

DIFFICULTIES IN DANGEROUS GOODS TRANSPORTATION VIA NEW INDEPENDENT COUNTRIES

V. Paulauskas

Klaipėdos universitetas

1. Introduction

Many dangerous goods such as oil products, dyes, spirits, chemical products are transported between the Western and Eastern countries. A big part of these dangerous goods is transported via transit countries such as Central European countries, Baltic Countries and others.

Till now there are some differences between the requirements regarding dangerous goods transportation in different countries and especially the lack of information about the conditions of dangerous goods transportation makes big problems for the transport units and for the countries via which dangerous goods are transported.

At the same time dangerous goods like other cargoes are transported via concrete transport corridors. In this case it is possible to solve the transportation and safety problems more easily.

2. Requirements for the transportation of dangerous goods in different countries

The main international regulations regarding dangerous goods transportation ADR, RID, IMDG Code and other are approved in many countries. But it is theoretically. In practice all countries must implement international regulations in their legislation, create structures and procedures for the control requirements of the international regulations. For new independent countries such as Lithuania the implementation of international regulations requires additional resources, especially to create control mechanisms. This part of the implementation of international regulations is more difficult because it requires to create special institutions, mainly State, select and train people.

At the same time it is impossible to keep a control person near every transport unit or near every loading place with dangerous goods which means that informa-

tion system and control procedures are necessary.

According to the investigations which were carried out in the last years in new, independent and in other countries regarding dangerous goods transportation control, the same difficulties in effective control of the dangerous goods transportation are noticed. In many countries dangerous goods transportation control on roads is provided by traffic control institutions (road police), but at the same time road police has not enough experience and is not sufficiently trained regarding dangerous goods transportation requirements and international regulations.

On railway transport the main control of the dangerous goods transportation is provided by railway companies or in some countries by railway police which has the same problems as on the road transport.

On waterborne transport harbour masters in ports are responsible for the dangerous goods transportation control and this part in fact is more or less according to the requirements, but at the same time harbour master inspectors very often have not enough knowledge regarding road and railway requirements that is RID and ADR requirements. In this situation in sea ports control of the dangerous goods transportation is good when storage conventional ships and conventional cargoes are loaded or unloaded, but for the dangerous goods which are in transport units and are transported by Ro-Ro ferry ships dangerous goods transportation control in ports is not enough.

A very complicated situation is in the Eastern countries which are on border crossing places when transport units cross the borders between the countries because different requirements in countries and different control mechanisms and procedures can not insure that all the international requirements according to RID, ADR or IMDG Code are kept.

Traditionally in the Eastern countries control requirements are different for different types of dangerous

goods and this situation can not provide good total control of the dangerous goods transportation. As a result of such control about 25 % of transport units with dangerous goods which come from the Eastern countries to the Western countries according to Kiel water police information are with the deficiencies, mostly with stowage/securing problems inside transport units. This shows that there are big problems in Eastern countries with dangerous goods loading and transportation **control**.

3. Weak points of dangerous goods transportation

The biggest deficiencies in dangerous goods transportation are storage/securing inside the transport units. At the same time lots of other deficiencies in transport units with dangerous goods are checked during control procedures, especially in marking, documents and transport units technical conditions. Deficiencies in dangerous goods transportation show that such situation is dangerous for transport units, but it can make more problems for the population and environment near the transportation places. To exclude deficiencies as soon as possible during loading and transporting is the main task of the control institutions. One of the main places where it is possible to check deficiencies and to provide additional work or preparations is the border crossing places, but in this case international requirements should be very clear that cargo and transport unit owners or operators could clearly understand these requirements. The excluding of the deficiencies requires lots of time and expenditures because very often it needs the unloading of cargo from transport units, buying new additional equipment and materials and so on. In this case it is very important that all countries or cargo origin, transit and destination countries have the same requirements.

Now in some countries the requirements regarding information are different especially between the Eastern and Western countries. For example, in some Eastern countries petrol transportation by the road transport does not require special information and permissions. In such case, if a transport unit with such cargo crosses the border, transport unit operator has a lot of problems and control institutions must check lots of details. It takes a lot of time, additional documents and so on and in this case the transport operator has additional expenditures for these formalities.

Now in many countries special information systems for the dangerous goods transportation and storage are created. It is very important to co-operate in this very

important sphere that there would be, if possible, the same requirements regarding dangerous goods transportation and storage in neighbour countries.

