



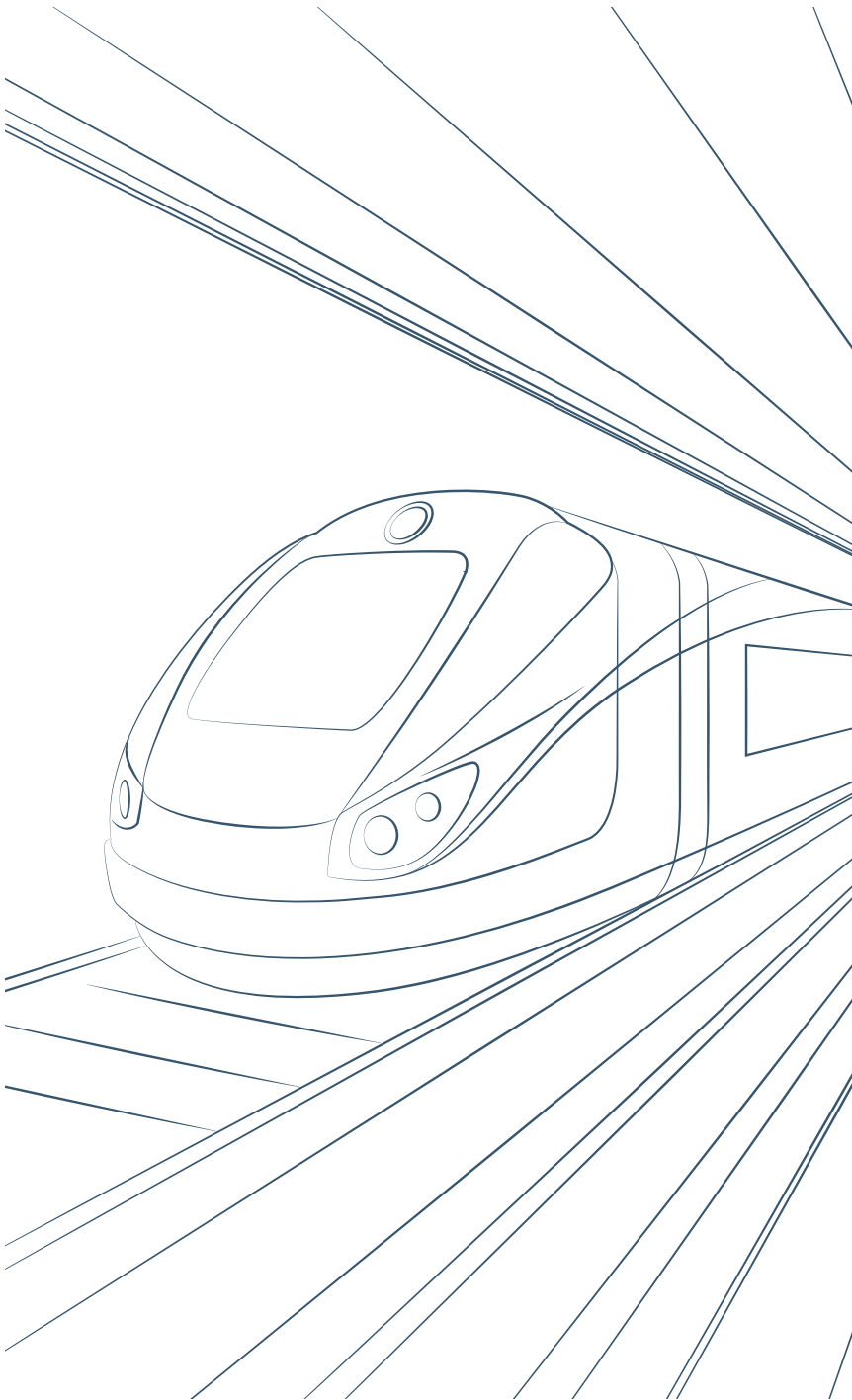
# Bulletin

125<sup>th</sup> year: No. 4/2017

**OTIF**

Organisation intergouvernementale pour les transports internationaux ferroviaires  
Zwischenstaatliche Organisation für den internationalen Eisenbahnverkehr  
Intergovernmental Organisation for International Carriage by Rail

Unified railway law to connect Europe, Asia and Africa



## SUMMARY

### NEWS

OTIF

- 4 More extensive training programme in the Secretariat planned for 2018
- 5 Meetings in China
- 5 Mrs Hammerschmiedová retires

COTIF

- 6 Withdrawal of the United Kingdom's reservations
- 6 Modification of COTIF: status of approvals

COMMUNICATING AND DISSEMINATING

- 7 Working session with the members of UNESCAP
- 7 New publication: "Guidelines on treaty acts under COTIF"

### DEVELOPMENT OF RAILWAY LAW

COTIF-OTIF

- 8 26<sup>th</sup> session of the Revision Committee in 2018

RAILWAY TECHNOLOGY

- 11 Integrating regional entities into COTIF
- 13 Interoperability: new Appendix H
- 16 Summary of the ERA workshops on the admission of railway vehicles and implications for COTIF

DANGEROUS GOODS

- 17 51<sup>st</sup> Session of the UN Sub-Committee of Experts on the Transport of Dangerous Goods (Geneva, 3 - 7 July 2017)
- 20 RID/ADR/ADN Joint Meeting (Geneva, 19 - 29 September 2017)

### DIARY OF EVENTS

Picture by

Valerio Compagnone OTIF



In this period at the end of the year, I should like to use this editorial to offer all our readers and partners my best wishes for success and development. In 2017, we have been able to continue to broaden the Organisation's activities to include new subjects, while consolidating what we have already achieved. This is the result of an internal dynamic in our relations with the Gulf Cooperation Council and with our partners in China's National Railway Administration.

Interest in the Organisation is also based on the strength provided by our partnership with the European Union Agency for Railways (ERA). The construction of a concept of interoperability beyond the European Union will have to be founded on a solid, shared

technical basis so that regional entities can be integrated into COTIF. This is examined in one of the articles in this Bulletin. Other partnerships are being developed. This year, OTIF signed an MoU with the World Customs Organization, which should help us approach the question of customs transit more effectively.

I should like our approach of openness and development to continue and accelerate in 2018.

To conclude on a more personal note, I should like to pay tribute to Mrs Hammerschmiedová, who will be leaving the Organisation at the end of this year. OTIF will certainly not be the same without her.

**François Davenne**

## MORE EXTENSIVE TRAINING PROGRAMME IN THE SECRETARIAT PLANNED FOR 2018

Since 2015, the Secretariat has been welcoming experts from the OTIF Member States that are not in the EU. These experts work as trainees for several months and have the opportunity to develop their skills and be involved in the implementation of COTIF. The training is now available to experts from states that are not members of OTIF.

Feedback on a recurrently successful programme.

For the benefit of staff from the competent authorities of Member States or future members, the training programme offers trainees the chance to spend two to six months in the Secretariat. Trainees take part in everyday activities, ask questions, learn and work on their own projects.

Each trainee has the opportunity to take part in a working group meeting, such as WG TECH, or one of the meetings of OTIF's committees, such as the Committee of Technical Experts (CTE).

The OTIF Secretariat's partnerships enable trainees to take part in seminars or meetings organised by other organisations, institutions or public authorities, such as the European Union Agency for Railways, the Swiss Confederation's Federal Office for Transport or the United Nations Economic Commission for Europe's Inland Transport Committee.

The training content is both practical and theoretical and trainees are expected to write a report on the situation of the sector and railway regulations in their country, focussing on implementation of the Convention concerning International Carriage by Rail and its appendices.

Since 2015, the training programme has essentially been based around the technical appendices of COTIF. However, OTIF's Member States have suggested that it might be interesting to study other areas of COTIF during the training programme.

Between April 2015 and April 2017,

the Secretariat welcomed five trainees from Turkey, Montenegro and Serbia. Their experience and feedback have been very positive in terms of the knowledge they have acquired and the place accorded to them within the Secretariat.

*"I was given a chance to be part of this amazing team of experts led by Bas Leermakers, with whose help I obtained a broad picture of railway processes and the knowledge required to apply COTIF correctly".* Jana Cirković, [Bulletin No. 2-2017](#), page 5.

*"One of the main reasons that motivated me to apply for this programme was the possibility of becoming more familiar with the work of OTIF, and with the assistance of experts at the Secretariat, to achieve a better understanding of the practical application of COTIF and identify more detailed aspects of its relevance for Montenegro. (...) This programme was recognised by the Montenegrin Ministry as a good way to intensify cooperation with OTIF. (...) I am grateful*

*for everyone being at my disposal for any kind of questions and doubts. I also hope that we will have the opportunity to cooperate further in future".* Milena Milačić, [Bulletin No. 4-2016](#), page 5.

More feedback can be found in [Bulletins Nos. 2-2016](#), page 5; [3-2015](#), page 6; [2-2015](#), page 8.

From 2018 onwards, not only will the training programme be open to trainees from states that are not members of OTIF and people who come from organisations that have signed a cooperation agreement with OTIF, but the programme will also be extended to include the legal area (CIM, CIV, CUI and CUV) and the transport of dangerous goods (RID).

The Secretariat is available to all those who might be interested and will be pleased to answer any questions to welcome applicants in 2018.



## MEETINGS IN CHINA

On 19, 20 and 21 September 2017, the Secretary General of OTIF, Mr François Davenne, was in Beijing, China. On 19 September 2017, he had talks with the Director of the Chinese National Railway Administration (NRA), Mr Yudong Yang. He then took part in the 26<sup>th</sup> plenary session of the Coordinating Council on Transsiberian Transportation (CCTT).

CCTT placed the focus of the plenary session on 20 and 21 September on the efficiency, competitiveness and development of rail freight between Asia and Europe. Speakers therefore presented a range of subjects, includ-

ing strategy, infrastructure, digitalisation, e-commerce and tariff policy.

240 delegates and 24 states took part in this event, which has now become a real forum for private rail transport actors between China and Europe. The Secretary General encountered an audience that was very interested in the advantages of the legal framework of COTIF. He welcomed the invitation from CCTT and the continually evolving working relationship.

In connection with another working relationship that is being cemented following the memorandum of under-

standing (MoU) signed on 12 July 2016, the Secretary General of OTIF attended a meeting at NRA.

The aim of the meeting was to explore the avenues for cooperation between NRA and OTIF in the short and medium term: how to consolidate the relationship formalised in the MoU and to find out which issues are particularly relevant to NRA at the moment in terms of developing Eurasian rail transport.

The meeting concluded with reciprocal invitations to each institution's major meetings and significant events.

