

Rail freight traffic quietens down

Switzerland first took measures to reduce the noise level of rail traffic 20 years ago. This has had a massive impact on people living in the vicinity of railway lines. This success, as well as Switzerland's role as a pioneer in Europe, have only been possible thanks to effective cooperation between all involved, including the freight wagon industry.

by Dr Rudolf Sperlich, Vice Director, Federal Office of Transport (FOT)

Railways are a very effective and environmentally friendly form of transport that needs to be expanded further. But the noise of passing trains can be very annoying for people who live or work close to rail tracks. There are, however, big regional and national differences in the impact of rail traffic noise levels, because of the varying density of the population and the rail network. It is hardly surprising, therefore, that Switzerland, Germany and the Netherlands are playing a leading role in noise reduction initiatives because of their high population density.

Noise abatement in the new millennium

Internationally, the Swiss government was one of the first to take early countermeasures to try to protect and improve the quality of life for people living in the proximity of major transport hubs. An initial programme for noise abatement on the railways was put in place around the turn of the millennium. The Swiss parliament set aside CHF 1.854 billion for this purpose. By 2016, the rolling stock for both passenger and freight traffic had been completely renewed and around



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Dear Reader

The times are changing. Sometimes quicker than we would like. The coronavirus pandemic has come to dominate our well-being and social life. The economy, and with it rail freight as the mainstay of our basic services, is doing its utmost to survive the lockdown. The impacts are massive. The Federal Office of Transport (FOT) reports an average of 30% fewer trains in transalpine freight traffic.

Will this change everything in the future? Probably not, but it will take a long time for business to recover. The rail freight transport of the future will undergo further innovations and adjustments, even if it is only to establish new supply chains. I fully agree with Peter Balzer, who calls for a new culture of innovation in rail freight transport where everyone pulls together. In response to popular demand we have reproduced the entire interview with Peter Balzer on page 10, originally published in the rail industry magazine Eisenbahntechnische Rundschau.

A major advantage in its competition with road transport is that rail traffic is allowed to continue through the night. The basic prerequisite for maintaining this is, and will remain, noise-reduction measures. Dr Rudolf Sperlich, Deputy Director of the FOT, outlines in his lead article and subsequent interview, the achievements to date. In addition, Jens-Erik Galdiks, Head of Fleet Technology at SBB Cargo, describes on page 5 the next area to tackle: the locomotives.

An overview of the market for locomotives is provided in the article on page 8 by Stefan Hofstetter, CTO, and Willem Goosen, CEO, of European Loc Pool AG, as well as the summarised table on the back of the infoletter.

I hope you will enjoy reading these articles, along with all the others in our infoletter. Keep healthy!

Philipp Müller Chairman of the Board of Directors

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276 kilometres of noise barriers had been built. To cater for any remaining excessive noise pollution, the cantons were commissioned by the federal government to install around 70,000 soundproof windows in the buildings affected. The government subsidised all the planning costs and half of the installation costs.

Noise emission threshold for all freight wagons travelling in Switzerland as of 2020

Back in 2013 the Swiss parliament decided to use part of the remaining credit from the first noise protection programme to finance a follow-on package. It set aside a total of around CHF 180 million (based on October 1998 prices) for projects in Switzerland. However, the most important measure of this second stage was the introduction of a binding noise emission limit for freight wagons - including those owned by foreign wagon keepers. As a result, the operation of noisy wagons with cast-iron brake blocks has been banned in Switzerland since the beginning of 2020. The long lead time and the announcement in advance to European partners made it possible to retrofit the wagons as part of regular maintenance schedules.

Other elements of the second noise protection package are investment promotion and government-backed research. The investment promotion funds can be used to support the procurement of modern freight wagons with composite brake blocks.

Over 20 projects were launched as part of the government research programme. The bigger projects were awarded in tranches. The 5L-Demonstrator initiated by SBB Cargo was an important project. Wagon keepers in the private sector also launched projects: Wascosa, for example, successfully completed two projects involving the detection of flat spots in wheel sets and the energy supply for refrigerated containers with train bus bars.

Infrastructure measures help as well

Additional measures have also been trialled in the area of track superstructure. They include a new regulation on the monitoring of track unevenness. An innovative rail pad (an elastic element between the rail and the sleeper) has been designed to dampen the noise generated by the rails and protect the superstructure. The final reports for all projects can be found on the FOT website. (Link 1 page 3).

