# safety performance report
# 2008
# Latvia

Compiled by the
State Railway Technical Inspectorate
2 RIEPNIEKU IELA 2, RIGA, LV 1050
www.vdzti.gov.lv
E-mail: vdzti@vdzti.gov.lv
Tel.: +371 67234308, +371 67234335; Fax: +371 67234333

# CONTENTS

# 1. general information

The aim of the State Railway Technical Inspectorate is to carry out State control functions as regards monitoring and supervision of the technical operation of railways, so as to ensure the enforcement of statutory enactments governing this field and to ensure efficient and high-quality maintenance of railway transport. Establishing clear operation and certification regulations will stimulate the improvement of railway traffic safety.

Our aim is to ensure that there are single and safe railway operation requirements in place for each company operating in the railway field, both in Latvia and in the European Community. The activities of the State Railway Technical Inspectorate are directed towards improving the railway sector, so as to help railway transport in Latvia to evolve into a safer and more environmentally friendly mode of transport:

- 5.1. with single certification principles for all companies operating in the railway sector;
- 5.2. with single railway professional certification principles;
- 5.3. applying equal requirements to railway facility construction projects;
- 5.4. with single technical railway operation regulations for all operators and equal monitoring criteria;
- 5.5. with clearly specified models of cooperation as regards traffic safety and drafting legislation.

The achievement of common Community goals depends heavily on mutual coordination among railway safety authorities and investigation bodies in all Member States, on the availability of data, as well as on the implementation of single safety indicators, goals, and methods. The implementation of single requirements will enable safety levels to be assessed both at the Community level, and in each Member State.

## 1. 1. contents of the report

The Report reflects work accomplished and results achieved in the field of traffic safety in 2008. The aim of the Report is to present the progress of improving railway safety in Latvia and to emphasise the problems identified in the given year. The Report reflects the works accomplished and results achieved by all parties related to the railway field.

The Report also contains information regarding the State Railway Technical Inspectorate, specifying the functions, tasks, and aims of the Inspectorate, as well as its working results. In 2008 a new function was assigned to the State Railway Technical Inspectorate, when it took over from the Ministry of Transport the functions of approving railway infrastructure projects and issuing construction permits.

The Report also provides information on amendments to legislation, on the assessment of activities, and on trends and developments in traffic safety. Specific features of the railway network in Latvia and technical differences of railway elements require the particular attention of all participants of the railway sector. 2008 saw active efforts to improve the joint use of the railway network and to resolve issues related to harmonising safety requirements. Regulations on the transport of hazardous goods by rail were harmonised, allowing operators, consignors,

and consignees to apply single requirements for the transportation of hazardous goods in the Community railway area, as well as in third countries.

The Report also reflects the railway safety-related efforts of railway companies. Through audits and inspections, the State Railway Technical Inspectorate gains assurance of the efficiency of companies' safety management systems, as well as of the safety levels of services provided. 2008 saw an increase in human error in relation to technological processes in companies. A significant problem that emerged in 2008 is related to the number of people injured in the vicinity of railway tracks or when crossing tracks at locations other than those designed for that purpose. Any accident involving an infrastructure management company or an operator company is subject to analysis. Measures are taken to avoid similar railway traffic accidents. The Report contains an analysis of the trends and dynamics of accidents based on data comparison. When summarising data related to accidents, companies faced difficulties in obtaining precise data from medical institutions and the police, due to personal data protection requirements. Problems also arise as regards classifying accidents, which points to the necessity of developing detailed instructions on the use of safety indicators. Companies still face problems in drawing economic estimates of loss related to delays and rolling stock issues, because the fleet of carriages is shared with the CIS countries.

The Safety Performance Report also provides information regarding measures taken by railway operators and managers of public railway infrastructure to improve traffic safety. The measures were organised in accordance with the goals specified in the safety management system.

## 1.2. summary in english

The main role of the State Railway Technical Inspectorate, as the NSA of Latvia, is to ensure safety in the railway field in accordance with national and EU legislation, together harmonizing requirements. The aim of the State Railway Technical Inspectorate is implementation of state administration functions in the field of railway operation, supervising railway companies in accordance with the national legislation's requirements.

The annual report reflects the activities performed and results achieved as regards railway safety in 2008. The objective of this report is to reflect on the development of railway safety in Latvia as well as to indicate problems that were detected during reporting year. The report interprets the performance of results achieved by all involved parties in the railway industry.

Information on the State Railway Technical Inspectorate, its tasks and functions, is also included in this report. The main priorities reaching targets were provision of supervision at national level, provision of certification processes, processing of information and analysis, preparation of safety requirements, etc.. In developing safety requirements it is very important to take into account national specifications but at the same time to perform them clearly, transparently and without any discrimination.

Safety during the reporting year was maintained and developed. The number of serious accidents increased, especially those with injured persons. Two serious accidents were registered with serious social and economic consequences. An increase of human factor failure during the fulfilment of technological processes was observed. The number of injured persons at accidents increased in 2008. But compared with the numbers of injured persons, there was a decrease in fatalities in Latvia. In spite of the safety measures implemented, suicides on railway lines are still

constant which reflects social problems in Latvia. Taking into account that there are many carriages of freight, including carriages of dangerous goods, every accident is investigated and necessary measures have been taken to avoid similar accidents.

An increase in human error has also been observed. This results from the violation of technological processes. Movements of accidents and tendencies are described in this report.

This report also describes the progress of national legislation and certification. Eight certificates were issued in accordance with the Safety Directive's requirements - five of them Part A and three Part B.

This report also reflects the development of the railway network and reached conclusions on the preceding year. Information from the safety reports of railway undertakings and main public-use infrastructure managers is included in this report. The results of audits and inspections show that public-use infrastructure is maintained, but there improvements in private-use infrastructure are still needed. Improvements to internal procedures to avoid 'human error' and renewal of rolling stock are required.

# 2. The railway sector in Latvia

## 2. 1. Railway infrastructure and operators

The total length of railway registered in Latvia amounts to 4 730.9 km, of which the total length (expanded length) of public railway is 3 727.5 km. The total expanded length of public mainlines amounts to 2 600.4 km. The mainline length in operation (the stretch forming part of the European railway network) amounts to 2 263.3 km. 95 % of the registered public railway is operated by the State joint stock company *a/s Latvijas dzelzceļš*, which is the largest operator of public railway infrastructure. *A/s Latvijas dzelzceļš* is involved in the management, maintenance and development of railway infrastructure. A map of the railway network in Latvia is provided in Appendix 1.

There are 1 003.4 km of private railway.

Double track railway comprises 302.8 km of public railway. The total length of electrified railway amounts to 257.4 km. 882.745 km (i.e. 38.68% of the total mainline length and 20% of total railway length) of public railway infrastructure feature ALSN (an automatic locomotive signalling system).

In 2008 there were six operators in Latvia which, in accordance with existing safety regulations, had the right to provide railway transport services using the public railway infrastructure:

### 2.1. CARGO TRANSPORT

**2.1.1.** *SIA LDZ Cargo* – provides local and international cargo transport services and shunting services;

**2.1.2.** *a/s Baltijas Ekspresis* - provides local cargo transport services and shunting services;

2.1.3. *a/s BALTIJAS TRANZĪTA SERVISS* - provides local cargo transport services and shunting services.

2.2. passenger transport

2.2.1. State joint stock company *a/s Latvijas dzelzceļš* – provides local and international passenger transport services;

2.2.2. *SIA Gulbenes –Alūksnes bānītis* (narrow-gauge railway) – provides local transport services;

2.2.3. *a/s Pasažieru vilciens* – provides local transport services.

Cargo transport services constitute the major part of railway services in Latvia. The highest volume of transport service is provided by *SIA LDZ Cargo* (approximately 90% of cargo transport services). The remaining services are provided by *a/s BALTIJAS TRANZĪTA SERVISS* and *a/s Baltijas Ekspresis*. It is worth noting that the volume of transport services provided by *a/s BALTIJAS TRANZĪTA SERVISS* and *a/s Baltijas Ekspresis* is growing.

The highest volume of passenger transport services is provided by *a/s Pasažieru vilciens* (90% of total volume of service), which provides local passenger transport services. In 2008 *A/s Latvijas dzelzceļš* mainly provided international passenger transport services.

Operators are improving their internal procedures and applying new knowledge and technologies to provide a wide range of railway transport and related services characterised by high levels of safety and efficiency.

A more detailed description of public railway infrastructure managers and railway operators is given in Appendix 2.

## 2.2. State control

### 2.2.1. The state railway technical inspectorate

The State Railway Technical Inspectorate was established on 1 July 1999 and is a direct management body supervised by the Ministry of Transport. The State Railway Technical Inspectorate was established with a view to perform the functions of State control in the field of monitoring and supervision of the technical operation of railways, so as to ensure the enforcement of statutory enactments governing this field. The operation of the Inspectorate is governed by Cabinet Regulation No 14 of 4 January 2005, *Regulations regarding the State Railway Technical Inspectorate*.

The task of the State Railway Inspectorate is to enforce the railway safety requirements contained in Latvian legislation, whilst at the same time working to harmonise these requirements with EU requirements.

The State Railway Technical Inspectorate should be independent of infrastructure managers, regulatory bodies, railway operators, and procurement bodies.

According to Article 33, Part 3 of the Railway Act, the functions of the State Railway Technical Inspectorate are as follows:

2.2.1.1. to monitor observance of the provisions of legislation in the field of railway operation and safety, as well as of other statutory enactments;

2.2.1.2. to monitor the implementation of civil defence measures (including preventive and response measures and mitigation of consequences) in railway operation;
2.2.1.3. to investigate railway accidents;
2.2.1.4. to control activities related to the mitigation of rolling stock accidents;
2.2.1.5. to assess railway infrastructure projects and to take decisions regarding these projects; to issue construction permits; and to control the observance of provisions of law and other statutory enactments in the construction sector on the part of entities involved in railway infrastructure construction;
2.2.1.6. to issue safety certificates to operators in accordance with legislation;
2.2.1.7. to issue safety approvals in accordance with the specified procedure;
2.2.1.8. to issue professional competence certificates in the subject field in accordance with legislation.

As of 2008 the State Railway Technical Inspectorate is wholly responsible for the issue of construction permits and acceptance of constructed buildings. Prior to 2008, construction permits were issued by the Ministry of Transport.

Supervision is exercised over railway transport operators, infrastructure managers, enterprises involved in repairs and maintenance, construction companies, and railway specialists.

2008 saw a decrease in the number of offices in the inspectorate. The number of offices was also reduced in the first quarter of 2009. The overall decrease of the number of offices amounts to 14%: from 22 to 19 positions. The responsibilities of the redundant positions have been distributed among the existing positions. All positions in the Inspectorate are filled.

There are four structural units in the Inspectorate (the structure is given in Appendix 3):

2.2.2.1. THE TRAFFIC SAFETY UNIT is responsible for State monitoring and control of the observance of statutory enactments in the field of railway operation, safety, and emergency situations. The unit is also responsible for investigating traffic safety violations committed by railway operators. There are seven positions within the unit.
2.2.2.2. THE ANALYSIS AND CERTIFICATION UNIT is responsible for State monitoring and control in the field of certification. The unit is also responsible for preparing draft legislation in the railway field, as well as for the transposition of EU requirements into national law. Each employee of the unit is responsible for a specific area of certification or policy. There are five positions within the unit.
2.2.2.3. THE FINANCE AND PROJECT MANAGEMENT UNIT is responsible for the efficient and transparent assessment of railway projects, for the planning and use of State budget funds, and for accounting. The unit is responsible for assessing construction projects, preparing decisions regarding construction projects, and issuing construction permits. There are three positions responsible for performing the tasks of the unit.
2.2.2.4. THE ADMINISTRATIVE UNIT is responsible for the control and registration of railway accidents, for the analysis of safety performance, and for drafting reports covering the operation of the Inspectorate and traffic safety performance. The unit is also responsible for issues related to human resources, implementation of internal control, and document management. There are three positions within the unit.

The Inspectorate is headed by the Director. The Director is appointed by the Minister for Transport upon approval of the candidate by the Cabinet of Ministers.

