Railway Safety 2015

NSA Annual Report for the Netherlands

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|  |  |
| Date | October 2016 |
| Status | Final |
|  |  |

Publisher’s details

|  |  |
| --- | --- |
| Published by | The Human Environment and Transport Inspectorate |
|  | ILT/ | Rail and Road Transport |
|  |  |
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Definitions and Abbreviations

Others (third parties)

Anyone not defined as ‘passenger’, ‘employees including the staff of contractors’, ‘level crossing users’ or ‘unauthorised persons on railway premises’.

**Other types of accident**

All accidents other than those already mentioned (train collisions, train derailments, at level crossing, to persons caused by rolling stock in motion and fires in rolling stock).

**Audit**

A systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled.

**Deaths (killed person)**

Any person killed immediately or dying within 30 days as a result of an accident, excluding suicides.

**Accidents to persons caused by rolling stock**

Accidents to one or more persons who are either hit by a railway vehicle or by an object attached to, or that has become detached from, the vehicle. Persons who fall from railway vehicles are included, as well as persons who fall or are hit by loose objects when travelling on board vehicles.

**Significant accident**

An accident involving at least one moving railway vehicle where at least one person is killed or seriously injured or that causes significant damage to the rolling stock, the rails, other installations or the environment (total damage at least €150,000) or which has caused serious disruption to traffic. Accidents in workshops, warehouses and depots are excluded.

**Extensive disruptions to traffic**

Train services on a main railway line are suspended for six hours or more.

Track-kilometres

Track-kilometres means the length, measured in kilometres of a Member State’s railway network, to which the field of application of Article 2 of Directive 2009/149/EC has been established. In the case of multiple track railway lines, only the distance between the start and end is counted.

Track buckles (also known as: lateral displacement of the track)

Faults related to the continuum and the geometry of track, requiring track obstruction or immediate reduction of permitted speed to maintain safety.

**Accidents to persons**

Accidents to persons caused by rolling stock in motion where the individuals are hit by an object that is attached to or has become detached from a railway vehicle, or has fallen from a railway vehicle.

**Passenger-kilometre**

Unit of measure that equates to transporting one railway passenger a distance of one kilometre. Only the distance travelled in the territory of the reporting country is counted.

**Train**

One or more railway vehicles hauled by one or more locomotives or electric railcars, or one railcar travelling alone, running under a given number or specific designation from an initial fixed point to a terminal fixed point.

**Train-kilometre**

Unit of measure representing the movement of a train over one kilometre. The distance used is the distance actually run, if available, otherwise the standard network distance between the origin and destination shall be used. Only the distance on the national territory of the reporting country shall be taken into account.

**Train passenger**

Any person, excluding members of the train crew, who makes a trip by rail, including passengers trying to embark/disembark onto/from a moving train.

**Suicide**

An act to deliberately injure oneself resulting in death, as recorded and classified by the competent national authority.

**Injuries (seriously injured person)**

Any person injured who was hospitalised for more than 24 hours as a result of an accident, excluding attempted suicides.

|  |  |
| --- | --- |
| CSI | Common Safety Indicator |
| CSM | Common Safety Method |
| DGB | The Directorate-General for Mobility and Transport at the Ministry of I&M (*Directoraat-Generaal Bereikbaarheid van het Ministerie van IenM*) |
| ECM | Entity in charge of maintenance |
| EUAR | European Union Agency for Rail safety |
| FWSI | Fatalities and Weighted Serious Injuries |
| I&M | Ministry of Infrastructure and the Environment |
| ILT | Human Environment and Transport Inspectorate of the Ministry of I&M |
| ISZW | Social Affairs and Employment Inspectorate |
| km | kilometre |
| LOD | Periodic penalty payments |
| bn | billion |
| M | million (106) |
| MWA | Moving Weighted Average |
| NRV | National Reference Value |
| NSA | National Safety Authority (*Nederlandse veiligheidsautoriteit spoor*) |
| OvV | Dutch Safety Board (*Onderzoeksraad voor Veiligheid, OvV*) |
| Spw | Railways Act (*Spoorwegwet*) |
| SPAD | Signal Passed at Danger |

Report Objective

The objective of this NSA annual report is to provide an overview of the developments in railway safety on the Dutch main railway line[[1]](#footnote-2) in 2015 as referred to in Article 18 of the European Railway Safety Directive (2004/49/EC).

Annually in September, the National Safety Authority (*Nederlandse Autoriteit Spoorveiligheid*, NSA) reports on the state of safety on the main railway line. They do this based on trends in the annual number of significant accidents. Agreements have been reached with the European Union Agency for Railway Safety (EUAR) on the categories of significant accidents and the corresponding indicators (Decision 2009/460/EC Common Safety Indicators).

The structure of the NSA Annual Report complies with the template recommended by the EUAR, EN 2012 version 15.

* The ERA Annual Report is intended for the EUAR in accordance with Article 18 of the Railway Safety Directive.

The report is published at:

Europe: [www.era.europa.eu/Search/Key-Documents/Pages/Home.aspx](http://www.era.europa.eu/Search/Key-Documents/Pages/Home.aspx)

Introduction

General

The NSA Annual Report on Railway Safety sets out the developments in safety on the Dutch main railway line.[[2]](#footnote-3) To do this, it uses the quantitative indicators for significant accidents. The indicators and the recording method are in accordance with recommendations by the EUAR.

The following criteria apply to a significant accident:

* at least one train in motion (train = railway vehicle(s) with motive power and with train number) is involved, and;
* at least one person died or was seriously injured, and;
* the sum of the damage to stock, rails, other installations or the environment is at least €150,000, or;
* there is extensive disruption to traffic where the train service is suspended for at least six consecutive hours.

Various sources have been consulted for the indicators. The main sources are: Promise[[3]](#footnote-4), the railway undertakings’ Unusual Incident Report (*Meldingen Bijzonder Voorval, MBV*) to the ILT, the annual safety reports from the railway undertakings with an A safety certificate and the ILT’s supervision information.

Information from the various sources was compared for verification. In cases where information does not correspond or is ambiguous, ILT is responsible for the choice of information used in this NSA Annual Report. Therefore, information in this report could differ from information on a topic that was published previously by undertakings.

Information from foreign undertakings that operate in the Netherlands has been incorporated when supplied. They have no obligation to report in the Netherlands.

The annual report is limited to the main railway line. This includes the yards that are designated as main railway line. Industrial tracks or tracks and rolling stock for tram, metro and light rail are not included in this report.

A ‘reference indicator’ is used to allow the developments in an indicator to be followed. This reference indicator is a weighted average of the significant accidents over a period of six consecutive years. The reference is designated as the National Reference Value (NRV). The NRV is compared with the Multi-year Weighted Average (MWA, Mean Weighed Average). The MWA is a progressive weighted average and at the end of a calendar year it is always recalculated for a period of five consecutive years. In other words, the NRV is a statistical value and the MWA always progresses one year.

Calculation and application of the NRV and MWA are stipulated by the EUAR (EU Decision 2009/460/EC and Implementation Guidance for CSIs).

Because it is necessary to total fatal injuries and serious injuries for some indicators we use the Fatal Weighted Serious Injuries (FWSI): number of dead + (0.1 x the number of seriously injured persons).

Information about the railway infrastructure and undertakings/businesses

On 31 December 2015, the Dutch main railway line was as follows:

*Table 1: Size of the main railway line, undertakings/businesses 2015*

|  | 2015 |
| --- | --- |
|  |  |
| Railway network (kilometres)  | 3058 |
| Train-kilometres (M) | 156 |
| Number of passenger transport railway undertakings  | *8* |
| Passenger train-kilometres (M) | 146 |
| Passenger-kilometres (bn) | *19* |
| Number of freight transport railway undertakings  | *29* |
| Freight train-kilometres (M) | 10 |
| Number of infrastructure managers (subject to authorisation)  | *1* |
| Number of contractors  | *18* |
| Number of shunting businesses  | *20* |
| Number of train operators running historical rolling stock | *4* |
| Number of inspection services | *10* |
| Number of businesses supplying personnel | *11* |
| Number of training institutes  | *6* |
| Number of examination institutes | *1* |
| Number of notified bodies | *6* |
| Number of maintenance businesses | *38* |
| Number of entities in charge of maintenance (ECM) | *15* |

Appendix A1 includes an overview map of the Dutch main railway line (source: ProRail). Appendix A2 contains the summary of railway undertakings and infrastructure managers as of 2015.

General developments in railway safety

The tables below show the injuries and accidents that were reported to the EUAR. The tables are a selection from the full summary of indicators that are to be reported to the EUAR. See Chapter 5 for a more comprehensive summary.

