

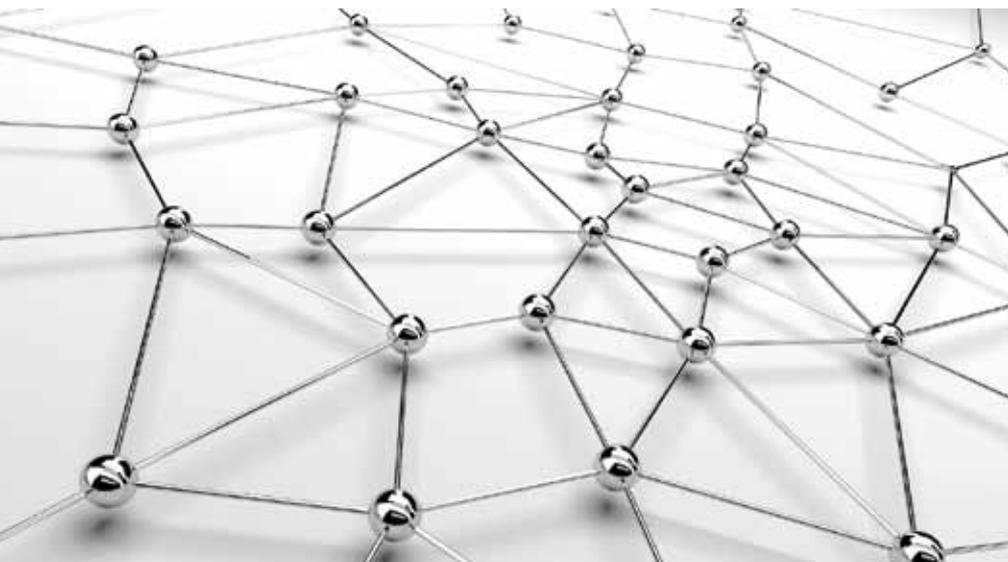


## Catching up – interview with DB Schenker CEO Dr. Karl-Friedrich Rausch

**90,000 employees at 2,000 locations in 130 countries – these figures make DB Schenker one of the world's biggest logistics companies. The number one in European rail-freight traffic, DB Schenker Rail, is also part of this company. Since 2009 Dr. Karl Friedrich Rausch has been the CEO for the Transport and Logistics division of DB Mobility Logistics AG. He explains why a European network is so important for DB Schenker Rail.**

**Dr. Rausch, German rail-freight traffic has recovered surprisingly quickly after the huge slump in the crisis year 2009. According to the latest figures the volu-**

**me of transport in 2010 has risen by 12 percent (in tkm) compared to the previous year. Can DB Schenker Rail match these figures?**



### Cause and effect

Dear readers, Safety in rail-freight traffic is being constantly improved through the implementation of measures that were resolved after the tragic accident in Viareggio almost two years ago. These will make the as yet safest carrier even safer still. That's the positive news. The not so good news is that increased checks and maintenance work has on the one hand led to a restricted availability of the rolling stock for customers and on the other to drastically higher maintenance costs for car owners. The same is true for the operation of low-noise, TSI Noise-compatible freight cars. The latest statutory requirements on freight cars in terms of safety and noise as well as the owners' new tasks and responsibilities have led to huge rises in the cost of rail transport. But these additional costs cannot be borne by the owners alone. This has to be taken into consideration. Not least by politicians and their policies that are forcing our traffic routes in this direction.

Philipp Müller  
Delegated by the Board of Directors

### News

PAGE 6/7 Two years after Viareggio – experiences, challenges, changes

PAGE 10/11 Cargo CBM – new long-term project «Condition Based Maintenance» to improve reliability

### On our behalf / Interesting facts

PAGE 5 WASCOSA at the transport logistic 2011

PAGE 8/9 Wall thicknesses of tank cars – decisive for hazardous goods transport



Dr. Karl-Friedrich Rausch, DB Mobility Logistics AG

Measured in tonne-kilometres, our German rail-freight traffic has grown by twelve percent, placing us exactly in line with the general trend reported by the German

**«Intermodal traffic is the fastest growing market segment of all in rail-freight traffic after the crisis.»**

Federal Statistical Office. We have recovered from the effects of the financial crisis and are back in the black for 2010 – on an EBIT basis. With a market share of 75 percent in Germany and 26 percent in Europe we are the market leader for rail-freight traffic.

This is due not least to the fact that despite the global economic crisis, we invested a record amount in our fleet of freight cars in Germany in the following year 2010. We purchased a total of 1,450 new cars and 71 locos. We have also overcome the crisis in intermodal traffic and are once again on course for double-figure growth with 76,000 trains in 2010. Intermodal traffic is the fastest growing market segment of all in rail-freight traffic after the crisis.

**What is your forecast for 2011?**

Following the good growth rates in the business year 2010, we are expecting slightly lower growths in the current year. What is important is that the upward

trend continues: we are expecting a plus of around four percent for rail-freight traffic in 2011. But the markets remain volatile; we have to reckon with unstable growth curves.

### Where do DB Schenker Rail's priorities lie in 2011?

The biggest growth potential for rail lies in the European perspective. Customers expect an international presence from a powerful and efficient partner. DB Schenker Rail is currently going through a process of change from a German to a European company, which naturally has a strong base in Germany. This year we will be stepping up the expansion of our network for international transport services in Europe to consolidate our position as the number one in European rail-freight traffic. 60 percent of our freight cars already cross at least one border. We are working flat out to further expand our European relations so that our customers can benefit from the system advantages of rail. This is also why we expressly endorse European standards for the technology and safety of freight trains. DB has championed European

«The goal is a continuous control of production and transport from the sender to the recipient as well as integrated support for complete customer networks.»

safety standards in Brussels and at the UIC in Paris from a very early stage and has helped promote this process.