## MRS HAMMERSCHMIEDOVÁ RETIRES

Mrs Hammerschmiedová started working for OTIF in 1991. She joined the legal service as a legal expert at the Central Office for International Carriage by Rail, which then became the Secretariat of OTIF.

It is impossible to list all the tasks, roles and services that Mrs Hammerschmiedová has been involved in within the Organisation: among other things, she is a specialist in and coordinator of the role of depositary, a fount of knowledge on protocol and diplomatic affairs, a specialist in the Uniform Rules on CIV and CUI contracts and more broadly, an expert in international law and rail transport law and an attentive and regular author of the Bulletin of International Carriage by Rail.

According to colleagues, Mrs Hammerschmiedová's career at OTIF has been characterised by her great ability to adapt to different managers and secretaries general, her great discretion, a spirit of sharing, real efficiency and a faultless level of precision.

Everybody is of the same view - that

she could be relied on: even with her immense knowledge, she has always been incredibly modest.

Who in the Secretariat has not had the pleasure of receiving from her a rapid, precise and educational reply to a question on OTIF or COTIF?

Mrs Hammerschmiedová is resourceful and has been witness to the major changes to the Convention and memory of the institution, has always made herself available to colleagues, never kept information to herself and has always wished to transfer the knowledge she has acquired over the years.

Another quality that must be underlined is that Mrs Hammerschmiedová is not just a legal expert; she is a polyglot legal expert. In addition to her native language, this multilingualism has enabled her to navigate easily between OTIF's different languages. She is a fluent speaker of French, German and English and has created "legal bridges" between certain concepts in rail transport law. She has also refined and proposed possible interpretations of some of the provisions.



Mrs Hammerschmiedová is also a fluent Russian speaker and has played a major role in establishing mutual comprehension between OTIF and OSJD. She has also contributed to the rapprochement of different legal sensibilities between Asia and Europe. Her multilingualism and personality have enabled the Organisation to extend its reputation to people from other cultural backgrounds.

Mrs Hammerschmiedová, who has been kind enough to stay on for a few more months, will be a great loss to OTIF. All her colleagues wish her all the best for the future.

## WITHDRAWAL OF THE UNITED KINGDOM'S RESERVATIONS

The United Kingdom has withdrawn its reservation against application of the Uniform Rules concerning the Contract of Use of Infrastructure in International Traffic (CUI UR – Appendix E to COTIF).

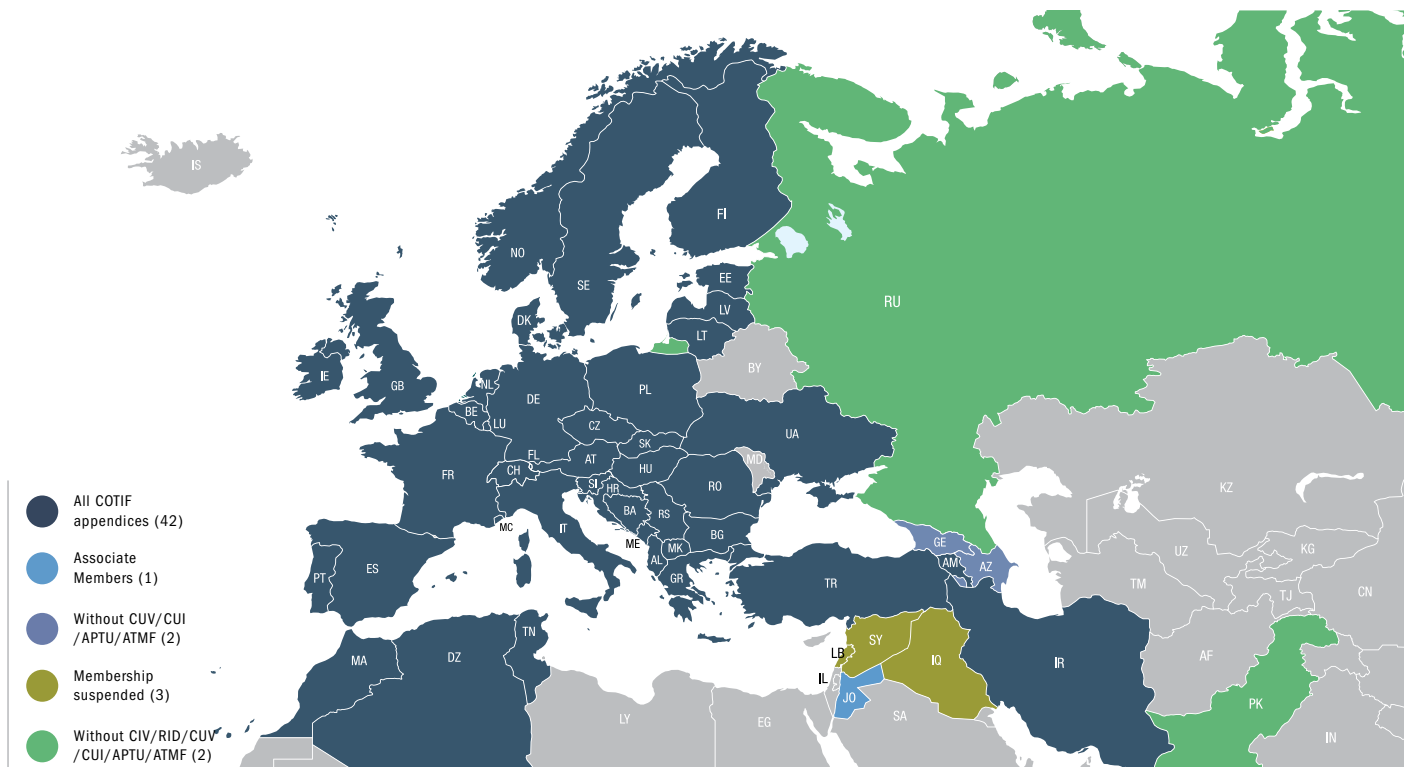
On 25 July 2017, the United Kingdom

deposited its instrument of withdrawal of the declaration with the Secretary General of OTIF. The withdrawal took effect on 28 July 2017.

The United Kingdom declared in June 2006 that it would not apply, among others, the CUI UR. OTIF's regulations

now apply consistently in all the Member States.

The Secretariat welcomes this withdrawal, which homogenises application of the Uniform Rules of COTIF.



## MODIFICATION OF COTIF: STATUS OF APPROVALS

The basic Convention (COTIF) and Appendices D (CUV), F (APTU) and G (ATMF) were amended at OTIF's 12<sup>th</sup> General Assembly in September 2015.

Since the 12<sup>th</sup> General Assembly, seven Member States have deposited an instrument notifying the Secretary General of OTIF of their approval of the amendments.

### Instruments deposited on 10 December 2017:

MEMBER STATE	INSTRUMENT	DATE
1. Switzerland	Approval	21 October 2016
2. Sweden	Approval	16 March 2017
3. Finland	Acceptance	10 April 2017
4. Netherlands	Acceptance	1 May 2017
5. Hungary	Ratification	1 June 2017
6. Spain	Acceptance	24 August 2017
7. Germany	Approval	12 October 2017

Experience in the Secretariat shows that amendments can enter into force 4 to 6 years after they have been adopted, even though the amendments may be important for the development of international rail traffic. The Secretariat has therefore submitted a proposal to the Revision Committee to change partially the procedure for amending COTIF.

## WORKING SESSION WITH THE MEMBERS OF UNESCAP

The United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) invited OTIF's Secretary General, Mr Davenne, and the head of the legal department, Mr Kuzmenko, to contribute to the expert group meeting on the harmonization of the rules and regulations for facilitation of international railway transport, which was held in Bangkok, Thailand on 4 and 5 September 2017.

The main aim of the expert group is to carry out studies to recommend:

- Measures to enhance the efficiency of railway border crossings,
- Measures to deal with common technical standards,
- Measures to harmonize operational practices.

In due course, these recommendations will provide support for the In-

tergovernmental Agreement on the Trans-Asian Railway Network.

OTIF's raison d'être is to connect Europe, Asia and Africa by setting up unified railway law.

It was therefore natural that Mr Davenne and Mr Kuzmenko presented OTIF's ability to provide structure for railway links in Asia.

They also reported on the solutions COTIF can provide for the problems that currently exist in Asia and the Pacific in terms of technical and legal interoperability. More generally, they showed that COTIF is a suitable legal framework for facilitating international rail transport for Asia and the Pacific and between Asia and Europe.

Around forty people attended this two

day meeting of discussions and recommendations, which was both intense and informative. The meeting was attended by the ministries of transport, railways and customs authorities of the countries invited, which included Bangladesh, India, Iran, Kazakhstan, Malaysia, Mongolia, Pakistan, Russia, Thailand, Turkey and Uzbekistan.

After the meeting, the OTIF Secretariat was invited to comment on the two studies that are underway concerning:

- The critical parameters for the facilitation of international rail transport,
- Practices at borders in rail transport.

The Secretariat looks forward to continuing its work together with UNESCAP on developing the railways.

## NEW PUBLICATION: "GUIDELINES ON TREATY ACTS UNDER COTIF"

On 20 November 2017, the Secretariat of OTIF published a document on OTIF's website ([www.otif.org](http://www.otif.org)) entitled "Guidelines on treaty acts under COTIF" ([click here](#)). This document is accompanied by model instruments intended to simplify the formalities for the entry into force of amendments to the Convention.

The Secretary General of the United Nations Organisation is the depositary of multilateral treaties, and in the same way, the Secretary General of OTIF is the depositary of COTIF. To this end, he receives and keeps all instruments and notifications in connection with the Convention concerning International Carriage by Rail (COTIF). Examples of these instruments are ratifications, declarations and reservations, and approvals of amendments, etc.

In order to clarify the practice, the OTIF Secretariat's legal department offered



to draft guidelines and model instruments.

After consulting the Member States of

OTIF, the Secretariat published these guidelines and was pleased to be able to send a printed copy to the ministries and embassies concerned.

## 26<sup>th</sup> SESSION OF THE REVISION COMMITTEE IN 2018

The Revision Committee will consider several structural issues for the Convention, such as a more efficient procedure for revising COTIF, contributing better to the digitalisation of international freight transport and revision of the CUI UR in order to facilitate the management of international train paths. To contribute to interoperability beyond the EU, a new Appendix H regarding the safe operation of trains will be presented, together with a discussion paper regarding the need to harmonise access conditions.