*Table 2: Injuries 2015 (2014) excluding suicides or attempted suicides.*

|  |  |  |
| --- | --- | --- |
|  | Fatal injury | Serious injury |
| Passengers | 0 (0) | 2 (0) |
| Railway staff | 0 (0) | 2 (0) |
| Level crossing users | 13(7) | 2 (4) |
| Unauthorised persons on the railway | 3 (1) | 1 (0) |
| Others | 2 (1) | 0 (0) |
| Total  | **18 (9)** | **7 (4)** |

*Table 3: Significant accidents in 2015 (2014)*

|  |  |
| --- | --- |
|  | Significant EUAR |
| Train-train collision | 1 (2) |
| Train-object crash | 7 (1) |
| Derailment | 1 (1) |
| Level crossing accident/crash | 12 (13) |
| Accidents to persons caused by rolling stock | 7 (1) |
| Fire in rolling stock | 2 (0) |
| Other types of accident  | 1 (1) |
| Total (excl. train-object crash) | **31 (19)** |

*Table 4: Accidents in which hazardous substances were involved in 2015*

*(2014)*

|  |  |
| --- | --- |
| Subject | Total  |
| Accidents where hazardous substances werereleased  | 1 |
| Accidents where hazardous substances wereinvolved | 2[[4]](#footnote-5) (0) |
|  |  |
| Total | 2 (0) |

The number of significant accidents has increased in comparison with 2014. The increase is primarily the result of more deaths on level crossings and injury to persons. Since 2009, the number of level crossing injuries has determined the face of deaths on the railway. An average of 70% of all deaths involves a person killed at a level crossing.

The number of significant collisions has increased also. The development concerns the recording of more damage to the overhead lines. This does not involve any deaths or serious injuries.

The number of serious injuries among passengers and staff has been falling since 2012. In 2012 there were 28 serious injuries and 1 death among passengers as a result of the accident at Amsterdam Westerpark. Now, most serious injuries to individuals are not a direct result of using the railway; they involve level crossing users and unauthorised persons.

Developments in significant accidents in general (overall) are more or less stable compared with the last five years. In the last two years, efforts have been exerted in improving the recording of significant accidents in the fields of delays and costs. This then begs the question: is the above mentioned trend a true reflection of recent years?

Organisation

Based on the Human Environment and Transport Inspectorate (ILT) Establishing Decree,[[5]](#footnote-6) the ILT performs the tasks of the National Safety Authority (Railway Safety Directive 2004/49/EC: National Railway Safety Authority), unless otherwise mandated. The tasks (Article 16 of Directive 2004/49/EC et seq) are summarised below:

* Commissioning of subsystems and checking whether the subsystems are ‘well’ run and maintained.
* Supervision of interoperability components.
* Permission to take new or modified rolling stock into use.
* Issue, renewal, modification and withdrawal of safety certificates, authorisations and checks on these.
* Supervision of the proper registration of vehicles in the Dutch National Vehicles Register and the accurate and regular updating thereof.
* Improving compliance with and where necessary enforcement of the regulatory framework for safety, including the system of national safety requirements.

Monitoring and developing a regulatory framework is a task for the Directorate-General for Mobility and Transport (DGB) at the Ministry of I&M.

In total, approximately 45 full time equivalent (FTE) staff are employed on the tasks.

Appendix B contains the organisational chart for the NSA.

To improve the safety of the railway, the Netherlands has the Dutch Safety Board (OvV), instituted under a Kingdom Act.[[6]](#footnote-7) The OvV does not have any NSA tasks but, at its own initiative, it conducts independent investigation of the causes of (major) incidents. Based on the investigations undertaken, the OvV can make recommendations to the Minister for I&M and other organisations involved.

Developments in railway safety

Initiatives to maintain or to improve safety performances

Various causes may exist, as a result of which measures are taken or action is taken with intention of improving safety. The ILT has various instruments for stimulating the improvement of safety, including investigations and/or enforcement. The table below shows the most important events after which investigations were conducted and the measures that resulted from them as well as a number of interventions during enforcement.

Table 5: Measures resulting from accidents or near-accidents.

|  |
| --- |
| Safety measure implemented |
| Town/city | **Description of the incident** | **Measure** |
| Tilburg | Passenger train involved in SPAD and crashed into a stabled freight train. The freight train was transporting hazardous substances and turned out to be longer than the siding. | Re-instruction of train drivers for departure on yellow. Better forwarding of the actual length of freight trains.Advice for installing vehicles creep protection.  |
| Kijfhoek | Front wagons derailed as a consequence of incorrect loading. Because a loader was defective, a decision was taken to load using a digger. As a result, the load was not distributed correctly and the vehicles were unbalanced. | Better control of loading and no more loading with a digger. |

Table 6: Safety measures or voluntary measures resulting from reasons other than accidents or near-accidents.

| Interventions  |   |   |
| --- | --- | --- |
| Legislation | **Description of reason for the measure.** | **The following safety measure was implemented:** |
| Railways Act Article 53, paragraph 3 | No Certificate of Competence and no Train Drivers Authorisation. | Periodic penalty payments |
| Railways Act Article 53, paragraph 1 under b | Inadequate command of language | (proposed) Periodic penalty payments. |
| Rail Traffic Regulations Articles 7, 8, 9, 10 and 11, and Rail Traffic Decree 9 | Maximum speed, brake percentage and brake weight not correctly harmonised. | Administrative measure of constraint |

Detailed analysis

Article 19 of the Operating and Safety Licence (Main Railways) Decree (referring to Article 9 and Appendix I of the European Railway Safety Directive 2004/49/EC) specifies the Common Safety Indicators (CSIs) upon which reporting is required.

The absolute number of significant accidents in 2015 increased when compared with 2014. The number of train-kilometres travelled remained approximately the same as 2014 at 156 million train-kilometres for passengers and 10 million train-kilometres for freight.

There were 31 significant accidents in 2015. A good third of these accidents were significant due to the serious injuries (deaths or seriously injured persons). Far fewer accidents were significant due to long delays.

The increase compared with the number of significant accidents in 2014 (19 incidents) is primarily a result of train-object crashes and injury to persons.

The first four cases where the overhead lines were damaged were recorded under the train-object crashes. In addition to large amounts of damage, this also causes severe disruption to train traffic. The injury to persons relates to individuals who were knocked down while changing platforms or had ‘accidentally’ found themselves on the track.

Accidents involving people on level crossings often end in a fatal injury. Of all 18 deaths, 13 were on a level crossing. The average number of level crossing deaths in recent years accounts for some 70% of the total number of deaths. When it comes to serious injuries, this category sets the scene. The other deaths occurred in the ‘unauthorised persons’ and ‘others’ categories.

The number of suicides increased for the first time in the last five years. With 31 more suicides, the total comes to 223.

The Inspectorate issued a set of guidelines to the railway undertakings prior to the safety annual reports. These guidelines are instructions on completing the report after it had been realised that its free-form nature was a hindrance to proper assessment. Observations include:

* Not all objectives have a SMART formulation. The safety annual report does not state how developments in safety are kept up to date in such cases.
* Many undertakings focus their objectives on I&M's policy objectives, for example stop Signal Passed at Danger events. It is not always clear if an undertaking sets its own business-related objectives, such as the number of members of staff who will undergo re-instruction or training.
* The Inspectorate believes that, in some annual reports, it is able to identify signs which indicate that smaller undertakings need to exert more effort to recover after an sizeable incident. A lack of sufficient resilience increases the probability of a repetition of an accident or causes other risks.
* In 2014 and 2015 the Inspectorate verified all accidents and injuries for the railway safety annual report. For example: of the 31 significant accidents uncovered by the Inspectorate, 12 reports were known to the Inspectorate and 24 to the infrastructure manager. Recording must be improved. How do you arrive at the figures?

The trend-based developments have been established in accordance with the CSI. With the exception of the CSI for ‘unauthorised persons’ the trends remain below the National Reference Value. Exceeding the value indicates a possible negative trend.

The number of SPAD events fell to 100 SPADs in 2015. The risk figures are below 20%. This means that the objectives of the SPAD programme were achieved, just as in 2014.

In 27 cases, a danger point was reached (a switch for instance). In three cases there was a possibility of trains colliding and in five cases a train drove onto an open level crossing[[7]](#footnote-8).

27 SPADs were at signals with the Automatic Train Protection System improved version (*ATBvv*). In 21 cases the protection system prevented the danger point being reached. At signals without *ATBvv*, 13 of the 43 SPADs did not reach the danger point.

In 2015, 10 SPADs were the result of a recalled signal and 115 SPADs were a technical SPAD.

For each train-kilometre travelled, freight train operators and service providers are involved in relatively more SPADs than passenger train operators. In an absolute sense, the number of SPADs by freight train operators and service providers is 28 and 8 SPADs respectively on a combined 10 million train-kilometres travelled. The passenger train operators were involved in 54 SPADs over 156 million train-kilometres. Compared with 2014, freight and passenger train operators individually made 10% fewer SPADs and the service providers 20%.