### 2.2.2. monitoring and cooperation structure

The Ministry of Transport is the main State governance authority in the transport and communications sector and is responsible for preparing draft statutory enactments governing the sector and policy planning documents and ensuring the implementation of the policy in State governance bodies subordinate to the Ministry, and enterprises where the Ministry is a shareholder.

The general aims of the Ministry of Transport, in the framework of its competence, are to prepare and implement the policies of the government of Latvia in the field of transport and communications, and to maintain and develop an efficient, safe, competitive, environmentally friendly, and flexible transport system in Latvia which offers a wide choice of opportunities to its system's users. Latvia's transport and communications policy is developed taking into account development tendencies in the region, EU policy in the sector, and activities of international organisations.

The Railway department of the Ministry of Transport is responsible for the shaping and implementing of railway policy. One of the department's tasks is to harmonise law with provisions of Community legislation.

State governance in the field of railway transport is exercised by the State Railway Technical Inspectorate, State Railway Administration, and Transport Accident and Incident Investigation Bureau.

The Transport Accident and Incident Investigation Bureau is responsible for investigating serious accidents involving trains and shunting services that affect traffic safety, taking into account the gravity of the consequences (at least one person killed or seriously injured, damage to rolling stock as a result of which it no longer complies with technical requirements and its safe operation cannot be guaranteed, and it is to be removed from fleet, or the damage to rolling stock, railway infrastructure or environment amounts to two million euro) and its effect on railway safety at Community level. In terms of its organisation, decision making, and legal status the Bureau is to be independent of railway infrastructure managers, operators, and the railway technical operation monitoring and control body, as well as bodies responsible for allocating railway infrastructure capacity.

The State Railway Administration is responsible for issuing licences to cargo transport operators, adjudicating conflicts among operators and infrastructure managers, shaping the strategy of environmental policy, and risk assessment. The State Railway Administration is responsible for keeping registers of State-owned infrastructure and rolling-stock. As a regulatory body, the State Railway Administration is to be independent of infrastructure managers and railway operators, bodies responsible for collecting payments, bodies responsible for allocating railway capacity, and applicants.

The monitoring and operation structure is provided in Appendix 3.

## 2.3. Main trends in safety performance

Freight transport increased from 18 313 million tonne-km in 2007 to 19 581 million tonne-km in 2008, an increase of approximately 7%. However, passenger transport in the reference year

decreased from 983 passenger-km in 2007 to 951 passenger-km in 2008. This is a decrease of approximately 3%. Freight transport still predominates in Latvia.

Main trends in traffic safety:

### 2.3.1. Certification

Compared with 2007, the certification of commercial railway companies has more than doubled:

**2.3.1.1.** There was an increase in the certification of railway infrastructure managers and entities that run specific technological processes for operators or railway infrastructure managers – 47 safety certificates were issued. In 2007 only 12 safety certificates were issued.

**2.3.1.2.** In 2008, eight safety certificates were issued in accordance with Cabinet Regulation No 168 of 10 March 2008, *Regulation regarding procedures and criteria for the issue, suspension, and cancellation of Parts A and B of the Safety Certificate*. Compared with 2007, the number of issued safety certificates remained the same.

**2.3.1.3.** The reference year saw the approval of six draft projects and 65 railway infrastructure projects, the issue of 62 permits for the construction of railway infrastructure facilities, and the extension of 12 construction permits.

**2.3.1.4**. In 2008 certificates were issued to 548 traction vehicle drivers, assistant drivers, and driving instructors. Similarly to 2007, in 2008 the greatest number of qualification examinations was held for diesel-powered train drivers, assistant drivers, and driving instructors – these amounted to 69% of the total number of qualification certificates issued. In 2006 the highest number of qualification examinations was held for applicants for railway traction vehicle driver, assistant driver, and driving instructor qualification certificates. 2008 saw a sharp increase in the number of qualification certificates issued for diesel-powered train drivers, which can be attributed to the fact that the transitional period during which former instructor-driver, driver, or assistant driver licences must be replaced with qualification certificates is about to end. In 2007 applications for qualification certificates were received from employees of 17 companies. In the reference year the highest number of applications was received from railway specialists employed by *SIA LDZ Cargo*.

**2.3.1.5.** A safety consultant (advisor) supervises and regularly examines the adherence of operators to the regulations governing the transport of hazardous goods. The right to act in the capacity of a safety consultant (advisor) are granted by a corresponding professional qualification certificate. 39 safety consultants (advisors) were registered in the reference year. According to reports, the total amount of hazardous goods transported in 2008 amounted to 22 680 thousand tonnes (17 584.3 thousand tonnes in 2007).

### 2.3.2. Control of railway operation and safety requirements

In order to ensure traffic safety, a number of company inspections and audits were conducted both by companies themselves and by the Inspectorate. The audits and inspections were conducted in accordance with the provisions of the safety management systems and internal monitoring systems. The operator companies constantly maintained safety systems and, where necessary, modified the systems so as to reduce risk factors:

**2.3.2.1.** An internal safety monitoring system was established in all companies. Technical recommendations for the improvement of processes were developed.

**2.3.2.2.** The State Railway Technical Inspectorate conducted 105 audits of internal monitoring systems in companies and 76 technical inspections.

**2.3.2.3.** Railway transport operators and public railway infrastructure managers conducted 160 audits and 18 215 technical inspections in the internal safety systems of companies (quality of repairs, technical condition of tracks, quality of work of locomotive teams, technical condition of rolling stock, etc.).

2.3.2.4. All operating railway crossings (641) were inspected. The majority of accidents and collisions in 2008 took place on unguarded level crossings. Particular attention was given to railway crossings where accidents or collisions had occurred previously or where serious maintenance violations had been identified. The inspection commissions focused particularly on the technical condition of railway crossings and traffic safety improvement issues.

2.3.2.5. 133 reports covering operations in 2007 were received from safety consultants responsible for hazardous goods transport. The reports provided information regarding operations with hazardous goods, as well as improvements made in the field of safety. According to the reports, the total transport of hazardous goods in 2007 amounted to 17 584.3 thousand tonnes. The main proportion of transported goods (84%) were inflammable liquids (14 829.9 thousand tonnes). The smallest proportion of transported hazardous goods (0.006%) was inflammable gases and explosives. In 2008 the transport of hazardous goods was dominated (72%) by inflammable liquids (16 391 thousand tonnes).

### 2.3.3. Traffic safety

The overall number of railway accidents and technical defects remained at the same level as in 2007. The number of serious railway accidents slightly increased in 2008.

2.3.3.1. Compared to 2007, the number of serious accidents increased by 19%. The number of serious accidents registered in the reference year was 61, which includes two accidents with serious economic consequences. The main trends are as follows:

- 2.3.3.1.1. during railway accidents in 2008 two employees were killed as a result of rolling stock collision;
- 2.3.3.1.2. no passenger trains were involved in collisions or derailment;
- 2.3.3.1.3. two employees were seriously injured during movement of rolling stock;
- 2.3.3.1.4. in the reference year two passengers were seriously injured: one of them fell out of a train and the other was getting on a train. Both passengers were under the influence of alcohol;
- 2.3.3.1.5. the number of individuals injured at level crossings increased;
- 2.3.3.1.6. 2008 saw an increase in the number of individuals injured while under influence of drugs or alcohol;
- 2.3.3.1.7. the increase in the number of injured individuals amounted to 30%; however, the proportion of casualties decreased. This decrease in the number of casualties, compared to 2007, amounts to 14%.

2.3.3.2. In terms of the nature of the accidents or violations, the reference year saw an increase in the number of accidents during shunting operations, as well as an increase in the number of traction vehicle and signalling system failures. The increase in the number of technical failures is indicative of wear of rolling stock, as well as violations of repair technology. This data suggest that the number of technical failures caused by errors made by staff members increased in 2008. 37% of the total number of violations was caused by human error.

### 2.3.4. Control of compliance of new and refurbished railway infrastructure facilities, equipment, machinery, and rolling stock when accepting for operation

When accepting railway infrastructure facilities for operation, the compliance of the facilities with the technical requirements of railway operation is verified.

2.3.4.1. In 2008, 20 stretches of track rail, three automatic identification facilities, and two other infrastructure facilities were accepted for operation. In the reference year, mainly refurbished railway infrastructure facilities were accepted for operation. In all, 16 refurbished railway facilities, eight new buildings, and one refurbished railway infrastructure facility were accepted for operation.

2.3.4.2. 2008 saw an increase of public railway track renovation works in the East-West corridor. The renovation of 89 kilometres of railway track was completed in 2008. Works in the

railway corridor included the renovation of railway tracks, the replacement of track switches, the replacement of surfacing on level crossings, and other works. The renovation of railway tracks was intended to improve traffic safety and passenger and freight train service, to reduce environmental pollution, and to significantly decrease noise and vibration levels.

**2.3.4.3.** The modernisation of an overheating brake shoe alarm system was under way. The new system is intended to improve traffic safety by helping to promptly identify rolling stock failures.

**2.3.4.4.** The modernisation of the automatic train traffic management systems began in the reference year; this is intended to significantly improve railway traffic safety, to increase the capacity of railway lines, and to decrease train delays. The modernisation should also help to reduce maintenance costs of management systems while providing new possibilities for railway management.

**2.3.4.5.** In the reference year a number of inspections related to the acceptance of 93 new and refurbished rolling stock units for operation were conducted. 2008 saw an increase in the number of traction vehicles accepted for operation: an increase was observed in the number of accepted diesel-powered locomotives and diesel-powered train rolling stock units. Similarly to 2007, the main proportion of rolling stock accepted for operation in 2008 was intended for passenger transport, in accordance with the approved concept of modernisation of traction vehicles and transition to single-person operation, i.e. without the assistant driver of the traction vehicle. The main emphasis was on the replacement of power equipment so as to increase the power and extend the service life of the rolling stock, as well as on equipping traction vehicles with devices for monitoring driver alertness.

# 3. Activities and development of railway safety performance

In order to maintain a high level of traffic safety, operator companies establish internal safety monitoring systems that determine specific safety measures. A system is established so that all responsibilities in terms of ensuring traffic safety and improving safety levels may be distributed between the company's staff members, including specifying deadlines and timeframes for performing the tasks. An internal transport safety monitoring system comprises a number of technical measures aimed at maintaining traffic safety, technical inspection of locomotives, expert inspection of tracks, track switches and other equipment, inspection of the quality of locomotive maintenance and repair, checking operation of radio communications and visibility of signals, control of railway specialists' work, planning and implementing training and instruction, drafting and enforcement of activity plans, reports, and regulatory enactments.

## 3.1. Activities in railway safety performance

Railway operators took numerous measures to reduce risks in 2008. Systemic aims were identified on the basis of the operator companies' work experience, results achieved, and changes in quality and personnel. The main safety measures aimed at risk reduction were as follows:

**3.1.1.** to establish risk management systems that identify risks and to ensure the improvement of appropriate activities in order to reduce or eliminate any potential consequences;

3.1.2. to maintain and improve staff awareness of safety issues;
3.1.3. to provide a safe working environment;
3.1.4. to develop, implement and assess safety processes;
3.1.5. to establish a system for maintenance of and repairs to rolling stock;
3.1.6. to maintain and modernise infrastructure;
3.1.7. to analyse railway accidents and to draft recommendations.

Measures aimed at improving railway safety performance are taken by operator companies, infrastructure manager, and State Railway Technical Inspectorate.

Despite the fact that railway operator companies and the public railway infrastructure manager took significant measures to improve railway safety in 2008, the number of accidents involving injuries increased. The number of accidents caused by human error also increased. In 2008 the public railway infrastructure manager held a number of safety-oriented campaigns that mainly focussed on informing the public of railway safety issues and safety requirements.

Accidents that occur when a train is in motion and which involve injured individuals have a significant impact on traffic safety in the country. In 2007 as well as in 2008 possible solutions were sought in respect to how to reduce the number of injuries in railway traffic. Taking into account available possibilities, in 2007 it was decided to start work at improving safety using preventive measures. 2008 saw the beginning of active cooperation with the Railway Police Department which compared data concerning all accidents. Also in 2008, a summary of information regarding locations in the vicinity of railway tracks where people tend to walk was prepared, so as to take decisions – together with local governments – on constructing level crossings and approaches to them. The railway police have increased the number of raids in railway areas, which resulted in an increase in the number of administrative offence notices issued from 300 in 2007 to 1 505 in 2008.