**T**he 26<sup>th</sup> session of the Revision Committee will take place in Berne from 27 February to 1 March 2018. The Committee will consider and take decisions on a variety of issues concerning the development of unified railway law

### Partial revision of the base Convention: amendment of the procedure for revising COTIF

**T**he current COTIF revision system was adopted at the 5<sup>th</sup> General Assembly (Vilnius, 26 May – 3 June 1999). Experience shows that national approval procedures for amendments adopted by the General Assembly take around six years. Apart from lengthy procedures, there is uncertainty about the date of entry into force of amendments adopted by the General Assembly.

A comprehensive legal assessment of the COTIF revision procedure and of possibilities for its amendment was carried out by Dr. Catherine Brölmann. Based on this legal assessment, possible amendments to the procedure for revising COTIF were initially considered by the working group which met on 3 May 2017 in Berne. In order to take into account national law, which governs the conduct of each state in relation to treaty-making, the Secretariat sent a questionnaire concerning national procedures applicable to amendments to COTIF. The national procedures proved to be very divergent and do not usually reflect the international procedures required under COTIF. The involvement of executive or legislative authorities varies from state to state. Nevertheless, irrespec-

tive of national procedures - even if parliamentary involvement is necessary - Member States were able to agree on and apply the current simplified revision procedure of the Committees (Article 35 COTIF).

As the most appropriate option, the OTIF Secretariat recommends setting a 36-month period for adopted amendments to the appendices to enter into force. The General Assembly should also be empowered to defer the entry into force of modifications. Member States would no longer have to approve amendments on the international level, but this would not rule out national procedures that are necessary for approval and/or the incorporation of such amendments into national legal orders. This solution ensures that both the Member States and the private sector would be aware of a precise and reasonable timeframe for the national approval/incorporation of amendments and for adapting contracts.

As a supplementary measure to the solution proposed above, the Secretariat proposes that the General Assembly may wish to introduce a “soft” reportage mechanism to assist Member States that experience any difficulties in completing their national procedures with regard to modifications adopted by the General Assembly.

### Partial revision of Appendix B (CIM UR)

At the global and regional levels there are initiatives that aim to facilitate and promote the electronic exchange of documents/information for the

purpose of performing international transport, in particular the use of electronic transport documents and the introduction and application of paperless customs procedures.

For instance, the Digital Transport and Logistics Forum (DTLF) provides a platform where Member States of the European Union and relevant transport and logistics stakeholders can exchange technical knowledge and cooperate and coordinate with a view to supporting measures aimed at promoting the efficient electronic exchange of information in transport and logistics.

The current Article 6 § 9 of the CIM UR embodies the principle of the functional equivalence of data registration with the paper form, which is a prerequisite for all the functions that the paper consignment note fulfills at present. The functional equivalence principle lays down criteria under which electronic communications may be considered equivalent to paper-based communications. In particular, it sets out the specific requirements that electronic communications need to meet in order to fulfil the same purposes and functions that certain notions in the traditional paper-based system seek to achieve – for example, “writing”, “original”, “signed” and “record”.

However, this principle, which everyone could freely use as a basis for ideas, has been implemented differently and has therefore sometimes been a source of differences between national laws. In addition, it has not resolved all the issues, particularly with regard to the electronic signature.



CIT sent the Secretary General its report on the railways' digitalisation of transport documents on 16 June 2017. In its letter to the Secretary General of OTIF, CIT indicated that:

- The second sentence of Article 6 § 9 of the CIM UR on the functional equivalence of the electronic consignment note is a sufficient legal basis for the new sector standard, which has been available to the users since 1 January 2017.
- Based on these standards, the sector is currently preparing the implementation of the electronic CIM consignment note, including with respect to customs.
- CIT will assess the need for further legislative development in COTIF/CIM after a certain period of time based on practical use and experience and if necessary will come back to OTIF with further suggestions for a revision of the legal framework.

Article 6 § 7 of the CIM UR stipulates that in the case of carriage which takes place on the customs territory of the EU or the territory on which the common transit procedure is applied, each consignment must be accompanied by a consignment note satisfying the requirements of Article 7 of the CIM UR. The Union Customs Code (UCC), which entered into force on 30 October 2013, has been applicable since 1 May 2016. It is part of the modernisation of customs. Its essential objective in particular is to make all customs formalities paperless by 31 December 2020.

It would seem that it is now necessary to work on a solution for simple digital rail transit which has an efficient interface with the transport documents. In the OTIF Secretariat's view, this will require definition of the interfaces to be developed between the sector's and the customs' digital solutions. In order effectively to attend the implications of these developments for the CIM UR and to prepare their revision under the best conditions, the interfaces between customs and transport regulations and the digitalisation of

international transport are priority issues for the working group of legal experts that the Secretary General will be setting up in 2018.

### Partial revision of the CUI UR

A working group set up by the Secretary General prepared the revision of the CUI UR. The main aim of the revision is to clarify the scope of the CUI UR, which is interpreted differently, thus hindering application and certainty for users, particularly infrastructure managers. The scope of the current CUI UR is ambiguous. They only apply to international rail transport, whereas infrastructure capacity is allocated at national level.

The problem with the current wording arises from the fact that international rail transport is defined by means of a contract of carriage. However, a train using the railway infrastructure may simultaneously be carrying passengers in both domestic and international traffic or goods in both domestic and international traffic. In such cases, it is difficult to make a clear distinction between the use of railway infrastructure for domestic transport and for international transport. Taking into account the international nature of the whole COTIF system and the fact that an extension of the scope of the CUI UR to domestic traffic would not be acceptable to most of the Member States, it was concluded that the CUI UR should only apply to international railway traffic.

The purpose of the clarified scope therefore is to ensure that the CUI UR are applied where really necessary or desirable, i.e. in international railway traffic (freight corridors, international passenger trains). At the same time, it must be made clear that the CUI UR will not apply to domestic traffic. This clarification is particularly important in the area of mutual liability of both parties to the contract of use, i.e. carriers and infrastructure managers.

It is proposed that the new scope be defined as follows: CUI UR shall apply

to any contract of use of railway infrastructure (contract of use) in a Member State in international railway traffic for the purpose of the CIV Uniform Rules and the CIM Uniform Rules. Thus the following three conditions should be met in order for the CUI UR to apply:

- existence of a contract of use of railway infrastructure in a Member State
- performance of this contract in the context of international railway traffic
- carriage must be performed for the purposes of the CIV or CIM UR.

Following the revision of the scope of application, a new definition of "international railway traffic" became necessary: "international railway traffic" means traffic which requires the use of an international train path or several successive national train paths situated in at least two States and coordinated by the infrastructure managers concerned. It is geared towards train paths used for international traffic. International traffic may either be performed on an international train path, i.e. on a train path established by agreement between two or more infrastructure managers, or on two or more successive national train paths coordinated by the infrastructure managers if the railway infrastructure is situated in different states. The CUI UR do not apply to the use of railway infrastructure for domestic traffic. In principle, the Member States are nevertheless free to provide the same legal system for domestic traffic.

Some of the proposed modifications to the CUI UR fall within the competence of the Revision Committee, while others fall within the competence of the General Assembly. However, all the modifications are closely related and the Secretariat therefore proposes to submit the whole set of amendments to the General Assembly for final adoption.

## New Appendix H regarding the safe operation of trains in international traffic

International railway traffic may be facilitated further by enabling a railway undertaking to run a complete train from its point of departure in one state to the destination in another state without technical or operational reasons to stop at the border(s). For that purpose, the Secretariat drafted a new Appendix H to COTIF to cover the safe operation of trains in international traffic. The concept of the draft new appendix is that state authorities would issue Safety Certificates for (foreign) railway undertakings based on harmonised criteria, as proof that the railway undertakings are able to operate trains safely in the state concerned.

The new appendix will have to be taken into account in several provisions of the base Convention, namely those dealing with the aims of OTIF, the structure of the Convention and subject matters that are covered, the competences of the Committee of Technical Experts and its decisions. The Committee will have to consider the modification proposals in accordance with Article 17 § 1 letter b) COTIF. They will be submitted to the General Assembly for adoption.

## Partial revision of the ATMF UR and the APTU UR

It is important for international traffic that the provisions applicable in the EU and COTIF are harmonised. With the adoption of the fourth railway package, the EU changed several provisions.

Modifications to ATMF are necessary in order to harmonise some terminology with the new EU provisions and to take into account some procedural changes in the EU, in particular the fact that the EU Agency for Railways would be competent to issue vehicle authorisations. The basic concept of ATMF is not the subject of the proposed changes. The Committee of Technical Experts discussed and endorsed the proposals for the modification of ATMF, including the justification for the proposals.

The modification of APTU concerns the provisions to be covered by the Uniform Technical Provisions. The modifications are necessary in order to ensure that the content of future European Union TSIs and COTIF UTPs remains equivalent.

## International railway market access conditions

The aim of OTIF is to promote, improve and facilitate, in all respects, international traffic by rail, in particular by contributing to the removal, in the shortest time possible, of obstacles to the crossing of frontiers in international rail traffic, while taking into account special public interests, to the extent that the causes of these obstacles are within the responsibility of states. In order to achieve this general aim, specific instruments are available under COTIF: the development of systems of uniform law (appendices to the Convention) or “soft law” instruments, including recommendations, best practices etc.

One of the obstacles to international

railway traffic that still remains outside regional economic integration organisations, such as the EU and the Eurasian Economic Union (EAEU) is that there are no multilateral agreements regulating access to a foreign state's railway infrastructure by a railway undertaking for the purpose of international traffic.

Within the OTIF area, railway undertakings and infrastructure managers may be vertically integrated or may be independent entities; companies may be private, state-owned or even part of an authority. A national railway market may be internally liberalised or may function as a monopoly. However, international cooperation may be organised in a considerably more efficient way than today by providing an appropriate legal framework and thus interfaces between the national railway systems.

The Revision Committee will have an opportunity to discuss possible future OTIF actions in order to optimise and harmonise international railway market access conditions. The discussions will be based on a paper prepared by the OTIF Secretariat containing a preliminary analysis of international railway market access. The paper presents a preliminary brief overview of how international access is ensured on a multilateral and bilateral level, with examples of experience from the EU and the EAEU in the railway sector, as well as experience from other transport sectors.

*Aleksandr Kuzmenko*

## INTEGRATING REGIONAL ENTITIES INTO COTIF

The expectation that rail transport can evolve to become the backbone of international land transport raises the question of the coexistence of regional entities and their own technical regulations. There are in fact a number of good operational reasons for having specific regional (or national) characteristics to optimise traffic management. The development of interconnected international corridors therefore requires that a balance be found between the regional and international dimensions. This potential is inherent in COTIF.