### What will the «Europeanisation» of Schenker Rail look like?

We will implement a European product structure and establish a consistent planning and executive organisation. This should control the market and quality requirements resulting from the increasing internationalisation of the transport chain and bring our European companies closer together.

«This allows us to offer our customers a unique range of services that combine rail-freight traffic with global logistics.»

The goal is a continuous control of production and transport from the sender to the recipient as well as integrated support for complete customer networks. The combination of DB Schenker Rail and DB Schenker Logistics means that we can offer our customers a unique range of services that combine rail-freight traffic with global logistics.

### Why is it so important for DB Schenker Rail to have a European presence?

We used to have to hand over our trains to one of the railways in the neighbouring country at the border, who then transported this on our behalf. This procedure was very time-consuming and often led to delays. Customer communication in particular was a huge problem since it was often very difficult for us to say just where the train was. Today we can organise Europe-wide

## Personal details

Dr. Friedrich Rausch ...

- ... studied industrial engineering between 1973 and 1980 at Darmstadt Technical University.
- ... worked as a research assistant at the Chair of «Operations Research» of the TH Darmstadt up to his doctorate in 1985.
- ... following his doctorate moved to Deutsche Lufthansa AG, where his last position was CEO of the divisional board of Lufthansa Passage Airline.
- ... was CEO of the components division at Deutsche Bahn AG and lastly responsible for passenger traffic before taking over as CEO of transport and logistics in 2009.

connections with our national companies, from just one source. This is run, controlled and operated by us. The majority of our new locos are compatible with several systems and can thus be used in different countries.

### Can you give an example for this sort of international transport from one source?

Thanks to our pan-European network we are able to offer a connection from Spain through to Great Britain which is operated completely by DB Schenker Rail. At almost 2,000 kilometres this is the longest connection in Europe that is operated by one single railway company. All of the traction services in Spain and France are provided by our French DB Schenker

Rail company, Euro Cargo Rail (ECR). DB Schenker Rail (UK) is responsible for the section in England.

This continuous traction leads to big advantages in terms of transport times and quality: for example, the train journey from Valencia to London takes less than 60 hours and in on time 95 percent of the time. In this way we create the prerequisites for shifting more transports onto rail.

#### **What does DB Schenker Rail do to encourage and improve international rail-freight traffic?**

Last year we set up the Xrail-Alliance together with six other European rail freight companies to expand and strengthen international wagonload freight in Europe. Wagonload freight accounts for around half of the total volume of freight in European rail-freight traffic.

**«In this way we create the prerequisites for shifting more transports onto rail.»**

The aim of the Xrail network is to make this traffic much more reliable and customer-focussed. Redundant tasks are to be reduced, capacities in the national networks optimised and procedures significantly improved through uniform international standards. This should noticeably improve the quality in the fields of trans-

port organisation, customer information and punctuality of wagonload freight between the most important European economic regions.

#### **But doesn't competition suffer from such an alliance in rail-freight traffic?**

Sales, customer contacts and pricing remain in the hands of the individual member railways. The goal of this alliance is to increase the predictability and transparency of traffic and thus improve

**«The goal of this alliance is to increase the predictability and transparency of traffic and thus improve customer communication.»**

customer communication. We offer our customers a constantly high punctuality of at least 90 percent along with complete shipment tracking with a defined transport plan. Xrail has a common database that is fed by the partner railways. The commissioned railway can therefore draw up international timetables and inform the customer of any delays. This should make it easier for the customer to plan international wagonload freight traffic.

#### **How do customers react to this offer?**

After one year of Xrail we have achieved

a positive result. With 150 international relations since the start of operations in September 2010 we have gained a market share of ten percent of all international wagonload freight shipments within Europe. On account of the constantly high punctuality and comprehensive information, more and more customers are asking about the Xrail standard for new transports. ■





On our behalf



## WASCOSA at the transport logistic 2011

Who's who in the industry meet up again between 10 and 13 May 2011 at the world's biggest trade fair for transport and logistics in Munich. Visit WASCOSA in the outdoor area, block 704/5, track 3/3. Under the motto of this year's trade fair «safety has a colour», Europe's most progressive freight car leasers once again present more innovations from their fleet of cars.

Visit us!  
Outdoor area block  
704/5, track 3/3.

More than 1,800 exhibitors from around the world reflecting the global, intermodal flow of goods by road, rail, sea and air will be meeting in Munich. This is the fifth time that WASCOSA has attended the transport logistic, the international trade fair for logistics, mobility, IT and supply chain management. WASCOSA presents innovations that embody the type of car

for the future to trade fair visitors – a hazardous substances tank car and an intermodal freight car.

### Interesting co-exhibitors

Learn more about the elements of the WASCOSA safety package and other components from interesting co-exhibitors – direct from the suppliers. ■

safety has a colour

## Two years after Viareggio – experiences, challenges, changes

The tragic accident in Viareggio with its unfortunate chain of several events turned the spotlight of European public interest on rail-freight traffic – a discussion of rail safety flared up in Italy in particular. Although railways remain the safest carriers, an immediate reaction was needed to this accident. To this end, the Joint Sector Group (JSG) of the Task Force of European Railway Agency (ERA) was founded which was to draw up measures to improve the level of safety. This call for some great efforts on all sides.



Further information:  
Jürgen Tuscher, Manager VPI Association of Private Freight  
Car Interested Parties  
tuscher@vpihamburg.de, www.vpihamburg.de

This is why the European Railway Agency, the European national railway safety authorities and the combined freight traffic sector (CER, ERFA, UIP, UIRR, UNIFE) got together within the scope of the ERA Task Force to investigate the possibilities for EU-wide harmonised criteria as well as short and medium-term measures which could help increase operational safety.

