Rapport

Datum
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Netherlands NSA Annual Report 2006 - Draft Version

Railway Safety Report for ERA

Contents

1 Part A: Scope and Summary

1.1 Scope of the report

This report is the draft Netherlands NSA Annual Report for the year 2006. It is produced as much as possible in accordance with the TF AR NSA Proposed Draft Template Version 10, date 8-3-2007.

It is the first report of it's kind and therefore not yet complete with respect to all information asked for in the template.

The railway system considered in this report is the whole Netherlands heavy rail network, mainly managed by Infrastructure Manager ProRail, including shunting yards and lines connecting private company shunting yards to the main network. Private company shunting yards and local rail networks – tram, metro, lightrail, museum lines – are excluded. Railway systems under construction, such as the Betuwe Freight Line, are excluded until they become operational.

1.2 Summary

2 Part B: Introductory Section

2.1 Introduction to the report

Unfortunately it was not possible to gather all information asked for in the template. This applies especially to the information on safety certification and supervision, asked for in parts F and G. and Annex E. Also detailed information on the Railway Undertakings asked for in Annex A is not yet available.

The report does contain all currently available data on Common Safety Indicators, as far as they are collected to day. Further data on safety indicators is presented in the Trends Analysis Report for 2006, published by the Netherlands Railway Inspectorate. This report is accessible on the website of the Railway Inspectorate: http://www.ivw.nl/nl/land/spoor/resultaten/trendanalyse/index.jsp.

2.2 Railway Structure Information

Annex A.1 Provides the Network map. This is taken from the Infrastructure Manager's Network Statement 2007. The Network map only includes heavy-rail infrastructure containing the main rail net and the lines that are accessible from the main rail net.

The Netherlands heavy rail network is accessible for all freight operators in a free market system. The NS, in accordance with the main rail net concession, performs national passenger services for the main rail net. Regional concession holders perform regional passenger services.

2.3 Summary – General Trend Analysis

The main railway safety trends are:

1) The number of SPADs has almost doubled in the past decade. The national policy aims at reducing the number of SPADs to half the number realised in the year 2003.
2) The number of passenger injuries has increased in the past few years. This is mainly caused by collisions as a result of a SPAD. The national policy aims at reducing the number of passenger injuries to half the number realised in 2003.
3) The track worker safety is considered to be persistently too high, compared to the safety of other construction worker's safety. The national policy aims at reducing the risk to 1 fatality per 10.000 Full Time Equivalent working years.

2.4 The Safety Directive – Stages of implementation

In 2006 the implementation of the Safety Directive was in the last stage of implementation, the formal consultation of the "Raad van State", the highest juridical body in national legislation. Per 1 May 2007 the Safety Directive is fully implemented in Netherlands National Law.

The Railway Act legislates the main railway safety topics of the Netherlands railway system. The Railway Inspectorate is appointed to maintain the safety rules.

3 Part C: Organisation

3.1 Introduction to the organisation

The Netherlands Railway National Safety Authority (NSA) is the Ministry of Transport, Public Works and Water Management. The NSA activities are performed by two of the Ministry's constituents: the Railway Inspectorate and the Directorate Rail of the Directorate-General Passenger Transport.

The Directorate Rail has the tasks of following, promoting and developing rules and legislation in order to improve railway safety. The Railway Inspectorate has the tasks of admission of railway undertakings and rolling stock and maintaining the railway safety rules.

The Railway Inspectorate has four units, performing specific tasks:

1) The Inspection unit inspects infrastructure, rolling stock, operational procedures and legal obligations. The unit has about 20 FTE's.
2) The Investigation unit investigates serious incidents and accidents with the purpose to inform the public and to encourage the companies involved to structurally improve safety. All railway actors are obliged to inform the Railway Inspectorate on incidents and accidents. This unit has about 14 FTE's.
3) The Approval and Continuation unit audits Safety Management Systems and certifies companies, working shops, rolling stock and notified bodies. This unit has about 7 FTE's.
4) The Expertise unit advises the Minister on new infrastructure projects and on the ministerial responsibility in relation to parliament. The unit also performs research projects on new developments or persistent railway safety problems. Finally, this unit is responsible for publication of the Inspectorate results. This unit has about 15 FTE's.

The whole Railway Inspectorate has approximately 63 FTE's, including management and staff.

3.2 Organisational Flow

Annex B shows the organisational structure of the Netherlands NSA and it's relationships with other national bodies that have a supervisory task with respect to the rail domain. These national bodies are briefly discussed here.

The Dutch Safety Board (Onderzoeksraad voor Veiligheid, OvV) is a fully independent investigation board that investigates serious incidents and accidents in order to find structural safety deficits. Governmental bodies are obliged to respond to recommendations of the board. The Dutch Safety Board investigates approximately 1 à 2 railway-related accidents per year. These investigations are parallel to the investigations of the Railway Inspectorate.

The National Police (Korps Landelijke Politie Diensten, KLPD) has a department dedicated to railways, called Railway Police (Spoorwegpolitie). The main focus of this police activity is on crime and public safety. The police also investigate serious safety incidents and accidents with the aim to bring the responsible to justice. These investigations are parallel to the investigations of the Railway Inspectorate. The National Police is part of the Ministry of the Interior and Kingdom Relations.