Noise abatement becoming more important throughout Europe

Switzerland is not the only country undertaking measures to reduce noise emissions from rail traffic. Initiatives are also under way in Germany – one of Switzerland's most important neighbours – and across the whole of Europe.

Deutsche Bahn (DB) has set itself the goal of halving noise emissions. Since the LL (low-noise, low-friction) composite brake block was approved in 2013, combined with the relatively simple technical solution of retrofitting, this technology has gathered momentum and is now subsidised by the German government. Thanks to the



Rail Noise Protection Act, which will impose severe restrictions on noisy freight wagons from December 2020, the noise abatement target is now within reach.

From December 2024, the revised TSI Noise [Technical Specification for Interoperability on Noise] will take effect in the **European Union:** with the introduction of noise thresholds for all freight wagons on busy routes, the conversion of wagons for international traffic will have to be by and large completed. Funds for the conversion have been provided for all member states as part of the Connecting Europe Facility (CEF). So far subsidies have paid for the modernisation of around 200,000 vehicles.

An important element to reduce noise: the LL composite brake block.



Growth of low-noise freight wagons as a percentage of total mileage travelled in Switzerland

The government policy of switching traffic from road to rail also plays at least an indirect role in noise abatement, with the construction of the Lötschberg, Gotthard and Ceneri railway base tunnels. For the affected population to accept night-time freight traffic, goods trains must be state of the art. This is the only way of guaranteeing one of the key competitive advantages that the railways have: the night-time ban on road freight traffic.

Railway noise monitoring

A system is in place to monitor the development of rolling stock and to ensure compliance with noise thresholds. It records the total noise emissions from rolling stock and the track superstructure. The measurements are commissioned by the FOT and recorded at six representative locations across Switzerland. The measuring stations have been operating around the clock since 2003 and in the time since

have played a key role in making sure the population near railway routes continues to have faith in the modernisation programme. The individual measurement data can be viewed on the FOT website (Link 2) and confirm the success of measures taken to date.

Link 1

 $https://www.bav.admin.ch/bav/de/home/verkehrsmittel/eisenbahn/ausbauprogramme_bahninfrastruktur.html$

Link 2

https://www.bav.admin.ch/bav/de/home/verkehrsmittel/eisenbahn/ausbauprogramme_bahninfrastruktur/laermsanierung/monitoring.html



Transit exposure levels (TEL) for freight trains on the Gotthard route





"Although a milestone has been reached, it would be wrong to sit back just now"

Interview with Dr Rudolf Sperlich, Vice Director at the Federal Office of Transport (FOT)

Since the start of 2020 Switzerland has imposed a ban on noisy freight wagons fitted with cast-iron brake blocks. Are those who in the main benefit from the ban actually aware of it?

The improvement already started when the conversion of Swiss freight wagons began back in 2004. The reaction of both residents and associations has been very positive to date. Our measurement data also clearly confirm the successful effect that this has had: the transit exposure levels generated by individual trains are dropping significantly. Despite increasing traffic, total noise emissions are also decreasing. Conversely, there is sometimes a psychological effect of people getting used to better conditions: the improvements are soon seen as normal, and the desire is for even quieter trains.

How is the industry complying with the ban and how are you monitoring adherence to noise thresholds?

Compliance is being monitored through random testing as part of our operational checks. In addition, the measurement data from our noise monitoring stations and the analysis of the data from the network operation are also available. Initial results are positive and very encouraging. But it's still too early to produce consolidated figures.

How are you coping with the various European regulations on the monitoring and punishment of breaches of noise thresholds?

We are in direct contact with German authorities regarding the implementation of new rules in both countries. In June we will report to the EU about our experiences from the first quarter of 2020. We will then be able to plan further steps on this basis.

The new low-noise brake blocks are more expensive to maintain than the old type. Does that not undermine the competitiveness of rail traffic?

It is partly for this reason that the Federal Council has decided to continue the noise bonus after 2021. Incidentally, an increased noise bonus will continue to be available for freight wagons with disc brakes. Thanks to this bonus, disc brakes could also be an economical solution for freight wagons with high mileage. Moreover, the new base tunnels in Switzerland mean that high-friction downhill runs are history. This should bring about a sharp reduction in maintenance costs.

Has the rail freight industry now done all it can when it comes to noise abatement?

Although a long-awaited milestone has been reached, it would be wrong to sit back just now. Quieter freight wagons make technical defects such as flat spots in wheel sets more audible. The maintenance programmes will need to be developed further as they play a more important role in reducing the wear and tear of rolling stock and superstructure. Greater support here will increasingly be provided by the telematics systems fitted to freight wagons.