The following measures were compiled in an action program:

- Visual inspection of the European wheelset / wheelset shafts park (according to European Visual Inspection Catalogue = EVIC) during every visit to the workshop when the railway freight cars is over a working pit / raised
- In-depth investigation of random samples of wheelsets from defined operating areas
- Europe-wide implementation of the systematic traceability of wheelset maintenance (European Wheelset Traceability = EWT) for the EVIC test / for general wheelset maintenance

The action program focuses on voluntariness: there is no legal obligation for the railway sector but there is a clear declaration to the safety authorities on the implementation of the program. All measures have been successfully launched since the middle of 2010.

### Further EU regulations to follow

Irrespective of the accident in Viareggio the EU has or will decree further regulations to implement the EU safety directives. In accordance with the «new approach», all risks that emanate from a system have

**«In accordance with the new approach, all risks that emanate from a system have to be controlled.»**

to be controlled. Specific mention is made here of the regulation on the ECM (Entities in Charge of Maintenance; draft, planned implementation: May 2011) and on the CSM (Common Safety Methods). ECM calls for proof of an effective maintenance management whereas CSM is

applicable in the development, approval, commissioning and operation of railway freight cars and deals with risk management in the broadest sense.

### Experiences, challenges, changes

Extensive training and instruction in the inspection catalogue was necessary so that the action program could be launched quickly and in a good quality. More than 110 persons in Germany alone were instructed as trainers for the performance of the EVIC program and they trained a total of 2,500 employees in the various companies. In the meantime the measures have got off to a good start throughout Europe. However, a final assessment is not yet possible since the program has not been running long enough and an inadequate amount of data has been collected. Representative statements can be expected in April 2011 when the action program has been running for one year.

### Successful start of the EWT program

The EWT program was also launched in Europe. 66 owners replied to an inquiry in March 2011, covering approx 64 % of the cars listed in the GCU. Around two thirds of these have already developed an electronic database to track the wheelset data and 94 % them have started collecting the data. Data collection will be completed when work is carried out on the wheelsets.

### ECM directive: hopes of clarity

Owners of railway freight have always had rules on maintenance since they are interested in not only the safety but also the availability of an important operating resource. The problem lies in the verification of a correct maintenance management, which has led to a certain amount

of confusion over the past two years on account of two interim arrangements (ECM certification according to MoU and ECM self-declaration of the owner). One can only hope that the enactment of

«One can only hope that the enactment of the ECM directive and ECM introductory guideline will bring some clarity to the form and content of the supporting documents to be provided.»

the ECM directive, scheduled for May 2011, and ECM introductory guideline will bring some clarity to the form and content of the supporting documents to be provided.

What's more, the sets of maintenance rules of former state railways are no longer available without restrictions since the

discontinuation of the «use» of private railway freight cars by state railways. VPI therefore publishes the VPI Guideline together with VAP (Switzerland) and V.P.I. (Austria) which can be used by owners as an element in a company-specific maintenance management. The obligation of an ECM to assess a supplier is largely carried out by the technical assessment of workshops performed by the VPI together with DB Schenker.

### Summary

The railway sector in Europe is able to make the in any case very safe rail-freight traffic even safer through jointly drafted, harmonised measures and actions. Everyone involved is making a great effort. The performance of the EVIC and EWT program in particular will prolong the time spent in the workshop, calls for additional and specially trained personnel as well as modifications / new developments in the EDP, and restricts the availability of the rolling stock. Further burdens on rail-freight traffic must be avoided since there will otherwise be a modal shift that cannot be borne against the background of an on the whole increasing volume of transport. ■

## Personal details

Jürgen Tuscher ...

- ... studied catholic theology and German in Tübingen.
- ... held office for 14 years as a regular officer in the Bundeswehr including a degree in business and organisation science and General Staff training.
- ... before joining VPI as head of controlling was responsible for all inherited ecological liabilities at Deutsche Bahn.

# Wall thicknesses of tank cars – decisive for hazardous goods transport

Transport containers for hazardous goods such as tank cars must be dimensioned in accordance with RID so that they withstand the stresses and loads that occur during normal transport. This means that the tank cars come up to an internationally recognised safety level. This set of rules is being constantly improved so that it meets the requirements of shippers and the recognised rules of technology at all times. Tank cars therefore guarantee the safety demanded by the legislators.



The goal for all substance classes is to define minimum requirements for hazardous goods containers that guarantee adequate safety for the stresses and loads that occur during normal transport (accelerations, vibrations, swashing movements of fluids, the effects of weathering, etc.). The purpose of RID is therefore to prescribe standard rules on whose basis hazardous goods can be safely packed and transported in international and national traffic.

«RID came into force  
in 1893.»

If the minimum requirements of RID are met the corresponding containers are normally approved for international rail traffic in all RID member countries. RID came into force in 1893 and has undergone numerous changes since its beginnings on account of the altered basic conditions, in particular with respect to the goods to be transported and the available tank technology.

### Important regulations from RID

The regulations applicable for the construction of tank cars can be found in Chapter 6.8 of RID: Chapter 6.8: Regu-

lations for the construction, equipment, type approval, testing and marking of tank cars. Chapter 6.8 of RID specifies that the tank car must be built in such a way that it withstands the stresses and loads that occur with the highest permissible amount of filling during rail traffic. These requirements are deemed to have been met if the pertinent authority in accordance with the technical specification of interoperability (TSI) has carried out this evaluation within the scope of the EC assessment of conformity for the car.

### Choice of material

The choice of material is very important. Not only does this have to be resistant to the freight being transported, it also has to guarantee the safety required by RID to the pressures that can occur inside the tank car. A number of hazardous goods can be transported in a car dimensioned for 4 bar or 10 bar, but certain fluids need 15 bar or even 21 bar tanks. Even higher pressures are prescribed for gas tank cars. If normal structural steel were to be used this would lead to high wall thicknesses and thus an excessively high weight of the tank car, which is why better and more resistant materials (e.g. grain-refined construction steel) are used.