No cases of broken wheels or axles were recorded.

Further information about the accidents and indicators can be found in Appendices C1, C2 and C3.

Safety recommendations in response to safety investigations

The table below shows the investigations conducted by the ILT or the OvV.

Table 7: OvV investigations 2015

|  |
| --- |
| Safety measure implemented |
| Town/city | **Description of the incident** | **Measure** |
| Tilburg | Passenger train involved in SPAD and crashed into a stabled freight train. The freight train was transporting hazardous substances and turned out to be longer than the siding. | Re-instruction of train drivers for departure on yellow. Better forwarding of the actual length of freight trains.Advice for installing vehicles creep protection.  |
| Kijfhoek | Front wagons derailed as a consequence of incorrect loading. Because a loader was defective, a decision was taken to load using a digger. As a result, the load was not distributed correctly and the vehicles were unbalanced. | Better control of loading and no more loading with a digger. |

In addition to the investigation by the OvV, the ILT conducted maintenance audits which mentioned improvement measures. Reports were written on the following theme-audits in 2015:

Table 8: Theme-audits 2014.

| Theme-audit | Explanatory note |
| --- | --- |
| Quick-scan rolling stock derailment risks (27 August 2015) | As a result of a crash and derailment at Teuge on 22 March 2015 the Inspectorate conducted a quick-scan of the derailment risks for vehicles without obstacle deflectors. The quick-scan revealed that the risks of derailment after a level crossing crash are not such that additional measures should be implemented. |
| Follow-up report on more stringent supervision (27 November 2015): | In this report, ILT concludes that ProRail Rail Traffic Control has improved the way in which traffic controllers and signallers plan. The efforts have led to an improvement in the safety culture, the growing use of pre-defined, conflict-free train routes and the introduction of automated resources in support of traffic controllers and signallers. In addition, both NS Reizigers and ProRail have implemented improvements to achieve a so-called conflict-free timetable. This ensures that trains encounter red signals less frequently. The Inspectorate believes that the improvements should be continuously developed. The more stringent supervision of ProRail and NS was lifted on 16 November 2015. The Inspectorate will continue to follow further progress closely. |
| Improvement in performance-oriented maintenance by ProRail (28 September 2015): | The ILT has investigated how ProRail is dealing with the Inspectorate’s earlier criticism of the method of tendering small-scale maintenance. The ILT endorses the direction that ProRail has taken to give safety an even more prominent position when tendering and implementing small-scale, regular maintenance. Important steps have been taken with the development of a new system of standards for maintenance, ensuring expert judgement in the event of deviations from the standard and the agreements on sharing data on the physical state of infrastructure with contractors. ProRail is implementing important system improvements, but inspections remain critical. The ILT has noted that ProRail does not elaborate the risk analyses and is therefore not complying with its own safety management system. Insight into the physical state of the infrastructure has not yet improved either. It is still too early to judge whether the improvement measures are sufficient to eliminate the infringements and shortcoming that were detected previously. This Inspectorate asks ProRail to tackle the outstanding points and is following this closely. |
| SPAD theme-audit, learn more from the causes | A number of railway undertakings have collaborated, on a voluntary basis, in a theme-audit of SPAD events by the Inspectorate[[8]](#footnote-9). A check was made of whether undertakings are reporting SPADs in accordance with the regulations. Whether or not they take sufficient measures to prevent SPADs was also assessed.It was established that train operators report their SPADs. It was also established that when undertakings learn from a SPAD, even better account can be taken of things if not only the primary cause, but the secondary causes were investigated too. |

Important amendments to laws and regulations

Laws and regulations

As a result of new European legislation, Dutch railway legislation is being amended as follows: The development from the European Commission is that they want to see more uniform legislation in international traffic, for the acceptance of freight rolling stock for instance. In addition, evaluation of the Railways Act in 2008 revealed a number of points for improvement. The Coordination of Implementation of Regulations Evaluation of Railway Legislation (*Coördinatie Implementatie Regelgeving Evaluatie Spoorwetgeving, CIRES*) directs that the points for improvement should be translated into amendments to legislation. The table below shows the total of legislation that was published in 2015.

Table 9: Total of legislation published in 2015

|  |  |  |
| --- | --- | --- |
| Publication | Title | Regulation/Policy Rule  |
| Dutch Government Gazette 2015, 267 | Decree of 13 November 2015, laying down the time that part of the Special Railways Decree comes into force.  | Railways Act (*Spoorwegwet*) |
| Dutch Government Gazette 2015, 436 | Decree of 13 November 2015, laying down the time that part of the Act of 19 November 2014 to amend the Railways Act and the Passenger Transport Act 2000 (*Wet personenvervoer 2000*) comes into force in connection with the second tranche of implementation measures for the Cabinet’s position on Rail in Movement (*Spoor in beweging*), including regulations relating to special railways and simplification of the main railway lines authorisations regime, and in relation to the introduction of a ban on entry and stay for public transport facilities (Dutch Government Gazette 2015, 9) and establishing the time at which the laws mentioned in Article 103 of the Railways Act will be revoked. | Railways Act (*Spoorwegwet*) |
| Dutch Government Gazette 2015, 44666 | Regulation by the State Secretary for Infrastructure and the Environment of 4 December 2015, No. IenM/BSK-2015/240139 laying down the distance, as referred to under the first paragraph of Article 11 of the Special Railways Decree (Special Railways Environment Regime Decree). | Railways Act (*Spoorwegwet*) |

The development of safety certificates and safety authorisation National legislation - starting dates - availability

**Starting date for the issue of safety certificates in accordance with Article 10 of Directive 2004/49/EC (Part A and Part B).**

Act on the Operational Safety of Railways of 13 May 2011, (Dutch Government Gazette 2011, No. 218).

**Starting date for the issue of safety authorisations in accordance with Article 11 of Directive 2004/49/EC.**

Act on the Operational Safety of Railways of 1 January 2015 (Railways Act 2005).

**Making it possible for the railway undertakings and infrastructure managers to consult the national safety regulations or other relevant legislation.**

Publication in the Dutch Government Gazette. Prior consultation on request from the legislator and/or via [www.wetten.overheid.nl](http://www.wetten.overheid.nl/)

Table 10: Certificates

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Total number of certificates** | **Number of Part A certificates in ERADIS[[9]](#footnote-10)[1]** |
| **Number of valid Part A safety certificates, issued in and prior to 2015, valid in 2015** |  | 26 | 26 |
| **Number of valid Part B safety certificates, issued in and prior to 2015, valid in 2015** | Number of Part B certificates where Part A was issued in the Netherlands | 26 | 26 |
| Number of Part B certificates where Part A was issued outside of the Netherlands | 12 | 12 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  |  | **A** | **R** | **P** |
| **Number of valid Part A safety certificates, issued in and prior to 2015, valid in 2015** |  | New certificates | 3 |  |  |
| Amended certificates | 5 |  |  |
| Re-issued certificates | 18 |  |  |
|  |  |  |  |  |  |
| **Number of newly issued Part B safety certificates for railway undertakings, issued in and prior to 2015, valid in 2015** | Of which Part A was issued in the Netherlands | New certificates | 3 |  |  |
| Amended certificates | 5 |  |  |
| Re-issued certificates | 18 |  |  |
| Of which Part A was issued outside of the Netherlands | New certificates | 5 |  |  |
| Amended certificates | 0 |  |  |
| Re-issued certificates | 7 |  |  |

**Procedural aspects**

There are three types of operating licence in the Netherlands:

* The EU operating licence, for general passenger and freight transport.
* The restricted A operating licence for shunting, for own transport and for participation in railway traffic without transporting.
* The restricted B operating licence for driving within a station and for self-propelled equipment on non-operational lines.

The EU licence is valid in all EU countries. A railway undertaking applies for and is issued with it in the country where it is established. The category A and B operating licences only apply within the Netherlands.

The safety certificate is issued by the Inspectorate to a railway undertaking when it has set up a proper and functioning safety management system.

Part A of the safety certificate is issued in the country where the railway undertaking was initially active. Part B is issued in all other countries to which the undertaking has access.

**Part A safety certificates**

**Reasons for amending/changing Part A certificates (e.g. change in the type of service provision, scale of the traffic, size of the business).**

Not applicable

**Main reasons if the average time for issuing Part A certificates (limited to those mentioned in Appendix E and after receipt of the necessary information) took longer than the four months stipulated in Article 12(1) of the Railway Safety Directive.**

Lack of staff capacity or incompleteness of the documents supplied with the application for Part A.

**Summary of the requests from other National Safety Authorities for information for checking/obtaining the Part A certificate for a railway undertaking that is certified in their country but applies for a Part B certificate in another Member State.**

Not applicable

**Summary of the problems with the mutual acceptance of Part A certificates that are valid throughout the entire Community.**

Not applicable.