"All locomotives need to become quieter"

Interview with Jens-Erik Galdiks, SBB Cargo

In addition to fitting freight wagons with composite brakes (K- or LL-type), various technical measures are available for further reducing noise emissions from goods wagons. But it is locomotives that offer the biggest potential for noise reduction. Jens-Erik Galdiks, Head of Fleet Technology at SBB Cargo, expects the relevant regulations to be introduced soon.

In Switzerland, the operation of noisy wagons with cast-iron brake blocks has been banned since the beginning of 2020. In your experience as a railway undertaking (RU), what is the current practice for Swiss wagon keepers or ECMs?

All Swiss wagon keepers have more or less converted their entire fleet – at least those operating in Switzerland. Experiences have been positive to date. But there are understandable objections in Nordic countries, where winter conditions cause particular problems.

New regulations in this area are not binding in EU member states until the

end of 2024, with the exception of Germany (end of 2020). In practice, what percentage of wagons do not (yet) comply with Swiss regulations?

In almost every train there is currently at least one wagon that does not meet the standards. But we expect this figure to gradually fall in 2020.

How do you come to terms on a daily basis with the fact that such wagons are not actually allowed to operate in Switzerland?

We have a clear procedure and are working closely with the Federal Office of Transport (FOT). Since the beginning of 2020, we no longer formally accept wagons that have not been retrofitted for noise reduction. The dispatching RUs and wagon keepers are consistently warned if a wagon with cast-iron brake blocks is handed over at the border. In the first half of the year we will still refrain from removing the wagons from traffic, but we reserve the right to adjust this practice. If people complain – based on the Environmental Protection Act – we will fine the customers concerned.

SBB Cargo has converted its entire fleet. What additional noise abatement measures are planned?

The 5L-Demonstrator showed that the noise emissions of freight wagons can be reduced even further. When we procure new wagons, we consider additional measures that would enable us to lower the noise threshold even further. But a train is only as loud as its noisiest component. And unfortunately that's the locomotive. That includes not only our many older models, but the new ones too. Locomotives in general need to become quieter.

Do you expect a further tightening of regulations?

Yes, that's what we anticipate. The main focus at present is on the freight wagons. But the regulations are certain to be extended to locomotives. The general trend in central European countries is to agree lower noise thresholds or even to adjust journey slots. So we need to plan for the introduction of additional measures.

Development of noise exposure of the population from rail traffic in Switzerland, Germany and France

Number of persons exposed to noise exposure exceeding 55db during the day, evening or night (Lden>=55db)



Pressurised gas tank wagons: a special challenge

In Europe, pressurised gas tank wagons are marked with a long orange stripe, about 30 cm high, running around the centre of the tank. Constructing these tanks is a special challenge due to the high pressure and various other specific requirements.

Lars Schulz, qualified engineer and head of sales at Waggonbau Graaff

Class 2 pressurised gas tank wagons are generally constructed according to RID in tank codes P (liquefied or dissolved gases) or R (refrigerated liquefied gases) and with top or bottom discharge, depending on the intended use. These wagons can be recognised by a continuous 30cm-wide orange stripe around the centre of the tank.

Test pressure and cargo determine the type of thermal insulation

The most frequently used pressurised gas tank wagon in the European rail network is the bottom discharge tank wagon for liquefied petroleum gas (LPG). The tanks are essentially designed for test pressures of 25 bar and 27 bar.

Depending on the test pressure and the cargo, a form of thermal insulation such as either a sun shield or a thicker tank wall is required. Not fitting a sun shield allows the tank diameter to be optimised, making a larger tank volume possible, but this is offset by the heavier weight of the tank.

For inspection purposes, the tanks have a manhole flange on the front side for internal access. The maximum tank length can also be influenced by the design and positioning of the manhole flange.

Determining the tank volume ...

With the focus being on the maximum permissible total weight of the tank wagon, the construction design and thus the specification of the tank volume is what is so challenging. This is because the design must be optimised for the transport of as many different gases with different specific weights as possible.

... and the welding processes are the most challenging tasks

A modified fine-grained structural steel with a tensile strength of 630 MPa is used as the tank material, especially for wagons with a high test pressure. This makes it possible to build the tank to an optimal size-to-weight ratio. However, it requires a suitable welding process which ensures



The manhole at the front allows access for internal inspections.

that the material properties are retained even after welding (through the application of heat). As proof of this, corresponding work samples are prepared and assessed for each tank from the steel plates used. In addition, the welding seams must be 100% volumetrically tested.