A summary of information regarding the injured indicates that most cases involved people in the ‘active age’ bracket (22 to 55 years old). Each year there are also children among the injured; it is for this reason that a lot of work is done to protect children. In 11 schools across Latvia ‘safety lessons’ are organised for children of various ages; in all, over 2 000 children attended these ‘safety lessons’. During these lessons, children were told about the structure of railways as well as the work, restrictions and safety requirements that apply to railways as a high-risk location. Under the children protection programme, in 2008 four cartoons about railways were added to the existing collection of cartoons. They are intended to help children understand railways better and to learn proper and safe behaviour when in the vicinity of a railway.

The risk of accidents at level crossings still remains high. Video control and remote control systems were installed at a number of level crossings during the reference year; these systems help to control the condition of signals and automatic barriers and promptly notify of equipment faults, so as to issue a warning or stop the train if necessary.

In order to prevent the number of accidents from increasing, operator companies regularly held inspections and other monitoring measures in the reference year. The safety measures of the infrastructure manager mainly focussed on improving technical equipment and reducing the influence of human factors on traffic safety. The infrastructure manager enterprise makes constant renovations of technical equipment and ensures maintenance and modernisation processes.

Similarly to 2007, the rate of locomotive faults remained high in 2008, which can be attributed to wear of rolling stock. This triggered measures for more stringent control of the technical conditions of rolling stock, both during the operation and when accepting it for operation after repairs. In order to ensure improved control of locomotives and locomotive teams

during operation, in 2008 one of the operator companies began to install GPRS-based systems for monitoring diesel-generator parameters in its line locomotives, which enables locomotive operation to be monitored on-line. Another operator company introduced an information system for recording scheduled and unscheduled repairs of locomotives, wear of components, component warranty periods, mileage and service maintenance of locomotives, general technical forms, general business forms, commercial contracts, amounts, types, and lists of transported goods. This database enables an enterprise to analyse the risks involved in the operation of locomotives, and risks of accidents related to transport of goods and hazardous goods.

A description of the implemented safety measures is provided in Tables 3.1.1 and 3.1.2, which contain traffic safety improvement measures taken by the State Railway Technical Inspectorate, operators and infrastructure managers.

Table 3.1.1

## Safety measures implemented to prevent accidents

| Implemented safety measures | Accidents triggering safety measures | | | Implementation period |
|---|---|---|---|---|
| | Date of accident | Location | Description of accident | |
| Installation of call registration equipment in the following stations: *Krustpils*, *Pļaviņas*, *Daugavpils marshalling yard*, *Zemitāni*, *Gulbene*, *Rēzekne 2*, *Rīga Krasta*, *Šķirotava* (marshalling yard) (*Rīgas Preču 2 parks*), *Zasulauks*, *Bolderāja*, *Lāčupe*, *Mangaļi - Ziemeļblāzma*. | 5 February 2008. | *Bolderāja* station | On the approach track of the Free Port of Riga Administration before the bridge over the Buļļupe river a company's train collided with the rear end of a shunting train of another company, as a result of which two cars (No 60156270 and 63952618) loaded with timber (logs) derailed and turned over. | October – December 2008 |
| Installation of new turnout curves at VAE switch points (rails UIC-60, switch type 1/11) in order to increase the turnout radius (R=350 m) and to ensure traffic safety | 12 September 2008. | *Liepāja* station | Derailment of a ČME-3 series locomotive at turnout curve of switch point No 63. The accident was caused by use of simple switch No 63 (rails R-50, switch type 1/9, manufactured in Russia) in a point subjected to heavy conditions (turnout curve). | November 2008 |
| Improvement of control element design in flexible cross-piece centre of VAE track switches | 28 October 2008. | *Asote* station | Train held at the station for more than one hour. The accident was caused by a technical fault in a track switch element. | 2009 |
| Revision and introduction of repair technology for *centre plate – base centre plate* device, bogie and car slides | 1 November 2008. | Railway of Russian Federation | Derailment of a freight car. The accident was caused by a defect in a slide because of incorrect repair technology. | December 2008 |

| Implemented safety measures | Accidents triggering safety measures | | | Implementation period |
|---|---|---|---|---|
| | Date of accident | Location | Description of accident | |
| Improvement of the mounting design of the flexible cross-piece centre of VAE track switches. | 9 December 2008. | *Lāčplēša* station | Derailment of a locomotive and two cars. The accident was caused by inadequate activities and insufficient training of the station attendant and deficiencies in the design of the locking device in flexible cross-piece centre of a VAE track switch. | April 2009 |
| Implementation of *Train traffic dispatcher centre data protocol analyser* – a computer program that records commands sent by a train dispatcher. | | | | January 2009 |
| Installation of mirrors in places with poor visibility to ensure better road and traffic views for car drivers. | 6 October 2009.<br>30 October 2009.<br>5 November 2009. | *Ventspils* station | Accidents at level crossings. | January 2009 |

Table 3.1.2

## Safety measures implemented to prevent accidents

| Implemented safety measures | Description of causes |
|---|---|
| Reports on accidents involving people should state the precise measures necessary to avoid further accidents. | The majority of serious accidents in Latvia still involve people who are injured when trains are in motion, which results in serious injuries. |
| The railway police to monitor individuals crossing tracks in places where crossing is not allowed (1 505 administrative offence notices were issued). | |
| Regular exchange of information between the State Railway Technical Inspectorate and Railway Police Department on the consequences of accidents and statistical data on accidents involving people hit by trains. | |
| Cartoons and clips about railways were broadcast on TV in order to educate the public, prevent accidents involving people, and reduce the number of offences. | |

| Implemented safety measures | Description of causes |
|---|---|
| Recommendations for operators and owners of traction vehicles are as follows: locomotive teams should be instructed to exercise special caution when approaching potentially dangerous spots at railway stations and stops where the movement of pedestrians is intense. | The majority of serious accidents in Latvia still involve people who are injured when trains are in motion, which results in serious injuries. |

| | |
|---|---|
| Holding information campaigns. | Cargo was not registered in accordance with hazardous goods transport requirements; freight car transport forms were not filled in as appropriate.<br>Cargo was not marked. |
| Auditing commercial enterprises (27 audits were held). | |
| Specific control during the inspection of trains. | |
| Improvement of inspection procedures and ensuring high quality inspections. | A large number of defective freight cars threatening railway traffic safety were discovered at *Krasta* station in Riga. |
| Installation of two opposite direction shunting lights at a linking track in order to improve safety when moving into and out of the locomotive depot. | Deterioration of safety at *Daugavpils* station. |
| Recommendations of operators: investigation of accidents should be done more carefully, implementation of the recommendations should be strictly controlled. | Cases of a superficial approach by operators to investigating accidents and implementing safety measures were discovered. In some cases data in operators' investigation documents are imprecise or untrue. |
| Conducting unscheduled technical revisions (complex audits) and inspections. | Deterioration of traffic safety in railway units of operator companies. |
| Prohibiting the use of railway tracks and track switches. | Unsatisfactory condition of railway track. |

## 3.2. Analysis of railway accidents and identified trends

Taking into account the provisions of Community legislation, the State Railway Technical Inspectorate is responsible for keeping records of railway accidents. The railway accidents record comprises collisions, violations of traffic safety, accidents involving people, and technical defects and faults. The State Railway Technical Inspectorate prepares an annual summary of statistical data regarding railway accidents and classifies the accidents in accordance with the established structure. The classification of accidents is based on the extent of damage to rolling stock, equipment and infrastructure, environmental damage, the extent of physical injuries, and the period of railway track closure.

The infrastructure manager submits information on accidents in electronic format. The information on accidents and technical faults, including disorderly behaviour, which occurred during the previous day, is sent to the e-mail address of the Inspectorate before 10 am the following day.

In accordance with the provisions of Community legislation, information regarding accidents involving damage to rolling stock, equipment, and infrastructure exceeding EUR 150 000 must be reported to the European Railway Agency. The railway accidents statistics also comprise accidents where environmental damage caused by rolling stock or infrastructure exceeds EUR 50 000. The railway accidents statistics also include accidents as a result of which at least one person died or was seriously injured, or which caused more than six hours' interrupted railway service. The summary of information is sent also to the Central Bureau of Statistics of Latvia.

The following types of accidents are included in railway accidents statistics: collision, derailment, accidents on level crossings, accidents involving people caused by moving trains, fire and other serious accidents (spillage of hazardous substances, shunting accidents, etc.) (in accordance with the abovementioned criteria).

The accuracy of data regarding accidents depends on all parties involved. Accident reports are drawn up stating the causes and reasons for the accidents, as well as additional information. In accordance with national legislation, the reports are filed by the operator or the infrastructure manager. The data are processed and re-checked by the State Railway Technical Inspectorate in order to ensure that the data are accurate and of high quality. Additional information regarding accidents involving injuries to people is adjusted by the Railway Police and ambulance information centre.

The accidents statistics are indicative of the level of safety in the Member State. The level of safety is a comparable value that can be used to assess safety over a certain period of time.

In general, the number of railway accidents and technical faults remained on the same level as in 2007 (233 accidents and technical faults). When comparing the nature of accidents and violations, the reference year saw an increase in the number of derailment cases during shunting services, as well as accidents involving defects in traction vehicles and signalling systems. The increase in the number of technical failures is indicative of wear of rolling stock and violation of repairs procedures. The data show that the number of technical failures caused by incorrect action

(human error) increased in 2008. It is noteworthy that many accidents occurred between 24.00 and 04.00 when works were carried out by night shift workers. 37% of the total number of accidents were caused by human error. The reference year saw increase of serious accidents among railway accidents and technical failures. Compared with 2007, the number of serious accidents increased by 19%. However, when the number of accidents is related to train-kilometres, the level of safety remains the same as in 2007 (see Appendix 4).

Sixty-one serious railway accidents were registered in the reference year, including two accidents that involved serious economic consequences. Sixty people were injured in the accidents; 29 people were fatally injured. People were injured in rolling stock collisions, in accidents on level crossings, and in accidents that occurred when the train was in motion. The ratio of injuries grew by 30%. However, the death ratio decreased. Compared with 2007, the decrease amounts to 14%.

| Railway accidents statistics | 2006 | 2007 | 2008 |
|---|---|---|---|
| **Total number of accidents** | **63** | **52** | **61** |
| accidents that involve injuries where | 62 | 44 | 56 |
| people were injured | 33 | 17 | 31 |
| people were killed | 30 | 28 | 29 |
| accidents that did not involve injuries | 1 | 8 | 5 |

2008 saw two serious accidents. On 5 February at *Bolderāja* station on the approach track of the Free Port of Riga Administration, before the bridge over Buļļupe river, a company's train collided with the rear end of a shunting train of another company, as a result of which two cars (No 60156270 and 63952618) loaded with timber (logs) derailed and turned over. The cars had to be removed from the fleet. No people were injured in the accident, although the total damage exceeded LVL 45 000, which includes damage to the rolling stock, repair costs, expenses of third parties (LVL 11 940.35) – loss of profit and expenses due to delays.

On 20 December 2008 at *Ventspils-II* railway station the train locomotive 2TE10M-3453 collided with the rear car of a train standing on Line 2 of *Ventspils-II* station, causing the car to explode and resulting in a fire. The driver and the assistant driver of train No 2445 died in the accident, the locomotive of train No 2445 caught fire, and the first two cars of the train derailed. In addition, the first three cars of the other train as well as the tank cars filled with petrol that stood nearby caught fire. The locomotive and a number of cars are to be removed from the fleet. Loss amounts to more than two million Latvian lats. The loss comprises rolling stock and infrastructure repairs, loss of goods, and compensations.

2008 saw four serious accidents caused by the derailment of rolling stock during a shunting service that resulted in significant railway service delays and seriously compromised railway safety. Given the large volume of goods transport and shunting services in Latvia, the number of other types of accidents also increased in the reference year. The data show that the turnover of goods grew from 18 313 million tonne-km in 2007 to 19 581 million tonne-km in 2008.