## Calculation of minimum wall thickness according to the rules

RID essentially defines two ways to dimension the minimum wall thickness:

The tank bodies must have a wall thickness of at least 6 mm if made of structural steel, or an equivalent thickness if made of a different material. In the case of powder or granular substances this thickness may be reduced to 5 mm for structural steel or an equivalent thickness for other metals. Whatever metal is used, the minimum wall thickness of the tank body may never be less than 4.5 mm.

The walls of the tank body must have at least the thickness calculated on the basis of the simple boiler formula. Sections 6.8.2.1.17 and 6.8.2.1.18 of RID for the first time calculate the wall thicknesses according to the rules of RID. But what exactly do the two sections 6.8.2.1.17 and 18 specify?

Section 6.8.2.1.17 contains the so-called simple boiler formula that is derived from mechanical-physical principles. It reads:

$$e = P * D / 20 * \sigma * \lambda$$

- e = Min. wall thickness of the tank body in mm
- P = Test pressure in bar
- D = inner diameter of the tank body in mm
- $\sigma$  = permissible stress in N/mm<sup>2</sup> for the chosen material
- $\lambda$  = coefficient 1 or less than 1 that takes into account the quality of the weld seam

The formula above all shows one thing: the wall thickness is proportionate to the test pressure and diameter of the tank car, and inversely proportionate to the quality of the material. The better the material, the thinner the wall, and the higher the test pressure and diameter, the thicker the wall.

Since certain hazardous goods constitute a particularly high risk, one has to take not only the test pressure but also the design pressure into account. This means that

Reference	Title of the document	Applicable for sub-sections/ paragraphs	Applicable for new or extensions of type approvals	Last date for withdrawal of existing type approvals
(1)	(2)	(3)	(4)	(5)
<b>for all tanks</b>				
EN 14025:2003 + AC:2005	Tanks to carry hazardous substances – metallic pressurised tanks – design and construction	6.8.2.1	between 1 January 2005 & 30 June 2009	
EN 14025:2008	Tanks to carry hazardous substances – metallic pressurised tanks – design and construction	6.8.2.1 and 6.8.3.1	until further notice	
EN 14432:2006	Tanks to carry hazardous goods – equipment for tanks to carry liquid chemical products – product drain and charge-cycle valves	6.8.2.2.1	until further notice	
EN 14433:2006	Tanks to carry hazardous goods – equipment for tanks to carry liquid chemical products – bottom valves	6.8.2.2.1	until further notice	

apart from a calculation with the test pressure, a calculation also has to be carried out with the design pressure and the wall thickness of the tank body must comply with at least the higher of the two values:

$$e = P_b * D / 20 * \sigma$$

- e = Min. wall thickness of the tank body in mm
- P<sub>b</sub> = design pressure in bar
- D = inner diameter of the tank body in mm
- $\sigma$  = permissible stress in N/mm<sup>2</sup> for the chosen material

## Calculation of minimum wall thickness according to the standard

The tank bodies must be built in accordance with the following standards; the highest and lowest filling/operating temperatures are taken into account for the choice of materials and dimensioning of the tank body's wall thickness.

The standards listed below are applicable as shown in the table column (4) for the design of the type approvals so as to satisfy the RID regulations specified in column (3). The regulations of Chapter 6.8 named in column (3) are in any case decisive. Column (5) shows the latest date on which the existing type approvals have to be withdrawn; if no date is shown the type approval remains valid until its expiry. The application of referenced standards has been legally binding since 1 January 2009.

## Determination of the minimum wall thickness

The minimum wall thickness now has to be determined from the calculations. It is the highest wall thickness from all of these individual calculations. But before work can start on the construction of the tank car all calculation bases and drawings have to be submitted to the pertinent authorities for approval. These check the documents and issue a type approval for a positive result. ■

Further information:  
Ernst Winkler, Hazardous Substances Officer at WASCOSA AG  
Member of the RID Technical Committee  
ernst.winkler@gefahrgutberatung.ch

# Cargo CBM – new long-term project «Condition Based Maintenance» to improve reliability

Never before in the post-war period has rail-freight traffic been exposed to so many changes than at present. But beyond the measures in connection with the EVIC (European Visual Inspection Catalogue) or ECM certification that have to be implemented at short notice, a long-term improvement in the profit situation of the overall industry is urgently required to actually enable the off-time predicted growth of the industry.

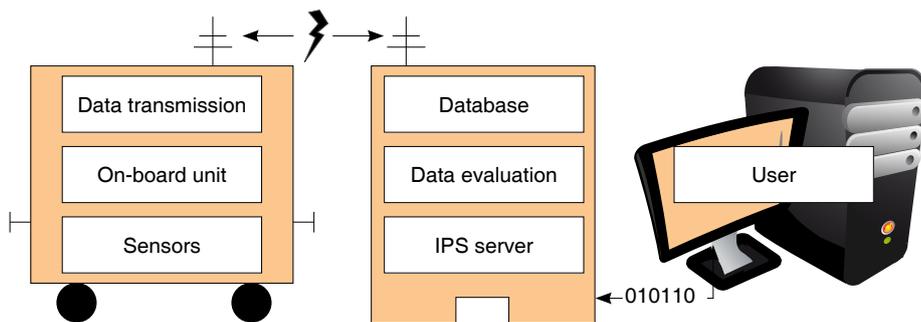
Further information:  
Prof. Dr. Markus Hecht & Dipl.-Ing. Christoph Gericke,  
Technical University Berlin  
markus.hecht@mailbox.tu-berlin.de  
www.schieneftzg.tu-berlin.de

Two key potentials to increase profits lie in the areas of shortening round-trip times and increasing reliability – but the corresponding opportunities can only be realised with higher quality freight cars.