Width of the tank diameter is critical

If the tank outside diameter has been selected so as to utilise the G1 profile as fully as possible, special measures are required. The critical area here is the width of the tank diameter. The values specified in the standards for maximum roundness tolerance are too large at this point. Limiting the permissible tolerance is one way of optimising the tank diameter, but requires greater manufacturing precision.



The orange stripe running around the centre is the standard identification prescribed for pressurised gas tank wagons.

Rules on exemption from periodic inspections for tank wagons

The initial and periodic inspections of tank wagons are governed by Chapter 6.8 of the Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). In addition to the open question of how operational exemptions from intermediate inspections apply, there are three additional rules relating to exemptions.

By Ernst Winkler, chartered engineer (Dipl. Ing. FH), CEO of GEFAG Gefahrgutausbildung und Beratung AG

See the RID news article in the Wascosa infoletter, issue 31, p. 12 published 31 May 2019. The final discussion in the Joint Meeting is still pending. However, there is no mention of this in the report on the adopted texts of RID 2021.

3. Rail transport related exemptions

Operational delays (route bottlenecks, marshalling yards, lack of locomotive drivers) may mean that the specified inspection date is exceeded and a correctly filled tank wagon suddenly finds itself in a train with an expired inspection date. Were there to be no exemption in such a case, this would have significant consequences: the train would have to be disassembled and the corresponding wagon isolated. An exemption certificate from the competent



Marking obligation: The date of the next intermediate inspection must be marked on the tank. The letter «L» stands for «leakage test».

Chapter 6.8 of the RID sets forth the following rules for inspection periods:

6.8.2.4.2. Shells and their equipment shall undergo periodic inspections not later than eight years.

6.8.2.4.3 Shells and their equipment shall undergo intermediate inspections at least every four years after the initial inspection and each periodic inspection. These intermediate inspections may be performed within three months before or after the specified date. However, the intermediate inspection may be performed at any time before the specified date. If an intermediate inspection is carried out more than three months before the prescribed date, a new intermediate inspection must be carried out no later than four years after that date. However clear these rules may seem, in practice they cause problems and make exemptions necessary:

1. Exemptions for tanks containing specific substances

Individual substances may deviate from the basic principle. These include, for example, tank wagons for transporting toxic gases, frozen liquefied gases or bromine.

2. Exemptions for operational reasons

Paragraph 6.8.2.4.3 of the RID allows the intermediate inspection of tank wagons to be deferred by up to three months before or after the specified date. The proposal from Poland that only the emptying of the tank wagon should be allowed within this period therefore prompted the following discussion: Is it now only permissible to defer the inspection, or may the tank wagon still be used without any restriction (i.e. filled and emptied) during this period?

authority would be required or the contents would have to be transhipped. For this reason, the provision in 4.3.2.3.7 was amended with effect from 1 January 2017: tank wagons may still operate for up to one month after the expiry of the periodic inspection date. However, if the deadline for the periodic inspection indicated on the tank wagon is exceeded, the open question discussed in point 2 becomes relevant.

4. Transport up to the proper removal of the contents

Unless otherwise required by the competent authority, tank wagons which have already been filled before the expiry of the deadline for periodic inspection may, within a maximum of three months after this deadline, still be used for the return of hazardous substances for proper disposal or recycling. The transport document must include details of this exemption.

Interesting facts

Locomotive trends in European freight traffic

Since the electrification of railways, two main types of propulsion have established themselves: electric locomotives with overhead catenaries and diesel locomotives. The latest, more innovative locomotives combine both technologies for optimal performance and provide much greater efficiency in rail freight traffic.

by Stefan Hofstetter, CTO, and Willem Goosen, CEO, European Loc Pool AG

The biggest group of locomotives hauling freight traffic on mainline routes is currently the 4-axle locomotives with about 6MW drive power and 300kN traction power. These locomotives are designed for use with all power systems and in all countries, and form the backbone of today's rail freight traffic. For non-electrified lines, a range of mostly six-axle diesel locomotives are used. However, these locomotives sometimes operate over electrified track, where electric locomotives could be used. This is not an ideal situation neither economically nor ecologically.

Dual locomotives – two drive units in one locomotive

Current trends such as the debate on climate change, the lengthening of freight trains to 750m and the performance of self-supervised shunting operations under own supervision require the use of a new generation of dual locomotives. These provide a combination of a heavy diesel locomotive with an eco-friendly electric drive unit in one vehicle, with shunting capacity as well.