Although the number of accidents on level crossings remained unchanged, the number of people injured on level crossings increased in 2008. Two accidents occurred involving the collision of road vehicles and railway traction vehicles, which were caused by the violation of traffic regulations by drivers and resulted in lethal or serious injuries. Numerous accidents took place on unguarded level crossings, and were caused by the violation of traffic regulations by drivers. A study of the nature of the accidents suggests the presence of the so-called 'human factor', because accidents occurred in circumstances where signals were operational, warning signals were given, road visibility was sufficient, and the approaching train was well visible. It is noteworthy that accidents with serious consequences were registered on unguarded level crossings with low intensity traffic, which is also indicative of drivers' carelessness. 2008 saw two accidents in which several people were injured. On an unguarded level crossing on *Līči – Spāre* section a passenger motorcar collided with a diesel-powered locomotive. Two people were seriously injured as a result of this accident. On an unguarded level crossing in Slampe a minibus collided with a diesel-powered locomotive. Three passengers from the minibus were killed as a result of the accident. 2008 saw increase in both the number of people injured on level crossings and in the mortality rate.

| Railway accidents statistics | 2006 | 2007 | 2008 |
|---|---|---|---|
| Collisions (except for those on level crossings) | 0 | 0 | 1 |
| Accidents involving injuries | 0 | 0 | 1 |
| people injured | 0 | 0 | 0 |
| people killed | 0 | 0 | 2 |
| Derailments | 1 | 0 | 0 |
| Accidents involving injuries | 0 | 0 | 0 |
| people injured | 0 | 0 | 0 |
| people killed | 0 | 0 | 0 |

| Railway accidents statistics | 2006 | 2007 | 2008 |
|---|---|---|---|
| Railway accidents on level crossings | 10 | 9 | 10 |
| Accidents involving injuries | 10 | 7 | 10 |
| people injured | 7 | 4 | 7 |
| people killed | 4 | 4 | 6 |
| Accidents involving people when trains were in motion | 52 | 37 | 45 |
| Accidents involving injuries | 52 | 37 | 45 |
| people injured | 26 | 13 | 24 |
| people killed | 26 | 24 | 21 |
| Other serious accidents | 0 | 6 | 5 |
| Accidents involving injuries | 0 | 0 | 0 |
| people injured | 0 | 0 | 0 |
| people killed | 0 | 0 | 0 |

The reference year saw a sharp increase in the number of accidents with serious economic consequences. The total cost of all traffic accidents and technical failures in 2008 amounted to LVL 2 491 903.45. The cost of serious traffic accidents amounted to 96% of the total cost of all traffic accidents and technical failures (LVL 2 402 329.98). The cost of rolling stock and infrastructure damages comprised 95% of the total cost of serious accidents. The main amount of loss was caused by accidents at *Ventspils II* and *Bolderāja* stations. No methodology was used to calculate the economic cost and the data are based on the information regarding actual loss caused by the accidents received from the infrastructure managers and operators. Costs related to physical injuries are based on the amounts of insurance claims and benefits. Notably, because of the increase in the amount of damaged goods, the amount of loss of profit and compensation claims submitted by third parties increased in 2008. As regards the calculation of the cost of delays and rolling stock damage, the operators still face problems when estimating loss because the fleet of cars is shared with the CIS countries.

The total number of injured people grew in 2008, although the number of accidents involving casualties decreased. The number of injured people was at its highest in accidents that occurred when trains were in motion. The rate of physical injuries from accidents on level crossings amounted to 22%, while the rate of physical injuries from accidents that occurred when trains were in motion amounted to 75%. Two people (railway specialists) were killed in rolling stock accidents in 2008. Compared to 2007, the total increase in the number of injured people amounts to 10%.

78% of people injured in accidents were men, while in 2007 the proportion of injured men amounted to 81%. All people killed in accidents on level crossings in 2008 were men. It is noteworthy that in many cases the men were under the influence of alcohol. The increase of the number of people under the influence of alcohol among injured people in 2008 amounted to 10%.

| Number of people injured in railway accidents | 2006 | 2007 | 2008 |
|---|---|---|---|
| **Injured people** | **63** | **45** | **60** |
| physical injuries | 33 | 17 | 31 |
| % | *52* | *38* | *52* |
| killed | 30 | 28 | 29 |
| % | *48* | *62* | *48* |

The analysis of data regarding injured people suggests that in most cases the injured were in the 'active age' bracket (20-55 years old). Children are injured in accidents every year. Accidents involving children are mainly registered during the summer.

Despite the fact that the number of accidents involving people that occur when trains are in motion tends to decrease, the ratio of people injured in accidents when trains are in motion is still the highest. The causes of the accidents include people on the railway track and people crossing the track in places where crossing is not permitted. In 40% of cases when people crossed a track where crossing was not permitted or where they were in a dangerous area, the people involved were under the influence of alcohol. Notably, people did not respect traffic safety requirements when on pedestrian crossings or level crossings and crossed the track in front of a moving train. The number of cases involving people disregarding safety requirements when getting on or off a train also increased.

| People injured in accidents that occurred when trains were in motion | 2006 | 2007 | 2008 |
|---|---|---|---|
| Unauthorised individuals in dangerous areas | 51 | 31 | 30 |
| Killed | 26 | 21 | 15 |
| Injured | 25 | 10 | 15 |
| Other persons | 0 | 4 | 11 |
| Killed | 0 | 2 | 6 |
| Injured | 0 | 2 | 5 |
| Passenger | 0 | 1 | 2 |
| Killed | 0 | 0 | 0 |
| Injured | 0 | 1 | 2 |
| Railway company staff | 1 | 1 | 2 |
| Killed | 0 | 1 | 0 |
| Injured | 1 | 0 | 2 |

While 70% of accidents in 2007 occurred during the summer, in 2008 the number of accidents involving people was approximately equal during the winter, spring, summer, and autumn.

The intensity of domestic and international transport in the Riga region grows each year, increasing demand on railway. The highest traffic intensity is the direction of Jurmala and Aizkraukle. The data show that the highest number of accidents involving people when trains are in motion occur the agglomeration area of Riga, especially in Riga – Aizkraukle and Riga – Tukums lines. Fewer accidents are registered on the in Jelgava line.

The summary of data over the past years suggests that accidents involving people when trains are motion mainly occur between 18.00 and 24.00 – 39% of the total number of accidents. An increase has been observed in the number of accidents registered between 06.00 and 12.00.

Nine suicide attempts on railways were identified in 2008. The number of suicide attempts in 2008 decreased by 10%. The attempted suicide rate depends on social conditions and the psycho-emotional load of individuals, etc. Suicides on railways were attempted by younger people. Suicide attempts on railway were mostly made by men.

The overall level of traffic safety on railways in Latvia remained equal to the previous year. Many accidents were caused by social and economic problems and violations of technological procedures, not so much by technical equipment. It should be emphasised, however, that one railway accident involving two casualties may cause serious deterioration of the traffic safety level and increased risk in the country. Accidents involving people when trains are in motion may also be connected with social problems in Latvia, which is proven by the increase of accidents involving people under the influence of alcohol or drugs.

It should also be mentioned that as far as technical equipment and operation is concerned, the operator companies maintain management systems in accordance with the requirements and make improvements where necessary, so as to reduce the risk of accidents.

A detailed analysis is given in the Appendix (in English).

## 3.3. Implementation of safety recommendations

In 2008, the Accidents and Incidents Investigation Bureau prepared a final report on the causes of the collision of two shunting trains (at 03.17 on 5 February 2008 in Bolderaja on approach track No 100 of the Free Port of Riga Administration). On the basis of the results of the investigation, the Bureau prepared recommendations for all parties involved in the accident, including the State Railway Technical Inspectorate. The final report contained eight recommendations:

1. The Administration of the Free Port of Riga, *SIA Eurorail*, *a/s Dzelzceļtransports*, and *SIA Lacon* should speed up the process of obtaining safety certificates and observe the requirements necessary for the issue of these certificates so as to ensure operational safety. They should also control the work of their employees on a regular basis, conduct internal audits, and make corresponding records.
2. *SIA Eurorail* should instruct locomotive drivers on the specific details and differences of the locomotives operated by the company.
3. The Administration of the Free Port of Riga, *SIA Eurorail*, *a/s Dzelzceļtransports*, and the State-owned joint stock company *valsts a/s Latvijas dzelzceļš* should ensure that the radio stations installed in locomotives operated in *Bolderaja* yard of *Tornakalna* station and on approach track No 100 of the Free Port of Riga Administration can be switched to a single frequency and specify the frequencies used in each case.
4. The Administration of the Free Port of Riga, *SIA Eurorail*, *a/s Dzelzceļtransports*, and State-owned joint stock company *valsts a/s Latvijas dzelzceļš* should consider installing a system for automatic recording of radio communication. Before such a system is installed, the approval of the despatch of trains to approach track No 100 of the Free Port of Riga Administration should be recorded in writing.
5. The State-owned joint stock company *valsts a/s Latvijas dzelzceļš* analyses the necessity of installing a system for automatic registration of radio communication in other stations where privately owned locomotives are used for shunting services.

6. The Administration of the Free Port of Riga together with enterprises involved in shunting services should revise the existing instructions and expressly state the procedure for testing the brake system of the shunting train before entering approach track No 100 of the Free Port of Riga Administration.

7. The Administration of the Free Port of Riga, together with enterprises involved in shunting services, should develop new instructions regarding the actions of the infrastructure manager, locomotive driver, and other specialists in case of an accident.

*8. The State Railway Technical Inspectorate should conduct an additional inspection focussing on the implementation of the above safety recommendations in the Administration of the Free Port of Riga, SIA Eurorail, a/s Dzelzceļtransports, and SIA Lacon.*

The State Railway Technical Inspectorate approved the recommendations given in the Final report on the investigation of the traffic accident and conducted an inspection which focussed on traffic safety and the implementation of the recommendations in all the indicated enterprises. Inspections focussing on traffic safety and the implementation of the recommendations were conducted in 2008. The State Railway Technical Inspectorate conducted eight inspections.

In accordance with the provisions of the final investigation report regarding the issue of safety certificates, the State Railway Technical Inspectorate in 2008 received two applications for safety certificates. A safety certificate constitutes approval of the operational safety of a company that ensures the provision of safe railway services in the specified field. On 23 July 2008 safety certificate No 38 was issued to *SIA Eirorail* approving the safety of shunting service. On 25 July 2009 safety certificate No 41 was issued to *a/s Dzelzceļtransports* certifying that the company ensures the management of infrastructure and shunting services in accordance with the safety regulations. The Inspectorate conducted the inspections from 1 June to 31 October 2008.

It should be indicated that State-owned joint stock company *a/s Latvijas dzelzceļš* took a number of measures which aimed at improving traffic safety. The recommendations were deemed well justified and were accepted for implementation. A system for automatic registration of radio communication was installed in the *Bolderaja* yard of *Tornakalna* station; the system registers all communications on the single frequency (153.250 MHz). The Instructions regarding internal services on approach tracks state that the dispatch of shunting trains to approach track No 100 must be made using a telephoned message and must be recorded in the logbook. Upon analysis of the operation of automatic radio communication registration systems in 2008, in addition to the existing systems computerised multi-channel systems for registering radio communications during shunting services and other types of communication were installed in 11 railway stations. Types of communication and the use of communication registration systems in specific stations are regulated by *a/s Latvijas dzelzceļš* Instruction of 29 April 2009 *Instructions regarding operation of computerised multi-channel communication registration systems*. The specific requirements were introduced in the period of 1 October to 31 December 2008.