**Fees when applying for a Part A certificate**

* Article 6, Regulation of Tariffs in the Railways Act 2012
* A fee, as shown below, is payable for processing an application for granting a safety certificate as referred to in Article 32 of the Act:

Table 11: Certificate fees

|  |  |  |
| --- | --- | --- |
| Safety certificate | Part A | Part B |
| Safety certificate for a railway undertaking with fewer than 300 members of staff employed in a safety role. | €12,885 | €8,589 |
| Safety certificate for a railway undertaking with 300 members of staff or more employed in a safety role. | €27,381 | €18,254 |
| Safety certificate for a railway undertaking that uses the main rail network at a single location for transferring railway vehicles or which performs activities on or near the main rail network using self-propelled equipment or equivalent vehicles on a part of the mainline rail network that has been taken out of service for this purpose. | €4,919 | - |

* A fee as shown in the table below is payable for processing an application to re-award a safety certificate as referred to in Article 32 of the Act:

Table 12: Fees for renewing certificate

|  |  |  |
| --- | --- | --- |
| Renewed safety certificate | Part A | Part B |
| Renewed safety certificate for a railway undertaking with fewer than 300 members of staff employed in a safety role | €10,099 | €6,443 |
| Renewed safety certificate for a railway undertaking with 300 members of staff or more employed in a safety role. | €13,818 | €7,623 |
| Renewed safety certificate for a railway undertaking that uses the main rail network at a single location for transferring railway vehicles or which performs activities on or near the main rail network using self-propelled equipment or equivalent vehicles on a part of the main rail network that has been taken out of service for this purpose. | €4,919 | - |

* Article 7, Regulation of Tariffs in the Railways Act 2011

A fee as shown in the table below is payable for processing an amendment to a safety certificate as referred to in paragraph 6 of Article 33 of the Act:

Table 13: Fees for amending a certificate

|  |  |  |
| --- | --- | --- |
| Amendment to a safety certificate | Part A | Part B |
| Amendment to a safety certificate for a railway undertaking with fewer than 300 members of staff employed in a safety role. | €6,443 | €4,295 |
| Amendment to a safety certificate for a railway undertaking with 300 members of staff or more employed in a safety role. | €9,664 | €6,443 |
| Amendment to a safety certificate for a railway undertaking that uses the main rail network at a single location for transferring railway vehicles or which performs activities on or near the main railway line using self-propelled equipment or equivalent vehicles on a part of the main rail network that has been taken out of service for this purpose. | €1,639 | - |

**Summary of the problems associated with using the harmonised formats for Part A certificates, in relation to the categories for type and scale of the service in particular.**

Not applicable.

**Summary of the common problems/difficulties experienced by the ITL with application procedures for Part A certificates.**

Not applicable.

**Summary of the problems reported by railway undertakings when applying for a Part A certificate.**

Not applicable.

**Feedback procedure (e.g. Questionnaire) allowing the railway undertakings to express their opinions on the issue procedures/practical aspects or to register their complaints.**

Not applicable.

## **Part B safety certificates**

**Reasons for amending/changing Part B certificates (e.g. change in type of services, scale of the traffic, lines to be operated, type of rolling stock, crew category, etc.).**

Not applicable.

**Main reasons if the average time for issuing Part B certificates (limited to those mentioned in Appendix E and after receipt of the necessary information) took longer than the four months stipulated in Article 12(1) of the Railway Safety Directive.**

Not applicable.

**Fees when applying for a Part B certificate**

See Tables 11 and 12.

### Summary of the problems associated with using the harmonised formats for Part B certificates, in relation to the categories for type and scale of the service in particular.

Not applicable.

**Summary of the common problems/difficulties experienced by the ITL with application procedures for Part B certificates.**

Not applicable.

**Summary of the problems reported by railway undertakings when applying for a Part B certificate.**

Not applicable.

**Feedback procedure (e.g. Questionnaire) allowing the railway undertakings to express their opinions on the issue procedures/practical aspects or to register their complaints.**

Not applicable.

**Safety authorisations**

The safety authorisations related to the infrastructure managed by ProRail. The safety authorisation was renewed in 2011 for a term of three years. It is an authorisation that is issued under national regulations. The following questions are therefore not applicable.

**Reasons for updating or amending the safety authorisations**

Not applicable.

**The main reasons for delays in issuing safety authorisations (only those mentioned in Appendix E and after receipt of all necessary information) exceeding the four months provided under Article 12(1) of the Railway Safety Directive.**

Not applicable.

**A summary of the problems or difficulties that regularly occur within the framework of the safety authorisations request procedures**

Not applicable.

**Summary of problems identified by the infrastructure managers when applying for a safety authorisation**

Not applicable.

**Feedback procedure (e.g. Questionnaire) allowing the infrastructure manager to express their opinion on the procedures/practical aspects of issuing certificates or to register their complaints.**

Not applicable.

**Does the NSA charge a fee for issuing an infrastructure safety authorisation? (Yes/No – fee)**

No

Supervision of railway undertakings and infrastructure managers

Audits/inspections/check-lists

In the Netherlands, the ‘railways’ are supervised by the ILT. Supervision focusses on the safe and sustainable use of the railways. Supervision activities include:

* Acceptance and certification (granting of authorisation) of undertakings, businesses, vehicles and infrastructure.
* The enforcement of laws and regulations (Railways Act, Working Conditions Act, relevant European legislation) in relation to infrastructure, staff, rolling stock and safety processes.

Supervision of rail transport is a type of system supervision. Under this, supervision is exercised based on the safety management system supplemented with reality checks (enforcement audits on the work floor and in the field) and object inspections (inspections of rolling stock and infrastructure).

This supervision comprises:

* the rail infrastructure,
* the manager of the rail infrastructure,
* the businesses that provide transport on the rail infrastructure,
* certain officers who are employed on the rail infrastructure,
* the vehicles that run on the rail infrastructure,
* businesses that conduct tests on the infrastructure, vehicles or people,
* businesses that provide training and are allowed to hold examinations.

ILT's complete long-term plan and the justification of it can be found in the ILT Long-term Plan and ILT Annual Report which are published annually ([www.ilent.nl](http://www.ilent.nl/))

Granting authorisation and passengers’ rights

Various authorisations were awarded and renewed in 2015. There was a catch-up action on the driver authorisations. The table below shows the numbers of authorisations issued.

Table 14: Number of authorisations issued

|  |  |
| --- | --- |
| Number of rail transport authorisations | 2015 |
| Undertaking and rolling stock authorisations | 190 |
| Infrastructure authorisations | 22 |
| Train driver authorisations | 441 |
| % within quality standard | 84 |

Since 4 October 2011, the Inspectorate has been designated as the authority that protects the interests of passengers in train traffic and advises them of their obligations. Since 2011, passengers have therefore been able to report incidents to the Inspectorate’s Reporting and Information Centre (*Meld- en Informatiecentrum, MIC*).

Most complaints concern insufficient or refusal to pay compensation for delays incurred or cancellations, or for missing connections to follow-on transport as a result of a delay or cancellation.

Table 15: Passengers’ rights complaints 2015

|  |  |
| --- | --- |
| Rail transport passengers’ rights | 2015 |
| Number of complaints  | 18 |
| % within norm | 95 |

Points requiring attention for railway safety in the Netherlands

The priorities in the enforcing supervision by the Inspectorate are decided based on risks, politico-social issues, I&M's policy objectives and the European Commission as well as the outcomes of inspections.

Enforcement audits ensure that the safety management system (on component level) actually works in practice. The object inspections examine whether infrastructure, operations (incl. rail traffic control, departure procedures, staff) and vehicles comply with laws and regulations. The ILT also inspects activities on the railways under the Working Conditions Act. Enforcement action is taken in the event of infringements.

In 2015, important points for attention in the supervision included:

* Internal policy in regard to route familiarity (including recording).
* Granting shunting authority to train drivers.
* Automatic train protection brake criteria (train event recorder data) in relation to driving style (supervision of train drivers).
* SPAD events.
* More stringent supervision of railway undertakings and the infrastructure manager.

In 2015, 2342 inspections[[10]](#footnote-11) and 138 enforcement audits were carried out. The inspections include 111 inspections on behalf of the Inspectorate of Social Affairs and Employment (safety at work) incl. safety in the workplace and safety instructions.

Table 16: Numbers of enforcement audits and inspections

|  |  |
| --- | --- |
| Type of instrument | 2014 |
| Inspections (incl. 111 Inspectorate of Social Affairs and Employment) | 2342 |
| Enforcement audit | 138 |

In most cases, notification was issued or a warning was given when infringements and/or shortcomings were detected. In these cases, the infringement or shortcoming concerned the inability to produce the necessary documents, such as the train drivers authorisation, for example.

