wascosà infoletter

LATEST NEWS FOR THE TANK AND FREIGHT CAR INDUSTRY



New T3000e wagon on the Rotterdam–Poznan corridor

ERS Railways BV has been operating as a rail transport company in Europe for 10 years. Starting from a purely maritime focus, it is increasingly becoming involved in continental Europe transport. Its fleet has been strengthened by new T3000e twin pocket wagons from WASCOSA since September 2012. And for good reason.



Solidarity between partners

The growing debt in various European countries and the associated aid programs from partner countries is currently putting the European Union to a tough test. We will have to wait and see if the union can last or whether it will be a case of each to his own when the going gets rougher.

The same applies for the much-quoted, strategic partnerships' in the professional world. Here again, the real meaning often only comes out in times of economic hardship.

Is it a genuine partnership where the partners pull together to look for the best way to solve the problems («win-win»)? Or was the term strategic partnership just an excuse to unscrupulously profit from the other party and thrash out the best terms and conditions for oneself («win-lose»)? It will be interesting to see how solidarity fares up in our line of business. Because at the end of the day, the winner should be rail transport.

On our beha

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Philipp Müller Delegated by the Board of Directors



Further information: Frank Schuhholz, Managing Director of ERS Railways B.V. in Rotterdam f.schuhholz@ersrail.com The decision to add T3000e-twin pocket cars in cooperation with WASCOSA as the Entity in Charge of Maintenance to the ERS fleet had already been taken at the beginning of 2011. The background to this was a shift in the company's interests away from a purely maritime operator/rail transport company to a service provider with a broad product portfolio focusing on unaccompanied intermodal traffic on the basis of (mega-)trailers in future.

The decision to purchase the first double pocket wagons of their kind in Europe to transport trailers with a corner height of 4m also marked the starting point for planning the Netherlands - Poland corridor offering. Contrary to the generally known restrictions when transporting megatrailers on transalpine traffic, especially through Switzerland, the chances for transporting such trailers per rail are much better on the east-west route (for example between the Netherlands and Poland).

Convincing profitability

The much more positive basic framework in terms of the use of the equipment on the Dutch-German-Polish infrastructure (compared to a Swiss transit along the Rotterdam-Genoa corridor) has to face an elaborate calculation of transport costs on the part of shippers and carriers. These place the focus very much on the efficiency of the resources used and also exert a very high competitive pressure on the cost side. The experience gained up to now on this corridor show that the shippers and carriers are happy to accept the product in terms of quality and price, but that in many cases they simply do not have the intermodal equipment (e.g. megatrailers) and thus the necessary experience.

Another challenge when using these double pocket wagons is to balance the flows of goods on the customer side as favourably as possible. Because incompatible pairings and the associated inefficiencies in the utilisation of the equipment always cost decisive percentage points in capacity utilisation and thus decide on the economic success or failure of an intermodal product. The advantage that intermodal transport chains can offer when using megatrailers is that the semi-trailers can be used even more flexibly than 45° containers when planning cyclic tours. 45° containers that are also used in the intermodal sector still require a chassis at the respective target terminal.

Through the intermodal approach on the Rotterdam – Poznan corridor, namely serving both maritime and continental customer segments, the focus when planning the product was on the right equipment mix so as to be able to transport the largest possible variety of transport containers. ERS Railways as the first user of the modified T3000e-wagons from WASCOSA benefits from the fact that these wagons can be used very flexibly and can carry not just standard and megatrailers but also short sea as well as deep sea containers.

Relocation potential

The use of this wagon on the Rotterdam - Poland corridor also becomes interesting for another reason: both countries have a number of strong and efficient road transport companies, i.e. the focus on both sides of this intermodal corridor is clearly on road-based delivery chains. Thanks to the offer of wagons that can carry megatrailers, both countries can gradually introduce a shift in thinking, something that was inconceivable in the past. In this connection it should be remembered that the Polish Ministry of Transport and Infrastructure adopted such shift projects in its transport policy long ago and can now present the first concrete successes.