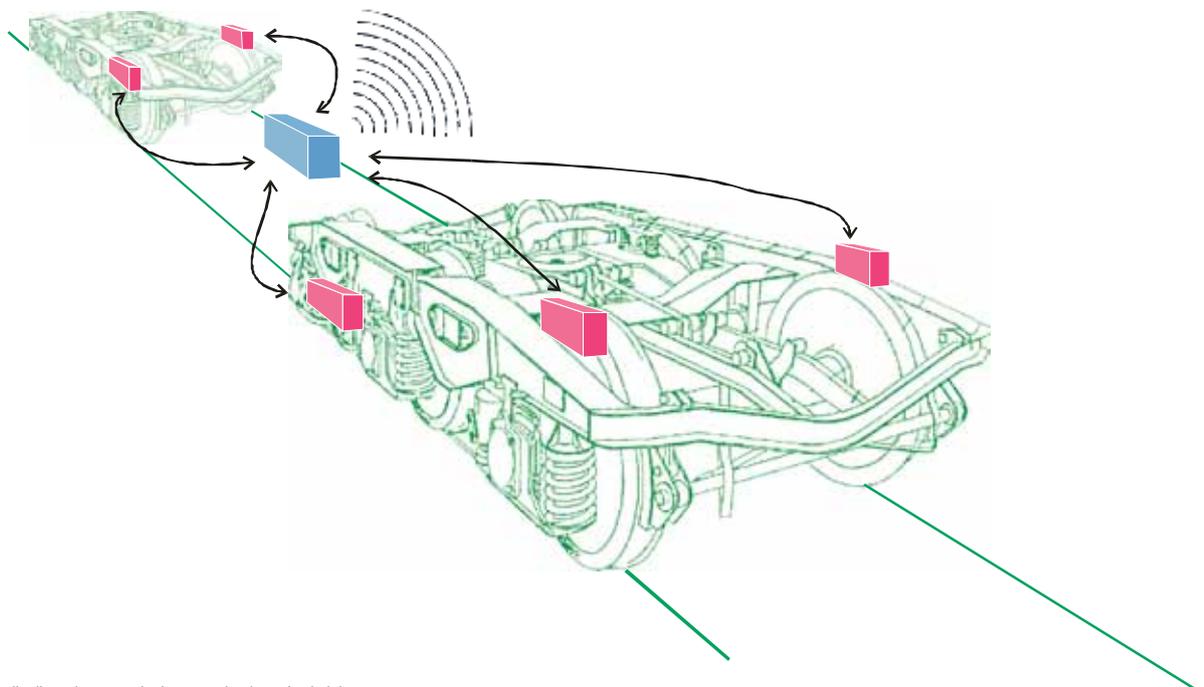
«Rail-freight traffic has some fundamental advantages over other types of transportation.»

This means that the quality of the freight cars has to be improved so that transports become cheaper and profits from transports higher. This approach is very promising.

WASCOSA is pursuing this goal together with the TU Berlin and five other external partners in the Cargo-CBM project. Rail-freight traffic has some fundamental advantages over other types of transportation, particularly thanks to the much lower CO<sub>2</sub> emissions and lower space requirements for the transport routes. This is why big subsidies are available – after five years preparatory work the German Ministry of Economics and Technology (BMWi) finally approved the subsidisation of the Cargo-CBM project in January 2010 ([www.cargo-cbm.de](http://www.cargo-cbm.de)).



Data flow in freight cars and on the land side



Principle of data collection from the distributed sensors in the central unit on the freight car

**Data acquisition running at full speed**

Since then intensive research and development work has been carried out into the measurement, evaluation and processing of freight car data. One key element of this project is to reduce the large amount of data that is collected to just a few pieces of data with a high informative value. This highly relevant data is then electronically transmitted and used by the existing maintenance programs.

This permits monitoring of the behaviour of components and assemblies in the critical areas of wheelset, wheel bearing and brake during travel – it is very difficult for the car inspector to identify problems which may arise here when the vehicle is

«Since then intensive research and development work has been carried out into the measurement, evaluation and processing of freight car data.»

at a standstill. This procedure means not only considerable time savings but also a

clear improvement in the quality of the recorded data. The goals listed in the project description of greatly reduced standstill

«The goals listed in the project description by all means appear to be realisable in view of the project results to date.»

times and a much higher car availability by all means appear to be realisable in view of the project results to date. One of the basic assumptions for this is a safe and low-cost energy supply for the measurement and analysis equipment as well as data storage. Interested experts at the InnoTrans 2010 were shown the first results of this topic on the stand of the TU Berlin.

**The future in view**

The innovative diagnostic methods that are nowadays a standard feature in both new and refurbished freight train locos can now be put to profitable use in freight cars too – taking into account the different basic conditions that have to be met. Basic improvements of this type can-

not be realised from one day to the next but call for a long-term and foresighted development of details as well as a gradual implementation. This is the only way to achieve added value for everyone concerned. WASCOSA is facing up to this challenge with its partners. ■



Model of data collection on the axle bearing cover and data transmission to the processing and storage box



Marcus Heymann, GCU expert in the DB Schenker Rail Group

## Forward-looking changes suggested to the GCU

Even though the GCU has become established as the basis for the use of freight cars over the past few years, improvements and adjustments to current circumstances are always needed. The rail-freight traffic sector has committed itself to a program of visual inspections and possibly the treatment of wheelset shafts for the European Railway Agency. The specifications of the EVIC program (European Visual Inspection Catalogue for freight car wheelset shafts) will be adopted in Appendix 10 on 1 May 2011. This ensures the legal security and binding force of the – ongoing – implementation.