The principal added value of COTIF is its capacity to initiate dialogue that can lead to the implementation of shared technical rules. The model that has been followed since the beginning is that of the European TSIs (Technical Specifications for Interoperability). The work carried out by the European Union Agency for Railways has brought together within the EU technical models that are historically very different.

On the basis of this European acquis, it might be asked whether it is not sufficient for each country simply to adopt these regulations that have already been developed in order to obtain a general interoperability framework. However, this approach encounters three major difficulties that can only be resolved in a multi-lateral framework:

- How can the various states be involved in the development of a benchmark which, by its nature, is constantly evolving?
- How can it be ensured that the rules are implemented in a common framework in which each party can have confidence in the procedure?
- How can the specific features of each network be managed?

The main question in terms of proper management of the network from the perspective of interoperability rules is in fact to put in place a tool to confront and resolve the various approaches for the implementation of the core interoperability concept developed by the EU. COTIF, in the con-

text of the new Appendix H<sup>1</sup> dealing with interoperability beyond the EU, would seem to be an appropriate tool.

### Harmonising and developing the regulations: the solution provided by COTIF

In order for the Uniform Technical Prescriptions (UTP) of COTIF to be fully effective, they must incorporate the constraints of regional partners, while using the general conceptual framework developed by the EU. For example, the Gulf Cooperation Council (GCC) envisages that in due course, its network can be interoperable with the networks of its neighbours that apply COTIF. It is nevertheless intending to use wagons of North American standard on part of its network.

To resolve this contradiction, this characteristic will have to be reflected in the law of COTIF in two ways:

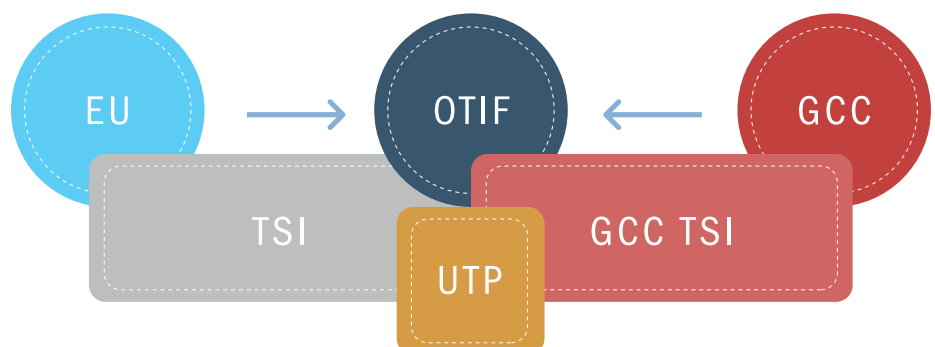
- By integrating the characteristics of North American rolling stock into the UTP Wagons;

- By indicating in a document accessible to the various states those lines where such traffic is possible; in due course, these lines should not be limited to the Gulf States.

COTIF's role as a forum therefore simultaneously enables the coordinated development of rules and their harmonisation. This vision is particularly important for the gradual construction of transnational corridors. These will have to meet the specific needs of regional entities, while using the existing interoperability rules as much as possible. This way, costs can be minimised and the future interoperability of networks that can take years to build can be ensured. This is a particularly important aspect in terms of the long term projects currently underway in Africa under the PIDA<sup>2</sup> programme (Programme for Infrastructure Development in Africa).

Figure 1 shows the possible pattern of coordination to be applied when drafting UTPs, taking regional entities into account, in this case the EU and the future GCC network:

### Taking regional rules into account



<sup>1</sup> See article page 13

<sup>2</sup> <https://www.afdb.org/fr/topics-and-sectors/initiatives-partnerships/programme-for-infrastructure-development-in-africa-pida/>

### Towards a common application mechanism

Having established the need to develop harmonised regulations together, the question of applying them arises. Here too, it is not merely necessary to import the EU technical rules into national law – they must be applied using a common mechanism to ensure the safe movement of rail traffic. The solution provided by Appendix H, which is currently being developed by OTIF to ensure interoperability beyond the EU, is based on the common definition of:

- Legal structures, such as the competent authorities for vehicle authorisation;
- Administrative procedures and registers that enable the national competent authorities and certification authorities to work with confidence.

This mechanism being defined by the Committee of Technical Experts should again be based on the European legislation, which has had to deal with the complexity of very diverse authorisation procedures.

Let us again take the example of GCC, even if the prospect of actual interconnection is still in the remote future. Once UTPS have been drafted to set out the common functional requirements and the routes that the interoperable trains they define can be operated on, authorisation procedures that can be mutually recognised must be agreed. It will also be necessary to define common operating solutions that can be used by all actors. This part of the work will have to be developed in close cooperation with UIC.

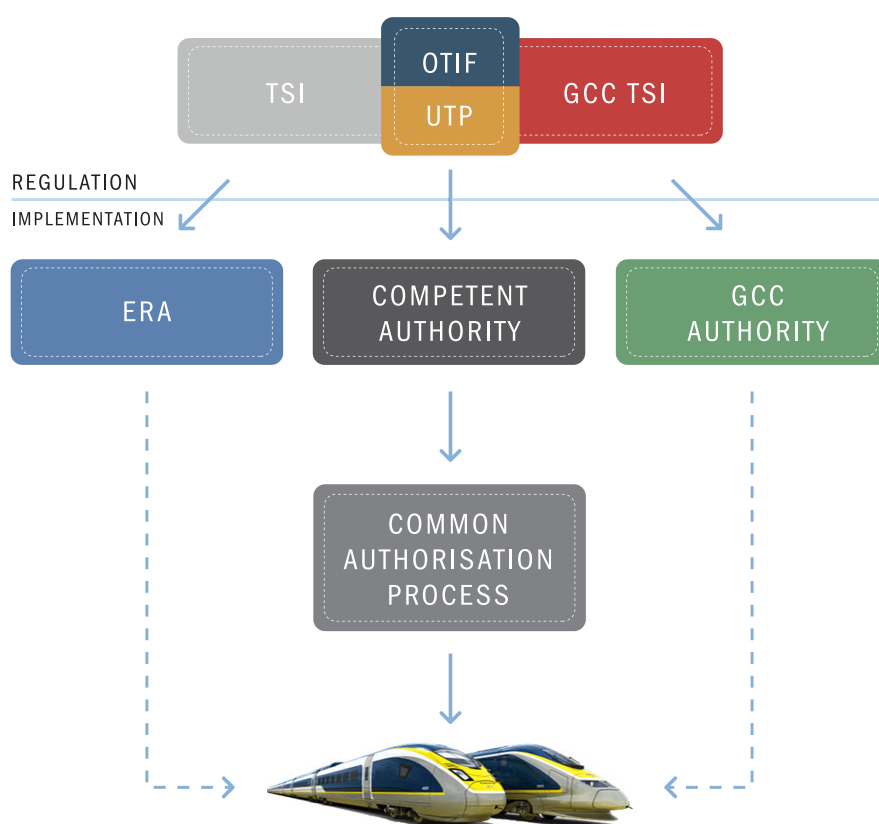
From the point of view of COTIF, the establishment of these procedures will involve the regional agencies (ERA, the future structure of the GCC, etc.) and the national competent authorities, so that the authorisations can

be recognised at international level by each of these authorities. In parallel, important work will have to be carried out with the sector, primarily UIC, to define common operating solutions, which is the only practical way of ensuring that trains can travel.

Nevertheless, the issue of recognising authorisation given by an author-

ity for access to the network with a view to international transport by another authority (dotted arrows in the diagram below) raises some complex specific questions. In particular, the part of the network for which this authorisation is valid will have to be determined, as well as the extent to which it is compatible with any regional or national rules.

### Towards a common authorisation mechanism



If only one idea from this analysis should be remembered, it is the fundamental importance of the framework COTIF provides in terms of organising an ongoing and productive multilateral dialogue between the various actors.

This is the only way of ensuring the operational nature and implementation of the interoperability rules in a way that is acceptable to everybody.

*François Davenne*

## INTEROPERABILITY: NEW APPENDIX H

How COTIF could evolve to support and promote interoperability - Railway transport has been international for more than 120 years, but railways are still largely operated on a national basis. Only a very small proportion of trains is operated across borders under the responsibility of one railway undertaking without reconfiguration of the train. Compare this to other modes, such as road or aviation, and it is clear that there is great potential for rail transport to become more efficient. The OTIF Secretariat has taken significant steps to promote interoperability by drafting a new appendix to COTIF.

While COTIF traditionally deals mainly with international railway traffic that is based on the exchange of vehicles at border stations, it may also develop further to support interoperability in terms of complete trains crossing borders. This type of operation has the potential to improve the efficiency of rail transport hugely by reducing transit times and costs as a result of limiting the number of stops and organisational interfaces.

Reliable and fast transport is of increasing importance to the business of companies and national economies. Rail transport competes in international traffic with other modes of transport, i.e. road, inland waterways and air which, due to their system architecture, are less bound by interfaces, both between technical systems and organisational aspects. In order for rail transport to remain competitive, it is inevitable that national rail systems must become more aligned and interconnected so that trains can interoperate on them.

It seems inevitable that states will have to conclude reciprocal agreements for trains coming from one state to run on the infrastructure in another state.

Part of these agreements would have to deal with ensuring the safety of the rail system when infrastructure managers have to work together with different railway undertakings. It would not be helpful if several such agreements were concluded bilaterally without coordination. It would instead be

more efficient to develop rules and principles at intergovernmental level. This would ensure a harmonised and coordinated approach to connect railway systems for the benefit of international railway traffic. The OTIF Secretariat has drafted a new Appendix H to COTIF for this purpose, which will be presented to the Revision Committee in 2018.

### General purpose and scope of the draft new appendix

The purpose of the new appendix is to provide general principles and responsibilities for the cross-border operation of trains for states that already fully apply APTU and ATMF.

Since its inception, ATMF has dealt with the procedure for the admission of railway vehicles to international traffic, including which rules are applicable to these vehicles and the responsibilities for correctly using and maintaining these vehicles.

The provisions are based on and intended to be compatible with the provisions applicable to the rail system of the European Union.

