

The infoletter for the tank car industry



We show our colours

As you know, the transport logistic trade fair is being held in Munich between 12 and 15 June, 2007. WASCOSA will also be there and will be bringing along attractive exhibits as well as interesting information.

Personal

What are we trying to communicate with this year's motto „We show our colours“? To show one's colours is a typical colloquialism that means: to confess to something or to stand by one's opinion.

WASCOSA believes in safe transport by rail, in high quality and complete technical equipment and has given its exceptionally young fleet of vehicles (over 50% of the vehicles are less than 5 years old!) an attractive colour design as an expression of modernity, away from drabness and monotony. WASCOSA thus gives the cars an easily recognizable, positive image, thus advocating shifting freight traffic from roads to rails. One could even say that the blue Wascosa euro tank car® has started a trend that both we ourselves and apparently other providers on the market are following.

WASCOSA stands by its opinions, stands up to current problems and actively cooperates against the general trend in European associations and study groups so as to increase the appeal of rail-freight traffic and improve the efficiency of the owner and shipper system. WASCOSA is and will remain independent, fast and flexible! If you are looking for customer-orientation, innovation and efficiency and want to talk with adept experts, why not visit us at the transport logistic.

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Werner Handelsmann,
Sales Manager WASCOSA AG

Lobby for Europe's rails

The Community of European Railway and Infrastructure Companies (CER) represents the interests of 62 companies in Brussels. The members of the association are as diverse as the sector itself: former state railways and newcomers, international enterprises and regional railways, integrated companies as well as purely passenger, freight or infrastructure companies.



The European markets for rail-freight traffic were opened on 1 January 2007. At least by law. According to some politicians in Brussels, this has created the basic conditions that will allow rail companies to get freight traffic off the roads and thus contribute to a lasting and efficient transport system in Europe. One of CER's central tasks is to counteract this rosy-tinted view of reality.

Beginning with the interoperability of national systems, the quality of infrastructure through to equal opportunities for the various carriers: freight traffic is still top of the list at CER in this year of complete market liberalization.

continued on Page 2

continued from Page 1

Standard systems

Two topics are particularly current in the field of interoperability: firstly, the introduction of the standard, European Rail Traffic Management System (ERTMS), one of the biggest investment challenges for the coming four years, and secondly the creation of a common standard for telematics applications in freight traffic.

In both cases Brussels has to be made aware of the fact that although uniform standards are in the interests of European railways in the long term, an intelligent implementation strategy is necessary so that the baby is not thrown out with the bath water and the enormous costs are balanced by corresponding benefits. In the field of ERTMS, the sector has thus agreed on a corridor concept with politicians: instead of patchwork of ERTMS infrastructures wherever extensions or new systems are built. First the important international connections will be equipped all with the new technology. This will enable the consistent use of ERTMS by a set target date. The challenge we now face is to develop the technology further into a uniform standard that is applicable throughout Europe.

The freight railways are affected not only by ERTMS but also the European specifications for telematics applications in freight traffic. In January of this year, CER presented a strategy plan to the European Commission in which European railways outline how they plan to achieve the goal of a standard „language" in the field of telematics applications. In this they agree to implement complete standardisation by 2014 at the latest. The railways and infrastructure companies spent a year developing this strategy plan under the leadership of the CER and other associations in the sector. If the Commission accepts this plan, the implementation phase could start within the next few weeks.



Johannes Ludewig, Executive Director of CER Community of European Railway and Infrastructure Companies (CER), Brussels

Interoperability also means common standards for the employment of personnel and much more. CER offers constructive advice and support for the work of the European Railways Agency in all of these fields. But interoperability alone, just as little as market liberalization, is not the solution for tomorrow's traffic problems.

Pragmatism called for

Freight traffic in the EU is rising constantly and posing enormous problems for traffic and environmental policies - not just in connection with discussions on climatic change. Railways must have an appropriate infrastructure so that they can handle a part of the growth in traffic. This message is not new, but all former deliberations into the establishment of a separate network for freight traffic came to nothing - not least due to the question of financing. The CER has now started a new attempt. A survey was carried out over the past few months in cooperation with McKinsey as to which measures and funds will be needed to increase the capacity of individual important freight traffic corridors.