They offer

- mainline haulage on electrified routes with the energy efficiency and performance of an electric motor,
- 2. the ability to run on non-electrified lines with the drive dynamic of a comparable diesel locomotive and
- 3. heavy shunting capacity with a shunting locomotive.

Under certain conditions, a dual locomotive with six axles can replace the double traction of 4-axle mainline locomotives.

Innovative dual locomotives – new on the market

The EuroDual built by Stadler Rail, a locomotive with six axles, 2.9MW diesel and 6MW electrical power, has been operating in Germany since the beginning of 2020. At the same time, Siemens was in the process of marketing its 4-axle Vectron Dual Mode with 2MW drive power in diesel and electric mode.

In 2022 European Loc Pool will also start operating the first Euro9000 dual locomotives built by Stadler Rail. This locomotive



Locomotives at a glance: Comparison based on their power and tractive effort (page 16)

has 1.9MW diesel and up to 9MW electrical power, with 500kN tractive effort. The basic configuration with Germany, Austria, the Netherlands, Italy, Belgium and Switzerland will be extended to other countries and corridors in the future. A special feature is the diesel boost mode, which allows the limitation of 3kV DC catenary to be increased by 1.5MW to 7.5MW. This produces a 25% increase in towed load capacity with the same drive dynamics. This locomotive is setting new standards and contributing to the successful development of rail freight transport.



Stadler's EuroDual locomotive on one of its first freight operations in Germany.



Performance comparison of the Euro9000 in diesel, 3kV and AC catenary mode and in diesel boost mode compared to a conventional 4-axle BoBo standard locomotive

This tractive effort (TE) diagram shows two different groups of curves: on the one hand the dashed curves show the TE requirement, i.e. the necessary tractive effort depending on the weight of a train (1600t, 2000t or 2400t) and/or depending on the gradient of the route (16‰ or 20‰). On the other hand, the solid curves show the performance of the locomotives compared here or their drive modes. If the tractive effort requirement of the train is below the tractive effort curve of the locomotive, the corresponding train can be driven.

Especially relevant are the intersection points of the two types of curves: these show the limit of gradient and towed load in relation to the maximum speed. A conventional, 4-axle BoBo standard locomotive can pull a 1600t train on a gradient of 16‰ at a maximum speed of approx. 68km/h. In 3kV mode with the additional diesel boost, the Euro9000 can reach a top speed of approx. 70km/h with a 2000t train on a route with a 16‰ gradient, meaning that it can achieve almost the same driving dynamics but with a 25% heavier train.

Source: Stadler Rail AG



"We need a new innovation culture in rail freight transport"

Although transport by rail beats roads when it comes to climate considerations, the road transport lobby is much better organised. Peter Balzer, CEO of Wascosa, is therefore calling for the railway sector to pull together. This is the only way to master the industry's four major challenges: standardisation, planning certainty, innovation and digital transformation. Wascosa is already well positioned here, as explained by CEO Peter Balzer in the following interview with Dr Thomas Sauter-Servaes from the ZHAW School of Engineering, Department of Applied Mathematics, Physics, Systems and Operations, which was published in the trade magazine Eisenbahntechnische Rundschau (ETR) in February 2020.*)

Despite all political initiatives, rail transport volumes across Europe are still fairly low. Do you think there are still opportunities for traffic to switch from road to rail?

That will certainly be difficult, despite the huge potential. Rail transport will definitely get some tailwind from the debate on climate change and the associated Green Deal produced by the European Commission. Even with the more widespread use of electric vehicles, road transport will never match the railways in terms of CO₂ emissions. Unfortunately, however, the road lobby is much better organised that the rail sector. A switch will only be successful if the rail industry manages to focus its collective attention on the bigger picture.

> "Standardisation continues to be crucial for the success of rail transport. Without this, we cannot take advantage of the absolutely essential economies of scale and efficiency gains."

What do you see as the positive aspects?

There are certainly positive developments in industry collaboration, such as the joint Technical Innovation Circle for Rail Freight Transport (TIS). Competitors such as VTG, Ermewa, GATX and Wascosa are no longer afraid to join forces and are working to-



Peter Balzer

gether for their common benefit. But that can only be a beginning – it's not enough to simply be able to compete with road haulage.

If you were asked to choose three measures that you would like European transport ministers to take, what would they be?

