall' is seen inside the original main shed on June 29th.

Richard Hargreaves



Kitson & Co. 0-4-0ST No. 1338, ex-Cardiff Railway and built in 1898 is currently out of service awaiting an overhaul, seen next to GWR No. 1340 'Trojan' an Avonside 0-4-0ST built in 1897 and ex-Alexandra (Newport and South Wales) Docks and Railway, which is also awaiting an overhaul.
Brian Battersby

Replica GWR Firefly Class 'Firefly', an early broad gauge 2-2-2 is seen in an original transshipment shed dating from broad gauge days, when it was used for transferring goods from broad to "narrow" (i.e. standard) gauge rolling stock and vice-versa. [Brian Battersby](#)



CWR
ENGINES
MUST NOT PASS
THIS POINT

WITNESSEDS

British Rail No. 18000 gas turbine-electric locomotive
is pictured outside the shed at Didcot.

Brian Battersby





GWR 5700 Class 0-6-0PT No. 3738 is seen operating on the 'Branch Line' at Didcot passing the magnificently restored signal box. [Brian Battersby](#)

Great Western 6959 Class No. 6998 'Burton Agnes Hall'
is seen stored outside at Didcot during a visit on June 29th.

Richard Hargreaves



GWR 1400 Class 0-4-2T No. 1466 and wearing BR Black livery, is seen in the yard at Didcot. This loco is withdrawn from service with an expired boiler ticket. *Brian Battersby*





Great Western Railway (GWR) 4575 Class are 2-6-2T Small Prairie type based on the 4500 Class but with larger side tanks. This is No. 5572, inside the shed at Didcot awaiting overhaul. [Brian Battersby](#)

The 4300 Class Moguls were the maids of all work on the GWR network and later the Western Region of British Railways. Employing a Standard No. 4 boiler and the support struts similar to those fitted to the '2800' class, the class very quickly earned an excellent reputation in its ability to handle most types of traffic, from local stopping goods to main line expresses. This is No. 5322, built in 1917 and still in service today. [Richard Hargreaves](#)



SNCF BB No. 22404 is pictured upon arrival into Rennes on August 22nd 2002.
Brian Battersby



On June 28th 2006, CD Class 742.170-4
is seen waiting to depart Mlada Boleslav
with a trip working to Turnov. [Paul Godding](#)



DB Class 110 electric locomotive
No. 110.417-3 is seen at Bonn Hbf
with a passenger service on June 3rd 1983.

Dave Felton



Indian Railways Class WDG4-12050 is seen leading another member of the class, in charge of this lengthy freight train as it passes through Betalbatim on November 15th 2007, working from Vasco da Gama to Margoa. [Dave Felton](#)