The Netherlands Competition Authority (Nederlandse Mededingingsautoriteit NMa) has the task to maintain a level playing field for all actors in the railway industry. The activities of the Netherlands Competition Authority have very little connection with the activities of the NSA. In some cases safety arguments are used in business conflicts between actors. In these cases the Railway Inspectorate can advise the Authority. The Netherlands Competition Authority is part of the Ministry of Economic Affairs.

The Labour Inspectorate (Arbeidsinspectie) has the task to supervise the worker's safety and to maintain the Labour Health and Safety Act. For the Railway field, this is particularly of interest to Train Drivers, Train Managers, Track Workers and Shunt Workers. The Labour Inspectorate and the Railway Inspectorate work closely together on issues that are relevant for the worker's safety. The Labour Inspectorate is a part of the Ministry of Social Affairs and Employment.

4 Part D: The Development of Railway Safety

4.1 Initiatives to Maintain or Improve Safety Performance

Initiatives to maintain or improve safety performance form a continuing process. The main framework for this process is the policy statement "Kadernota Veiligheid op de Rails" from 2004. This document describes top-level safety targets, together with the main railway safety developments and persistent problems. It presents current and coming projects and activities to improve safety.

On top of this policy statement, accident investigations lead to recommendations and initiatives to improve safety. This paragraph does not give a complete overview of all projects and initiatives, but highlights the most important.

1) SPAD problem
A series of train collisions caused by SPAD's (e.g. Amsterdam, 24 May 2004), together with the knowledge that the number of SPAD's has strongly increased since the mid-nineties, have urged the railway participants to come up with measures to reduce the number of SPAD's and the risk associated with it. The measures comprise of a series of lower impact measures, such as signal visibility improvement, train driver awareness assessment and route setting improvements, together with one high impact measure to improve the current ATP system, the so-called ATB Eerste Generatie. An add-on for this system is being developed in order to force trains approaching red signals to brake. This add-on is to be installed in all trains and on 1000 signals, most relevant to the risk of SPAD's. The measures together must result in reducing the number of SPAD's by 50% in the year 2009, compared with the year 2003. The associated risk must be reduced with 75%.

2) Infrastructure geometry
Two derailments caused by track buckles in summer 2006 have urged the infrastructure manager to come up with an infrastructure safety management improvement program. This program consists of improvement of company procedures, training of personnel and intensifying contractor audits and inspections.

3) Track Worker Safety
The number of Track Worker fatalities is considered to be consistently too high. The Infrastructure Manager ProRail initiated a large-scale safety improvement

programme. The contractors and the relevant supervisory bodies – the Railway NSA and the Labour Inspectorate – are involved in this programme.

Other railway safety improvement programmes active in 2006 are for instance:

- a programme to reduce the number of railway premises intrusions by unauthorised persons
- an ongoing programme to improve level crossing safety
- the standardisation and upgrading of tunnel safety requirements
- a safety management improvement programme by the Infrastructure Manager

Finally, accident investigation reports from the Dutch Safety Board and all reports from the Railway Inspectorate – accident investigation, inspection or safety management system approval, lead to specific or structural safety improvement recommendations and measures.

4.2 Detailed Data Trend Analysis

The Netherlands NSA yearly reports a detailed data trends analysis. The 2006 report is attached to this annual report. The main trends are:

- The number of passenger fatalities is below the nationally accepted value of 0.15 fatality per 10^9 passenger.kilometres for the last ten years, evaluated on a 5-years average basis.
- The previous decade, there has not been a single passenger fatality due to a train collision, derailment, level crossing accident of fire. All 12 fatalities that have occurred were caused by accidents with rolling stock in motion.
- The previous decade, 10 track workers have been killed, whereas approximately 1 fatality in 3 years is considered to be acceptable. The trend is constant.
- The number of level crossing fatalities has decreased the previous decade from almost 40 per year to less than 20 per year, evaluated on a 5-years average basis. In 2006 there were only 12 fatalities.
- The number of SPAD's has increased the previous decade from approximately 150 to over 250 per year (5-year average).

The accident data according to the draft Common Safety Indicator definitions is presented in Annex C.

5 Part E: Important Changes in Legislation and Regulation

In 2006 there have been two changes in national legislation:

- A part of the railway infrastructure between the cities of Rotterdam, The hague and Zoetermeer has been taken out of the national railway network in order to become part of the local light rail network RandstadRail.
- The legislation with respect to the approval of rolling stock has been made consistent with the technical specifications for interoperability TSI-CR-CCS, as a consequence of the introduction of ERTMS/ETCS on the Netherlands network. The TSI-CR-CCS is implemented at 28 september 2006.

6 Part F: The Development of Safety Certification and Authorisation

For this subject, the information asked for is currently not available.

7 Part G: Supervision of Railway Undertakings and Infrastructure Managers

For this subject, the information asked for is currently not available.