My experiences with TIS have already made it clear to me: the key to success for rail transport is still standardisation. Without it, we cannot capitalise on the economies of scale and efficiency gains that are so essential. But, in concrete terms, the three measures at the top of my wish list would be: first, the fastest possible pan-European migration of digital automated coupling; second, more rapid introduction of ERTMS/ETCS, at least on European rail

Dr. Thomas Sauter-Servaes

freight corridors; and third, the adoption of English as the single European language in rail transport.

What do you think the industry needs to do to make rail transport more at-tractive again?

The rail industry is still far too dependent on politics. We need greater planning certainty. Without clear signals from national governments, it is uncertain whether investments in innovation will actually pay off. And innovation is urgently needed, so that the rail industry – and above all railway undertakings and operators of rail infrastructure – can deliver quality at a competitive level. Despite the huge congestion on motorways, rail transport is currently miles behind road haulage when it comes to reliability and punctuality.





High regulatory hurdles for innovation: three years ago Wascosa rolled out its new e-car®. Despite enormous cost and effort, it has still not received all the necessary national approvals.

There is much talk in passenger transport about "Mobility-as-a-Service". Here the focus is on setting up multimodal platforms capable of offering a complete mobility package from one source. Do you see a similar development happening in goods traffic?

Passenger transport has a significant advantage here. Fixed timetables and greater frequency make it possible to create attractive intermodal travel links. These new mobility concepts combining several modes of transport to suit specific situations will win through. After all, the fact that we all have our own cars is extremely inefficient. Things are rather different in freight transport. Pure cooperation initia-

> "To increase the competitiveness of rail freight transport, it is not enough to drive forward progress for specific wagons in an isolated manner. That's why I am impressed by the approach taken by the Technical Innovation Circle for Rail Freight Transport in the TIS White Paper Intelligent Freight Train, which focuses on the freight train as an entire unit."



tives are currently associated with a high reliability risk. If I work in logistics, I really need to be able to control the entire transport chain. If I manage to do so, there are certainly opportunities for pushing railways as a link in the overall chain. Customers don't care how the goods reach them as long as price and reliability are guaranteed. All they want is just-in-time delivery.

When it comes to innovation, your website states "As you can see, we don't believe in boundaries". What boundaries do you intend to break through next?

Innovation is definitely an important part of Wascosa's DNA. At the moment, however, we are coming up against boundaries due to the prevailing industry conditions. Three years ago we presented the Wascosa e-car® in Munich. Despite hefty outlays, this has still not received all the necessary national approvals. And now the ERA is introducing amended conditions for approvals. This poses huge challenges to medium-sized companies looking to inject innovation into the railways. If the switch from road to rail is to succeed, we desperately need far greater support from state authorities and a new innovation culture to deal with the aspects which are so challenging and expensive when it comes to obtaining approvals.

How do you see Wascosa in 20 years' time? And how do you think the freight industry as a whole will look then?

In order to be able to survive in 20 years' time, Wascosa will need to successfully master digital transformation. If we achieve this, Wascosa will be one of probably three to five freight wagon leasing companies that will dominate the market by then. As in the US, the process of market consolidation is set to continue over the coming years.



You can download the TIS White Book «IG2» here: https://tis.ag/downloads/

Finally, I'd like to ask you about books you've read recently: have any particularly impressed you, and why?

The Technical Innovation Circle for Rail Freight Transport has produced a very readable White Book. To improve the competitiveness of rail transport, it is not enough to push ahead in isolation with innovations focused specifically on freight wagons. In its White Book "IG2", TIS focuses on the freight train as a whole. I admire the approach of linking together innovative freight wagons and intelligent freight trains so that they become much more than the sum of their two parts. This really could trigger a huge productivity boost and allow the highly automated rail freight transport we so desperately need to become a reality.

*) This reprint of the interview published in the April edition of Eisenbahntechnischen Rundschau (ETR) is reproduced with the kind permission of the magazine publisher.

DB Cargo AG and Wascosa sign framework agreement

On 15 January 2020, a long-term framework agreement on the leasing of freight wagons was signed between DB Cargo AG and Wascosa in Mainz.

"The framework agreement which we have signed with Europe's leading rail company represents a milestone for us. The contract forms the basis for our future collaboration and will make a significant contribution towards simplifying and optimising the handling and business processes for all involved."

Yann Bonguardo, Chief Sales Officer, Wascosa AG

"For DB Cargo, the conclusion of the framework agreement is an important step in ensuring that wagons can be supplied quickly, particularly for new business."