The Baltic Sea countries have Memorandum of Understanding regarding dangerous goods transportation on the Ro-Ro ferry ships in the Baltic Sea. Such international regulations can assist the Baltic sea countries to create more or less the same information systems and control mechanisms regarding dangerous goods transportation by roads, railways and sea. But for the successful process it is very important to harmonize the main international dangerous goods transportation regulations that is RID, ADR and IMDG Code.

4. Dangerous goods control systems

It is possible to create the same requirements and the same control systems in different countries for dangerous goods transportation and storage, if all the countries or a big number of countries take as a basis the same requirements. Such requirements can be EC directives, international Conventions or Agreements. Existing RID and ADR Agreements regarding dangerous goods transportation on roads and railways must be harmonized with IMDG Code because more and more cargoes including dangerous goods are transported by the sea transport, that means - grown up philosophy "push cargo in water". This situation requires deeply harmonized RID, ADR and IMDG Code, especially for the inter modal transport.

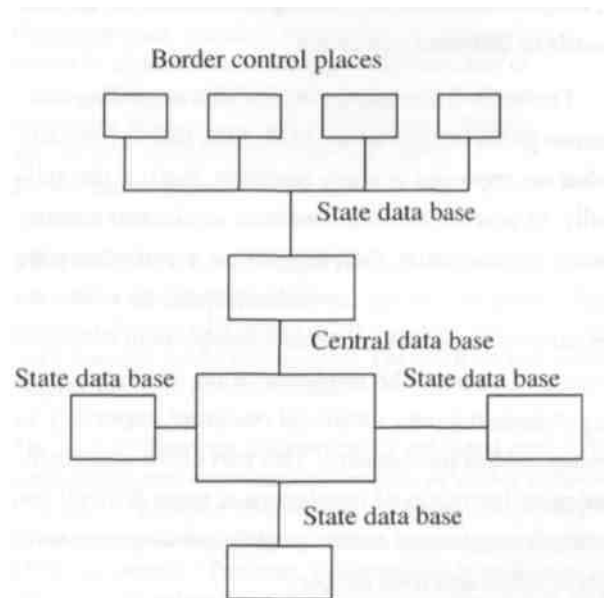


Fig 1. Principle scheme of the dangerous goods transportation and storage control system

At the same time dangerous goods transportation and storage control systems should be harmonized that would be possible to provide very simple and fast control on cargo loading, border crossing and other places in the same manner.

Control system for the dangerous goods transportation and storage can be the same as it is in the sea: state port control in accordance with Paris Memorandum of Understanding (Paris MoU). According to Paris MoU in Sent-Malo data base of information system is created which is linked with a big part of European ports. Information about any ship which visits European port and which is in Paris MoU system is available for the inspectors at any time [1], According to information it is possible to find any deficiencies which ship in previous ports had. In such systems there is no need to repeat what was done before, it is possible very easily to provide additional control of deficiencies or to provide additional control of the ship or transport unit, or cargo which was not controled before. System for the dangerous goods transportation control can be designed as it is shown in Fig 1.

It is very important to provide control during loading operations of transport units that it would be possible to check any deficiencies in the earliest stages because in this stage the situation could be changed with minimum losses for the cargo owner or transport unit operator. In this case it is very important to link information control system with institutions which are responsible for the dangerous goods transportation and storage control.

5. Dangerous goods transportation via transport corridors

In many cases transport corridors for cargo transportation are used, that means concrete roads, ports, railways are used (Fig 2).

Transport corridors have few conditions:

- geographical;
- juridical;
- responsibility;
- economical.

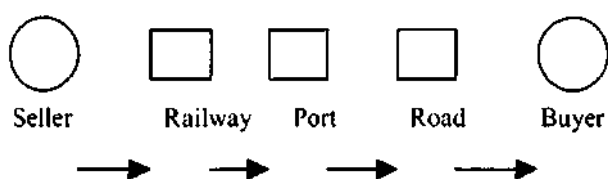


Fig 2. Transport corridor scheme

Geographical conditions mean concrete geographical places: countries, roads, ports, railway stations, border crossing places which are used for cargo transportation. For example, for cargo transportation including dangerous goods transport corridor from Koln region to Moscow region via Kiel or Mukran ports, Klaipeda port, Vilnius, Minsk, Smolensk is used. On this way there are border crossing places in Kiel or Mukran (Germany), Klaipeda (Lithuania), Medininkai (Lithuania - Belorussia), Smolensk (Belorussia - Russia) [2] (Fig 3).

Legal conditions on concrete transport corridors are very important because it is possible to harmonize and implement the main international regulations and requirements easier and to approve these regulations and requirements by the country Authorities.