But let us consider this corridor from a different aspect: the overall rail freight traffic sector, and thus the intermodal segment too, will be confronted by the topic of noise emissions and the possible avoidance of the same in future. All newly registered wagons already have to be fitted with noise-reducing brake systems. A requirement whose implementation means that all concerned will have to put their minds to a calculation of the associated additional costs; costs that are not fully known at present. From a user's point of view, a speedy clarification of the basic framework for the equipment of new constructions (for example brake systems) on a European level would be most welcome.

The only thing that is clear is that the grey cast iron block formerly used in brake systems will no longer be allowed as of 2020. This certainty about the abolition of a proven system is at the same time opposed by an uncertainty as to the various options that have to be provided. The current situation, i.e. an uncertainty about the brake systems equipment in new wagons means that entities in charge of maintenance are rather cautious when it comes to the use of brake systems other than those based on K-blocks. ERS believes that what is needed is a speedy legal solution to ensure a reliability of planning when it comes to these investment goods. After all, their amortisation period far exceeds any customer contract.

As for the noise problem, the west-east corridor is not half as complicated as that along the Rhine corridor. But this will not stop ERS as a rail transport company and at the same time an intermodal operator from proactively searching for a solution together with suppliers and partners such as WASCOSA AG.

Personal details

Frank Schuhholz ...

- ... has been working for the A.P. Moller Maersk group since 2009 and since May 2010 has been Managing Director of ERS Railways BV with headquarters in Rotterdam.
- ... was employed between 1999 and 2003 at Hellmann Moritz International Forwarders Sp. Z o.o. in Warsaw, his last office being that of COO.
- ... was responsible for the establishment and expansion of the Europe-wide Railport network at DB Schenker Rail in Mainz from 2003 to 2009 as head of Logistics Service.



Top-class speakers contributed to the success of the seminars: from left to right, Peter Balzer, WASCOSA AG spoke amongst others about ,Alternatives for action for wagon owners from an economic point of view', Ms. Annette Hinze, EBA explained the status of the implementation in Germany and the former Director of Alcosuisse Mr. Pierre Schaller reported on the experiences with outsourcing the ECM responsibility to a third-party partner.

ECM seminars by WASCOSA – a great success

A large number of participants and positive feedback: WASCOSA hit the mark with seminars on the new ECM/EU Directive 445/2011 and the resulting consequences for wagon owners. Top-class speakers that included the pertinent authorities of the transit countries Switzerland, Austria, Germany and France contributed to the success of the one-day event.

The seminars were aimed at the heads of purchasing, rail transport and logistics of companies that owned their own wagons. Topics included various newly introduced regulations and in particular the EU Directive 445/2011. The participants were first told about the responsibilities and liability risks that would be transferred to the owners of rail freight wagons through the new regulations on the basis of case studies. These call for technical and organisational adjustments and thus have a major effect on the operating costs. As Pierre Schaller, now retired Director of Alcosuisse

> «The costs arising from ECM/EU 445/2011 are manifold and often concealed.»

and a speaker at all four seminars, explained: «The costs arising from ECM/



EU 445/2011 are manifold and often concealed.»

The second part explained how small to medium-sized wagon owners can best cope with the new operational, legal and economic requirements. One interesting option is to split the planning of wagons from their technical and administrative management. The participants also learnt that money can be saved by outsourcing the maintenance.

Philipp Müller, CEO of WASCOSA, spoke about the strategic importance of maintenance management and hereby emphasised that WASCOSA is a powerful partner in its capacity as a professional service provider in the field of ECM fleet management: «We focus on what we can do better than others and on what is honoured by the market and customers.» Field reports on the outsourcing of the ECM responsibili-

«The second part explained how small to medium-sized wagon owners can best cope with the new operational, legal and economic requirements.»

ty to a third-party partner as well as the alternatives for action open to wagon owners from an economic point of view rounded off the fascinating seminars.