Table 17: Number of interventions

|  |  |
| --- | --- |
| **Type of instrument** | **2015** |
| Provide information | 50 |
| Warning | 105 |
| Periodic penalty payments | 4 |
| Administrative measure of constraint | 1 |
| More stringent supervision | 1 |
| Administrative fine | 3 |

Assessment of annual reports from infrastructure managers and the railway undertakings.

Infrastructure managers, railway businesses and contractors for railway works submit their safety report to the Minister of Infrastructure and the Environment: (in accordance with Article 9(4) of the Railway Safety Directive) before 30 June of the current year. The obligation applies to all holders of a Part A safety certificate. Undertakings that are not registered in the Netherlands are not under an obligation to report. They provide data on a voluntary basis. All holders of a Part A safety certificate submitted their annual report in 2014. Of the foreign undertakings, four undertakings submitted a report voluntarily.

The annual reports for the A certificate holders were used when compiling this annual report. The differences between the individual reports is notable. This is in regard to both structure, content and the reporting and interpreting of the various incidents and accidents. There is no easy way to compare the reports with each other and to compare the certificate holders with each other on this basis. Additional information from other sources, such as Promise and the railway undertakings’ Unusual Incident Reports to the ILT, is required to do this.

Complaints

### Summary of the complaints from the infrastructure manager about the railway undertakings that relate to the conditions stated on their Part A/B certificate:

The infrastructure manager claimed his rights from a railway undertaking and forwarded an invoice for the use of the infrastructure based on this. The invoice amount was too high.

### Summary of complaints from the railway undertakings about the infrastructure manager that relate to the conditions stated on their authorisation:

We know of no complaints in 2015.

Report on the application of the common safety methods (CSM) for risk evaluation and assessment

CSM on Supervision makes the legislator's intention clear in consideration 6 and Article 1(3) of Directive 2004/49/EC: state where the responsibilities lie. The risk analysis and assessment should be based on our supervision activities and be addressed to the Minister. The ILT has a system of bimonthly policy alerting, which, among other things, concerns the adequacy and/or applicability of policy, laws and regulations.

European Directive 2009/352/EC applies in full in the Netherlands. It sets out a common safety method for risk evaluation and assessment as referred to under a in Article 6 paragraph 3 of Directive 2004/49/EC of the European Parliament and of the Council.

No experience of interface management has been gained in the application of the CSM regarding risk analysis and assessment.

The NSA does not have any ongoing experiments for risk evaluation and assessments. During the inspections the undertakings were notified of the importance of conducting risk analyses and evaluations on important changes in the organisation.

There is no procedure, a questionnaire for instance, that provides the railway undertakings and infrastructure managers with the opportunity to show their experience with the European regulations on CSM for risk management.

There is talk of a revision of national regulations that introduces the European regulations for CSM on risk management. European Regulation 2009/352/EC applies in the Netherlands without revision.

EU Regulation 1077/2012 was published at the end of 2012 and came into force from 7 June 2013. In it, a common safety method came into force for the supervision by the national safety authorities, following the issue of a safety certificate or safety authorisation (CSM on Supervision).

Exceptions in regard to the ECM certification system

Not applicable.

Conclusion on Reporting Year 2014 – Priorities

The number of accidents and serious injuries in 2015 rose in comparison with 2014. In general, the trends are slightly downward. They remain below the reference values of the CSI with the exception of ‘others’.

Of the 18 deaths in 2015, 13 occurred at level crossings. With an average of more than 70% in the last five years, fatal accidents on level crossings set the scene for injuries on the railways[[11]](#footnote-12). All deaths in 2015 were individuals without a direct connection to the railways.

The Inspectorate issued a set of guidelines to the railway undertakings prior to the safety annual reports. These guidelines are instructions on completing the report after it had been realised that its free-form nature was a hindrance to proper assessment. Observations include:

* Many undertakings focus their objectives on I&M's policy objectives, for example stop Signal Passed at Danger events. It is not always clear if an undertaking sets its own business-related objectives, such as the number of members of staff who will undergo re-instruction or training.
* In 2014 and 2015 the Inspectorate verified all accidents and injuries for the railway safety annual report. For example: of the 31 significant accidents uncovered by the Inspectorate, 12 reports were known to the Inspectorate and 24 to the infrastructure manager. Registration must be improved (how do you arrive at the figures?)

Appendices

|  |  |
| --- | --- |
| Appendix A1:  | Main Railway Network |
| Appendix A2:  | Undertakings and Infrastructure Managers 2014 |
| Appendix B:  | NSA (ILT and DGB) and OvV Organisational Structure |
| Appendix C1:  | Infrastructure Manager Key Figures |
| Appendix C2:  | Safety Indicators: Figures  |
| Appendix C3:  | CSI Data and Associated Definitions |
| Appendix D:  | Registrations in Vehicle Register |

Appendix A1: Main Railway Network



**Source: ProRail**

**Key**

  1 track

  2 tracks

  3 or more tracks

 O Station/hub

75 Distance in kilometres

Appendix A2: Railway Undertakings and Infrastructure Managers 2014

|  |
| --- |
| Infrastructure Managers |
| Name | **Postal address** | **Postcode + city** |  **Website** |
| ProRail | Moreelsepark 3 | 3511 EP Utrecht | www.prorail.nl |
| Railway undertakings |
| Name |  | **Postal address** | **Postcode + city** |
| Arriva Personenvervoer Nederland BV |  | PO Box 626 | 8440 AP Heerenveen |
| BAM Rail B.V. |  | PO Box 3172 | 4800 DD Breda |
| Bentheimer Eisenbahn |  |  |  |
| NMBS Logistics NV (Belgium) |  | Hallepoortlaan 40 | 1060 Brussel |
| Captrain Belgium (Belgium) |  | Italiëler 2 | 2000 Antwerp |
| Connexxion Openbaar Vervoer NV |  | PO Box 224 | 1200 AE Hilversum |
| CrossRail Benelux N.V. |  | Luchthavenlei 7 | 2100 Deurne |
| DB Regio NRW GmbH (Germany) |  | Willi Becker Allee 11 | 40227 Düsseldorf |
| DB Schenker Rail Nederland NV |  | PO Box 2060 | 3500 GB Utrecht |
| Euro-Express Treincharter BV |  | Burgemeestersrand 57 | 2625 NV Delft |
| ERS Railways BV |  | PO Box 59018 | 3008 PA Rotterdam |
| Eurailscout Inspection & Analysis BV |  | PO Box 349 | 3800 AH Amersfoort |
| Heavy Haul Power |  |  |  |
| HSA Beheer NV |  | PO Box 767 | 1000 AT Amsterdam |
| HSL Logistiek BV |  | Bruistensingel 160-A | 5232 AC Den Bosch |
| HTRS Nederland BV |  | PO Box 59179 | 3008 PD Rotterdam |
| KombiRail Europe BV |  | PO Box 540 | 3190 AL Hoogvliet (Rotterdam) |
| Locon Benelux |  | Noordzeelaan 20 B | 8017 JW Zwolle |
| LTE Netherlands BV |  | Moezelweg 151 | 3198 LS Rotterdam |
| NS Reizigers BV |  | PO Box 2025 | 3500 HA Utrecht |
| NedTrain BV |  | PO Box 2167 | 3500 GD Utrecht |
| PKP Cargo S.A. |  | Grójecka 17 | PL 02-021 Warsaw |
| RheinCargo (Germany) |  | Harry-Blum-Platz 2 | 50678 Cologne |
| Rotterdam Rail Feeding BV |  | Europaweg 855 | 3199 LD Rotterdam |
| Rail Transport Service Austria GmbH |  | Puchstraβe 184b | A-8055 Graz |
| Ricardo |  |  |  |
| Rurtalbahn Benelux BV |  | PO Box 59169 | 3008 PD Rotterdam |
| SBB-cargo |  |  |  |
| Shunter Tractie BV |  | PO Box 5185 | 3000 AD Rotterdam |
| Spitzke Spoorbouw BV |  | Peppelkade 3 | 3992 AL Houten |
| Strukton Rail Materieel BV |  | PO Box 1281 | 5200 BHDen Bosch |
| Syntus BV |  | PO Box 17 | 7000 AA Doetinchem |
| TrainGroup B.V. |  | Nicolaas Beetslaan 76 | 2985 VH Ridderkerk |
| TXLogistic |  |  |  |
| Veolia Transport Rail BV |  | PO Box 1533 | 6201 BM Maastricht |
| VolkerRail Nederland BV |  | PO Box 240 | 4130 EE Vianen |
| Zuid Limburgse Spoorwegmaatschappij |  | PO Box 21071 | 6369 ZH Simpelveld |

Appendix B: NSA (ILT and DGB) and OvV Organisational Structure

**Ministry of Infrastructure**

**and the Environment**

**Directorate General for**

**Mobility and Transport**

**Directorate of Public Transport and Railways**

**Human Environment and**

**Transport Inspectorate**

**Rail and Road Transport Domain**

**Dutch Safety Board**

Appendix C1: Infrastructure Manager Key Figures

|  |  |  |
| --- | --- | --- |
| Subject | Value | Source |
| Train-kilometres | 1.59E+08 | 2014: figures from annual reports and ProRail statement |
| Passenger train-kilometres | 1.45E+08 | 2014: figures from annual reports and ProRail statement |
| Passenger-kilometres | 1.9E+10 | 2014: figures from annual reports by the railway undertakings |
| Number of level crossings | 2282 | ProRail statement |
| Number of kilometres of track | 7030 | ProRail statement |
| Number of railway track kilometres | 3061 | ProRail statement |
| Percentage of main railway line with automatic train protection | 100% | ProRail statement |
| Percentage of train-kilometres with automatic train protection (*ATB*) or ERTMS on railway lines. | 100% | ProRail statement |

The number of level crossings has fallen after the removal of a number of service level crossings / paths and station level crossings / paths that are not level crossings under the ERA definition.