## 4. Changes in legislation

2008 saw the issue of numerous statutory enactments and adjustments of statutory enactments as a result of which the State Railway Technical Inspectorate was assigned a new responsibility and one of its supervision responsibilities was adjusted.

| No | Statutory enactment | Tasks and responsibilities |
|---|---|---|
| 4.1.1. | Cabinet Regulation No 3 of 2 January 2008 Railway construction regulations | Considering railway infrastructure projects and taking decisions on them, issuing construction permits for railway projects, controlling the observation of the provisions of this law and other statutory enactments governing the construction field by railway construction workers, accepting railway objects for operation. (***new responsibility***) |
| 4.1.2. | Cabinet Regulation No 168 of 10 March 2008 Regulation regarding procedures and criteria for the issue, suspension, and cancellation of Parts A and B of the Safety Certificate | Issuing the safety certificate – the document granting access to the railway infrastructure **(*adjusted responsibility*)** |

In 2008 the Cabinet of Ministers issued three regulations and two orders regarding railway safety. Four new statutory enactments and amendments to certain provisions were issued.

| NO | Statutory enactment | Field |
|---|---|---|
| 4.2.1. | Cabinet Regulation No 29 of 15 January 2008 Amendments to Cabinet Regulation No 392 of 6 October 1998, *Regulation regarding construction, equipment, service, and closure of railway crossings* | 1. Classification of level crossings with regard to time.<br>2. Requirements for the construction of permanent level crossings.<br>3. Legal process when closing level crossings. |
| 4.2.2. | Cabinet Order No 20 of 21 January 2008 On constructing a Category III temporary railway crossing over Aizkraukle-Koknese railway line | Construction of a temporary level crossing. |
| 4.2.3. | Cabinet Order No 21 of 21 January 2008 On constructing a Category III railway crossing in Liepaja | Construction of a level crossing. |

2008 saw the continuation of the preparation of a new technical operation regulation that would include maintenance, operation, signalling, and shunting service requirements and parameters. The draft regulation comprises all operation and repairs requirements necessary for ensuring traffic safety. The draft will be completed by September 2009.

The process of preparing the State Railway Technical Inspectorate draft regulations also involves representatives of railway organisations and enterprises. Consultations regarding the necessary adjustments and amendments to the regulations are held.

The Cabinet of Ministers issues all regulations regarding railway safety. The issued regulations are published in the official gazette *Latvijas Vēstnesis* (www.vestnesis.lv). All regulations and orders of the Cabinet are binding for railway operators and manufacture managers. The same also refers to railway infrastructure managers and companies involved in the building, repair, and maintenance of rolling stock and technical infrastructure equipment, as well as in shunting service. The Inspectorate issues only administrative enactments and compulsory ordinances.

All statutory enactments issued in the railway sector are available on the website www.likumi.lv, as well as on the State Railway Technical Inspectorate website www.vdzti.gov.lv.

Statutory enactments that are also binding on railway operators and with which the State-owned joint stock company *a/s Latvijas dzelzceļš* as the entity managing railway infrastructure regulates the use of railway infrastructure and that refer to the organising and control of traffic of trains and other rolling stock on railway tracks, control of infrastructure and management of safety systems, or otherwise refers to the safe operation of the railway infrastructure are issued in accordance with Article 5(2.[1]) of the Law on Railway. Regulations issued by the manager of the public railway infrastructure that are binding on the operators were updated in 2008 and summarised in the Network review published on the manager's website at www.ldz.lv. In 2008 the public railway infrastructure manager issued six new and two amended statutory enactments that are binding on the operator companies. The issued statutory enactments refer to the following fields:

4.3.1. the procedure of issuing warnings using the Complex information warning issue system (BIS-K);
4.3.2. the procedure of despatching locomotives, motor coach rolling stock, railway cranes, and specialised rolling stock on public use railway;
4.3.3. technical maintenance and repair system for freight cars;
4.3.4. action in the case of accidents involving hazardous goods;
4.3.5. technical inspection of rolling stock wheel pairs;
4.3.6. analysis and registration of completed train service schedules;
4.3.7. the procedure of locating, installation and operating equipment controlling the technical condition of a moving train (amendments).

The legal reference, dates of coming into force, and description of the statutory enactments are given in Appendix 5.

## 5. Safety certificates and approvals

On 10 March 2008 the Cabinet issued Regulation No 168, *Regulation regarding procedures and criteria for the issue, suspension, and cancellation of Parts A and B of the Safety Certificate,* in accordance with which railway operators and infrastructure managers must establish and maintain a safety management system. The safety management system must include the following categories:

8.1.1. risk assessment and control – so that the safety system is not only based on observation of the standards, but also on the assessment of operational risk;
8.1.2. establishment of competences – especially in those areas where the risk cannot be assessed;
8.1.3. safety management – the necessity to ensure safe operation and establish a safety policy in the company.

The Regulation came into force as of 26 March 2008.

The procedure for certification of enterprises is regulated by Cabinet Regulation No 616 of 23 August 2005 Procedure for the issue, cancellation, and suspension of the Safety Certificate. The certification process refers to railway infrastructure managers and entities that run specific

technological processes for operators or railway infrastructure managers, with the exception of operators holding the safety certificate. The issue of safety certificates started in 2005.

This regulation is binding on railway operators, infrastructure managers, and enterprises involved in the building, repair, and maintenance of rolling stock and technical infrastructure equipment and facilities, as well shunting services.

All binding statutory enactments in the field of railway safety are available on the website www.likumi.lv as well as on the State Railway Technical Inspectorate website at www.vdzti.gov.lv. Information on issued safety certificates, as well as on changes to the national legislation is placed on the website of the Inspectorate, where operators and infrastructure managers can find up-to-date information. When more detailed explanations regarding current safety issues are required, information letters are circulated to operators and infrastructure managers or meetings are held.

## 5.1. ISSUE OF RAILWAY TRANSPORT SAFETY CERTIFICATES

In accordance with Community legislation, in 2008 the State Railway Technical Inspectorate introduced a new procedure for safety certification and issued eight safety certificates. Safety certificates are issued to operators that have established and maintain a safety management system that complies with the specified requirements in the field of technical operation and observes safety requirements as regards personnel, rolling stock, and the internal structure of the enterprise.

| | 2008 |
|---|---|
| **Number of issued safety certificate, including** | **8** |
| **issued Parts A of the certificate** | **5** |
| passenger services | 2 |
| transport of goods | 3 |
| **issued Parts B of the certificate** | **3** |
| passenger services | 2 |
| transport of goods | 1 |

In 2008 the State Railway Inspectorate received five applications from railway operators for the issue of Part A of the certificate and three applications for the issue of Part B of the certificate. All the applications were accepted for consideration and the operator enterprises proved their ability to ensure safe services. The safety certificates were issued to enterprises registered in Latvia.

Information on the issued Part B of the safety certificate can be found in sections Pakalpojumi/Drošības sertifikāti (Services/Safety certificates) of the State Railway Technical Inspectorate website www.vdzti.gov.lv.

## 5.2. Procedure for issuing safety certificates

The State Railway Safety Inspectorate takes a decision to grant Part A or reject an application for Part A of the safety certificate within a month following receipt of the application. Upon acceptance of an operator's application for Part B of the certificate, the State Railway Technical Inspectorate sends the documents and a copy of Part A of the certificate to the corresponding infrastructure manager within five working days following receipt of the documents, so that the manager may give its opinion on the correspondence of technical and operational values characterising the rolling stock of the operator to the requirements of the railway network, unless the applicant is also the manager of the corresponding railway infrastructure. The railway infrastructure manager studies the operator's application for Part B of the safety certificate and submits its opinion and suggestions regarding the conditions of issue of Part B of the certificate to the State Railway Technical Inspectorate within 14 days following receipt of the application.

In case the operator changes Part A of the safety certificate, licence, the register of railway specialists or the list of rolling stock types it expects to operate in accordance with the requested safety certificate, it must apply for a new copy of Part B of the safety certificate (regardless of the expiry date of the existing certificate). Applicants must enclose documents relating to changes in the conditions of the issue of the previous copy of Part B and a statement in which the applicant certifies that other conditions of issue of Part B remain unchanged.

Should the applicant change information regarding the sufficiency of financial and technical resources submitted with the application for the special permit (licence), technical specification of interoperability or the list of parts attached thereto to specify the use of the specification in safety management procedures as regards employees, rolling stock, and services, documents regarding safety management system processes involving personnel, processes involving rolling stock, or changes to safety management system processes, the operator must inform the State Railway Technical Inspectorate of these changes in writing at least a month before such changes take place.

The State Railway Technical Inspectorate must refuse to issue Part A or Part B of the safety certificate in the following cases:

5.2.1.1. the operator does not meet the safety requirements of technical regulations governing operation of railway, requirements of regulations governing railway safety or the safety requirements of the railway infrastructure manager;

5.2.1.2. the operator did not provide the State Railway Technical Inspectorate with all necessary documents and the Inspectorate requested additional information;

5.2.1.3. within a year prior to the application Part A or Part B of the safety certificate issued to the operator being cancelled.

The State Railway Technical Inspectorate must inform the operator on the taken decision within three working days from the date of the decision. A copy of the Decision must be sent to the railway infrastructure manager.

Should Part A or Part B of the safety certificate be lost or damaged, the State Railway Technical Inspectorate must issue a duplicate copy of Part A or Part B within 10 days following receipt of the corresponding application.

The State Railway Technical Inspectorate must take a decision to suspend Part A or Part B of the safety certificate if the operator violates a safety requirement or provisions of a regulation governing railway safety, and such violation compromises railway safety. Part A or Part B of the safety certificate is suspended until the violation is corrected. The State Railway Technical Inspectorate must take a decision to cancel Part A or Part B of the safety certificate in the following cases:

5.2.2.1. the operator is issued a new copy of Part A or Part B of the safety certificate;
5.2.2.2. the operator provided false data;
5.2.2.3. the operator's safety certificate is suspended for a second time in a year;
5.2.2.4. the operator does not use the safety certificate for a year;
5.2.2.5. the operator ceases its activity.

Before taking a decision to cancel Part A or Part B of the safety certificate, the State Railway Technical Inspectorate sends a notification to the operator. The notification states the violations identified and indicates a deadline for their correction; this deadline must be no longer than five days starting from the date of the notice. Unless the operator provides to the State Railway Technical Inspectorate information regarding correction of the violations indicated in the notice, the State Railway Technical Inspectorate must take a decision to cancel Part A or Part B of the safety certificate.

When considering an operator's application and enclosed documents, if the State Railway Technical Inspectorate discovers that the documents submitted with the application for the safety certificate do not correspond to this regulation or are imprecise or incomprehensive, the Inspectorate must have the right to request additional information from the operator, stating the deadline for submission of such documents. In 2008 the Inspectorate requested additional information from operators in six cases. The following information was requested:

5.2.3.1. comprehensiveness of the submitted documents;
5.2.3.2. compliance of the safety management system to the operator's duties;
5.2.3.3. procedures involving basic elements of the safety management system;
5.2.3.4. conditions of rolling stock maintenance and repair;
5.2.3.5. traffic safety monitoring system;
5.2.3.6. personnel training issues;
5.2.3.7. procedure of accidents notification.

It should be noted that changes to the safety certification procedure made it necessary to hold additional consultations regarding the basic elements of the safety management system and the procedure for preparing reports. Employees of the State Railway Technical Inspectorate gave numerous consultations, within the limits of their capacity. The consultations showed that development of a safety management system caused difficulties for operators, given that the existing railway systems are based on technical requirements, whereas the elements of safety management comprise risk assessment, which is a new development for operators in Latvia.

When considering an application, the State Railway Technical Inspectorate may invite a representative of the operator or the public infrastructure manager to provide further explanations.

In 2008 the State Railway Technical Inspectorate issued Parts A and B of the safety certificate only to enterprises registered in Latvia. The safety certificate is issued to enterprises free of charge.

## 5.3. Issue of safety approvals

The certification procedure applies to railway infrastructure managers, railway operators, and entities that run specific technological processes for operators or railway infrastructure managers, except for operators holding safety certificates. The issue of safety approvals started in 2005.

In 2008 the State Railway Technical Inspectorate issued safety approvals to 47 enterprises:

- 5.3.1. building, repair and maintenance of rolling stock;
- 5.3.2. building, repair and maintenance of railway infrastructure equipment;
- 5.3.3. management of railway infrastructure;
- 5.3.4. shunting services.

| | 2006 | 2007 | 2008 |
|---|---|---|---|
| **Issued safety approvals** | **7** | **12** | **47** |
| **Field of operation** | | | |
| building, repair, and maintenance of rolling stock | 3 | 9 | 4 |
| building, repair, and maintenance of railway infrastructure equipment | 4 | 3 | 32 |
| shunting services | 1 | 2 | 11 |
| management of railway infrastructure | 1 | 1 | 14 |

The safety approval may be issued for several fields of operation. In 2008 safety approvals in the field of infrastructure management were issued to 14 enterprises.

In 2008 the highest number of applications was received in the field of building, repair, and maintenance of railway infrastructure equipment. In 2007 the highest number of applications was received in the field of building, repair, and maintenance of rolling stock. 2008 saw an increase in the number of applications for safety approvals, which can be attributed to the conditions of the transitional period.