CER will place the results of this survey at the disposal of the Traffic Commissioner Jacques Barrot, who will

present a memorandum on a priority freight traffic network in Summer . This CER survey was a pragmatic attempt to take all possible measures into account, from the construction of new sections of track through to priority regulations in relation to passenger traffic. There are many starting points - what's important is that these are finally attempted.

This pragmatism applies for all topics addressed by CER, be these legal questions of freight law or the customs code, route prices in Central/Eastern Europe and the cross-subsidising of passenger traffic there or quality obligations or simply the future of single car traffic in Europe. In this connection CER believes it should be just as natural for freight traffic customers to be connected to the rail network through sidings as it is for every manufacturing company to be connected to the road network.

The growing membership of the CER, which has doubled over the past three years demonstrates that the basic political conditions created in Brussels are of existential significance for railways - and at the same time decide on the sustainability of the European transport system.

Johannes Ludewig, CER

News

TAF TSI - specifications for owners in TSI telematics applications for freight (TAF)

What is TAF TSI? What does a car owner have to know and for what is he responsible in future? What possibilities does an owner have to comply with TAF TSI? The latest information can be found as a download at www.wascosa.ch.

Interesting facts

Pressurized gas tank cars

Pressurized gas tank cars as transporters for liquefied gases account for a considerable share of all European tank cars. - an overview of the vehicles and changed regulations.



Pressurized gas tank cars are identified by the orange warning stripe around the tank and are used for various gases. A differentiation is made between the following gases:

- pressurized, liquefied gases (e.g. propane, butane, chlorine, ammonia); these are filled into the tank as liquids if the product is liquefied and gaseous;
- compressed gases (e.g. hydrogen, oxygen, nitrogen); these are in a gaseous state;
- deep-frozen, liquefied gases (e.g. carbon dioxide, argon, oxygen, nitrogen); these are cooled down to their boiling point and are present in an almost unpressurized, liquid state in the tank.

Different designs

The particular type of gas to be transported determines the design and equipment of the tank car. The wall thickness of a tank is between 10 and 18 millimetres depending on the pressure design and the minimum test pressure is between 10 and 29 bar. The minimum test pressure and minimum wall thickness for the tank that can be derived from this essentially determine the tare weight of the pressurized gas tank car.

As far as specification is concerned, the pressurized gas tank cars can be divided up into cars with and without

insulation. Whereas no protective thermal insulation is needed for products such as chlorine or ammonia, this is necessary for many other products. Insulations can be

- a sunshade roof that covers at least the upper third, though at most the upper half of the tank surface at a distance of 4 cm (e.g. for butadiene), or
- a complete cladding of insulating materials (e.g. for ethylene oxide)
- a vacuum insulation with a perlite filling in the inter-tank space, whereby there is a vacuum between the inner and outer tank with only a few struts to prevent a heat input (for cryogenic liquefied gases such as oxygen)

All pressurized gas tank cars have triple-protected drains, firstly

- the bottom valve inside the tank that can be operated by remote control, then
- the cut-off valve in the drain pipe, which is also closed with a



Drain valves: gas phase (green) and liquid phase (blue).

- blind flange during transport. Separate valves are provided for the gas and liquid phases.

The openings are not below the liquid level for certain products such as chlorine or sulphur dioxide. These cars thus have two valves with riser pipe for filling and draining liquid products on the top of the tank. The third valve is connected to the gas chamber.

New statutory regulations

The construction of the undercarriage or pressurized gas tank cars will change with the coming into force of stricter statutory regulations. These requirements are phrased in Part 6 of RID, Section 6.8.4. According to these, certain pressurized gas tank cars must be able to absorb a collision energy of 800kJ at each end of the car in future in accordance with the new equipment regulation TE 22. This is possible with new undercarriage components that allow deformations as of a certain impact speed as well as special buffer elements. This means that all new cars have to be fitted with crash buffers as of the beginning of 2007 (see box on Page 4). Chlorine cars also have to have protective shields fitted on the ends of the tanks (headshields) as a crumple zone and protection against over-buffering to prevent the cars piling up on top of each other.

continued on Page 4

continued from Page 3

Transitional regulations apply for existing cars in accordance with RID sub-section 1.6.3.27. According to these, cars for certain substances such as ammonia have to be retrofitted with 500 kJ crash buffers by 31.12.2010 so that they can remain in use. This retrofit regulation does not apply for tank cars approved before 1.1.2007 that are only used for hydrocarbon gases.