Appendix C2: Safety indicators

Indicators for trends and performances

The Common Safety Indicators (CSI) are used in Europe for trend-based developments and to compare the safety performances of the individual Member States with each other (see Appendix B)[[12]](#footnote-13). The CSI are:

* Risk to passengers (passengers’ safety risk).
* Risk to employees (prevent industrial accidents).
* Risk to level crossing users (level crossing safety).
* Risk to unauthorised persons on railway premises (unauthorised persons on the railways).
* Risk to others (others).
* Risk to whole society Overall safety (total safety).

Member States must reduce the number of accidents and injuries. To stimulate this, reference values (NRV) were set for each member state. The NRV is the minimum performance. If the minimum is exceeded it could indicate an unfavourable development in safety (see Appendix B for more details). An explanation must be provided if the NRV is exceeded by more than 20% for more than three years. An improvement plan may also be requested. To date, the Netherlands has not been asked to provide an improvement plan.

To make an assessment and draw conclusions, it is important to know that the CSI is based on serious injuries. There is no CSI for (significant) accidents. Trends for these are primarily based on absolute figures.

A Fatal Weighted Serious Injury (FWSI) is used to provide a single variable for deaths and serious injuries. Here, ten serious injuries equates to one death. A five-year weighted average (Measured Weighted Average, MWA) of FWSI is used for the trend.

CSI developments in pictures

*Risk to passengers (passengers’ safety risk).*

Graph 1 shows the developments in the ‘passengers’ CSI. The development in the CSI is favourable in line with the developments. There is a slight downward trend. There have been no deaths or large numbers of serious injuries among passengers since the accident in Amsterdam in 2012. The MWA (green dashed line) will fall if the trend for passengers continues. The accident at Amsterdam will have no effect on the passengers MWA after 2017.



|  |  |
| --- | --- |
| FWSI per mld reizigertreinkm | FWSI per bn passenger train-kilometres |
| REIZIGERS | PASSENGERS |
| NRW+20% tolerantie | NRV +20% tolerance |
| NRW | NRV |
| Jaar | Year |
| Genormaliseerde waarde | Normalised value |
| MWA | MWA |

Graph 1: Developments in the ‘passengers’ CSI.

In Europe, the number of fatal injuries to passengers fell in 2014; from 97 in 2013 to 15 in 2014. From all categories with a CSI, two percent of the deaths were passengers. Twenty people were seriously injured.

*Risk to employees (prevent industrial accidents)*

Only a small number of people were injured (one serious injury). The picture for FWSI is not as ‘tranquil’ as for passengers (Graph 2). This is because there have been several occasions when multiple passengers suffered serious injuries: in 2009 one death and one serious injury, in 2012 there were nine serious injuries.

Incidents where staff are injured are recorded by the railAlert Foundation (*stichting railAlert*). The foundation is a collaboration of undertakings in the railway sector. Their involvement is by issuing safety regulations and information to prevent accidents involving staff, for instance. In 2014, 407 incidents were reported to railAlert[[13]](#footnote-14). The most prevalent were falls and trips. Nineteen incidents resulted in absence from work.



|  |  |
| --- | --- |
| FWSI per mld treinkm’s | FWSI per bn train-kms |
| SPOORPERSONEEL | RAILWAY STAFF |
| NRW+20% tolerantie | NRV +20% tolerance |
| NRW | NRV |
| Jaar | Year |
| Genormaliseerde waarde | Normalised value |
| MWA | MWA |

Graph 2: Developments in the ‘staff’ CSI

Within the EU, 30 people were killed in 2014 and 63 were seriously injured. Over a period of five consecutive years, the number of deaths has remained stable, an average of approximately 36 members of staff.

*Risk to level crossing users (level crossing safety)*

A review of accidents and injuries indicated that level crossing accidents are a substantial portion of the deaths. Despite various measures, the number remains approximately the same as in 2010; the exception being seven deaths in 2014. There is a downward trend due to the effects of fewer serious injuries on level crossings in the years 2009 to 2011 inclusive (Graph 3). There is a slightly upward trend in 2015. The Inspectorate cannot (yet) confirm if this trend is continuing. A cautious expectation is that the measures that are being taken contribute to at least a stabilisation of the number of serious injuries.



|  |  |
| --- | --- |
| FWSI per mld treinkm’s | FWSI per bn train-kms |
| OVERWEGGEBRUIKERS | LEVEL CROSSING USERS |
| NRW+20% tolerantie | NRV +20% tolerance |
| NRW | NRV |
| Jaar | Year |
| Genormaliseerde waarde | Normalised value |
| MWA | MWA |

Graph 3: Developments in the ‘level crossing users’ CSI

Unlike in the Netherlands, level crossing injuries are not dominant in the EU; it is injuries in the ‘unauthorised persons’ category. Compared with approximately 300 deaths on level crossings there were over 700 ‘unauthorised persons’ deaths. The number of serious injuries on level crossings is 287.

The picture for the CSI for level crossing users could lead to the conclusion that the development is not unfavourable, at least that it does not require additional effort. The trend is flat and the FWSI and MWA remain below the NRV. This paints a picture that is contrary to the developments among level crossing users based on absolute numbers.

*Risk to unauthorised persons on railway premises (unauthorised persons on the railways)*

Based on near-accidents (see paragraph 4.3), it can be presumed that the number of serious injuries to unauthorised persons is not undergoing a favourable development. In an absolute sense, the number of serious injuries may not be high, but together with ‘level crossing users’ and ‘others’ this accounts for all of the serious injuries in 2015.

The FWSI is rising in 2015 (see Graph 4). The MWA is also increasing, as a result of which the trend line is rising, but remains below the NRV. It is difficult to make predictions for unauthorised persons. By definition, they belong to a category that can barely be foreseen and that show no mutual connections. Such as individuals who flee across the track during a quarrel compared with serious injury resulting from train surfing.



|  |  |
| --- | --- |
| FWSI per mld treinkm’s | FWSI per bn train-kms |
| ONBEVOEGDEN | UNAUTHORISED PERSONS |
| NRW+20% tolerantie | NRV +20% tolerance |
| NRW | NRV |
| Jaar | Year |
| Genormaliseerde waarde | Normalised value |
| MWA | MWA |

Graph 4: Developments in the ‘unauthorised persons’ CSI

At 704 deaths, ‘unauthorised persons’ represents 26% of the total number of deaths[[14]](#footnote-15) on the railways in the EU. Three hundred and thirty-one people were seriously injured. The EURA cannot explain this high number. One possible explanation is the interpretation of the term ‘unauthorised person’. In the past, the Inspectorate has established that it can be difficult to make a distinction between authorised and unauthorised. This may also be the case in the EU and ‘unauthorised persons’ is some kind of remainder category for serious injuries where the cause cannot be established clearly.

 *Risk to others (others)*

‘Others’ includes people who are seriously injured because they have been struck by a moving train but who are ‘authorised’. Examples of this include passengers or people seeing passengers off on the platform. These are not connecting train injuries. Connecting train injuries do not include a moving train.

Two people were killed in 2015. After a slight fall in the MWA in 2013, the weighted average since 2014 is above the tolerance area of 20% of the NRV (see Graph 5). In the report on the CSI, the Netherlands must explain the developments and indicate how this will be turned into a positive trend.

|  |  |
| --- | --- |
| FWSI per mld treinkm’s | FWSI per bn train-kms |
| ANDEREN | OTHERS |
| NRW+20% tolerantie | NRV +20% tolerance |
| NRW | NRV |
| Jaar | Year |
| Genormaliseerde waarde | Normalised value |
| MWA | MWA |

Graph 5: Developments in the ‘others’ CSI.

Only 2% of the fatal injuries in the EU fall into the ‘others’ category. Seventy-four people were seriously injured in 2014. Just as in the Netherlands, the development is stable and is between 20 and 25 people.