### Present Scope of ATMF

ATMF was last revised in 2014 and entered into force in July 2015. The trigger for this revision was the increasing technical freedom for the construction of vehicles, particularly freight wagons. As the UTP for freight wagons had increasingly functional

requirements to allow innovation, it could no longer be taken for granted that all types of freight wagons could be safely coupled and operated together in a train. ATMF was therefore revised to clarify the responsibilities for train composition and the correct use of vehicles. This resulted in a new Article 15a, which defines the mutual responsibilities between railway undertakings, keepers and infrastructure managers. This new Article 15a, in combination with the responsibilities for entities in charge of maintenance in Article 15, sets out the legal requirements to ensure that:

- Each vehicle has an Entity in Charge of Maintenance (ECM) assigned to it which ensures that the vehicle is in a good state of maintenance;
- ECMs for freight wagons must be certified in accordance with Annex A to ATMF;
- All vehicles within a train composition will be used within their conditions and limits of use, under the responsibility of the railway undertaking;
- Trains are composed by railway undertakings in such a way that they can be safely operated;
- Trains are only operated on compatible infrastructure and it is the task of the railway undertaking to ensure this.

ATMF contains all the elements to ensure that not only vehicles, but also the composition of a train composed in one state, do not have to be called into question by other states. The actual operation of trains is not in the scope of ATMF.

## Interoperability beyond the EU

At the General Assembly of 2015, the Secretary General launched the idea of establishing a legal basis in COTIF to support interoperability beyond the EU. Interoperability in this context means the safe and uninterrupted movement of trains on and between the rail systems of neighbouring states. In practical terms, interoperability means that a railway undertaking would be able to run a complete train from its point of departure in one state to the destination in another state without technical or operational reasons to stop at the border(s).

Following discussions with partner organisations and at the Committee of Technical Experts, the Secretariat suggests developing interoperability beyond the EU along two parallel lines:

- The operational and safety provisions concerning, in particular, railway undertakings and infrastructure managers, in order to ensure that trains are operated safely, including the certification and supervision of railway undertakings and the certification of ECMs for freight wagons.
- The network access conditions, setting out the conditions in a state for railway undertakings to operate trains in that state, including e.g. licensing, charges and capacity allocation.

The Secretariat of OTIF suggested dealing with these two subjects separately. This article concerns the first point. Point two should be analysed separately in order to establish whether it is necessary and feasible. The reason for separating the two subjects is that the first subject is not conditional on the second.

Even without network access conditions agreed at international level, states can themselves define or agree in bilateral or multilateral agreements the access conditions for their networks. Neither would it be a problem if one state were to conclude different access agreements with different neighbouring states. Even in such cas-

es, a harmonised safety framework would have clear added value.

The approach to safety and operations should be harmonised as much as possible, so that a modern and efficient approach to safety is adopted and the proliferation of different, incompatible approaches to safety is avoided.

### Proposed scope of the draft new Appendix H

In order to support the aims of interoperability beyond the EU, provisions should be developed which can be applied in addition to ATMF. Where the scope of ATMF covers the approval and use of vehicles in international traffic, the new appendix should cover the operation of trains composed of vehicles which are covered by ATMF. The provisions of the draft new appendix are based on the following principles:

The new appendix should be applied only by states that have organised their railway system and applicable legislation in accordance with the ATMF provisions. It would, for example, be based on the assumption that all vehicles in a train are admitted to operation and have an ECM assigned to them. As a consequence of applying the new appendix:

- Responsibilities for ensuring railway safety are clearly assigned;
- The railway system will be organised in such a way that the infrastructure manager, in the meaning of ATMF, has to work with different railway undertakings;
- The safety and operational rules applicable to railway undertakings and to infrastructure manager(s) are public;
- There is a process for the safety certification of railway undertakings;
- All railway undertakings and the infrastructure manager(s) will have established their safety management systems, which will be subject to supervision on behalf of the state.

Without prejudice to the responsibilities of keepers and ECMs in the scope of ATMF, railway undertakings and infrastructure managers would share responsibility for ensuring that trains are operated safely, each of them within a clearly defined area.

The Committee of Technical Experts would be competent to harmonise provisions on the following subjects:

- Safety and operational rules concerning the operation of trains in international traffic;
- Provisions applicable to railway undertakings and infrastructure managers concerning the implementation of a safety management system and monitoring its correct application;
- The safety certification of railway undertakings;
- The supervision of safety management systems by or on behalf of states.

In addition to the draft new appendix, the base Convention should also be amended to refer to the new appendix and establish competences and procedures for modifying it.

## Benefits of the new Appendix

The proposed new appendix with safety and operational provisions could be very useful, even in the absence of harmonised access conditions. Different models for granting access to networks, whether based on an open market model or a more restricted model, would benefit from a harmonised approach to safety and operational responsibilities.

Access conditions can be determined by each state individually, or agreed bilaterally or multilaterally between states. The international operation of trains might be possible even if access conditions are not fully harmonised.

## Planning and implementation

The subject of interoperability was presented to and discussed by the Committee of Technical Experts in 2016. It supported the general principle and asked the standing working group technology to develop the concept further. This draft new appendix is the result of this work.

The draft new appendix was reviewed and endorsed by the Committee of Technical Experts on 13 and 14 June 2017 and subsequently submitted to the 26<sup>th</sup> Revision Committee which will convene from 27 February to 1 March 2018. The approval of a new appendix is subject to a decision by the General Assembly, which is scheduled to convene in autumn 2018.

Should the General Assembly adopt the new appendix, Article 33 § 4 COTIF requires two-thirds of all Member States to approve the General Assembly's decision before it can enter into force. Experience shows that this approval process may take several years.

Should the new appendix be adapted and approved, the states applying it

would have to ensure that they have an authority responsible for issuing safety certificates to railway undertakings and an authority responsible for supervision (a single entity could be responsible for both). As the new appendix would be harmonised with the general principles for railway safety in the European Union, states applying the law of the European Union have already established these entities.

## Next steps to complete the framework for interoperability

The actual cross-border operation of trains relies not only on the 'technical and safety' elements as set out in the draft new Appendix H, but also on the possibilities and conditions for railway undertakings to have access to the rail network of a state. These provisions, referred to as access conditions, would not be part of the scope of the new Appendix H.

Access conditions are meant to include elements such as:

- How to offer consistent conditions of access to the network
- Allowing foreign railway undertak-

ings to operate on the network

- Availability and publication of track access charges and network statement
- How to provide consistent access to essential facilities
- Liability of railway undertakings in the framework of an international service
- Insurance requirements and conditions.

Even without internationally harmonised access conditions, it might be in the interests of states to promote the operation of international trains on their networks, including access to facilities and services required for such operation. States could do this on a bilateral or multilateral basis, for example. This assumption implies that interoperability could be established even in the absence of harmonised access conditions at the level of COTIF. The OTIF Secretariat will initiate the first discussion on access conditions in the Revision Committee in 2018 on the basis of a document prepared for this purpose.

*Bas Leermakers*

# SUMMARY OF THE ERA WORKSHOPS ON THE ADMISSION OF RAILWAY VEHICLES AND IMPLICATIONS FOR COTIF

These workshops were required as a result of the European Interoperability Directive 797/2016.

The Article provides an overview of the specifications and content of the workshops with regard to the admission of vehicles. It also highlights current points of discussion and consequences for the technical appendices to COTIF.

With the publication of the fourth railway package's "technical pillar", it has been decided at European level that part of the admission of railway vehicles will be taken over by the European Union Agency for Railways (ERA). The legal acts for the "technical pillar" entered into force on 15 June 2016. A report on this was published in Bulletin 3/2016.

In this context, the RISC<sup>3</sup> Committee adopted an implementing act in November this year. This Regulation, together with the "practical arrangements", forms the legal basis for the admission process for railway vehicles. The Regulation is binding in its entirety and is directly applicable in all EU Member States.

These workshops were required as a result of the European Interoperability Directive 797/2016.

Article 21, paragraph 9 stipulates that by 16 June 2018, the Commission must adopt practical arrangements by means of implementing acts.

These must specify:

- "how the requirements for the vehicle authorisation for placing on the market and for vehicle type authorisation laid down in this Article are to be fulfilled by the applicant and listing the documents required;
- the details of the authorisation process, such as procedural stages and timeframes for each stage of

the process;

- how the requirements laid down in this Article are to be complied with by the Agency and the national safety authority through the different stages of the application and authorisation process including in the assessment of applicants' files".

As a supplement to this implementing act, ERA will publish guidelines. The guidelines will explain in more detail the process of vehicle admission between the actors and will supplement the Regulation (implementing act).

ERA started these workshops in 2015. All the notable organisations and EU authorities attend these workshops. The aim is to finalise the guidelines in spring 2018.

These workshops also include subgroups which deal with ancillary issues:

- OSS – "One-Stop Shop", a central resource for the exchange of documents.
- CSM RA – Application of common safety methods in the context of the requirements capture process in the event of changes to the "railway system" or if required in a TSI.
- Templates – Development of standard declarations of verification with the new features the fourth railway package brings with it.

The OTIF Secretariat's WG TECH will continue to analyse the impact of the

implementing acts and "practical arrangements". The OTIF Secretariat will also continue to take part in the workshops to draft the "practical arrangements".

The preliminary consequences of the fourth railway package will be submitted to the Revision Committee (Berne, 27 February to 1 March 2018) for decision. The amendments concern both the Convention's technical Appendices – APTU and ATMF.

These amendments were drafted in cooperation with the European Commission and representatives of the Member States voted on them in the WG TECH meetings and at CTE 10.

Another effect of the fourth railway package that is being discussed at the moment is that according to the current definition in Article 5 of ATMF, the national safety authority of the European Union can also act as a competent authority for technical approvals. However, as the fourth railway package that has been adopted transfers part of the competence for admission to ERA, the European Union must decide whether ERA will assume joint competence in COTIF or whether Article 5 is to remain as at present, and must notify the OTIF Secretariat's Secretary General of its decision.

*Margarethe Koschmider*

<sup>3</sup> Railway Interoperability and Safety Committee



## 51<sup>st</sup> SESSION OF THE UN SUB-COMMITTEE OF EXPERTS ON THE TRANSPORT OF DANGEROUS GOODS (GENEVA, 3 – 7 JULY 2017)

The 51<sup>st</sup> session of the UN Sub-Committee of Experts was the first session in the 2017/2018 biennium. As a result, many subjects were only discussed on a preliminary basis. The outcome of these discussions will have to be taken into account in revised proposals. After the end of the biennium, in the context of harmonising RID/ADR/ADN with the UN Recommendations on the Transport of Dangerous Goods, OTIF will take over the decisions of the UN Sub-Committee of Experts into the 2021 edition of RID and the UNECE will do the same for the 2021 editions of ADR and ADN.

The 51<sup>st</sup> session of the UN Sub-Committee of Experts on the Transport of Dangerous Goods was held from 3 to 7 July 2017 under the chairmanship of Mr Duane Pfund (United States of America). 23 states entitled to vote, 3 observer states, 6 governmental organisations and 30 non-governmental organisations were represented at the session. As all the decisions of the UN Sub-Committee of Experts have repercussions for the dangerous goods provisions of the various modes, the Intergovernmental Organisation for International Carriage by Rail (OTIF) was represented as a modal organisation.