Above left: Torsten Wagner, Branch Manager Hamburg, Wascosa AG, Dr. Yan-ling Xu, Purchasing, DB Cargo AG, Ole Nygaard, Wascosa AG, Dr. Armin Peetz, Head Wagon Rentals, Transfers and Invest, DB Cargo AG

Below left: Iris Hilb, Head of Customer Service Center, Wagon Management, IT Sales, DB Cargo AG, Yann Bonguardo, Chief Sales Officer, Wascosa AG



New Shimmns wagon type TTU of DB Cargo AG

Wascosa Flexpay Module – the path to bespoke and fair partner solutions

The basic rental of freight wagons belongs to the past. Changing industry conditions, and the needs that customers have for greater flexibility, mean that new leasing models are required. With its Flexpay Module, Wascosa offers its partners bespoke and fair rental solutions.

By renting out freight wagons, rental companies used to cater for the fluctuating demand of their customers, who would usually rent wagons to supplement their own fleet. However, changes in the overall conditions have resulted in significantly different customer needs: siding contracts have been scrapped, the concept of an entity in charge of maintenance (ECM) was introduced and new accounting standards (such as IFRS) have been adopted. For customers, there are often restrictions in the area of capex, and because their capital is tied up in their own core businesses, hardly any industrial customers therefore still actually own their rail wagons today. Longterm rental contracts can therefore be an obstacle to securing a flexible supply of rail wagons over the long term, and this is the challenging task facing many customers.





"Wascosa's flexible and long-term Flexpay solution, which offers a combination of rental and purchase, has allowed us to modernise our ageing fleet of owned wagons flexibly over time."

René Weber, Head of Internal Services & Logistics, Jura-Cement-Fabriken AG.

New rental models needed

Wascosa recognised this early on. The decision to develop new rental models resulted from a Future Lab workshop organised by Wascosa in 2014 with its most important customers. The aim was to determine how a rental company should continue to develop in order to ensure it was able to cater effectively for all its customers' needs in the future.

It was against this backdrop that Wascosa developed the Flexpay Module. This is a service which ranges from traditional rental through to leasing and rental with a purchase option. But it also extends to individually tailored rental conditions. Here fair and transparent prices – irrespective of the rental model – form the basis for a long-term partnership with customers. This flexibility allows Wascosa to offer its customers bespoke solutions which are unavailable elsewhere on the market.

Keeping options open in the long term

One important issue for customers is sometimes their current cash flow or the fact that their capital is tied up in their own core business. Occasionally they may face a conflict of interests if their priority is to buy, rather than rent, their own assets for rail logistics. Such a conflict can even block procurement decisions. Here too, the Wascosa Flexpay Module offers a solution: over time, the customer can buy rented wagons outside the rental contract but still have them managed professionally as part of an ECM mandate. On top of that, the customer can have these wagons built to its own specifications. Purchase quantities and timings can be agreed individually. Maximum flexibility is therefore guaranteed.

At the same time, customers are being increasingly forced to search for new solutions regarding longer-term rental contracts. Changes to accounting standards (especially IFRS) are making life more difficult for them. Here too, Wascosa Flexpay Module can offer the ideal solution. If you'd like a more detailed explanation about how all this works, a Wascosa customer service representative will always be delighted to meet you personally.

Handing over the keys in Hamburg

Wascosa made sure that the arrangements for enabling an internal candidate to take over as head of the Hamburg subsidiary were in place well in advance: on 1 January 2020 Torsten Wagner, formerly Sales Manager, took over the management of the subsidiary from Thomas von Berlepsch, who will continue to be part of the long-established team in Hamburg until the end of the year.

In the 29 years or more since the German subsidiary, formerly NACCO GmbH, was founded in Hamburg, Thomas von Berlepsch has succeeded in building up the business to the point where it is now one of Germany's leading lessors of freight wagons. Now Thomas von Berlepsch has handed over the reins to his longstanding colleague Torsten Wagner with the symbolic handover of the «golden key to success» actually taking place back in December 2019 at Wascosa's Christmas party in Lucerne.

Torsten Wagner has been sales manager for the company for 20 years (formerly with NACCO GmbH up to September 2018). A very well-kn own face in the industry,



Peter Balzer (left of the photo) oversees the handover of the key from Tomas von Berlepsch (on the right) to Torsten Wagner.

Torsten Wagner, who up until now has been Wascosa's representative in Germany, will in future be responsible for managing the Hamburg subsidiary.