*Risk to whole society, Overall safety (total safety)*

The ‘overall safety’ CSI is the sum of the individual CSI categories (Graph 6). It presents a picture of the overall developments in safety on the main railway line based on all serious injuries.

The effect of various incidents can be seen in the ‘overall safety’ CSI and there is therefore a peak in the FWSI in 2012 as a result of the Westerpark Amsterdam accident and the significant fall in the number of injuries in 2014. The NRV is not being exceeded and on this basis the overall developments can be considered to be satisfactory.



|  |  |
| --- | --- |
| FWSI per mld treinkm’s | FWSI per bn train-kms |
| TOTAAL | TOTAL |
| NRW+20% tolerantie | NRV +20% tolerance |
| NRW | NRV |
| Jaar | Year |
| Genormaliseerde waarde | Normalised value |
| MWA | MWA |

Graph 6: Developments in the ‘overall’ CSI.

The trend line will become flatter when the peak in injuries in 2012 is left out and 2014 has a proportionally greater effect on the course of the trend line. The positive developments in serious injuries among passengers and staff provides a (fragile) balance in the trend, despite the less favourable developments in level crossing users, unauthorised persons and others.

Appendix C3: CSI Data and Associated Definitions

C.1. CSI Data

**Safety indicators according to Annex I of the Railway Safety Directive (Directive 2004/49/EC)**

1. **Indicators relating to accidents**
	1. **Total number of significant accidents and average number of significant accidents (per million train kilome- tres), broken down into the following types of accident**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | All types of accident | Collisions of trains including collisions with obstacles within the clearance gauge | Derailments of trains | Level crossing accidents including accidents involving pedestrians at level crossings | Accidents leading to personal injury caused by moving railway vehicles, excluding suicides | Vehicle fires | Other accidents |
| Total | 31 | 7 | 1 | 12 | 7 | 1 | 1 |
| Average number | 0.199 | 0.045 | 0.006 | 0.077 | 0.045 | 0.006 | 0.006 |

* 1. **Total number and average number (per million train kilometres) of serious injuries and fatalities by type of accident, broken down into the following categories**
		1. Person seriously injured

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | All types of accident | Collisions of trains including collisions with obstacles within the clearance gauge | Derailments of trains | Level crossing accidents including accidents involving pedestrians at levelcrossings | Accidents leading to personal injury caused by moving railway vehicles,excluding suicides | Vehicle fires | Other accidents |
| Total seriously injured | 7 | 1 | 0 | 2 | 2 | 1 | 1 |
| Average number seriously injured | 0.045 | 0.006 | 0.000 | 0.013 | 0.013 | 0.006 | 0.006 |

Of whom:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Passengers | 2 | 0 | 0 | 0 | 1 | 1 | 0 |
| Average number of seriously injured passengers | 0.013 | 0.000 | 0.000 | 0.000 | 0.006 | 0.006 | 0.000 |
| Average number of seriously injured passengers per billion passenger kilome- tres | 0.107 | 0.000 | 0.000 | 0.000 | 0.054 | 0.054 | 0.000 |
| Average number of seriously injured passengers per million passenger train kilometres | 0.014 | 0.000 | 0.000 | 0.000 | 0.007 | 0.007 | 0.000 |
| Employees, including the staff of contrac- tors | 2 | 1 | 0 | 0 | 0 | 0 | 1 |
| Average number of seriously injured employees, including contractors | 0.013 | 0.006 | 0.000 | 0.000 | 0.000 | 0.000 | 0.006 |
| Level crossing users | 2 | 0 | 0 | 2 | 0 | 0 | 0 |
| Average number of seriously injured level crossing users | 0.013 | 0.000 | 0.000 | 0.013 | 0.000 | 0.000 | 0.000 |
| Unauthorised persons on railway premises | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Average number of seriously injured unauthorised persons on railway premises | 0.006 | 0.000 | 0.000 | 0.000 | 0.006 | 0.000 | 0.000 |
| Others | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average number of others seriously injured | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |

* + 1. Person killed

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | All types of accident | Collisions of trains including collisions with obstacles within the clearance gauge | Derailments of trains | Level crossing accidents including accidents involving pedestrians at level crossings | Accidents leading to personal injury caused by moving railwayvehicles, excludingsuicides | Vehicle fires | Other accidents |
| Total number of fatalities | 18 | 0 | 0 | 13 | 5 | 0 | 0 |
| Average number of fatalities | 0.116 | 0.000 | 0.000 | 0.083 | 0.032 | 0.000 | 0.000 |

Of whom:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Passengers | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average number of passengers killed | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Average number of passengers killed per billion passenger kilometres | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Average number of passengers killed per million passenger train kilometres | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Employees, including the staff of contrac- tors | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Average number of employees, including the staff of contractors killed | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| Level crossing users | 13 | 0 | 0 | 13 | 0 | 0 | 0 |
| Average number of level crossing users killed | 0.083 | 0.000 | 0.000 | 0.083 | 0.000 | 0.000 | 0.000 |
| Unauthorised persons on railway premises | 3 | 0 | 0 | 0 | 3 | 0 | 0 |
| Average number of unauthorised persons on railway premises killed | 0.019 | 0.000 | 0.000 | 0.000 | 0.019 | 0.000 | 0.000 |
| Others | 2 | 0 | 0 | 0 | 2 | 0 | 0 |
| Average number of others killed | 0.013 | 0.000 | 0.000 | 0.000 | 0.013 | 0.000 | 0.000 |

1. **Indicators relating to dangerous goods**

**Total and average numbers (per million train kilometres) of accidents in connection with the carriage of dan- gerous goods, broken down into the following categories**

|  |  |  |
| --- | --- | --- |
|  | Accidents in which at least one rail vehicle carrying dangerous goods was involved | Accidents in which dangerous goods were released |
| Total | 2 | 1 |
| Average number | 0.013 | 0.006 |

1. **Indicators relating to suicides**

**Total and average numbers (per million train kilometres) of suicides**

|  |  |  |
| --- | --- | --- |
|  | Suicides | Attempted suicides |
| Total | 223 | 20 |
| Average number | 1.431 | 0.128 |

1. **Indicators relating to incidents and near misses**

**Total number and average number (per million train kilometres) of incidents and near misses, broken down into the following categories**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | All incidents and near misses | Broken rails (EIUs only) | Buckled rails (EIUs only) | Signalling errors (EIUs only) | Signals passed at danger | Broken wheels | Broken axles |
| Total | 196 | 54 | 5 | 37 | 100 | 0 | 0 |
| Average number | 1.258 | 0.347 | 0.032 | 0.237 | 0.642 | 0.000 | 0.000 |
|  | Resulting in an accident | 0 | 0 |
| Found in service | 0 | 0 |
| Found during regular maintenance | 0 | 0 |

1. **Indicators relating to the consequences of significant accidents**

**Total amount in Euro and average values (per million train kilometres) for**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Number of deaths and serious injuries multiplied by the valueof avoiding accidentvictims | Costs of damage to rolling stock and infrastructure | Costs of environmen- tal damage\* | Costs of delays caused by accidents |
| Total costs | 42,048,124 | 1,980000 | n.a. | 221,348 |
| Average costs | 269,823 | 12,706 |  n.a. | 1,420 |

1. **Indicators relating to technical safety of infrastructure and its implementation**
	1. **Automatic train protection**

|  |  |
| --- | --- |
| Percentage of tracks with automatic train protection (EIUs only) | 100% |
| Percentage of train kilometres run using operational train protection systems | 100% |

* 1. **Number of level crossings (in total, per line kilometre and per track kilometre), broken down into the follow- ing eight types:**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | With user-side automatic warning | With user-side automatic protection | With user-side automatic protection and automatic warning | With user-side automatic protection and automatic warning and with rail- side protection | With user-side manual warning | With user-side manual protection | With user-side manual protection and manual warning |
| Actively protected level crossings | 64 | 0 | 1480 | 0 | 177 | 0 | 37 |
| Average number per line kilometre | 0.021 | 0.000 | 0.484 | 0.000 | 0.058 | 0.000 | 0.012 |
| Average number per track kilometre | 0.009 | 0.000 | 0.211 | 0.000 | 0.025 | 0.000 | 0.005 |

|  |  |
| --- | --- |
|  | Total |
| Passively protected level crossings | 522 |
| Average number per line kilometre | 0.171 |
| Average number per track kilometre | 0.074 |

1. **Indicators relating to the safety management system**

|  |  |
| --- | --- |
| Total number of internal checks (audits) carried out |  |
| Percentage of internal checks (audits) carried out in relation to the number of checks stipulat- ed or planned | Not available |