Some of the interesting issues dealt with at this meeting are looked at below.

### Explosive substances

#### Carriage of fireworks in small quantities

In the context of the increase in e-commerce and the direct posting of goods to consumers, Switzerland submitted a proposal to simplify the conditions of carriage for UN 0337 Fireworks. In line with special provision 364, which applies to cartridges for weapons and cartridge cases of UN numbers 0012, 0014 and 0055, it was proposed to include a special provision to allow the limited quantity provisions of Chapter 3.4 to be used.

In the past, the UN Sub-Committee of Experts had already developed four principles that were used to develop provisions for the carriage of articles

containing explosive substances in limited quantities:

- irrespective of the packaging, the articles must not propagate an explosion;
- entries from the list of high consequence dangerous goods are excluded;
- articles assigned to generic entries or n.o.s. entries are excluded;
- the article must present no hazardous effects outside the package in the event of accidental initiation.

Some doubt was expressed that fireworks satisfied all these principles. It was also pointed out that the Universal Postal Convention does not currently allow fireworks to be sent by post.

### Classification and packing issues

#### Optional application of exemptions

Special provision 375 exempts environmentally hazardous dangerous goods of UN numbers 3077 and 3082 from the provisions if they are carried in packagings not exceeding 5 litres or 5 kilograms, provided the packagings meet the general packing requirements.

Many companies carry these substances in the same shipments at the same time, in packagings of less than 5 litres or kilograms and in larger packagings. Separate handling of these packagings according to whether they are exempted or not incurs extra costs for changes to IT

Only a few final decisions were taken at this first session of the 2017/2018 biennium. Most of the decisions can be looked at again during the next three sessions in this biennium.

The main points of discussion were the classification and packing of clinical wastes and the clarification of various questions of interpretation.

systems and logistics management, which creates problems at all stages of the distribution chain.

In addition, it has been observed that some inspecting authorities assume that goods that are not subject to the regulations may not be transported as dangerous goods. Any danger labels, placards or marking would have to be removed in order to avoid disproportionate intervention costs in the event of an accident.

At its 46<sup>th</sup> session, the UN Sub-Committee of Experts had already considered the question of whether it was possible to carry dangerous goods of UN numbers 3077 and 3082 in packagings not exceeding 5 litres or 5 kilograms even without applying the exemption accorded by special provision 375. At that time, the UN Sub-Committee of Experts came to the conclusion that application of the special provision was optional and that the consigner can decide not to make use of the exemption.

The UN Sub-Committee of Experts had to reconsider this question, as some delegations were of the view that it was not clear from the wording of special provision 375 that its application was optional. In addition, the question of optional application arose in connection with all the other exemptions in the regulations.

The UN Sub-Committee of Experts again confirmed that in principle, an exemption in the regulations constituted a possibility, but not an obligation. As most delegations were of the view that amending the wording of special provision 375 could create misunderstandings and entail time-consuming amendments to many other provisions, the UN Sub-Committee of Experts decided to maintain the current wording of special provision 375.

### Interpretation of special provision 366

According to special provision 366, manufactured instruments and articles containing no more than 1 kg of mercury are not subject to the regulations. For air transport the threshold is 15 g.

The scope of application of this special provision is interpreted differently. Germany inferred from the term “containing” in special provision 366 that it only exempts instruments and articles where the mercury is enclosed in the instrument or article. However, if the instruments and articles are damaged in such a way, when handed over for transport or during transport, that mercury is released, Germany was of the view that such instruments or articles would no longer be covered by the exemption.

It can be inferred from the wording of 1.1.1.9 of the UN Model Regulations (RID/ADR 1.1.3.10) that special provision 366 also applies to lamps containing mercury.

Used fluorescent lamps containing mercury are often carried unpackaged for the purpose of disposal or recycling

(e.g. on lattice box pallets). During these transport operations, some fluorescent lamps can be damaged, resulting in mercury being released. Some lamps may also be contaminated with mercury residues. For these reasons, Germany's interpretation was that in accordance with the current legal situation only undamaged lamps were exempted by special provision 366 and that in all other cases the exemption of 1.1.1.9 (c) of the UN Model Regulations (RID/ADR 1.1.3.10) was to be applied.

There was a controversial discussion on Germany's proposal to supplement special provision 366 to say that damaged instruments and articles must be packed in outer packagings sufficient to prevent release of the contents under normal conditions of transport.

Some delegates were of the view that in the case of fluorescent tubes, the quantities of mercury were very small, the mercury evaporated quickly, the vapour pressure was very low and during transport, there was no risk of being exposed to toxic vapours. However, other delegates were of the view that the vapours were toxic upon inhalation and that there was therefore a risk.

As a result, Germany said it would revise its proposal.

### Packing instruction P 410

The Secretariat pointed out that the wording of footnote d) to packing instruction P 410 could lead to misunderstandings. The footnote says that bags may only be used for packing group II substances when carried in a closed wagon/vehicle or closed container. This footnote could be interpreted to mean that bags for substances of packing group III are not permitted.

The UN Sub-Committee of Experts adopted new wording for the footnote.

### Classification and packaging for medical waste

During the previous biennium the UN Sub-Committee of Experts had already looked into the issue of the classification and packaging of medical waste containing infectious substances of Category A.

The need for new classification and packing instructions for these substances arose in 2014 following the Ebola epidemic in West Africa. The packagings currently authorised in packing instruction P 620 were only suitable for small volumes of infectious substances of Category A, such as cultures and specimens, as well as small quantities of clinical waste. However, these packagings were not adequate for large volumes of waste contaminated with the Ebola virus. Among other things, this contaminated waste consisted of personal protective equipment worn by medical staff (gloves, protective masks, aprons), various types of absorbent materials, bedding or patients' clothing. In order to resolve this critical situation temporarily, Belgium at that time initiated a multilateral special agreement for road transport (M 281), which allowed suitable packagings to be used, thus enabling the safe transport of this type of waste.

In order to find a lasting solution, the United Kingdom and Canada submitted a joint proposal for a new UN number that should only be used for solid waste generated from the medical treatment of humans or the veterinary treatment of animals infected by infectious substances of Category A. This UN number may not be used for waste from biological research or for liquid waste.

In addition, two new packing instructions for the carriage of this type of waste were proposed, based on common packagings in accordance with Chapter 6.1 and large packagings in accordance with Chapter 6.6, as these are quickly available in crisis situations. Both packing instructions prescribe a triple packaging consisting of

an inner, an intermediate and an outer packaging. In contrast to the 9 m drop height prescribed in the drop test for packagings for infectious substances of Category A, a drop height of 1.8 m (minimum drop height for dangerous goods of packing group I) should be sufficient according to the new packing instructions. Puncture resistance will only be prescribed for inner packagings containing sharp or pointed articles, such as glass shards or needles. Flexible packagings, such as plastics bags, should be permitted for the inner and intermediate packagings. As only solid substances will be carried (no liquids) – small quantities of free liquid must be retained by absorbent or solidifying material – the pressure and leakproofness tests were not considered necessary for the time being. However, some delegations pointed out that this type of waste was often a solid substance soaked with liquids and that the risk of the infected liquids being released can be relatively high. For this reason, the outer packaging should be capable of retaining liquids.

However, despite a lengthy discussion, it was not possible to achieve consensus. Nevertheless, the proposals revised by a working group were provisionally adopted, as they provide the health authorities with suitable guidelines for crisis situations, such as the Ebola epidemic in 2014. The delegations were asked to consult their national health authorities with regard to the compromise that was reached.

### UN 3536 Lithium batteries installed in cargo transport units

In reply to a question from Switzerland, the UN Sub-Committee of Experts confirmed that the cargo transport units referred to in UN number 3536 covered not just containers, but also vehicles or freight wagons, as explained in the definition in 1.2.1.

The UN Sub-Committee of Experts acknowledged that it was necessary to add text concerning lithium batteries installed in cargo transport units to special provision 360, which applies

to lithium batteries of UN numbers 3091 and 3481, and to special provision 388, which applies to vehicles of UN numbers 3166 and 3171.

### Exemption for cargo tracking units and data loggers

Cargo tracking units can locate the position of a load at a specific point in time. Simple devices only contain the container identification number, which can be picked out and then linked to the position of the scanner. More sophisticated devices can track the position constantly and may have additional sensors that can detect, for example, whether the doors have been opened. The electrical energy supply for many cargo tracking units is provided by lithium batteries.

In order to avoid having to assign cargo tracking units operated by lithium batteries to UN number 3091 Lithium metal batteries contained in equipment or 3481 Lithium ion batteries contained in equipment, Germany proposed to include an additional exemption in 1.1.1.2 of the UN Model Regulations (RID/ADR 1.1.3.7). In addition to cargo tracking units, this takes account of data loggers used for packagings and overpacks. The minimum requirements for this will be to satisfy the provisions of 2.2.9.1.7 and that the batteries be protected by an outer casing.

As some delegations expressed concern about this decision owing to possible contradictions with the technical provisions and administrative procedures in air transport, the UN Sub-Committee of Experts decided only to adopt the addition to 1.1.1.2 provisionally. Some fundamental questions from the Netherlands concerning the scope of application of the UN Model Regulations still need to be answered. For the Netherlands, it is not clear to what extent the UN Model Regulations can regulate dangerous substances and articles that are needed during carriage and that are not part of the load. In addition to the cargo tracking units and data log-

gers referred to, this might also concern computer or cleaning products, for example.

### Marking and labelling

Clarification of the dimensions of danger labels and markings was included in the 18<sup>th</sup> edition of the UN Model Regulations (RID/ADR/ADN 2015). Among other things, this clarification concerns the minimum width of the line inside the edge of the diamond shape, which, since then, must be 2 mm. The same applies to the diamond shaped mark for UN 3245 and UN 3373 and the limited quantities mark. The transitional provision that allowed the continued use of danger labels, placards and markings expired on 1 January 2017.

In air transport, this line width specification is a problem, because packages with danger labels where the border line is less than 2 mm are now being rejected.

The International Air Transport Association (IATA) was of the view that this provision is not relevant to safety and should again be relaxed. In addition, this provision gave more prominence to the border line than to the actual information provided by the danger label.

The UN Sub-Committee of Experts adopted the relaxation proposed by IATA and asked the organisations responsible for the mode-specific regulations to carry over this amendment. IATA was asked to submit the consequential amendments required in other parts of the UN Model Regulations to the next session.