Would you like to learn more about ECM/EU 45/2011?

Richard Seebacher, Special Projects, will be pleased to be of assistance.

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Figure 1: Track system strategy of SBB Infrastruktur Fahrbahn

Interesting facts

The challenges facing rail track facility management at SBB and how it copes with increasing wear and tear

The «Rail track and interaction» department along with five other LCM business units of SBB Infrastruktur is responsible for its types of facilities towards the owner of the facilities, the Swiss Federation. This includes the regular reporting and monitoring of KPIs, and above all the responsible and daunting task of preparing and implementing an investment and maintenance strategy that meets the requirements and is expedient from a macroeconomic point of view. Sustainable and reasonable investment decisions have to be taken that also have to take into account long-term effects. The «Rail track and interaction» division has set itself the goal of optimising rail track maintenance on both the track side and of implementing measures for customers. This article presents measures to optimise maintenance planning.

Further information:

Dr. Jochen Holzfeind, Head of Rail Track Facility Management Schweizerische Bundesbahnen SBB in Bern jochen.holzfeind@sbb.ch

Measures to optimise rail track maintenance on the track side – influencing factors and cost drivers for rail tracks

The biggest cost drivers – that can more or less be directly influenced by the infrastructure – are: track load, line routing, type of rail system and quality of the subgrade. Based on these cost drivers, the rail track facility management department began to settle the strategic alignment of the rail track division on a new foundation in 2010. Numerous experts helped the rail track facility management department draw up an investment strategy on the basis of lifecycle costs (Figure 1). This is aligned to the loads expected in 2030 and covers the future requirements on the rail track. Die rail system investment strategy became valid on 01.01.2012 in the regulation RI 22211 and is binding for all rail track projects as of 2014.

From reactive to proactive facility management

On account of the constantly changing basic framework in terms of the load on the rail track - both in the form of the increasing number of trains as well as increasing speeds, axle loads and wheel vertical forces - proactive facility management has to have a detailed account and a sound understanding of the quality behaviour of its facilities. Railway tracks on a roadbase are permanently deformed during use and from time to time their geometrical position is improved through maintenance work. An optimisation and professionalisation of rail track maintenance calls for a recording of the development of the track geometry and the effects of measures that have already been carried out. This is only possible if the quality behaviour can be estimated for the present, specific basic framework. In an age of low-cost storage media and technically mature measurement cars, the quality behaviour of tracks can be traced over many years on the basis of the results of measurement runs.

The majority of railway infrastructure administrations currently use a reactive maintenance system. Measurement runs of a diagnostic vehicle, which are usually carried out between two and six times a year throughout the network, are considered separately. The results of the measurements are checked to see whether limits have been exceeded, e.g. attention (AT), intervention (IS) and the immediate action threshold (IAS). Those renewal and maintenance measures that have to be carried out directly are derived on the basis of these considerations. Reactive action leads to an unscheduled or unschedulable and cost-intensive maintenance on account of its short-term nature. This can be changed by a reliable forecast of the



Figure 2: swissTAMP - track position analysis and measures planning tool of SBB Infrastruktur Fahrbahn



Personal details

Dr. Jochen Holzfeind ..

- ... studied civil engineering at the Technical University in Graz and the Politecnico di Bari.
- ... assisted in big projects of the Austrian state railways between 2004 and 2009 in the new and expansion division (e.g. Koralm tunnel).
- ... developed new possibilities in the field of forecasting wear behaviour and the implementation of a proactive lifecycle management of rail track between 2006 and 2009.
- ... has been head of the rail track facility management department of SBB Infrastruktur since 01/2010.





Figure 3: swissTAMP allows the decision basis to be extended by the time component and thus a proactive and predictive monitoring and facility management.



development of a track's quality. One precondition here is a knowledge of the correlations between the different behaviours and the development of the rail track. This will enable operators to plan and prepare the use of large-scale construction machinery better and thus achieve the required planning stability and improved efficiency in the railway infrastructure sector.

