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## QUALITY OF RAIL FREIGHT TRANSPORT

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The rail transportation management control and key performance indicators are necessary for the effective and efficient management of customer’s cargo throughout the transport process. The purpose of the current article is to give a partial overview about the quality management of cargo transportation by rail. The customers of rail transport are not fully satisfied with quality of the service. Use of the Quality contracts along the transportation route should be further developed. Service providers must carry out regular self-assessment of performance against defined criteria of service with the objective of continually improving the quality of services provided and is prepared in a manner, which facilitates independent audit of the service provider’s performance in order to give confidence to customers that the integrity of performance measurement is maintained. Most sensitive service quality parameters and indicators for freight quality are information, rolling stock, reliability and punctuality.

**Keywords:** rail transport, quality services, standards

### 1. Introduction

During the economic recession period rates of goods delivery and logistics services are becoming more and more relevant. After bankrupt of the big number of road transport companies and rundown of road transport service amount, a lot of cargo owners have begun to care for alternative freight delivery methods and logistics solutions. One of the alternative modes is a railway transport, which in spite of the fact that is not very flexible, even able to offer various means of freight transportation for acceptable for the customers rates and service level.

At the same time, in the railway transport, in contradistinction, for instance, to air transport, the problem of service quality remains – there is no united compulsory service quality standards for all railway companies in the country, region or the international route. With a view to unify quality standards and quality management system the Commission of the European Communities considers and provides to the Council and the European Parliament various solutions related to it.

### 2. Legal Regulation

On 8<sup>th</sup> of September 2008 the Commission of the European Communities report to the Council and the European Parliament Communication on “The quality of rail freight services”.

Main guidelines and proposals of this communication from the Commission:

- a) Continuing and stepping up action to develop competition;
- b) Continuing and stepping up action to improve infrastructure and develop interoperability;
- c) Continuing and stepping up action to promote greater transparency of information and the management of the performance of the rail system.

With an eye to unify, control and ensure quality of provided rail freight services the following documents have been signed:

1) Freight Quality Charter – 2003, which was signed on 4<sup>th</sup> of July 2003 by the UIC (International Union of Railways), CER (Community of European Railway and Infrastructure Companies) and CIT (International Rail Transport Committee);

2) Joint Declaration by UIC/CER and FIATA/CLECAT on “Quality in international conventional and combined railway freight traffic, which was signed on 15<sup>th</sup> of April 2005 by UIC/CER from one side and FIATA (International Federation of Freight Forwarders Associations)/CLECAT (European Association for forwarding, transport, logistic and customer services) from the other;

3) Guidelines for the development and implementation of quality agreements for specific trainloads in international conventional rail freight traffic, which have been announced on 19<sup>th</sup> of October 2006 by UIC, FIATA and CIT.

### 3. Quality Standards

The Commission of the European Communities quite intensively reaches to implement rail freight quality standards in unification and application for carriages in European Union. These standards are mostly included into standards related to the combined transport, because full logistic chain is possible only connecting at least few transport modes. The main standards related to the freight transport and logistics services published by the European Committee for Standardization are shown in the Table 1.

**Table 1.** The main standards related to the freight transport and logistics services

Standard reference	Title
CEN/TR 14310:2002	Freight transportation services – Declaration and reporting of environmental performance in freight transport chains
EN 12507:2005	Transportation services – Guidance notes on the application of EN ISO 9001:2000 to the road transportation, storage, distribution and railway goods industries
EN 12798:2007	Transport Quality Management System – Road, Rail and Inland navigation transport – Quality management system requirements to supplement EN ISO 9001 for the transport of dangerous goods with regard to safety
EN 13011:2000	Transportation services – Good transport chains – System for declaration of performance conditions
EN 13876:2002	Transport – Logistics and Services – Goods transport chains – Code of practice for the provision of cargo transport services
EN 14943:2005	Transport services – Logistics – Glossary of terms
EN 15696:2008	Self storage – Specification for self storage services

Meanwhile, Lithuanian railway transportation system with all inclusive infrastructure and rolling-stock has been placed from the quondam Soviet Union railway system.

Consequently, all legislation was customized for wide gauge (1 520 mm) users, i.e. for SMGS (International Convention on Rail Freight carriage) member states. This convention determines point-to-point international communication by freight railway transport between railways of the SMGS member states.

This convention defines conditions of conclusion, execution, alteration, responsibility, handle of complaints and billing of the rail freight contract. Despite this, the unanimously applied and approved by all countries (SMGS member states) quality standards do not exist. The only standard that can be assigned to one of the elements of the quality system and which must be observed by the members of the SMGS convention is mentioned cargo delivery on time and penalties for delayed delivery of goods.