GCU members will shortly be sent a package of three suggested amendments:

### Damages can be repaired without the consent of the owner

This should extend the former ruling on repairs to cars by the rail transport companies in Article 19 and make this more practical. The following suggestion has been made: up to now rail transport companies have been allowed to repair damages up to EUR 750 directly without the

consent of the owner. The purpose of this regulation is to ensure that railway operations are not unnecessarily hindered by minor repairs and to minimise complex coordination processes in such cases. This specification could now be extended by a new Appendix 13 to the GCU. Appendix 13 will contain a catalogue of «mobile» repairs which can also be carried out without the prior consent of the owner. The costs of this work will not normally exceed EUR 750, but this amendment

makes it easier for rail transport companies to act safely and ensures that cars do not have to be withdrawn from use for

«Appendix 13 will contain a catalogue of «mobile» repairs which can also be carried out without the prior consent of the owner.»

an unnecessarily long period of time in workshops. The application of Appendix 13 remains optional for the rail transport company – they can still ask the owner.

#### Changes to the sample H/HR

A small but quite practical amendment has been suggested for the sample H/HR. In future the station code should be able

to be added alongside the destination address for deliveries of spare parts. This takes into account the requirements of rail transport.

#### Rejection in the event of official or legal specifications

And finally, an amendment to Article 11 takes into account the bigger role of safety authorities. The reasons why a car

«A rail transport company can also reject a car if official and legal specifications prohibit its acceptance.»

can be rejected that are listed here will be supplemented by a further point: a rail transport company can also reject a car if

official or legal specifications prohibit its acceptance. This is a necessary implementation. The changes presented here pick up on current developments in the interests of all members and provide a binding ruling. This keeps GCU up to date. In this spirit: to be continued. ■

Further information:  
Marcus Heymann, DB Schenker Rail GmbH in Berlin  
GCU expert in the DB Schenker Rail Group  
[marcus.heyman@dbschenker.eu](mailto:marcus.heyman@dbschenker.eu)



Photo credits: Franz Kaminski Waggonbau GmbH, Hameln



## Reclassification campaign based on inhalation toxicity of toxic substances

It was almost an accident, or rather experts in the USA discovered that a number of the substances that had been classified in classes 3, 5.1, 6.1 or 8 up to 2011 also satisfy the criteria of inhalation toxicity in accordance with RID /ADR 2.2.61.1.8. A number of these substances had to be transported in L10CH tanks up until then, so that the adjustment with respect to transportation by tank was restricted to the assignment of the new SV 354. However, the substance data that was determined meant that a whole series of substances had to be reclassified in Class 6.1. A big reclassification campaign was thus carried out which came into force in RID/ADR 2011 on 1.1.2011. All of the following UN numbers UN 1510, 1810, 1834, 1838, 2481, 2486, are now in Class 6.1, with the assignment of the former main risk to a secondary risk.

### What does this mean for tank car transport?

All of these substances will be assigned a new and much stricter tank instruction, L10CH or L15CH depending on the case. But there a number of other substances alongside these that had already been classified in Class 6.1 where it was discovered that in addition to their «normal» toxicity they were also toxic by inhalation. This relates to the following UN numbers: UN 1092, 1238, 1239, 1244, 1251, 1510,

1580, 1810, 1834, 1838, 2474, 2486, 2668, 3381, 3383, 3385, 3387 and 3389. Some of these substances are still assigned the L4BN tank code, so that this reclassification at most has big consequences for the choice of a suitable tank. All substances that satisfy the criteria of inhalation toxicity, including those that are already classified in Class 6.1 on account of their toxicity, have been assigned the new special provision SV 354. There is no change to the classification in Chapter

2.2.61 for preparations (N.O.S. entries); the manufacturer remains responsible for the correct classification.

**«All of these substances will be assigned a new and much stricter tank instruction.»**

Since a number of the tanks cars in use today do not satisfy the requirements for the aforementioned UN numbers, and the market needs time to adjust to the new conditions, the RID technical committee has added a liberal interim arrangement in Chapter 1.6: 1.6.3.40: The tank code shown in column (12) of Table A, Chapter 3.2 that was applicable up to 31 December 2010 can still be used up until 31 December 2016 for tanks built before 1 July 2011 for substances with UN numbers 1092, 1238, 1239, 1244, 1251,

**«A number of tank cars that are in use today do not satisfy the UN numbers mentioned.»**

1510, 1580, 1810, 1834, 1838, 2474, 2486, 2668, 3381, 3383, 3385, 3387 and 3389 that are toxic by inhalation.

#### **Consequences of the reclassification – one example**

UN 1838 titanium tetrachloride. Up until 31.12.2010 this substance was classified in Class 8, packaging group II, with no

secondary risk. It is now assigned to Class 6.1 with Class 8 secondary risk. The new packaging group (indicates the hazardous nature of the substance) is VGI. When using mobile tanks, T10 is replaced by the new T20, and during tank car transport the tank code is tightened from L4BN to the new L10CH. And finally, the code number for the risk also changes: «X80» becomes «668».

**«When using mobile tanks, T10 is replaced by the new T20, and during tank car transport the tank code is tightened from L4BN to the new L10CH.»**

And finally, mention should be made of the new UN numbers adopted in RID, UN 2488 to UN 3493 for the new classification codes TFC and TFW.

Examples:

- UN 3488 toxic by inhalation liquid, flammable, corrosive, n.o.s
- UN 3492 toxic by inhalation liquid, corrosive, flammable, n.o.s. ■



Further information:  
Ernst Winkler, Hazardous Substances Officer at WASCOSA AG  
Member of the RID Technical Committee  
ernst.winkler@gefahrgutberatung.ch





## EIA – the first European association open to all transport modes: rail, road, waterborne, air

**The EIA European Intermodal Association is the only organisation of its kind that is committed to encouraging intermodal transport in Europe. It strives for better cooperation between the individual carriers to overcome the various structural, technical, organisational and legal obstacles in the logistics chain.**

EIA was founded in 1993 and awarded an NGO status by the United Nations (UN); the European Commission also recognised the EIA as the first neutral European organisation for intermodal transport that is open to all carriers. Today the EIA has more than 90 members, including market leaders from the transport sector and related industries around the world.