The ideal intervention threshold for a optimised useful life has to be assessed for an additional optimisation of the maintenance, along with the possibility of scheduling the times of maintenance work. A lot of research still has to be done in this field and there are huge potentials with respect to efficiency and efficacy.

Outlook on measures to optimise rail tack maintenance on the customer side

The historical and current situation of rail tracks shows that the present maintenance efforts are not enough to satisfy today's and tomorrow's requirements. The constantly rising loads and increased marginal exploitation of tolerance ranges during the procurement of wagons are forcing the «Rail track and interaction» division into action. In this respect, «Rail track and interaction» has decided to consider the cost driver axle load relative to the speed and thus restrict this to fast-moving vehicles. What's more, the tolerance range for wear-critical wheel-rail forces will not longer be exploited to the maximum. This problem was identified throughout the group and, together with SBB Personenverkehr, SBB Infrastruktur has take a big step forwards in terms of improvement and progress.

Based on the increasing demand for maintenance measures in highly-stressed and highly-frequented areas as well as on the damage patterns in points, the rail track facility management department is developing a tool that will isolate the cause of the damage and clearly assign the damage caused to the originator. This should lead to a rethinking during the procurement, use and construction of vehicles thanks to a source-related settlement of damages and of the costs of repairing the damage. «We are looking forward to continuing our successful partnership with WASCOSA. We can recommend the independent Swiss company as a service provider at any time.»

> Gerald Retscher, Managing Director of Wiener Lokalbahnen Cargo GmbH

«The personal support of particularly dedicated and competent employees on both a business and technical level has to be applauded. Our contact persons are active, fast and can be reached at almost any time.»

> Gerald Retscher, Managing Director of Wiener Lokalbahnen Cargo GmbH



Revision of Swiss hazardous substances laws

Tank wagons and other containers such as tanks, gas cylinders, barrels etc., that are used to transport hazardous substances have to be built and tested in accordance with the RID regulations. In Switzerland the tests may only be carried out by the pertinent authorities or an expert they have named. The regulation on the transport of hazardous substances by railways and cable cars (RSD) names the Swiss Federal Inspectorate of Dangerous Goods (EGI) as the responsible authority for the approval, authorisation and testing of packaging, pressure vessels and tanks.



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

The amendments to RID 2013 that will come into force soon are likely to herald the end of a controversial 20-year era in the field of official activities and in the testing of containers for hazardous substances in Switzerland too as per 1.1.2013. In October 2007 the Federal Council of Switzerland decided to adopt the Directive 1999/36/EC (which was replaced in July 2010 by the Directive 2010/35/ EU). By doing so it became necessary to introduce a conformity assessment system within the scope of the directive and in return to repeal the system of official approvals that is currently legal in Switzerland. The scope of the directive covers so-called mobile pressure devices, mainly pressure vessels, tank wagons, battery wagons, gas containers etc., that may be used to transport gases.

The DETEC (Department of the Environment, Transport, Energy and Communications) was commissioned to introduce the conformity assessment system and adapt this accordingly to the set of national regulations. With the introduction of the conformity assessment system, the testing and conformity assessment tasks were handed over to the free market, though new tasks emerged for the pertinent authorities, such as the identification and monitoring of conformity assessment offices and the supervision of the market. The DETEC decided that the Federal Office of Transport (FOT) should take charge of those additional tasks with a cross-carrier character. The 2013 amendments include, amongst others:

- a new directive on the bringing into circulation of hazardous substance containers and the market monitoring;
- a new RSD directive on the transportation of hazardous substances with railways and cable cars on a Federal Council level (the existing RSD directive on a department level will be repealed);