## 5.4. Procedure for issuing safety approvals

The issue of safety approvals is based on the principles of the Directive on railway safety. Safety authorisations are issued to railway managers in Latvia as a safety approval for managing railway infrastructure.

The safety approval is issued as an acknowledgement of the safe operation of an enterprise which guarantees provision of safe services in the corresponding field of railway operation. The approval is issued for five years. To obtain the approval, an enterprise must submit

an application to the State Railway Technical Inspectorate, enclosing documents that are necessary for the issue of the approval. The State Railway Technical Inspectorate gives its opinion within a month. A more detailed description of the procedure was given in 2006 report.

The safety approval is issued to enterprises free of charge.

An enterprise is issued with the approval if the internal system of safety management established in the enterprise ensures operation of the enterprise in the specific field or railway services in accordance with safety requirements. In 2008 applications for safety certificates were submitted in connection with the following:

5.4.1.1. commencement of a certification procedure in a field of business;
5.4.1.2. significant changes in conditions of operational processes: introduction of new technological processes and services;
5.4.1.3. change of legal address or other details stated on the safety approval.

All submitted applications were accepted for consideration. Upon assessment of applications for safety approvals in 17 cases additional information and further explanations were requested from the enterprises in connection with the following:

5.4.2.1. incomprehensive documents;
5.4.2.2. imprecise description of technological processes;
5.4.2.3. imprecise information regarding railway specialists;
5.4.2.4. imprecise description of the structure and levels of responsibility in the enterprise.

In 2008 two safety approvals were amended due to the expansion of the operation of the enterprises in the fields of building, repair, and maintenance of railway infrastructure equipment.

# 6. RESULTS of monitoring

## 6.1. audits and inspections

Both public railway infrastructure managers and private railway infrastructure managers are subject to control. Control is also exercised over railway operators and enterprises involved in the building, repair, and maintenance of rolling stock and infrastructure. The State Railway Technical Inspectorate is also responsible for supervising the safety systems in railway enterprises.

In 2008 the State Railway Technical Inspectorate conducted 181 audits and inspections in 140 railway facilities (94 facilities of the State-owned joint stock company *Latvijas dzelzceļš* and its subsidiaries and 116 facilities owned by private enterprises).

| Number of conducted inspections | 2006 | 2007 | 2008 |
|---|---|---|---|
| Expected result indicator | 110 | 110 | 110 |
| Conducted audits and inspections, including: | 122 | 120 | 181 |
| scheduled inspections (%) | *71* | *75* | *80* |
| random inspections (%) | *29* | *25* | *20* |

In accordance with the result indicators specified by the State Railway Technical Inspectorate, the Inspectorate staff conducted more audits and inspections than initially planned. The ratio of scheduled audits in comparison to random audits grows each year. The analysis proves that enterprises are interested in improving their railway systems in accordance with regulations. The tendencies indicate that the introduced regulations are appropriate and transparent, and therefore facilitate the improvement of the railway sector.

Similarly to previous years, separate unscheduled inspections were conducted, particularly focussing on issues relating to the operation of rolling stock. Random inspections amount to one third of the total number of inspections. Unscheduled inspections were conducted in connection with violations of railway operation requirements by one of the enterprises. In 2008 multiple inspections were conducted in 22 enterprises. Inspections were repeated in ten enterprises in order to ensure that the identified irregularities had been corrected.

| Inspected facilities broken down by types of enterprise | 2006 | 2007 | 2008 |
|---|---|---|---|
| Operators | 6 | 5 | 6 |
| Enterprises involved in repair of rolling stock | 5 | 6 | 12 |
| Loading/unloading hazardous goods | 30 | 20 | 27 |
| Infrastructure maintenance and shunting services | 41 | 59 | 95 |
| Total | 82 | 90 | 140 |

The reference year saw a slight increase in the number of enterprises involved in the repair of rolling stock due to the restructuring of enterprises. In accordance with the railway safety trends, in the years to come greater attention will be paid to improving safety and quality requirements in enterprises involved in repair activities.

As in previous years, the State Railway Technical Inspectorate mainly focussed on inspecting the conditions of railway infrastructure and processes related to shunting services. Trends from previous years suggest that focussing on the conditions of privately owned railway infrastructure helps to improve safety performance in enterprises.

| Types of monitoring | 2007 | 2008 |
|---|---|---|
| **Complex audits, including** | **34** | **30** |
| % | 28 | 17 |
| **scheduled** | 22 | 30 |
| operators | 7 | 7 |
| managers of public railway infrastructure | 5 | 1 |
| repair enterprises | 4 | 13 |
| other enterprises | 6 | 9 |
| **unscheduled** | 12 | 0 |
| operators | 0 | 0 |
| managers of public railway infrastructure | 0 | 0 |
| repair enterprises | 0 | 0 |
| other enterprises | 12 | 0 |

| Types of monitoring | 2007 | 2008 |
|---|---|---|
| **Audits** | **47** | **75** |
| % | 39 | 41 |
| **scheduled** | 42 | 64 |

| | | |
|---|---|---|
| operators | 4 | 2 |
| structural units of managers of public railway infrastructure | 11 | 6 |
| repair enterprises | 0 | 3 |
| other enterprises | 27 | 53 |
| **unscheduled** | 5 | 11 |
| operators | 0 | 2 |
| structural units of managers of public railway infrastructure | 1 | 1 |
| repair enterprises | 0 | 0 |
| other enterprises | 4 | 8 |
| **Inspections** | **39** | **76** |
| % | 33 | 42 |
| **scheduled** | 28 | 52 |
| operators | 3 | 1 |
| structural units of managers of public railway infrastructure | 0 | 2 |
| repair enterprises | 1 | 0 |
| other enterprises | 24 | 49 |
| **unscheduled** | 11 | 24 |
| operators | 2 | 0 |
| structural units of managers of public railway infrastructure | 1 | 3 |
| repair enterprises | 0 | 0 |
| other enterprises | 0 | 21 |

Inspections and audits focus on the internal monitoring system in the enterprise, railway infrastructure, building and repairs of rolling stock, maintenance technologies, safety at work, and monitoring and control of dangerous equipment. Railway specialists – experts – are invited to participate in complex audits. During the audits and inspections irregularities are identified and recommendations regarding improvement of railway safety are given.

| Focus of inspections | 2006 | 2007 | 2008 |
|---|---|---|---|
| Enterprise internal monitoring system | 17 | 21 | 30 |
| Condition of rolling stock | 25 | 27 | 42 |
| Condition of railway track | 28 | 17 | 53 |
| Organisation of service | 8 | 3 | 2 |
| Transport of hazardous goods and safety consultants' services | 40 | 37 | 27 |
| Working environment risks | 1 | 11 | 15 |
| Miscellaneous | 3 | 4 | 4 |
| Observations of investigation bodies | 0 | 0 | 8 |
| Total | 122 | 120 | 181 |

In general, railway safety in Latvia is well maintained and operation requirements are observed, which is proven by the number of issued administrative orders. Administrative orders indicate the measures necessary for the improvement of operational processes and list measures for the correction of irregularities. The reference year saw a 3% decrease in measures taken due to compromised railway safety.

The Head and Senior Inspectors of Traffic safety unit of the State Railway Technical Inspectorate are responsible for inspections and audits. In 2008 two officers of Administrative unit

were assigned responsibilities involving control and monitoring of issues relating to railway accidents records. This comprises 50% of the total staff of the Inspectorate.

## 6.2. Safety measures approved as a result of audits and inspections

In accordance with the provisions of the administrative process, irregularities identified during audits and inspections are recorded in statements, administrative offence notices are issued, and prohibition of the operation of rolling stock or the use of infrastructure may be imposed.

| Railway safety measures taken as a result of inspections | 2006 | 2007 | 2008 |
|---|---|---|---|
| Use of railway tracks prohibited due to unsatisfactory condition | 12 | 16 | 19 |
| % | *10* | *13* | *10* |
| Operation of rolling stock prohibited due to unsatisfactory condition | 23 | 14 | 13 |
| % | *19* | *12* | *7* |
| Other prohibitions imposed (suspension of railway specialists from duty) | 0 | 7 | 5 |
| % | *0* | *6* | *3* |
| Speed restriction of 5 km/h | 0 | 0 | 1 |
| % | *0* | *0* | *1* |
| Issue of administrative orders to correct irregularities | 83 | 81 | 143 |
| % | *68* | *67* | *79* |
| Issue of administrative offence notices | 4 | 2 | 0 |
| % | *3* | *2* | *0* |
| Total | 122 | 120 | 181 |

The reference year mainly saw the prohibition of the use of railway tracks due to unsatisfactory conditions. If serious violations are identified, senior inspectors of the State Railway Technical Inspectorate may prohibit operation of rolling stock until such irregularities are corrected, close traffic on railway track or restrict the speed on railway track. Such restrictions were applied in specific cases.

The main reasons for suspending rolling stock from service, closing railway tracks for train traffic and shunting services were technical failures and violation of procedures. There were also instances where railway specialists were suspended from service.

## 6.3. Analysis of operators and operators' reports

In accordance with Cabinet Regulation No 168 of 10 March 2008, *Regulation regarding the procedures and criteria for the issue, suspension, and cancellation of Parts A and B of the Safety Certificate*, railway operators and public railway infrastructure managers must submit annual safety performance reports by 30 June.

By 30 June 2009 the State Railway Technical Inspectorate had received reports from all operators and public railway infrastructure managers. The reports provided information regarding the safety measures taken, the internal monitoring system in the enterprise, and contained general statistics, as well as an analysis of trends and priorities for the following year. Information regarding railway accidents was given in the enclosed Appendices.

It should be emphasised that this was the first time that such reports had been prepared. Discussions with railway operators show that it is necessary to prepare guidelines on drafting safety performance reports and to amend regulations regarding the registration and classification of railway accidents. An analysis of the data indicates that classifying some accidents is difficult; it also suggests that there are unresolved issues regarding certain economic indicators, such as calculation of loss, loss of profit, etc.

The reports contain information regarding the identified safety targets and implementation of the plan of safety measures because the introduction of safety management systems is a new process for the companies and requires additional competence in risk assessment. However, the companies maintain their monitoring processes and their internal monitoring systems comply with the requirements for technical operation regulations. The companies conduct internal technical inspections and audits. Schedules are prepared in accordance with the timeframe specified by the internal safety monitoring system. Complex audits and inspections focus on both registering specific irregularities and giving recommendations to employees in charge concerning the correction of irregularities and improvement of general railway safety.

Violations of regulations and irregularities identified during technical inspections (complex audits) are registered in reports that are referred to heads of the corresponding structural units, following which a schedule of correction activities and safety measures is prepared.

In order to provide high quality services, railway operators constantly improve their internal monitoring systems. To ensure that safety requirements are observed, experts of the companies take the following measures within the scope of their competence:

- **6.3.1.** assessment of company-related risks and possible consequences, monitoring of risks;
- **6.3.2.** ensuring the availability of the necessary technical documents and timely supplements and amendments to these documents in accordance with the company's orders or the present situation;
- **6.3.3.** preparing suggestions for the improvement of technological processes;
- **6.3.4.** control of expiry deadlines of permits, licences, certificates, etc.;
- **6.3.5.** monitoring the introduction of new technical or operation standards and preparing timely measures for implementing these standards;
- **6.3.6.** control of the processes in which the company's railway specialists are awarded their qualifications and timely renewal/approval of the qualifications in accordance with provisions of the legislation.

Technical training of diesel-powered locomotive drivers is organised and their working environment is improved in order to reduce the effect of human factor on railway safety.

The companies conducted a total of 160 audits and 18 215 technical inspections. Because of the increase in the number of serious accidents, more inspections were conducted that initially planned. After serious accidents the companies conducted unscheduled technical inspections and audits focusing on observing the procedures.

## 7. Priorities in 2009

Activities planned in 2009 are specified in the operational strategies of the Ministry of Transport and the Inspectorate and in the safety management systems of the operators. All activities will focus on verifying the efficiency of the operators' safety management systems and observing requirements of the Community regulations governing certification of railway specialists.