### Next session

The 52<sup>nd</sup> session will be held from 27 November to 6 December 2017 in Geneva and will continue the work on the 21<sup>st</sup> revised edition of the UN Model Regulations.

*Jochen Conrad  
Katarina Guricová*

## RID/ADR/ADN JOINT MEETING (GENEVA, 19 – 29 SEPTEMBER 2017)

The last RID/ADR/ADN Joint Meeting of the 2016/2017 biennium was held in Geneva from 19 to 29 September 2017. However, there will still be time to discuss a few remaining open questions at the spring session in March 2018. 21 States, the European Union, the Committee of the Organization for Cooperation of Railways (OSJD) and 19 non-governmental organisations were represented at this meeting. The Democratic Republic of Congo took part as an observer.

### Harmonisation of RID/ADR/ADN with the UN Recommendations on the Transport of Dangerous Goods

Traditionally, the Joint Meeting's last session of a biennium deals with the question of harmonisation with the latest (currently the 20<sup>th</sup>) edition of the UN Recommendations on the Transport of Dangerous Goods. This work was prepared by an ad hoc working group which met for three days in April.

With regard to this harmonisation work, the following amendments should be highlighted. These will be included in the 2019 edition of RID/ADR/ADN.

### Classification of articles containing dangerous goods

In addition to individual entries for certain articles containing dangerous goods, RID/ADR/ADN has also so far included a collective entry (UN 3363 Dangerous goods in machinery or dangerous goods in apparatus), although this has so far been exempt from the dangerous goods provisions in European land transport. This has meant that various articles containing different quantities of a wide variety of dangerous substances were assigned to this collective entry because in most cases, it was more difficult to assign these articles to the entry which corresponded to the dangerous substance contained in the apparatus. Moreover, it was not always possible to pack the articles in accordance with the packing instruction provided for the substance contained in the article. Entry UN 3363 therefore became a catch-all entry for articles where it was too difficult to decide what the correct assignment was.

The Joint Meeting decided to include twelve new UN numbers in RID/ADR for articles containing dangerous substances of the individual classes of dangerous goods. As a result, UN Number 3363, which was previously exempt from the provisions, is now subject to the provisions of RID/ADR, but may only be used for articles which only contain dangerous substances within the thresholds for limited quantities. However, only basic packaging requirements apply to UN number 3363; the other provisions of RID/ADR do not.

The general exemption provision in 1.1.3.1 (b) has also been deleted. According to this provision, machinery or equipment not specified in RID and which happen to contain dangerous goods in their internal or operational equipment, are exempt from RID. In conjunction with this deletion, a four year transitional period has been allowed, particularly in order to avoid unforeseen problems, as it is not possible at the moment to estimate the number and type of articles affected by the withdrawal of the exemption.

The twelve new UN numbers cannot be used for articles containing substances of classes 1, 6.2 or 7.

Packing instructions for packagings and large packagings have been included in Chapter 4.1, although carriage without packaging is also allowed under certain circumstances.

A specific paragraph on the labelling of articles has been included in Chapter 5.2. The labelling is oriented towards the main and subsidiary risks of the dangerous substances contained in the article. If necessary, the lithium

The last meeting of the 2016/2017 biennium dealt primarily with the harmonisation of RID/ADR/ADN with the 20<sup>th</sup> edition of the UN Recommendations on the Transport of Dangerous Goods. In addition to dealing with further proposals for amendments and questions of interpretation, the Joint Meeting took a decision on the introduction of alternative methods for the periodic testing and inspection of gas cylinders. A working group on tanks was again set up to deal with the numerous documents relating to tanks. This group met in parallel to the plenary and was chaired by Mr Arne Bale (United Kingdom). All the decisions taken at this meeting are intended to enter into force on 1 January 2019.

batteries mark or danger label 9A must also be affixed.

### New classification provisions for Class 8

The Joint Meeting took over the new Class 8 classification provisions from the UN Model Regulations, which results in the closest possible alignment with the text of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

In particular, the new classification provisions contain alternative methods for assigning mixtures to packing groups. In the past, this had always caused difficulties for the industry. To use these alternative methods, a step-by-step approach is provided, depending on the data available, according to which the most reliable meth-

od should always be considered first. This step-by-step procedure should also ensure an appropriate level of safety in situations where reliable data are not easily obtainable.

According to this procedure, the current criteria for assigning packing groups need only now be applied in those cases for which test data are available for the entire mixture. If the only data available concern similar mixtures and if these data are sufficient to assess the hazards, the assignment can be made on the basis of certain bridging principles. In cases where there are not enough data on similar mixtures, the corrosive properties of the individual components of the mixture must be taken into account. Assignment to packing groups is then carried out on the basis of a calculation method.

The working group on the harmonisation of RID/ADR/ADN with the UN Model Regulations had noticed that unlike the UN Model Regulations, RID/ADR/ADN also contain the provision that substances that only form corrosive liquids in contact with water or that form corrosive vapours or mist in contact with natural moisture in the air must also be assigned to Class 8. The government representatives' opinions on whether to maintain this difference were divided and the European Chemical Industry Council had also not been able to reach consensus on this issue among its members. It was therefore decided to maintain this difference for the time being, to inform the UN Sub-Committee of Experts and, if necessary, to return to the matter later.

The existing 2.2.8.1.9 stipulates that substances, solutions and mixtures, which are not classified as corrosive to skin or metal of category 1 according to Regulation (EC) No 1272/2008, may be considered as substances not belonging to Class 8. This was deleted in order to prevent mixtures that meet the criteria for corrosivity during transport from being exempt, even though they are subject to the dangerous goods rules in carriage by sea or air.

### Packing instructions for damaged or defective lithium batteries

For the carriage of damaged or defective lithium batteries which, under normal conditions of carriage, are liable to disassemble rapidly, dangerously react, produce a flame or a dangerous evolution of heat or a dangerous emission of toxic, corrosive or flammable gases or vapours, the competent authority previously had to define the conditions of carriage. Owing to the rapid developments in electromobility and the growing need to carry batteries damaged in accidents, standardised packing instructions were developed on the basis of the conditions of carriage previously defined by the competent authorities, in order to restrict individual competent authority approvals to fewer types of transport.

Packagings for such batteries must satisfy additional performance requirements, which must be checked in a test laid down by the competent authority. The packing instructions also contain criteria that can be called upon for this test.

### Tanks

#### Tanks with a section including a concave part

Recent sessions have discussed cross-sections of tanks that are not completely circular, elliptical or box-type (see Bulletin 2/2017, p. 14). The tank working group was of the view that tanks with divergent cross-sections should be permitted in RID/ADR, provided an equivalent level of safety is demonstrated. The cylindrical, elliptical and box-shaped cross-sections referred to in the provisions should simply be considered as examples in order not to hinder technical developments.

The Netherlands submitted a proposed text to this Joint Meeting, which only contained basic conditions for derogations from the tank cross-sections permitted hitherto. The details should be dealt with in

standard EN 13094 (Tanks for the transport of dangerous goods – Metallic tanks with a working pressure not exceeding 0.5 bar – Design and construction).

The text proposed by the Netherlands was provisionally adopted. WP.15 and the RID Committee of Experts were asked to take a decision on the final adoption at their meetings in November 2017.

#### Template for an RID/ADR tank plate

One of the issues discussed at a meeting of the relevant CEN working group was whether the tank plate model currently contained in standard EN 12972 (Tanks for transport of dangerous goods – Testing, inspection and marking of metallic tanks) should remain there or be transferred to RID/ADR.

On the basis of this discussion, the United Kingdom had submitted a document to the Joint Meeting proposing that the model tank plate be transferred, with the justification that RID/ADR Chapter 6.7 already contained such models for portable tanks. Based on the model in the standard, the United Kingdom had collated the information that is required in both RID/ADR Chapter 6.8 and in standard EN 12972, or in only one of these two texts. Other information that might be of use was also listed.

The majority of the tank working group welcomed the inclusion of a tank plate model in Chapter 6.8 and asked the representative of the United Kingdom to revise his proposal in light of the comments made. The tank plate model should only be made mandatory for new-builds, it should only contain the information according to 6.8.2.5.1 and not according to 6.8.2.5.2, the individual lines on the tank plate should be numbered and the serial number of the tank and the date of the initial hydraulic pressure test should also be shown behind the tank plate in case the tank plate is lost.

## Austenitic-ferritic stainless steels

6.8.2 permits the use of austenitic-ferritic stainless steels for tanks with a test pressure of less than 10 bar. For welded tanks for which a test pressure of at least 1 MPa (10 bar) is prescribed, and for tanks for the carriage of refrigerated liquefied gases, 6.8.5.1.2 (a) contains an exhaustive list of the types of steel permitted. At present, that list does not mention austenitic-ferritic steels.

The Joint Meeting agreed to include austenitic-ferritic steels in 6.8.5.1.2 (a), because if the material requirements of 6.8.2, 6.8.3 and 6.8.5 are complied with, there are no concerns in terms of safety.

## Capacity of shell

A question of interpretation arose concerning the last sentence of the definition of “Capacity of shell”, according to which parts of the shell that cannot be completely filled because of their shape or construction need not be taken into account when determining the capacity.

The Joint Meeting confirmed that for “banana-shaped” tanks for example, where the top areas at each end of the tank cannot be filled, the reduced capacity must be shown on the tank, i.e. the quantity that can be filled in the tank without using pressure. The purpose of indicating the lower capacity is to avoid overfilling the tank.

## New proposals

### Languages to be used for markings

RID/ADR contains various provisions concerning the marking to be affixed to packages. However, unlike the provisions for the transport document, there is no general provision in RID/ADR specifying the languages to be used for these markings. There are only a few special cases where anything is said in this respect, e.g. “Avoid sources of ignition” for polymeric beads, expandable, of UN

number 2211 and plastics moulding compounds of UN number 3314 and when indicating the proper shipping name on packages containing goods of Class 1.

In order to resolve this issue, Sweden proposed to include a similar provision for marking to the one that already exists for the transport document. According to this, the particulars on the markings should be prescribed in an official language of the forwarding country, and also, if that language is not English, French or German, in English, French or German, unless agreements concluded between the countries concerned in the transport operation provide otherwise.

Differing opinions were expressed in the discussion on this proposal. While some Member States supported the proposal, other Member States did not believe it would really improve safety. As an alternative, it was proposed that only English should be used, as in the labelling of radioactive substances. It was also recalled that it was always possible to deal with this issue in regional international transport between countries with the same languages by means of multilateral special agreements.

Sweden would submit a new proposal to the next Joint Meeting taking into account the outcome of this preliminary discussion.