### Supporting sustainable transport solutions

The main concern of the EIA is the development, improvement and encouragement of sustainable intermodal transport solutions through the combined use of the system advantages offered by innovative carriers such as rail, inland waterways, road, air and maritime traffic. In order to encourage the expansion of combined freight traffic in Europe the EIA is in contact with political decision-makers, international institutions as well as representatives from industry and the market. It also offers its members a plat-

form to exchange experiences, discuss broader political questions in connection with intermodal transport and work out measures that should encourage and ensure the continuous development of

«The EIA is also involved in research projects and other initiatives to produce concrete, effective tools to upvalue intermodal transport.»

intermodal traffic in Europe. The EIA is also involved in research projects and other initiatives to produce concrete, effective tools to upvalue intermodal transport. For example, the EIA is involved in the SCUTUM research and development project for the safe transport of hazardous goods and is a partner in the TELLIBOX project which is developing a new carrier (MegaSwapBox) for rail, road and sea.

What's more, EIA brings out publications such as the «Intermodal Yearbook 2010 – Strategies, Statistics, Terminals and Players», which compiles and presents facts and figures for various carriers – always with the goal of promoting intermodal traffic. ■

Further information:  
[info@eia-ngo.com](mailto:info@eia-ngo.com) & [www.eia-ngo.com](http://www.eia-ngo.com)

On our behalf



## Take part in the big photo competition – WASCOSA rolling stock in focus

**Modern, innovative, dynamic: the photo competition focuses on innovations in the WASCOSA fleet of cars. Send us your best shots – and you could win the main prize, a trip with the famous Glacier-Express including two overnight stays for 2 people. Anyone can take part!**

Send us your best shots. You chose the place and perspective that really captures the progress, dynamics and innovation. Send us your most creative, atmospheric photos in a resolution of at least 300 dpi by 30 September 2011 with details of the location, your name and address per e-mail to [marketing@wascosa.ch](mailto:marketing@wascosa.ch).

The winners can look forward to a trip with the Glacier-Express, the world's most famous railway. It runs from

Zermatt to Davos or St. Moritz, through unspoilt mountain landscapes, glamorous spa towns, deep ravines, lovely valleys, 91 tunnels and over 291 impressive bridges.

By taking part in the competition you agree to a possible publication by and transfer of the copyrights to WASCOSA. By sending in their entries the participants also declare that they have shot the photos themselves and that their publication does not infringe any

third party rights. The winners will be notified personally. There will be no correspondence about the competition. ■

### Have a go!

Closing date for entries:  
30 September 2011 to  
[marketing@wascosa.ch](mailto:marketing@wascosa.ch)



## Strengthening the WASCOSA team



Wolfgang Woldt, Head of Maintenance  
T +41 41 727 67 60, wolfgang.woldt@wascosa.ch

**Wolfgang Woldt** has been the head of maintenance at WASCOSA since 1 October 2010. After his degree in me-

«Lucerne, WASCOSA's new location from the middle of August 2011, is one of the most beautiful places in the world.»

chanical engineering he gained many years of experience in car technology, personnel management and in the field of contract negotiations. He is an expert in the field of preventive maintenance.

What he appreciates at WASCOSA is the diversity – not just of cars he has to look after but also the variety of different tasks. He also stands out through his respectful dealings with customers and service providers. The motivation for contributing his great know-how day in, day out is the work in a team, living human values and the distinctive corporate identity at WASCOSA. And Wolfgang Woldt is particularly looking forward to working in Lucerne: «One of the most beautiful places in the world», as he says. ■



Claudia Aregger, Finances and Accounts  
T +41 41 727 67 59, claudia.aregger@wascosa.ch

**Claudia Aregger** has been assisting the accounting team at WASCOSA since 1 March 2011. She can look back on a quarter of a century of experience in the construction trade; she spent the last 14 years at Sand + Kies AG in Lucerne. Accounting is her hobbyhorse – she has

«Every day is different, every day is a new challenge.»

constantly gained further qualifications to keep her know-how up to date. Claudia Aregger has found what she wanted at WASCOSA: a new line of industry, an employer with growth potential – and a job where she can put her experience to

optimum use: «I love working in accounting. Every day is different, every day a new challenge. It's been my world for the past 25 years.»

What Claudia Aregger likes about WASCOSA is the great team and the appreciative corporate culture: «I look forward to working here every single day because I know that my work is appreciated and that I will be thanked for it.» ■