Measures planned in 2009:

7.1. **In Latvia**:

- 7.1.1. Improvement of the certification system:
  - 7.1.1.1. approval of safety systems introduced by railway companies – there is a transitional period for introducing the system in Latvia: the safety systems in companies involved in shunting services and repair of rolling stock and infrastructure must be approved by the end of 2008; the safety systems of all infrastructure management companies must be approved by the end of 2010. Amendments to Latvian regulations are necessary. Additionally, improvement of control of the observation of requirements in the companies;
  - 7.1.1.2. improvement and introduction of traction vehicle driver certification system.
- 7.1.2. Modernisation and renewal of rolling stock.
- 7.1.3. Improvement of the condition of railway tracks under the project *East-West Railway Corridor*:
  - 7.1.3.1. refurbishment of 75 km of track;
  - 7.1.3.2. replacement of 60 track switches.
- 7.1.4. Modernisation of control, signalling, and communication equipment:
  - 7.1.4.1. modernisation of braking shoe overheat alarm system;
  - 7.1.4.2. modernisation of the automatic train traffic management systems (Stage I);
  - 7.1.4.3. modernisation of the automatic train traffic management systems (Stage II).
- 7.1.5. Reducing the effects of the human factor on railway safety processes.
- 7.1.6. Reconstruction of *Indra* station.
- 7.1.7. Educating the public (prevention measures):
  - 7.1.7.1. informing of railway safety requirements:
    - 7.1.7.1.1. children protection programmes;
    - 7.1.7.1.2. broadcasting clips and cartoons about railway on television channels.

7.2. **At the State Railway Technical Inspectorate:**

7.2.1. Performance of functions specified by the Law on Railway:

| Quality indicators in 2009 | 2009 |
|---|---|
| Number of inspections of compliance of rolling stock and railway infrastructure to the requirements of technical operation regulations | 110 |
| Certification of railway companies and issue of safety approvals | 45 |
| Qualification and certification of railway specialists | 210 |
| Approval of railway projects | 30 |
| Issue of railway facility construction permits | 30 |

7.2.2. Improvement of the construction process monitoring system – internal and external procedures.

7.2.3. Completion of approval of safety systems introduced by railway companies – by the end of 2008 in companies involved in shunting services and repair of rolling stock and infrastructure and by the end of 2010 in all infrastructure management companies.

7.2.4. Complete introduction of the railway traction vehicle driver, traction vehicle assistant driver, and driver instructor certification system by 2011.

## 8. Sources of information

8.1. Railway Act (1 April 1998).
8.2. Statutes of the State Railway Technical Inspectorate (3 January 2005).
8.3. The State Railway Technical Inspectorate operation strategy for the 2007-2013 programming period (1 January 2006).
8.4. The Ministry of Transport operational strategy 2007-2009 (6 July 2006).
8.5. Transport in 2008. Collection of statistics. (Latvijas Republikas Centrālā statistikas pārvalde (The Central Bureau of Statistics of Latvia), Riga, 2009).
8.6. 2008 Report of the State-owned joint stock company *a/s Latvijas dzelzceļš* (Riga, 2009).
8.7. 2008 Railway safety performance report of the State-owned joint stock company *a/s Latvijas dzelzceļš* (Riga, 2009).
8.8. 2008 Safety performance report of *SIA LDZ CARGO* (Riga, 2009).
8.9. 2008 Safety performance report of the joint stock company *Baltijas Ekspresis* (Ventspils, 2009).
8.10. 2008 Safety performance report of *SIA Gulbenes – Alūksnes bānītis* (Gulbene, 2009).
8.11. 2008 Railway safety report of *a/s Pasažieru vilciens* (Riga, 2009).
8.12. 2008 SAFETY PERFORMANCE REPORT OF *AS BALTIJAS TRANZĪTA SERVISS* (Riga, 2009).
8.13. Main operational indicators of the State-owned joint stock company *a/s Latvijas dzelzceļš* in 2008. (Riga, 2009).
8.14. 2008 Operational report of the State Railway Administration (Riga, 30 June 2009).
8.15. 2008 Operational report of the State Railway Technical Inspectorate (Riga, 30 June 2009).
8.16. RMMS questionnaire REV2/26.3.2009.


| | |
|---|---|
| Latvijas dzelzceļu karte | Map of the railway network in Latvia |

## public infrastructure managers
(as at 31 December 2008)

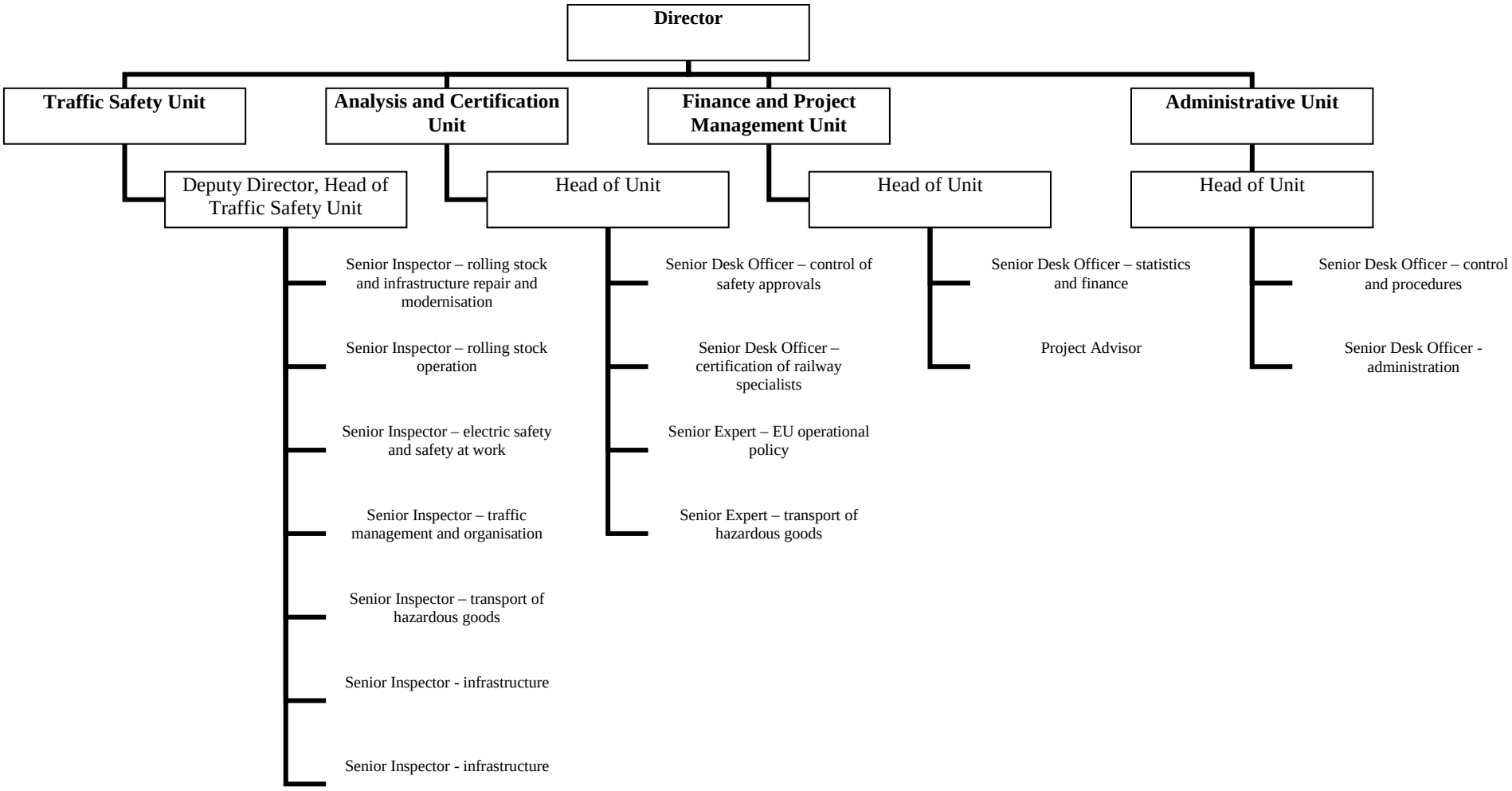
| | |
|---|---|
| Title | State-owned joint stock company *a/s Latvijas dzelzceļš* |
| Address | 3 Gogoļa iela, Riga, LV-1547, registered under No 40003032065 |
| Homepage address | www.ldz.lv. |
| Network overview | http://www.ldz.lv/texts_files/0_tikla_parskats_2008.pdf |
| No of safety approval and date of issue | LV-45, issued on 26 August 2008 valid until 25 August 2013. |
| Company registration date | 1 October 1991. |
| Total length of railway | **3 727.5 km (expanded length)** |
| 1 520mm wide track | 3 694.1 km |
| 750mm wide track | 33.4 km |
| Electrified lines, km | **257. 4 km** |
| Voltage | 3.3 kV |
| Length of railway in operation | **2 263.3 km** |
| Length of double track railway | **302.8 km** |
| Total length of high-speed lines | None |
| Total length of lines with installed, also | **882.745 km** |
| Also % of total railway length | 38.68 % of total railway in operation |
| Number of level crossings | 666 (including non-operational) |
| Number of signals | 4 543 |

## Railway operator companies

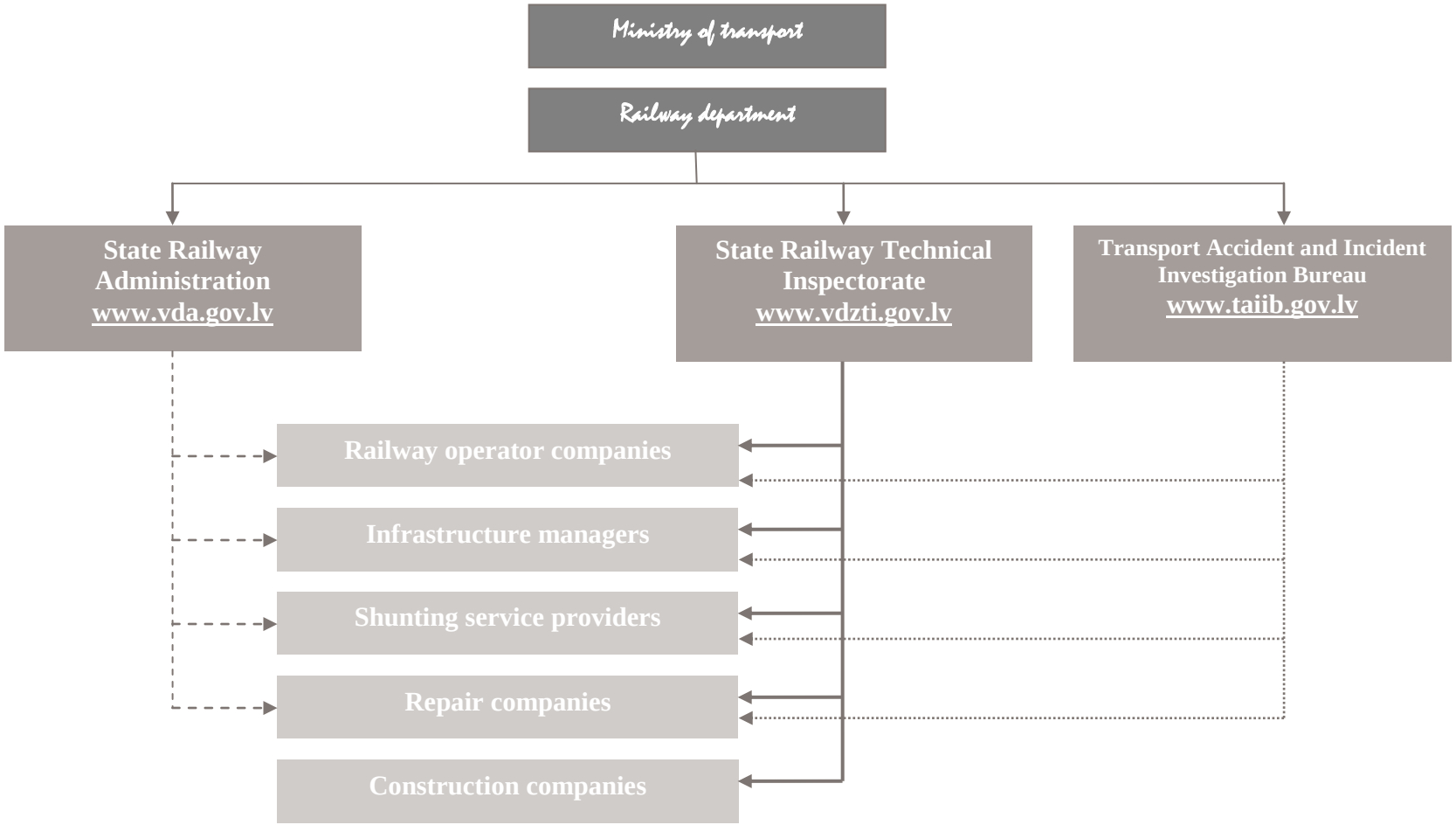
(as at 31 December 2008)