With the adoption of TPED in the Swiss set of regulations, the putting into circulation and market monitoring of mobile pressure devices have to be redefined. The new directive on hazardous substances containers (GGUV) on the putting into circulation of hazardous substances containers and the market monitoring re-defines the regulations on the putting into circulation and of the associated conformity assessments and market monitoring of all hazardous substance containers. The inspection and testing work in particular will now be carried out by private, accredited companies. The directive is scheduled to be approved by the Federal Council on 12 December 2012. The tasks of the authorities regarding hazardous substances containers have been regulated up to now in RSD and SDR. With the change from a system of official approvals to the conformity assessment procedure, new tasks emerged for the authorities such as the accreditation, identification and supervision of conformity assessment offices or the market monitoring of the containers provided, including tank wagons - something of a paradigm shift! What's more, the issue of technical instructions, approval of deviations in testing methods, classification of special hazardous substances, expert activities, etc. still have to be guaranteed. In the current system this work is performed by the EGI. But since the introduction of a conformity assessment system calls for a strict separation of official duties and testing activities, the EGI is no longer allowed to perform official tasks in the new system.

From a hillbilly to a pioneer

The conformity assessment system should be extended to cover not just Class 2 mobile pressure devices but all hazardous substances containers in all classes. In Switzerland's case, with its relatively small market for hazardous substances containers, it would only be possible to simultaneously introduce a conformity assessment system and a system of official approvals with a disproportionately large amount of work. This is why the new system is to be applied for all classes of hazardous substances. This is a brave plan and very forward-looking since RID only calls for the implementation of TPED for class 2 objects at present (i.e. gas wagons for all LPG gases such as propane, butane etc. or for ammonia, ethylene oxide, chlorine, sulphur dioxide etc.). The procedures for mobile pressure devices and for other hazardous substances containers will be regulated separately in the directive.

Class 2 objects

Testing offices that wish to perform conformity assessments for mobile pressure devices (which include tank wagons for gases) have to be identified by the pertinent authorities and notified by the member states in accordance with Directive 2010/35/EU. In Switzerland the identification is by the DETEC. The mutual recognition of the identified offices as conformity assessment offices within EU states is ensured by their adoption in the MRA.

Objects in other classes

Testing offices who wish to perform conformity assessments for hazardous substances containers other than mobile pressure devices only require identification by the DETEC, a recognition within the scope of MRA is not necessary since the scope of Directive 2010/35/EU only covers mobile pressure devices. The prerequisites for the identification, however, are identical.

Consequences for operators of tank wagons and tanks

This means that operators of tank wagons and tanks can choose between the various testing offices on the market in future. In the case of gas tank wagons, they can even consult foreign testing offices or have the tank tested abroad. In the case of tank wagons not affected by TPED, they still have a free choice of testing offices, and we can only hope that a market will emerge here which in the end leads to a development of a competitive service in line with the market. At present there is only one further testing office on the market in Switzerland, Retest GmbH (see www.retest.ch).

More about MRA Mutual Recognition Agreements

Bilateral 1; MRA Agreement between the European Community and the Swiss Confederation on mutual recognition in relation to conformity assessment: 1 June 2002; SR 0.946.526.81

Agreement between the European Community and the Swiss Confederation on mutual recognition in relation to conformity assessment. Concluded on 21 June 1999. Approved by the Federal Assembly on 8 October 1999. Swiss instrument of ratification lodged on 16 October 2000; Came into force on 1.6.2002.

Background

Goods that are exported first have to satisfy the product requirements of the importing country and second have to be tested for conformity with these product requirements. If the importing country does not recognise the conformity assessment performed in the exporting country (testing, inspection, certification), the manufacturer has to have the export product tested for its conformity in the importing country by an approved testing office beforehand (= trade restrictions).