Today's standard tank cars are mainly 4-axles cars with a volume of 110 or 120m³ and a wheelset load of 22.5 t. They are suitable for a number of products, in particular for liquefied



Headshield to protect the tank.

Source: Güterwagen-Correspondenz 108-1/07

hydrocarbons such as propane, butane, etc. Apart from the filling weight, other aspects have to be taken into account when selecting the most suitable vehicle, such as the outer axle base or length of the car, since these can be very important for the optimum operational use. An overview of the ideal pressurized gas tank cars for each product can be found on the last page.

Further information from:
infoletter@wascosa.ch

Sources include:
Edition 6/96, Hazardous loads

News

Crash buffer

Crash buffers absorb an energy of 400 kJ per buffer (new freight cars) or 250 kJ (retrofit buffers). This occurs through the deformation of the buffer sleeves, for example. According to RID, this energy absorption through plastic deformation may only occur in conditions that lie outside the normal railway operation (impact speed over 12 km/h).

The minimum energy absorption of freight cars built before 1 January 2007 is only 500 kJ per end of the car, in other words 250 kJ per buffer. Cars affected by this RID regulation,

for example those used for ammonia, must be converted by 31 December 2010.

The statutory protection of the tank body is not free: the new crash buffers will be available for roughly double the price of a conventional buffer. Let's hope that the growing demand and competition will ease the situation. At present there are three suppliers who use various methods to absorb the energy.

Further information from:
infoletter@wascosa.ch



Example of a crash buffer before and after deformation.
© Photo EST Railway-Systemtechnik GmbH

Interesting facts

Insurance solutions for workshops and other service providers

The entry into force of the new COTIF agreement in 1999 and the discontinuation of the liability agreement in accordance with UIC bulletin 413 associated with the transition to the "General Agreement on Use (AVV)" will have a direct effect on the position of workshops and other service providers under liability law. What's more, the requirements on their (liability) insurance coverage will also rise.

The Commission of European Communities was prompted by the reform of international railway law to harmonise the procedure for commissioning railway rolling stock and in particular to amend the directive 2004 / 49 / EC on railway safety in the community. A change to this directive should at the same time define the (future) concept of the vehicle owner at

community level and specify the relationship between the vehicle owner and railway company, in particular in the field of maintenance.

A current draft schedules the insertion of a new article 14 b

continued on Page 5

continued from Page 4

(vehicle maintenance), according to which a legal person is to be appointed during the commissioning of a vehicle who will be responsible for the vehicle maintenance. If vehicle owners do in fact certify the maintenance in this connection, this would necessarily have to be assumed for workshops and other service providers too.



Leaky fittings: are workshops adequately insured for this and other cases?

Irrespective of the fact that the current study group draft cannot yet be called a final version, workshops and other service providers will almost certainly be confronted with more damage compensation claims and/or third party regress claims in future. A liability insurance cover may have to be proven for customers in individual cases. Mention should be made in this connection of the double function of a liability insurance, namely the settlement of justified third party damage compensation claims and the prevention of unjustified claims. In order to "protect profits" with this instrument, workshops and service providers will have to pay attention to the best possible insurance terms and sufficiently high coverage for operational liability insurance protection. Expert insurance advice and support would also appear indispensable here.



Peter Schenkendorf,
Gayen & Berns ·
Homann GmbH

News

Successful results from trial conversion of derauling detectors

SBB AG fitted 623 of its tank cars, 242 of them, in other words more than one third, from WASCOSA, with type EDT 100 derauling detectors between 1998 and 2002. Together with Esso Switzerland, WASCOSA was instrumental in the introduction and promotion of this new safety development during this period.

During the three year operational trials there were repeated spurious releases of the EDTs - particularly at high ambient temperatures. These normally resulted in train delays and blocked lines for at least 20 minutes. The cause was the sensitivity chosen (and defined in the

UIC Leaflet 541-08) for the EDTs compared to the normal operational accelerations that occur with the cars. Consequently, the firm of Oerlikon Knorr-Eisenbahntechnik AG, who were responsible for the system technology, changed the threshold values from the range 5 - 10 g to 6.5 - 11.5 g.