| Title | STATE-OWNED jsc a/s Latvijas dzelzceļš | A/s Baltijas ekspresis | A/s Pasažieru vilciens | a/s Baltijas Tranzita Serviss | SIA Gulbenes-Alūksnes bānītis | SIA LDZ Cargo |
|---|---|---|---|---|---|---|
| Address | 3 Gogoļa iela , Riga, LV-1547 | 20a Dzintaru iela, Ventspils, LV-3602 | 14 Turgeņeva iela, Riga, LV-1050 | 10 Andrejostas iela, Riga, LV-1045 | 12 Viestura, Gulbene, LV-4401 | 3 Gogoļa iela, Riga, LV-1547 |
| Website address | www.ldz.lv | www.asbe.lv | www.pv.lv | | www.banitis.lv | www.ldz.lv |
| Part a of safety certificate | - | **LV1120080007** | **LV1120080003** | **LV1120080006** | **LV1120080001** | **LV1120080005** |
| | | 14 November 2008. | 5 August 2008. | 21 October 2008. | 26 May 2008. | 16 September 2008. |
| Part b of safety certificate | - | **LV1220080008** | **LV1220080004** | | **LV1220080002** | |
| | | 2 December 2008. | 21 August 2008. | | 21 August 2008. | |
| Safety certificate (directive 2001/14) | **LV-1/2** (valid until 17 September 2009.) | - | - | - | - | - |
| Company registration date | 1 October 1991. | 8 January 1998. | 2 November 2001. | 13 May 1999. | 20 April 2001. | 9 December 2005. |
| Type of services | Passenger | Freight | Passenger | Freight | Passenger | Freight |
| Number of locomotives | 5 | 41 | 0 | 7 + 6 rental | 5 | 193 |
| Number of rail trolleys/ trains | 46 rail trolleys<br>34 track inspection cars<br>14 cranes | - | electric trains -26 trains<br>diesel-powered trains - 21 trains | - | - | - |
| Number of carriages | freight - 305<br>passenger - 38 | - | electric trains - 180<br>diesel-powered trains - 114 | - | 5 | 4,898 |
| Number of traction vehicle drivers, of which | **148** | **59** | **243** | **15** | **7** | **939** |
| Instructors | 5 | 1 | 5 | 1 | 2 | 19 |
| Drivers | 120 | 51 | 137 | 8 | 5 | 552 |
| Assistant drivers | 23 | 7 | 101 | 6 | 0 | 368 |
| Volume of passenger service | **366 000** | - | **26 400 000** | - | **26 011** | - |
| Volume of freight service | - | **2 604 727 t** | - | **3 150 467 t** | | **56 061 000 t** |

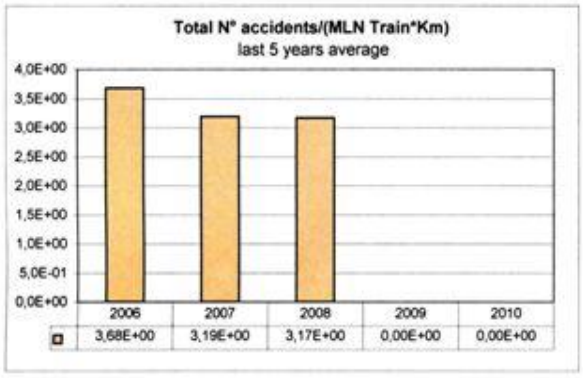
## *Structure of state railway technical inspectorate*

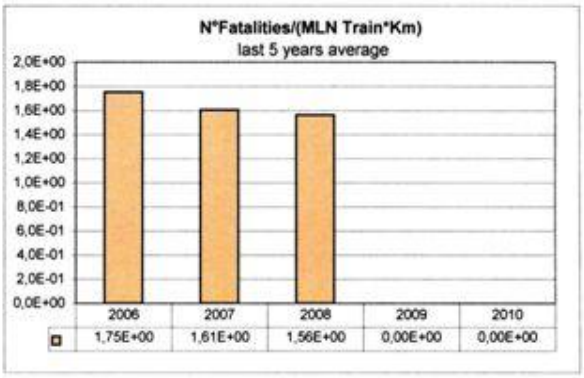


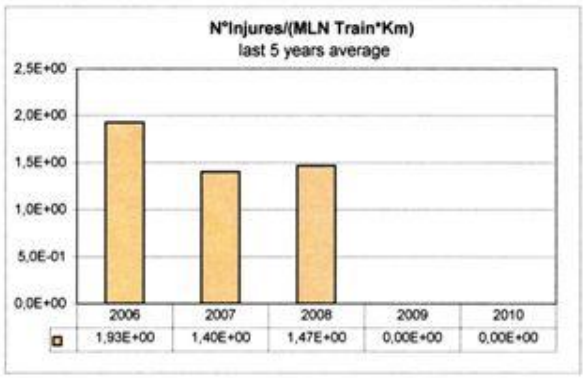
## Reporting structure

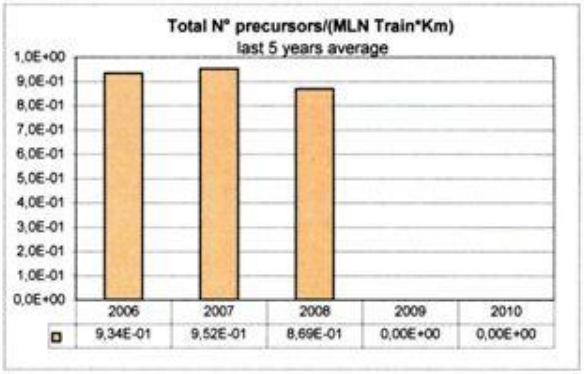


## Safety indicators in 2006 – 2008 period




| Requirements | Legal reference | Date of entering into force | Amendments or new legislation | Description |
|---|---|---|---|---|
| **National legislation** | | | | |
| Legislation that specifies tasks for the body responsible for control and monitoring of technical railway operations. | - | - | - | - |
| Legislation regulating the application of technical specifications for railway interoperability | - | - | - | - |
| **Railway safety regulations** | | | | |
| Regulations governing safety management systems and railway operator safety certification | Cabinet Regulation No 168 of 10 March 2008 'Regulation regarding procedures and criteria for the issue, suspension, and cancellation of Parts A and B of the Safety Certificate' | 'LV', 46 (3830), 25.03.2008. In force since 26 March 2008. | New legislation | The regulations govern the procedure for the issue, suspension, or cancellation of Parts A and B of the safety certificate, as well as the criteria for the issue, suspension, or cancellation thereof |
| Requirements that apply to acceptance of infrastructure facilities for operation | Cabinet Regulation No 3 of 2 January 2008 Railway construction regulations | 'LV', 20 (3804), 06.02.2008. In force since 8 February 2008. | New legislation | Approval and acceptance for operation of railway infrastructure facilities |
| | Cabinet Regulation No 29 of 15 January 2008 Amendments to Cabinet Regulation No 392 of 6 October 1998, *Regulation regarding construction, equipment, service, and closure of railway crossings* | 'LV', 10 (3794), 18.01.2008. In force since 19 January 2008. | Amended legislation | 1. Classification of level crossings with regard to time.<br>2. Requirements for the construction of permanent level crossings.<br>3. Legal process when closing level crossings. |

| Requirements | Legal reference | Date of entering in force | Amendments or new legislation | Description |
|---|---|---|---|---|
| Railway safety regulations | | | | |
| Requirements that apply to acceptance of infrastructure facilities for operation | Cabinet Order No 20 of 21 January 2008 On constructing a Category III temporary railway crossing over Aizkraukle-Koknese railway line | 'LV', 11 (3795), 22.01.2008. In force since 21 January 2008. | New legislation | Construction of a temporary level crossing. |
| | Cabinet Order No 21 of 21 January 2008 On constructing a Category III railway crossing in Liepaja | 'LV', 11 (3795), 22.01.2008 In force since 21 January 2008. | New legislation | Construction of a level crossing. |
| Interoperability | Cabinet Regulation No 724 of 8 September 2008 Procedure of applying technical interoperability specifications with regard to standard railway rolling stock noise | 'LV', 143 (3927), 16.09.2008. In force since 17 September 2008. | New legislation | The procedure for applying technical interoperability specifications with regard to a subsystem of the European standard railway system has been accepted and approved. |
| | Cabinet Regulation No 804 of 29 September 2008 Procedure for applying technical interoperability specifications with regard to the subsystem *Control, management, and signalling* of the European standard railway system | 'LV', 155 (3939), 07.10.2008. In force since 8 October 2008. | New legislation | The procedure for applying technical interoperability specifications with regard to a subsystem of the European standard railway system has been accepted and approved. |

Appendix 6

## Development of certification process (statistics)

### 1. safety certificates issued pursuant to Directive 2004/49/ec

| | | NEW | extended | renewed |
|---|---|---|---|---|
| Issued safety certificates – **Part A** (2008) | operators registered in Latvia | **5** | - | - |
| | operators registered in other Member States | - | - | - |
| Issued safety certificates – **Part B** (2008) | operators registered in Latvia | **3** | - | - |
| | operators registered in other Member States | - | - | - |

| | | | A | R | P |
|---|---|---|---|---|---|
| Applications for **Part A** of the safety certificate (2008) | operators registered in Latvia | New certificates | **5** | - | - |
| | | Extended certificates | - | - | - |
| | | Renewed certificates | - | - | - |
| | operators registered in other Member States | New certificates | - | - | - |
| | | Extended certificates | - | - | - |
| | | Renewed certificates | - | - | - |
| Applications for **Part B** of the safety certificate (2008) | operators registered in Latvia | New certificates | **3** | - | - |
| | | Extended certificates | - | - | - |
| | | Renewed certificates | - | - | - |
| | operators registered in other Member States | New certificates | - | - | - |
| | | Extended certificates | - | - | - |
| | | Renewed certificates | - | - | - |

A = Approved applications, safety certificates have been issued
R = Rejected applications, safety certificates have not been issued
P = Application has been submitted and will be considered, but safety certificate has not been issued as yet.

### 2. List of states where railway operators submitting applications for part b of the safety certificate received part a of the safety certificate.

Latvia

## 3. Safety approvals issued pursuant to Directive 2004/49/ec

| | NEW | extended | renewed |
|---|---|---|---|
| Number of safety approvals issued to infrastructure managers in 2008 | **14** | - | - |

| | | A | R | P |
|---|---|---|---|---|
| Applications for safety approval submitted by infrastructure managers (2008) | New certificates | **14** | - | - |
| | Extended certificates | - | - | - |
| | Renewed certificates | - | - | - |

A = Approved applications, safety approvals have been issued
R = Rejected applications, safety approvals have not been issued
P = Application has been submitted and will be considered, but safety approval has not been issued as yet.

## 4. Procedural aspects of safety certification – Part a of safety certificate

| | | NEW | extended | renewed |
|---|---|---|---|---|
| Average period of time from submission of the application to issue of Part A of the safety certificate (2008) | operators registered in Latvia | **1 month** | - | - |
| | operators registered in other Member States | - | - | - |

## 5. Procedural aspects of safety certification – part b of safety certificate

| | | NEW | extended | renewed |
|---|---|---|---|---|
| Average period of time from submission of the application to issue of Part B of the safety certificate (2008) | operators registered in Latvia | **1 month** | - | - |
| | operators registered in other Member States | - | - | - |

## 6. Procedural aspects in connection with safety approvals

| | | NEW | extended | renewed |
|---|---|---|---|---|
| Average period of time from submission of the application to issue of the safety approval (2008) | operators registered in Latvia | **1 month** | - | - |
| | operators registered in other Member States | - | - | - |