Responsibility on a transport corridor or parts of a transport corridor is linked with juridical conditions because responsibility of the concrete transportation partner must be linked with the main requirements. Responsibility conditions are very important for the control of the dangerous goods transportation and transport units, especially in the border crossing places and they assist to improve information and control systems.

Economical conditions are linked with competition requirements and in fact link all the conditions in comparison with the other transport corridors.

6. Conclusions

1. Dangerous goods transportation is in responsibility of all the countries via which dangerous goods are transported.

2. The same requirements in countries for the dangerous goods transportation and storage are possible to be implemented via international regulations like RID, ADR, IMDG Code and others.

3. Lack of information in dangerous goods transportation makes a lot of problems for the countries especially for the transit countries and in this situation it requires to find concrete transportation safety solutions.

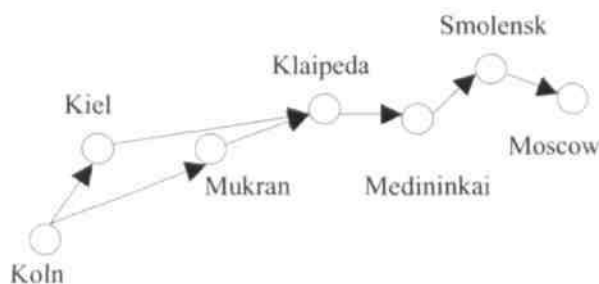


Fig 3. Transport corridor Koln - Moscow

4. Information and control systems on the basis of international requirements and regulations are the main ways to solve information and control problems.

5. Transport corridors where more concrete and strict requirements for the dangerous goods transportation can be used can faster implement international regulations.

6. Agreements on concrete transport corridors between partners can assist to find more clear solutions regarding the safety of dangerous goods transportation and implementing local information and control systems.

7. Authorities and transport companies must co-operate for the improvement of safety conditions in dangerous goods transportation.

References

1. V. Paulauskas. Der Transport Gefährlicher Guter nach und von Osteurope // Gefahrliche Ladung. Hamburg, 1998, S. 35-44.
2. V. Paulauskas. Navigation in Lithuania inland waterways and inland and maritime connections between Lithuania and European Countries // Inland and maritime navigation and coastal problems of East European Countries. Vol 2. Gdansk, 1996, p. 395-400.

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PAVOJINGŪJŲ KROVINIŲ VEŽIMO PER ATGAVUSIAS NEPRIKLAUSOMYBĖ VALSTYBES SUNKUMAI

V. Paulauskas

Santrauka

Vežant pavojinguosius krovinius reikia labai gerai paruošti transporto priemones ir transporto sistemas, be to, informacija apie šiuos krovinius turi būti tiksli ir perduodama laiku.

Nepriklausomybę atgavusiose Europos valstybėse yra skirtingi pavojingųjų krovinių vežimo reikalavimai, todėl susidaro papildomų sunkumų šiuos krovinius ruošiant vežimams, vežant juos ir ypač kertant valstybių sienas. Dėl šių priežasčių didėja pavojingųjų krovinių vežimo laikas ir kaina. Kadangi pavojingieji kroviniai daugiausia vežami konkrečiais maršrutais (transporto koridoriais), esamas problema lengviau spręsti pasirašant specialias transporto koridoriaus sutartis. Kombinuotųjų pavojingųjų krovinių vežimų operatoriai bus pajėgūs dar geriau spręsti pavojingųjų krovinių vežimo problemas ir kartu maksimaliai užtikrinti jų vežimo saugumą.

VYTAUTAS PAULAUSKAS

Doctor Habil, Professor and Head of Shipping Department, Klaipėda University (KU), Bijūnų g. 17, LT-5800 Klaipėda, Lithuania. E-mail: donatasp@takas.lt

Doctor Habil of Science (Transport Technology), Vilnius Gediminas Technical University (VGTU formerly VTU), 1993. Doctor of Science, Leningrad Maritime Academy, 1979. MsCand master Marine, Kaliningrad Maritime Academy, 1968 - 1974. Membership: Governmental Klaipėda Port Development Committee, Doctor Habil and Doctor Committee in Vilnius, Kaunas and Klaipėda Universities. Publications: author of "Ship control" (1994), "Navigation" (1994), Port development and logistics" (1998), "Ship control in difficult navigation conditions" (1999). Research interests: transport technology, transport policy, port development, transport logistics, shipping safety, ship control, dangerous goods transportation.