Peter Balzer, CEO of Wascosa, is delighted with this very future-focussed internal appointment: «Our team in Hamburg is well established and has been extremely successful for many years in the German market. I'm very pleased that Thomas von Berlepsch has agreed to the early handover of the "keys" and for us the appointment of Torsten Wagner represents an excellent internal solution which will ensure continuity in our business relationships and a smooth handover. I would also like to personally thank Thomas von Berlepsch for his tremendous work, not least in integrating the Hamburg subsidiary into the Wascosa Team.»

«We are a strong team here in Germany and not only does Wascosa have a broad product range, but it is regularly the source of ground-breaking innovations. Even in the current difficult market conditions, we should be able to maintain our growth path over the medium term,» agree Torsten Wagner and Yann Bonguardo (CSO) as they look confidently to the future.

A big thank you for 47 years of rail service

After a glittering career of over 47 years in the rail industry, with the last 28 as Head of Technology for NACCO and Wascosa in Germany, we bid farewell to Roland Baumbach who began his well-deserved retirement at the end of February 2020. His wife, Karin Baumbach, who has also worked for the company for the past 11 years, retired at the same time. Roland Baumbach's railway career began in 1973 with Deutsche Reichsbahn, the national railways of the GDR. After his university studies in rail vehicle engineering, he had various jobs in new rail vehicle construction and maintenance. At the time of the privatisation of the Reichsbahn wagon fleet in 1992, he moved into the private freight wagon rental business. Although his home base remained Leipzig, his work would take him far beyond the borders of Germany and outside the rail company that he worked for, e.g. as part of the safety engineering working group (STAK) of the industry association VPI. Roland Baumbach has always been practically minded and it is thanks to his level-headed and target-focussed approach that he has always been successful in the many challenges placed before him.

We would like to thank Roland Baumbach and his wife Karin for their many years of loyal service and we wish them and their family every happiness in the years ahead.



Farewell party in Hamburg: Roland and Karin Baumbach (front centre of the photo) in the company of guests.

Calendar of events

Due to the Covid 19 pandemic in Europe, various events that should have taken place in spring were cancelled or postponed until the second half of the year. Further changes are possible. It is recommended to consult the individual websites of the organisations for the definitive dates.

Date	Event	Location	Website
26 27.08.2020	CRSC information and member event	Bochum, DE	www.crsc.eu.com
01 03.09.2020	Rail Freight Summit	Poznan, PL	https://events.railfreight.com
02 03.09.2020	15th International Conference on Critical Information Infrastructures Security (CRITIS)	Bristol, UK	www.Critis2020.blogs.bristol.ac.uk
10.09.2020	RFG Awards Dinner 2020	Chesham, UK	www.rfg.org.uk
16 22.09.2020	European Mobility Week	Europe	www.mobilityweek.eu
24 25.09.2020	Talent and Expertise Development Platform	Valencia, ES	https://uic.org/events/calendar
04 07.10.2020	54th EPCA Annual Meeting	Virtual event	www.epca.eu
06 08.10.2020	Intermodal Europe	Rotterdam, NL	www.Intermodal-events.com
14.10.2020	28th Annual Rail Freight Group Conference 2020	London, UK	www.rfg.org.uk
14 15.10.2020	Railtech Track Access Charges Summit 2020	Riga, LV	https://events.railtech.com
26 27.10.2020	UIRR 50 year anniversary and European Intermodal Summit	Brussels, BE	www.uirr.com
03 05.11.2020	8th International Transport & Logistics Exhibition	Warsaw, PL	www.translogistica.pl
04.11.2020	RFG's AGM & Autumn Group Meeting	Birmingham, UK	www.rfg.org.uk
04 06.11.2020	Multimodal Exhibition	Birmingham, UK	www.multimodal.org.uk
12 13.11.2020	F&L Meeting	Geneva, CH	www.europeanfreightleaders.eu
17 19.11.2020	Railtech Intelligent Rail Summit	Not yet defined	https://events.railtech.com
30.11 02.12.2020	International Rail Forum & Conference (IRFC)	Prague, CZ	www.irfc.eu/en

Outlook 2021

27. - 30.04.2021 in Berlin, DE www.innotrans.de



04. - 07.05.2021 in Munich, DE www.transportlogistic.de

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Locomotives at a glance:

Comparison based on their power and tractive effort



The above information on the locomotives includes the year of construction, their power and tractive effort.