### Requirements for placards

At present, there are provisions concerning the weather-resistance of markings, danger labels and orange-coloured plates. The regulations are silent in this respect with regard to placards and markings for elevated temperature substances.

The Joint Meeting adopted a proposal submitted by the International Union of Railways (UIC) to include a provision for placards and elevated temperature substance markings similar to that for orange-coloured plates, which, in addition to weather-resistance, require

durable marking throughout the entire journey.

### Transitional provision in 1.6.1.30

In the 2015 edition of RID/ADR, the requirements for danger labels were made more precise. One of these requirements concerns the 2 mm minimum width of the line that runs 5 mm from the edge of the danger label. A transitional period until 30 June 2019 was included in 1.6.1.30 to allow time to change the danger labels.

France had submitted a proposal to the Joint Meeting to extend this transitional period to 30 June 2021 so that supplies of high-quality laminated danger labels that have lines inside the diamond-shaped edge narrower than the 2 mm now prescribed can be used up.

It was pointed out in the discussion that in the meantime, the UN Sub-Committee of Experts had decided to relax this requirement because there had also been problems in air transport in implementing this non safety-related requirement (see p. 17). The UN Sub-Committee of Experts was of the view that no minimum width for this line was necessary and for the mode-specific provisions, had asked the relevant organisations to delete this requirement.

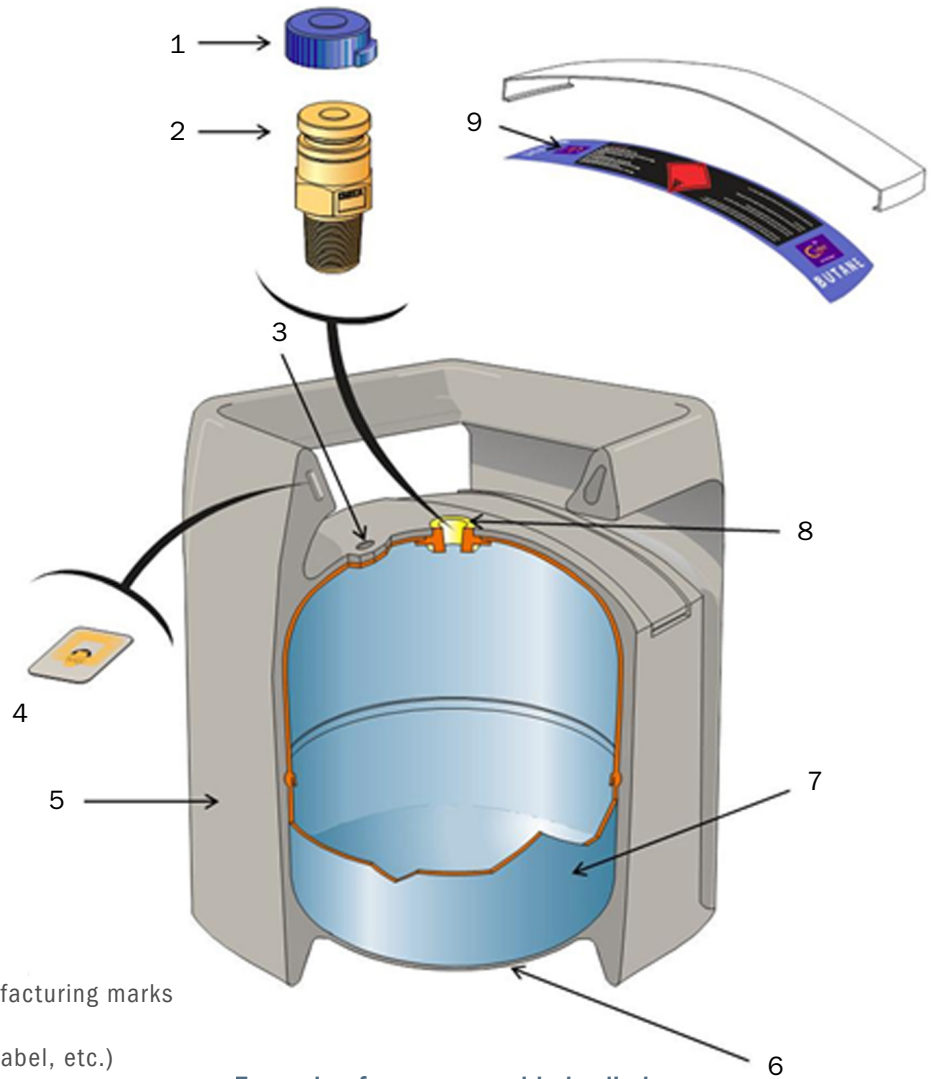
## Reports of informal working groups

### Alternative methods for periodic inspections

Over-moulded cylinders have a coated welded steel inner cylinder with an over-moulded protective case made from cellular plastic, which is non-removable and bonded to the outer surface of the steel cylinder wall. They are designed for the carriage of UN numbers 1011, 1075, 1965, 1969 and 1978. Around 4 million such cylinders, which have been in production since 1997, are currently in circulation, particularly in Belgium and France.

The steel cylinder is protected from corrosion by a coating and sufficient bonding between the protective case and the steel cylinder. Over-moulded cylinders have an electronic identification tag by means of which the properties of the cylinder recorded in a database can be made available. This database can be used to ascertain which cylinders belong to a production batch.

The design life of protected over-moulded cylinders is currently set at 30 years. However, this design life can be extended every five years, provided the tests carried out during the periodic inspection show that the polyurethane on the inner receptacles is still adhesive.



Example of an over-moulded cylinder

#### Key

1. Cylinder valve cap
2. Cylinder valve
3. Tare weight indication
4. Electronic identification tag
5. Overmoulded protection
6. Certification, operational and manufacturing marks
7. Coated steel cylinder
8. Identification marks (UN number, label, etc.)
9. Cylinder number and other marks

Owing to the special design of these cylinders, the pressure tests and visual inspections of the pressure receptacle prescribed in RID/ADR 6.2.1.6 (a) and (d) in the context of the periodic inspection are not suitable, as minor leaks cannot be seen and the inner receptacle cannot be visually inspected for permanent volumetric expansion because of the non-removable overmoulding. No inspection of the external condition of the pressure receptacle can be carried out either, as the outside steel surface is not visible.

Other non-destructive tests are not suitable either, for instance because in the ultrasonic examination the cellular plastic absorbs the sound waves, in the acoustic emission examination it is not possible to achieve direct con-

tact with the steel cylinder, and in the radiography examination no holes with a diameter smaller than 200 µm or surface corrosion or pitting corrosion can be detected.

For these reasons, alternative test methods have been developed which are based on regular sampling and a destructive test. After three years in service, burst tests, adhesion tests, peeling tests and corrosion tests will be carried out on these samples. These tests will first be conducted after 3 years in service and every 5 years thereafter using samples.

The aim of the burst test is to prove that the mechanical and structural integrity of the inner receptacle is maintained. Similarly, the adhesion test

and the peeling and corrosion tests are to prove that there is no external corrosion on the wall of the inner receptacle. The adhesion test provides proof that the polyurethane material retains its adhesive properties over time and hence continues to protect the anti-corrosion coating of the inner receptacle. The peeling test involves a visual inspection to check that there is no corrosion.

If the result of the tests performed is negative, the sub-group of over-moulded cylinders concerned, which can be identified by means of the electronic tag on the pressure receptacle tested, must be separated out and cannot be released for filling or use for the time being. Additional tests must be carried out in order to discover the root

cause of the failure. If it cannot be proved that the root cause is limited to the owner's sub-group concerned, the competent authority must take measures concerning the entire population of cylinders and possibly those manufactured at other periods of time.

This Joint Meeting decision concluded the work of an informal working group that has been discussing this issue since 2013. In future, RID/ADR will contain general provisions on alternative tests, but the details of these alternative methods will be set out in a special provision. Before any other alternative methods can be allowed in future, they must first be approved by the Joint Meeting.



Jochen Conrad Example of a burst test



Example of a peeling test



Example of an adhesion test



## CALENDAR OF OTIF'S MEETINGS IN 2018

DATE	EVENT	LOCATION
6 - 7 February	WG TECH: standing working group technology, 34 <sup>th</sup> session	Belgrade - Serbia
27 February - 1 March	Revision Committee	Berne - Switzerland
12 - 16 March	RID/ADR/ADN Joint Meeting	UNECE Berne - Switzerland

## EVENTS WITH OTIF PARTICIPATION IN 2018

DATE	EVENT	ORG	LOCATION
15 - 16 January	Working party "Risk and hazard"	International Union of Railways (UIC) and Romania	Lille - France
23 January	Working party "Risk and hazard"	EU Agency for Railways	Lille - France
30 - 31 January	Railway Interoperability and Safety Committee (RISC)	European Commission	Brussels - Belgium
30 - 31 January	RID Committee of Experts' working group on tank and vehicle technology	UIP	Hamburg - Germany
6 - 9 February	WP 30. Working Party on Customs Questions affecting Transport	UNECE	Geneva - Switzerland
6 - 7 February	Working party TSIs LOC&PAS and WAG	EU Agency for Railways	Lille - France
13 - 16 February	Temporary Working Group on Annex 2 to SMGS "Provisions for the Carriage of Dangerous Goods"	OSJD	Warsaw - Poland
15 February	Working party European Vehicle Register (EVR)	EU Agency for Railways	Lille - France
20 - 23 February	Inland Transport Committee	UNECE	Geneva - Switzerland
26 - 27 February	34 <sup>th</sup> Storck Symposium 2017	Verlag ecomed Storck	Hamburg - Germany
28 February - 1 March	Working group on checklists for the filling and emptying of tank-wagons for liquids	Netherlands	The Hague - Netherlands
6 - 7 March	UIC Group of Experts on the Carriage of Dangerous Goods	UIC	Luxembourg - Luxembourg
14 - 15 March	Working party ECM	EU Agency for Railways	Lille - France
22 March	CIM Committee	CIT	Berne - Switzerland

Dear readers

If you would like to subscribe to OTIF's publication, the Bulletin of International Carriage by Rail, please send an e-mail to the following address: [media@otif.org](mailto:media@otif.org)

You can also read the Bulletin on OTIF's website ([www.otif.org](http://www.otif.org)) under the tab headed "Media".

Thank you for your continued interest.

**The Bulletin editor**

Gryphenhübeliweg 30 CH - 3006 Berne

Tél. : + 41 (0)31 359 10 10 | Fax : + 41 (0)31 359 10 11 | [info@otif.org](mailto:info@otif.org) | [www.otif.org](http://www.otif.org)