Goal and content of MRA

Agreements on the mutual recognition of conformity assessments are an important trade policy instrument, which are also recognised in the scope of WTO, to eliminate such technical trade restrictions in the state-regulated sector. Within the scope of such agreements, the importing country pledges to recognise the conformity assessment performed in the exporting country on condition that: 1. the product has been tested in accordance with the regulations of the importing country and 2. the conformity assessment office of the exporting country satisfies the requirements on a professional qualification set out in the agreement. If the product regulations of both countries are equivalent, a conformity assessment carried out in the exporting country in accordance with its own regulations is also sufficient to put the corresponding product into circulation in the other contracting party's country.



The new management of WASCOSA (from left to right): Thomas Karsten, Richard Seebacher, Detlef Schlickelmann, Irmhild Saabel, Philipp Müller, Fabian Stadler, Roy Bruderer

On our behalf

WASCOSA strengthens its management

In connection with the continuous expansion of the WASCOSA fleet in terms of numbers and classes, and with a view to the further strategic development of products and business relationships, WASCOSA is reshuffling its management.

Since October 2012, the WASCOSA management has been made up as follows: Thomas Karsten joined us on 1 October 2012 and took over as Chief Sales Officer from Richard Seebacher, who had assumed this function ad interim since June 2012. Thomas Karsten has decades of experience in the business as a sales manager for various leasing companies. Richard Seebacher will continue to work on special projects at WASCOSA.

WASCOSA welcomed Detlef Schlickelmann on 1 September 2012 as the new Chief Technical Officer. Detlef Schlickelmann is a qualified mechanical engineer, completed his MBA between 2006 and 2008 and also has decades of experience in the business.

Irmhild Saabel now takes over the new function as Chief Business Development having successfully established the technical sector. In this new function she will ensure the further strategic development of WASCOSA's products and business relationships.

The following posts remain unchanged: Philipp Müller as CEO, Fabian Stadler as Chief Financial Officer and Roy Bruderer as Chief Operating Officer. «We are convinced that these personnel changes in the top management will strengthen the management competence at WASCOSA so that we can continue to provide our business partners with customer-oriented and top quality services,» says Philipp Müller, Delegate of the Board of Directors.



CER – Community of European Railway and Infrastructure Companies (CER)

The Community of European Railway and Infrastructure Companies (CER) is the leading European railway association. It was founded in 1988 with 12 members and now brings together 80 European railway undertakings, infrastructure companies and vehicle leasing companies, including long-established bodies, new entrants, and both private and public firms.

In EU, EFTA and EU accession countries, CER members represent about 75% of the rail network length, more than 85% of the rail freight business and over 90% of rail passenger operations, with 1.2 million jobs directly created by CER members.

«The Community of European Railway and Infrastructure Companies (CER) is Europe's leading railway association.»

Geographically, CER members come from the European Union, Norway and Switzerland, the candidate countries (Macedonia, Montenegro, Serbia and Turkey) as well as from the Western Balkan countries. Among CER's 80 members, JR East (the East of Japan Railway Company) and Georgian Railway Ltd are formal CER partners and collaborate with CER on a number of issues. CER is based in Brussels and represents the interests of its members to the European Parliament, Commission and Council of Ministers as well as to other policymakers and transport actors. CER's interests cover all policy areas that have a potential to impact on railway transport. In close cooperation with its members, CER contributes to the drafting of legislative proposals and monitors and evaluates the implementation of policies.

CER promotes a strong rail industry that can form the basis of a long-term sustainable European transport system.

Further information: contact@cer.be & www.cer.be

Did you know, that ...

...CER member companies were responsible for 186,784 kilometres of railway lines in 2011. This is equivalent to travelling around the Earth four and a half times.



...1,293 million tonnes of cargo were transported by CER members in 2011. If this freight were to be carried by road, it would require over 100 million truck journeys.



...CER member companies carried 12.8 billion passengers in 2011. This is twice the entire population of the Earth.



- 12.8 billion passengers
- ...1.2 million jobs are directly created by CER members. This equals 0.4% of the EU's working population.