100 EDTs have been adjusted to the new threshold values since August 2006 and fitted to 50 tank cars from WASCOSA. Lessees used these tank cars as a sort of pilot test and thus monitored the sensitivity of the threshold values. Up to now (January 2007) there have been no further spurious releases of the modified EDTs after several months of operation. With an unconditional approval of derauling detectors by the UIC, it would thus be sensible to modify the EDTs on the remaining 573 cars and fit more cars with EDTs.



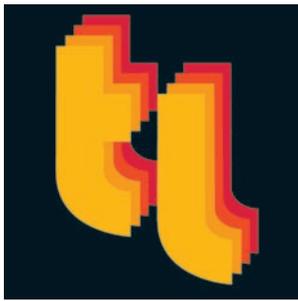
Derauling detectors are fitted to buffer beam at each end of the car and are pneumatically connected to the train's main air line via a 1"-line.

Source:
Gerd Buchmeier, Knorr-Bremse
and Christian Aubry, SBB Cargo

Based on this experience, the UIC Study Group 5, which met in January 2007, drew the following conclusions:

- the changed threshold values 9.0 ± 2.5 g (instead of 7.5 ± 2.5 g) have been adopted on account of the positive operational tests with 50 cars.
- the UIC approval is retained even with the changed threshold values.
- a change of the type name is required (e.g. EDT 101).
- type EDT 100 will be deleted from the approval list for bulletin 541-08.
- the firm of OKE will make a declaration of conformity for EDT 101 = EDT 100 (the only change being the higher threshold values) All EDT 100 units have to be changed to EDT 101.
- the changes to the threshold values will be published on the UIC website.
- Bulletin 541-08 will only be modified in connection with a general revision of the same.
- if new (higher) requirements for a derauling detector are specified in bulletin 541-08 the formerly approved EDT 101 will enjoy a right of continuance.

News



transport logistic - meeting place for the transport and logistics industry

Transport logistic, the number one logistics trade fair in Europe, will be held this year in Munich between June 12 and 15. All important representatives of the industry will be presenting their latest technologies, products and visions at the 2007 transport logistic.

Further information can be found at www.transportlogistic.de

We show our colours at transport logistic

**Block 704/10,
track 1/2 und track 2/2**

WASCOSA AG will be presenting itself again at the transport logistic. Under this year's motto of „Showing our colours" we will be presenting two new cars from our fleet:

- a pressurized gas tank car and a
- newly developed dry bulk freight car.

We will be holding a special Benelux Day this year on Wed. 13 June 2007 and a special Sweden Day on Thurs. 14 June 2007 with our agents.

Show your colours too at our stand and win a trip with the famous Glacier-Express incl. overnight stay and flight for 2 persons. Visit our stand for your chance to win.

Tickets and trade fair documents can be requested from: infoletter@wascosa.ch under the keyword "transport logistic".

Max Sandmeier, the founder of WASCOSA AG, celebrates his 80th birthday



Pietro Scotti and Max Sandmeier, the founders of WASCOSA in the founding year 1964.

Max Sandmeier celebrated his 80th birthday on 27 January 2007. He founded WASCOSA AG together with Pietro Scotti in 1964.

Max Sandmeier is a pioneer amongst car lessors in the post-war era. He had already learnt the trade from his uncle in Italy in 1949. This was also where WASCOSA was founded. During his active career, Max Sandmeier was regarded as an entrepreneur who always looked ahead and acted accordingly. He has always succeeded in determining new trends and customer needs promptly and in implementing these successfully. For example, WASCOSA was the first firm to offer the new 90to mineral oil car that met the new air pollution protection act in Switzerland in 1991. Ultimately, under the 30 years of Max Sandmeier's management, WASCOSA has developed into an important medium-sized hiring company.

Max Sandmeier retired from active management at the end of 1993 when his son-in-law, Philipp Müller, joined the company. But as Chairman of the Supervisory Board he continues to follow developments in the freight car trade with great interest.