Currently, SC “Lithuanian Railways” has no rail freight quality standards, their implementation and evaluation system and is guided by international conventions (SMGS, CIM, COTIF and etc.), European Union directives (First, Second and Third EU railway legislation packages) and following national, freight rail operations governing documents:

- Law on the Principles of the Activities of Transport,
- Law on Carriage of Dangerous Goods by Car, Rail and Inland Waterway,
- Law on the Railway Transport Sector Reform,
- Railway Transport Code,
- Law on the Safety in the Railway Traffic,

- Rules on the Certification of the Railway Companies Railway Safety Manager,
- Regulations on the Licensing of the Passenger, Baggage and Freight Rail Transport,
- Regulations on the Registry of the Rolling-stock and Containers,
- Regulations on the Public Railway Infrastructure,
- Rules on Registration of the Rolling-stock and Containers,
- Regulations on the Technical use of Railways,
- Rules on Railway Traffic,
- Rules on Railway Signalling,
- Rules on Rail Freight and etc.

Anyway, SC “Lithuanian Railways” does not stand still and is already proven and follows a “Nuclear fuel transportation quality assurance manual”, which is relevant to the transportation of fuel used in both the Ignalina nuclear power plant and in transit through Lithuanian territory.

It is also extensively discussed the possibility for wider range of quality standards, its implementation and evaluation systems, in order to develop freight volumes to Westward and to ensure high quality services at an affordable price using a modernized rolling-stock.

As already mentioned, the European Commission makes all steps to transfer cargo flows from road to rail. To this end, there are opportunities for rail transport development and the necessary measures taken by the European Commission presented in its Communication No COM (2007) 608 final of the European Parliament and the White Paper on European Transport Policy for 2010.

In spite of this, the railway transport has all opportunities for further development. The main problems encountered in the carriage of goods by rail are the reliability, flexibility, punctuality, information management, and the average traffic speed. All these factors affect the prospective customers in the determination of the mode of transportation of goods. However, new opportunities unclose: after liberalization of the transport market by the European Union, the freight rail transport is becoming increasingly competitive because of the growing volume of trade exchange, traffic jams on the roads, rising prices of fuel and concerns about environmental protection. Carriage of containers, in combination of sea and rail transport, is becoming more and more popular.

The European Union is pursuing a policy of revitalizing of the rail transport in three main directions:

- A freight market on a European scale was established. The opening of the rail freight market was accompanied by the restructuring of the formal state monopoly rail companies.
- The development of technical interoperability and common safety rules. The implemented measures concerning the European train driver’s license and the proposal submitted by the Commission on the cross – acceptance of rolling-stock come under this heading.
- The identification of a rail network in the context of the Trans-European transport network (TEN-T).

#### 4. Rail Freight Market Forecasts

On the 30<sup>th</sup> of March 2010 company Price Waterhouse Coopers in cooperation with the University of Leeds, NEA and Significance have submitted to the European Commission the study “Situation and Perspectives of the Rail Market TREN/R1/350-2008 Lot 2”. The Table 2 shows the presented in this study the freight market outlook distribution by mode of transport and submarkets.

**Table 2.** Mode share forecast

Submarkets in EU27-non-EU	Mode share 2007, in %			Mode share 2020, in %		
	Rail	Road	Other (Sea/IWW)	Rail	Road	Other (Sea/IWW)
EU27-CH/NO	9	45	46	10	50	41
EU27-Eastern Europe (1 520 mm gauge, Baltic Rim)	56	23	22	59	22	19
EU27-Eastern Europe (1 520 mm gauge, Ukraine, Belarus, Moldova)	27	37	36	23	41	36
EU27-Eastern Europe (1 435 mm gauge, Balkan and Turkey)	9	33	58	9	37	54
Total EU27 – non-EU	22	37	41	22	39	39

According to this study, the largest growth in freight traffic is forecasting for the European Union-Eastern Europe submarkets through the Baltic region using the wide gauge.

However, in order to attract additional traffic to rail transport in the above – mentioned direction is necessary to ensure compliance with quality standards, the more especially as used in this way both the narrow (1 435 mm) and wide (1 520 mm) gauges.

## 5. Conclusions

Many of the rail freight operators in Europe pointed out, that the main obstacle to the development of this transport mode is high railway infrastructure use charges in some states, which are sometimes even 2.5 times higher than that of the road transport.

To encourage the rail freight transport, the European Commission approved the proposal to legalize freight rail corridor network. Six of these corridors will be operational after three years and will interlink at least two European Union countries. Other three corridors will be operational in five years.

Despite the liberalization of railway market, most of the railways companies still enjoy their monopoly position and consequently rail freight rates are not regulated by the competition. Due to this reason, quality related to rail freight services suffer, because potential customers have no possibilities of choice.

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