New at WASCOSA



Roger Weber, Team Operations Tank Wagon T +41 41 727 67 73, roger.weber@wascosa.cl

Roger Weber has been helping the tank car operations team since the middle of January 2012. The graduate technician and process expert with a Swiss federal certificate knows the industry back to front: before joining WASCOSA he worked for several years at SBB Cargo AG Asset Management, the last post being in spare parts logistics.

Thanks to his previous work he knows the value-creation processes in the workshops and is convinced that he can find and

implement the best solution at all times for WASCOSA's customers and business partners. He really appreciates the work at WASCOSA: «I am delighted to be working for such a great company where values are still appreciated and the word team still means something special in the corporate culture.»



Patrick Koller, Spare Parts and Wheelset Management T +41 41 727 67 38, patrick.koller@wascosa.ch

Not a completely new face at WASCOSA – since February 2012 – Patrick Koller; he joins the spare parts and wheel management team. Before WASCOSA he had worked for five years at Shell Switzerland after completing his commercial training and then at Petroplus Marketing AG. In this company he worked in administration, amongst others, monitored inventories and stocks and planned trains.

Customers and business partners of WAS COSA profit from Patrick Koller's experience in logistics and his technical understanding. He is thrilled with his new job: «The work is very interesting, diversified and varied. The team is convivial and accepted me in a super way – I already feel right at home.»

Credits

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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 2,850 printed copies appears twice a year in German and English

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Calendar

2013

22. – 23.01.2013 Cologne (DE)	BME-/VDV forum rail-freight traffic	Info: Verband Deutscher Verkehrsunternehmen e.V. (VDV) www.vdv.de
11. – 12.04.2013 Luxembourg (LU)	IBS Spring conference	Info: Interessengemeinschaft der Bahnspediteure (IBS) e.V. redaktion_ibs@vodafonde.de www.ibs-ev.com
23.04.2013 Vienna (AT)	VPI Members Meeting	Info: VPI Verband der Privatgüterwagen- Interessenten Österreichs info@vpirail.at www.vpirail.at
15.05.2013 Lucerne (CH)	CRSC Conference	Info: Cargo Rail Service Center e.V. info@crsc.ch www.crsc.ch
16.05.2013 Zurich (CH)	VAP Forum Freight Car Spring conference	Info: VAP Schweiz vap@bluewin.ch www.cargorail.ch
22. – 24.05.2013 Istanbul (TR)	F&L-Meeting	Info: F & L European Freight and Logistics Leaders Forum Secretariat@EuropeanFreightLeaders.eu www.europeanfreightleaders.eu
23. – 24.05.2013 Siegburg (DE)	Siegburg Cooperation Talks – 10th joint market event	Info: Verband Deutscher Verkehrsunternehmen e.V. (VDV) www.vdv.de
04. – 07.06.2013 Munich (DE)	transport logistic	Info: Munich exhibition centre info@transportlogistic.de www.transportlogistic.de
20.06.2013 Potsdam (DE)	11. Technical Information Event of the VPI	Info: Vereinigung der Privatgüterwagen- Interessenten mail@vpihamburg.de www.vpihamburg.de
25.09.2013 Zurich (CH)	VAP Forum Sidings	Info: VAP Schweiz vap@bluewin.ch www.cargorail.ch
07.11.2013 Zurich (CH)	VAP Forum Freight Car Autumn Conference	Info: VAP Schweiz vap@bluewin.ch www.cargorail.ch

Hazardous substance classes and hazard labels

Class 1 Class 2 Class 3 Flammable liquids **Explosives** Gases Class 4.1 Class 6.1 Class 5.1 Flammable solids Oxidising agent Poison Class 4.2 Class 5.2 Class 6.2 Infectious substances Spontaneously combustible solids Organic peroxide Class 4.3 Dangerous when wet All Class 9

Class 7 Radioactive substances Class 8 Corrosive substances

Hazard labels have numbers



Source: www.gefahrgut-shop.ch

wascosa infoletter

No guarantee for the figures and no claim to completeness.

Miscellaneous hazardous materials

and objects