Max Sandmeier today

On our behalf

Support for technology

The technology team at WASCOSA was expanded by two experienced members of staff towards the end of 2006. Mr. Torben Kempf joined us as a technical officer on 1 October 2006. Mr. Kempf has 4 years of experience as a car inspector at SBB Cargo, a great assistance for his work as specialist for damages. WASCOSA has thus reacted promptly to the great increase in the number of damage claims since the introduction of the AVV. With Mr. Kempf we can thus be sure that damage reports will be handled quickly and competently, and that above all else, costs can be saved for the leaser of the car.



Torben Kempf and Alfred Meier.

At the beginning of November 2006 WASCOSA also welcomed Mr. Alfred Meier to its technology team. Mr. Meier has 25 years of experience in the maintenance of tank cars. His many years of front-line practical work will be invaluable to technology, where his know-how will mainly benefit the mineral oil car sector.

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Feedback

Questions, suggestions, tips

Send your questions, suggestions, tips to infoletter@wascosa.ch.

Change of address

Inform us of a change of address by sending an E-mail to infoletter@wascosa.ch.

Calendar

Exhibitions, trade fairs, congresses 2007 / 2008

03.05.2007 Vienna (A)	VPI Austria General Meeting	Info: Verband der Privatgüterwagen-Interessenten Österreichs sylvia.sloboda@gatx.at
07.-08.05.2007 Neuss (D)	The future of combined traffic (conference)	Info: Verband Deutscher Verkehrsunternehmen (VDV) akademie@vdv.de / www.vdv-akademie.de
21.-22.05.2007 Frankfurt/M. (D)	Private Public Partnership in the railway infrastructure (conference)	Info: Verband Deutscher Verkehrsunternehmen (VDV) akademie@vdv.de / www.vdv-akademie.de
21.-24.05.2007 Helsinki (FIN)	57th World Congress & Mobility and City Transport	Info: UITP hicham.badrان@uitp.com / www.uitp.com
01.06.2007 Kassel (D)	VPI Annual Members Meeting	Association of Private Freight Car Interested Parties vpiahamburg@t-online.de
05.-06.06.2007 Braunschweig (D)	Rail Automation 2007 Railway operation and railway safety technology in and for Europe	Info: TU Braunschweig ifev@tu-braunschweig.de / www.tu-braunschweig.de/ifev
07.06.2007 Paris La Défense (F)	AFWP General Meeting	Info: Association Française des Wagons de Particuliers webmaster@afwp.asso.fr
12.-13.06.2007 Dresden (D)	3. Railway Forum	Schreck-Mieves GmbH info@schreck-mieves.de / www.schreck-mieves-seminare.de
12.-14.06.2007 Lille (F)	Sifer 07	Info: Mack Brooks Exhibitions Ltd. sifer@mackbrooks.co.uk / www.sifer2007.com
12.-15.06.2007 Munich (D)	transport logistic	Info: Messe München GmbH newsletter@messe-muenchen.de / www.transportlogistic.de
19.-20.06.2007 Halle/Saale (D)	VDV Annual Conference 2007	Info: Verband Deutscher Verkehrsunternehmen (VDV) akademie@vdv.de / www.vdv-akademie.de
13.-14.09.2007 Würzburg (D)	COTIF - Experiences with the new international railway law (conference)	Info: Verband Deutscher Verkehrsunternehmen (VDV) akademie@vdv.de / www.vdv-akademie.de
20.-23.09.2007 Cannes (F)	VPI - UIP Congress 2007	sylvia.sloboda@gatx.at
29.09.-03.10.2007 Berlin (D)	EPCA Logistics Meeting	The European Petrochemical Association meetings@epca.be / www.epca.be
24.-25.10.2007 Strassburg (F)	Trans-European Railway Competence (congress)	Info: VDEI Service GmbH Service.GmbH@VDEI.de / www.vdei.de
12.-14.11.2007 Dortmund (D)	#railtec2007	Info: #railtec2007-Projektbüro CP/Compantner Agentur für Kommunikation GmbH railtec@cp-compantner.de / www.railtec.de
2008		
06.-12.03.2008 Hannover (D)	CeBit 2008	Info: Deutsche Messe AG www.messe.de
23.-26.09.2008 Berlin (D)	Inno Trans 2008 International trade fair for traffic technology, innovative component-vehicle systems	central@messe-berlin.de / www.messe-berlin.de
30.09.-02.10.2008 Bremen (D)	Intergeo 2008	Info: Hinte Messe GmbH ofreier@hinte-messe.de / www.intergeo.de