Appendix D: Registrations in Vehicle Register

|  |  |
| --- | --- |
|  |  |
| Name of owner | Total |
| AAE Cargo AG | 1 |
| AAE Freightcar S.à r.l. | 15 |
| AAE RaiLease S.à r.l. | 917 |
| AAE RailFleet S.à r.l. | 91 |
| ABN Amro Lease N.V. | 2 |
| Alpha Trains Luxembourg No2 Sarl | 12 |
| Alpha Trains Luxembourg Sarl | 4 |
| ANSALDOBREDA S.p.A. | 72 |
| Arriva International Trains Limited | 27 |
| Arriva Personenvervoer Nederland B.V. | 337 |
| Atir-Rail | 181 |
| BAL Global Finance (Deutschland) GmbH | 126 |
| BAM Rail B.V. | 34 |
| BASF SE | 126 |
| Bentheimer Eisenbahn AG | 1 |
| CBRAIL S.à.r.l. | 1 |
| CFL cargo | 25 |
| Connexxion NV | 50 |
| Corus staal | 6 |
| DB Schenker Rail Deutschland AG | 665 |
| DB Schenker Rail Nederland N.V. | 142 |
| Deutsche Leasing für Sparkassen und Mittelstand GmbH | 75 |
| Eiffage Rail Deutschland GmbH | 1 |
| Ermewa Ferroviaire | 585 |
| Eurailscout Inspection & Analysis | 6 |
| GATX Rail Austria GmbH | 2498 |
| GATX Rail Germany GmbH | 2702 |
| GATX Rail Poland Sp.z o.o. | 981 |
| GATX Wagon Leasing GmbH | 13 |
| GATX Zweite Wagon Leasing GmbH | 20 |
| GE Capital Rail Services GmbH & Co KG | 250 |
| Gerd Dieter Wenske | 10 |
| GRAWACO C.V. | 40 |
| Herik Rail Treincharters B.V. | 1 |
| Het Spoorwegmuseum | 62 |
| Historisch Streekvervoer Achterhoek | 2 |
| HSA Beheer N.V. | 19 |
| HSL Logistik BV (NL) | 4 |
| Infraspeed Maintenance b.v. | 2 |
| J. Fijn techniek B.V.  | 7 |
| Kockums Industrier AB | 1 |
| Kurt Nitzer (GmbH & Co.) KG | 15 |
| LBSH Leasing GmbH & Co. KG | 75 |
| Lloyds Register Rail Europe B.V. | 1 |
| LOCON Benelux BV | 18 |
| LTE Logistik- und Transport-GmbH  | 2 |
| Macquarie European Rail  | 58 |
| Matériel Ferroviaire et Industriel S.A. | 38 |
| Dutch Ministry of Defence | 248 |
| Mr. J.L. Pit Beheer B.V | 3 |
| Nacco Luxembourg S.a.r.l. | 400 |
| NACCO S.A.S | 902 |
| NedTrain B.V. | 4 |
| Niteq B.V. | 1 |
| NS Financial Services Company | 1379 |
| NS Reizigers BV | 1966 |
| On Rail Gesellschaft für Eisenbahnausr. mbH | 816 |
| Ontspanningsvereniging NS RB Haarlem | 1 |
| ORV On Rail Gesellschaft für Vermietung und Verwaltung von Eisenbahnwaggons mbH | 784 |
| Personeelsvereniging NS Rotterdam | 2 |
| Rail Rolling Stock B.V. | 91 |
| Railinsight BV | 4 |
| Railpool München | 27 |
| Railpromo Fleet Services B.V. | 1 |
| RailReLease BV | 43 |
| RAS Rail B.V. | 23 |
| Rotterdam Rail Feeding | 13 |
| SC Rail Leasing Europe B.V. | 5 |
| Shunter B.V. | 4 |
| Speno International S.A. | 2 |
| Spitzke Logistik GmbH | 3 |
| Stichting DE III | 1 |
| Stichting Historisch Dieselmaterieel (ANBI) | 15 |
| Stichting Klassieke Locomotieven | 1 |
| stichting Mat'64 | 2 |
| Stoom Stichting Nederland | 12 |
| Strukton Rail Materieel | 175 |
| Swietelsky Baugesellschaft m.b.H  | 19 |
| TRANSRAIL SNC | 1142 |
| UBS Leasing | 229 |
| Veluwsche Stoomtrein Maatschappij | 142 |
| Voestalpine Railpro B.V. | 1317 |
| VolkerRail Plant & Equipment B.V. | 69 |
| VPS Verkehrsbetriebe Peine-Salzgitter GmbH | 58 |
| VTG Deutschland GmbH | 1460 |
| Wagon Care B.V. | 134 |
| WASCOSA AG | 842 |
| Zuid-Limburgse Stoom Maatschappij | 28 |
|  | 22689 |
| CB Rail Leasing S.a.r.l. | 2 |
| DB Schenker Rail Deutschland AG | 1 |
| Het Spoorwegmuseum | 10 |
| Husa Transportation Railway Services Nederland BV | 3 |
| NS Financial Services Company | 1 |
|  | 17 |
| NS Financial Services Company | 60 |
|  | 60 |
| AAE Railcar S.à r.l. | 157 |
| AAE RaiLease S.à r.l. | 49 |
| BAM RAIL B.V. | 1 |
| DB Schenker Rail Deutschland AG | 220 |
| DB Schenker Rail Nederland N.V. | 96 |
| Herik Rail Treincharters B.V. | 1 |
| Het Spoorwegmuseum | 2 |
| On Rail Gesellschaft für Eisenbahnausr. mbH | 18 |
| Railpromo Fleet Services B.V. | 1 |
| Rotterdam Rail Feeding | 3 |
| Strukton Rail Materieel | 1 |
| VolkerRail Materieel | 6 |
| VTG Deutschland GmbH | 597 |
| Zuid-Limburgse Stoom Maatschappij | 3 |
|  | 1155 |
| BAM RAIL B.V. | 2 |
| DB Schenker Rail Nederland N.V. | 8 |
| NS Financial Services Company | 2 |
| NS Reizigers BV | 158 |
| On Rail Gesellschaft für Eisenbahnausr. mbH | 5 |
| Railpool München | 1 |
| Voestalpine Railpro B.V. | 50 |
|  | 226 |
| NedTrain B.V. | 2 |
| NS Financial Services Company | 2 |
| VolkerRail Materieel | 3 |
|  | 7 |
| NS Financial Services Company | 3 |
| NS Reizigers BV | 227 |
|  | 230 |
| AAE RaiLease S.à r.l. | 3 |
| BAM RAIL B.V. | 11 |
| DB Schenker Rail Deutschland AG | 20 |
| DB Schenker Rail Nederland N.V. | 11 |
| Herik Rail Treincharters B.V. | 2 |
| NedTrain B.V. | 1 |
| NS Financial Services Company | 8 |
| NS Reizigers BV | 173 |
| RailMotion AG | 1 |
| Rotterdam Rail Feeding | 2 |
| Shunter B.V. | 4 |
| Strukton Rail Materieel | 2 |
| UBS Leasing | 76 |
| Voestalpine Railpro B.V. | 266 |
| VolkerRail Materieel | 6 |
| VolkerRail Plant & Equipment B.V. | 1 |
| VTG Deutschland GmbH | 29 |
|  | 616 |
| Voestalpine Railpro B.V. | 1 |
| VolkerRail Materieel | 1 |
|  | 2 |
| Total  | 25002 |

This is a publication of the

The Human Environment and Transport Inspectorate

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September 2014

1. Decree Designating Main Railway Lines, dated 20 December 2004 [↑](#footnote-ref-2)
2. This is insofar as this falls under the remit of the ILT as National Rail Safety Authority, and insofar as Article 19 of the Operating and Safety Licence (Main Railways) Decree applies to an undertaking/business. [↑](#footnote-ref-3)
3. ProRail's administrative system for recording incidents and accidents. [↑](#footnote-ref-4)
4. The collision is not significant based on previously mentioned criteria. However, because hazardous substances were involved in the accident, the accident must still be reported to ERA. [↑](#footnote-ref-5)
5. Article 2, paragraph three, under a. [↑](#footnote-ref-6)
6. Kingdom Act of 2 December 2004, establishing a Dutch Safety Board. [↑](#footnote-ref-7)
7. Source ProRail [↑](#footnote-ref-8)
8. The undertakings voluntary collaborated in the audit. They are not a representative selection of the undertakings. The results of the audit are indicative only. [↑](#footnote-ref-9)
9. [1] ERADIS is a data information system from the ERA with certificates, issued by the national railway safety authorities. [↑](#footnote-ref-10)
10. Including cableways. [↑](#footnote-ref-11)
11. Excludes suicides [↑](#footnote-ref-12)
12. The European Railway Agency (ERA) sets the reference values (National Reference Value) for each Member State. The ERA has indicated that the reference values will be adjusted. Although 2015 was mentioned as the date for this, the values have not yet been adjusted. [↑](#footnote-ref-13)
13. Source: railAlert Annual Report 2015 [↑](#footnote-ref-14)
14. Excludes suicides [↑](#footnote-ref-15)