# Calendar

## 2011

10.05.2011 Munich (D)	IBS Award 2011 at the transport logistic (Hall B6, Stand 300)	Info: Interessengemeinschaft der Bahnspediteure (IBS) e.V. <a href="http://www.ibs-ev.com">www.ibs-ev.com</a>
10.-13.05.2011 Munich (D)	transport logistic	Info: Munich exhibition centre <a href="mailto:info@transportlogistic.de">info@transportlogistic.de</a> <a href="http://www.transportlogistic.de">www.transportlogistic.de</a>
18.05.2011 Zurich (CH)	CRSC Conference	Info: Cargo Rail Service Center CRSC e. V. <a href="mailto:info@crs.ch">info@crs.ch</a> / <a href="http://www.crs.ch">www.crs.ch</a>
19.05.2011 Zurich (CH)	VAP Forum Freight Car Spring conference	Info: VAP Switzerland <a href="mailto:vap@bluewin.ch">vap@bluewin.ch</a> / <a href="http://www.carograil.ch">www.carograil.ch</a>
09.06.2011 Rostock (D)	7. Technical Information Event of the VPI	Info: VPI Association of Private Freight Car Interested Parties <a href="mailto:mail@vpihamburg.de">mail@vpihamburg.de</a> / <a href="http://www.vpihamburg.de">www.vpihamburg.de</a>
10.06.2011 Rostock (D)	VPI Members Meeting	Info: VPI Association of Private Freight Car Interested Parties <a href="mailto:mail@vpihamburg.de">mail@vpihamburg.de</a> / <a href="http://www.vpihamburg.de">www.vpihamburg.de</a>
28.06.2011 Paris La Défense (F)	AFWP Annual Meeting	Info: AFWP Association Française des wagons de particuliers Le Stratège <a href="mailto:blaurent@afwp.asso.fr">blaurent@afwp.asso.fr</a>
08.09.2011 Bern (CH)	Forum sidings and inland freight traffic	Info: VAP Switzerland <a href="mailto:vap@bluewin.ch">vap@bluewin.ch</a> / <a href="http://www.carograil.ch">www.carograil.ch</a>
29.09.2011 Bern (CH)	UIP Management & Directors Committee + General Meeting	Info: UIP Union International d'Associations de Propriétaires de Wagons de Particuliers <a href="mailto:info@uiprail.org">info@uiprail.org</a> / <a href="http://www.uiprail.org">www.uiprail.org</a>
29.09.2011 Bern (CH)	UIP Congress	Info: UIP Union International d'Associations de Propriétaires de Wagons de Particuliers <a href="mailto:info@uiprail.org">info@uiprail.org</a> / <a href="http://www.uiprail.org">www.uiprail.org</a>
17.11.2011 Zurich (CH)	VAP Forum Freight Car Autumn Conference	Info: VAP Switzerland <a href="mailto:vap@bluewin.ch">vap@bluewin.ch</a> / <a href="http://www.carograil.ch">www.carograil.ch</a>

## Credits

Publisher  
WASCOSA AG, Grafenastr. 5, 6300 Zug, Switzerland

Contact  
T +41 41 727 67 67, F +41 41 727 67 77  
[infoletter@wascosa.ch](mailto:infoletter@wascosa.ch), [www.wascosa.ch](http://www.wascosa.ch)

Concept and text  
WASCOSA AG, Esther Schmid

Printed by  
Druckerei Ebikon AG, Ebikon

Layout  
WASCOSA AG, Esther Schmid  
Studio ONE AG, Ruswil

Translation  
proverb, Biel

Circulation  
printed 2,900 copies,  
appears twice a year in German and English

Copyright  
WASCOSA AG

## Overview of important dimensions for container cars and pocket cars

Class	Type	Load length (ft)	TEU (most important dimension)	LoB (mm)	No. of axles	Container loading height (mm)	Load limit (t)	Tare weight (t)	Wheelset load (t)	Support bracket height (cm)
<b>Container cars</b>										
Lg(n)s(s)		40	2 x 20' or 1 x 21'...40' (in part 42)	13,860	2	1,175	approx. 27 – 33	Dec 13	20 or 22.5	
Lg(n)s(s)		45	2 x 20'...21' or 1 x 22'...45'	15,200	2	1,175	approx. 26 – 31	approx. 14	20 or 22.5	
Sgns(s)	UIC-Typ 2a	60	3 x 20' or 2 x 21'...30' or 1 x 40' or 1 x 20' or 1 x 42'...45'	19,640	4	1,155	70 – 73	17 – 20	22.5	
Sggrs(s)		80 (2 x 40)	per half of the car: 2 x 20' or 1 x 30'...40'	26,400 – 27,100	6	1,175	107 – 109	26 – 28	22.5	
Sggmrs(s)		90 (2 x 45)	per half of the car: 2 x 20' or 1 x 21'...45'	approx. 29,600	6	1,155	105 – 106	approx. 29 – 30	22.5	
Sggmrs(s)	UIC-Typ 4a	104 (2 x 52)	per half of the car: 2 x 20'...24' or 1 x 20'...22' + 1 x 20'...26' or 1 x 20'...21' + 1 x 30'...31' or 1 x 40'...45'	approx. 33,940	6	1,155	101 – 104	approx. 31 – 34	22.5	
Sggmrs(s)	Low-floor	104 (2 x 52)	per half of the car: 2 x 20'...24' or 1 x 20'...22' + 1 x 20'...26' or 1 x 20'...21' + 1 x 30'...31' or 1 x 40'...	36,440	8	825	approx. 89	approx. 39	16	
<b>Pocket cars</b>										
Sdgmrs(s)	UIC-Typ 1a	50	2 x 20'...22' or 1 x 20'...21' + 1 x 20'...24' or 1 x 40'...44'	16,440	4	1,175	approx. 44	approx. 17	16	113 (P)
Sdgmrs	UIC-Typ 1b	54	1 x 20'...24' + 1 x 20'...26' or 1 x 20'...22' + 1 x 30' or 1 x 31'...45'	18,340	4	1,175	approx. 69	approx. 21	22.5	113 (P)
Sdgmrs(s)	T 4.2, T 5	60	2 x 20'...26' or 1 x 20'...26' + 1 x 30'...31' or 1 x 40'...45'	20,000	4	1,155	approx. 69	approx. 21	22.5	113, 98, 88 (P, (P), x, y, z)
Sdgmrs(s)	736, 739/744, T 2000	104 (2 x 52)	per half of the car: 2 x 20'...23' (in part: 2 x 20'...24') or 1 x 20'...21' + 1 x 30' (in part: 1 x 20'...21' + 1 x 30'...31') or 1 x 40'...45'	33,940	6	1,155	approx. 102	approx. 33	22.5	113, 98 (P, (P)
Sdgmrs(s)	T 3000, Twin	104 (2 x 52)	per half of the car: 2 x 20'...24' or 1 x 26'...45'	34,030	6	1,155	100	35	22.5	113, 98, 88 (P, (P), x, y, z)

No guarantee for the figures and no claim to completeness. More detailed data on the loading possibilities can be found in the relevant loading plans for the specific designs.