For your files

Which pressurized gas tank car
for which product according to RID 2007

Product	UN-no.	Min. test pressure, bar		Filling factor	Volume / max. payload, to						Optimum volume 6)	
		w. thermal insulation	w/o thermal insulation		53.0	80.0	104.0	110.0	116.0	120.0		
Ammonia	1005	26	29	0.53	-	-	-	-	-	-	-	104m ³
Butane	1011	10	10	0.51	-	-	55.0	56.1	59.2	55.1	-	116m ³
Butadiene, stabilised	1010	10	10	0.55	-	-	55.0	57.0	61.5	55.1	-	116m ³
But-1-en	1012	10	10	0.53	-	-	55.0	57.0	61.5	55.1	-	116m ³
Butene mixture	1012	10	10	0.50	-	-	52.0	55.0	58.0	55.1	-	116m ³
Butadiene and HC mix stab.	1010	10	10	0.50	-	-	52.0	55.0	58.0	55.1	-	116m ³
Chlorine	1017	17	19	1.25	63.3	-	-	-	-	-	-	53m ³
Dimethylamine, water-free	1032	10	10	0.59	-	-	55.0	57.0	61.5	55.1	-	116m ³
Ethyl chloride	1037	10	10	0.80	-	-	55.0	57.0	61.5	55.1	-	116m ³
Ethylene oxide	1040	15	15	0.78	-	62.4	-	-	-	-	-	80m ³
Mixture A	1965	10	10	0.50	-	-	52.0	55.0	58.0	55.1	-	116m ³
Mixture A 0	1965	12	14	0.47	-	-	48.9	51.7	-	55.1	-	120m ³
Mixture A 1	1965	16	18	0.46	-	-	47.8	50.6	-	55.1	-	120m ³
Mixture A 01	1965	12	14	0.49	-	-	51.0	53.9	-	55.1	-	120m ³
Mixture A 02	1965	12	14	0.48	-	-	49.9	52.8	-	55.1	-	120m ³
Mixture B	1965	20	23	0.43	-	-	44.7	47.3	-	51.6	-	120m ³
Mixture B 1	1965	20	23	0.45	-	-	46.8	49.5	-	54.0	-	120m ³
Mixture B 2	1965	20	23	0.44	-	-	45.8	48.4	-	52.8	-	120m ³
Mixture C	1965	25	27	0.42	-	-	43.7	46.2	-	50.4	-	120m ³
Isobutane	1969	10	10	0.49	-	-	51.0	53.9	56.8	55.1	-	116m ³
Isobutene	1055	10	10	0.52	-	-	54.1	57.0	60.3	55.1	-	116m ³
Methylamine, water-free	1061	10	11	0.58	-	-	55.0	57.0	61.5	55.1	-	116m ³
Methyl chloride	1063	13	15	0.81	-	-	55.0	57.0	-	55.1	-	110m ³
Propane	1978	21	23	0.42	-	-	43.7	46.2	-	50.4	-	120m ³
Propene	1077	25	27	0.43	-	-	44.7	47.3	-	51.6	-	120m ³
Sulphur dioxide	1079	10	12	1.23	63.3	-	-	-	-	-	-	53m ³
Trimethylamine, water-free	1083	10	10	0.56	-	-	55.0	57.0	61.5	55.1	-	116m ³
Vinyl chloride, stabilised	1086	10	11	0.81	-	-	55.0	57.0	61.5	55.1	-	116m ³

No guarantee for the figures
No claim for completeness

- Key**
- 1) Mean values
 - 2) Conversion crash buffer 500 IK by 31.12.2010
 - 3) New construction form 2007 with crash buffer 800 kJ
 - 4) Over-buffering protection according to TE 25 needed as of 2007
 - 5) Over-buffering protection according to TE 25 needed as of 2007, existing cars must be retrofitted by 31.12.2014
 - 6) The optimum volume takes into account the filling amount, wheelset load and tare weight of the car.

Practical tips: when choosing a vehicle you should take not only the optimum volume but also the different products to be transported and requirements of the loading station (length of the car) into account. Thus, taking hydrocarbon gases as an example, the 110 m³ car and 120 m³ car are optimum vehicles in consideration of these aspects.