8 Part H: Conclusions – Priorities – Results of Safety Recommendations

8.1 Conclusions

The general level of railway safety in the Netherlands is considered to be good, when compared with the national safety targets.

8.2 Priorities

The Netherlands railway safety priorities are SPAD reduction, infrastructure safety improvement and track worker safety improvement.

8.3 Results of Safety Recommendations

This subject is currently not elaborated.

9 Part I: Annexes

9.1 Annex A: Railway Structure Information

9.1.1 Annex A.1: Network Map

Figure A.1: Network Map, taken from ProRail Network Statement

9.1.2 Annex A.2: List of Railway Undertakings and Infrastructure Managers

Name	Address	Website/ Network Statement Link	Safety Authorisation	Start Date Commercial Activity	Total Track Length/ gauge	Electrified Track Length/ Voltages	Total Double/ Single Track Length	Total Track Length HSL	ATP equipment used	Number of LC	Number of Signals
ProRail	Moreelsepark 3 3511 EP Utrecht	www.prorail.nl www.prorail.nl/ProRail/Vervoerders/Netverklaring.htm	Not applicable	1 January 2003	6500 km / 1435 mm	4000 km / 1500 V DC (1900 km network length)	Single: 900 km Other: 1900 km Network: 2800 km	0 km	ATB EG on electrified track ATB NG on other	2700	9800

Table Infrastructure Manager

Name	Address	Website	Safety Certificate 2001/14/EC (number/date)	Safety Certificate A – B 2004/49/EC (number/date)	Start Date Commercial Activity	Traffic Type	Number of Locomotives	Number of Railcars / Multiple Unit Sets	Number of Coaches / Wagons	Number of train Drivers / Safety Crew	Volume of Passenger Transport	Volume of Freight Transport
ACTS			15-03-2005									
Arriva			26-02-2007									

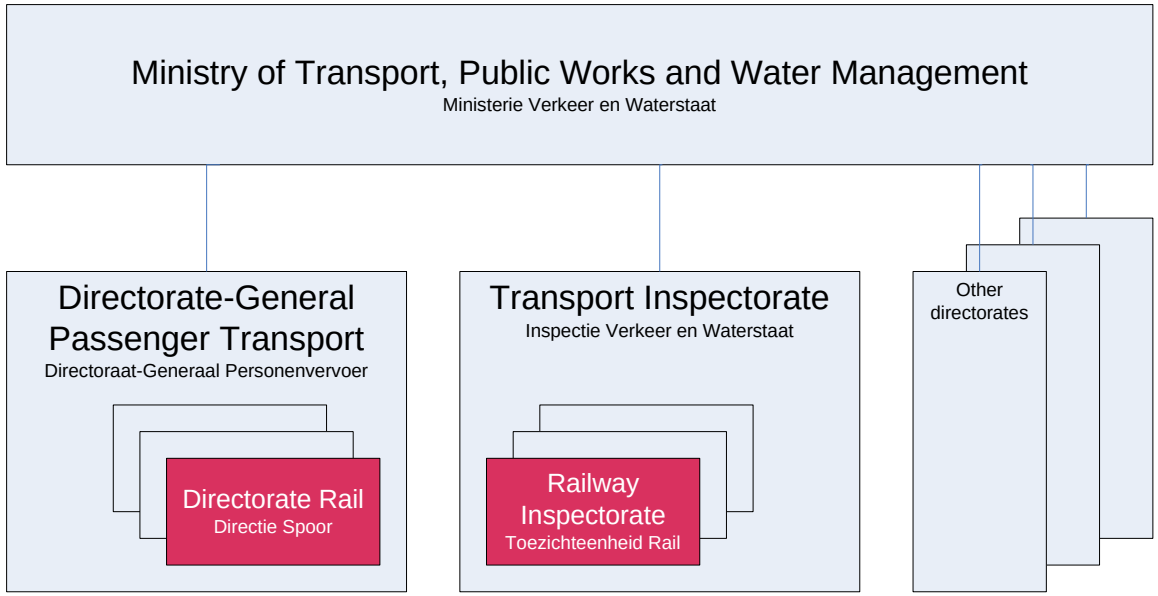
BAM Rail			19-05-2005									
B-Cargo			3-8-2006									
Bentheimer Eisenbahn AG			?									
Connexxion			1-12-2006									
CB NRW			1-12-2004									
DLC			1-1-2006									
ERS			29-03-2007									
Eurailscout			1-11-2005									
HGK			1-10-2005									
Lloyds register R.E.			16-12-2006									
NSR			29-11-2006									
NedTrain			11-12-2006									
Prignitzer Eisenbahn			1-12-2004									
Rail4Chem Benelux			1-8-2006									
Rail4Chem GmbH			1-8-2006									
Railion			29-9-2006									
RRF			1-12-2005									
SNCF			28-12-2006									
Spitzke			7-11-2005									
Strukton			20-6-2006									

Railinfra Materieel												
Syntus			30-3-2005									
Thalys			31-8-2005									
Veolia Cargo			1-3-2007									
Veolia Transport / CGEA			11-5-2007									
Volker Rail			15-3-2007									

Table: Railway Undertakings

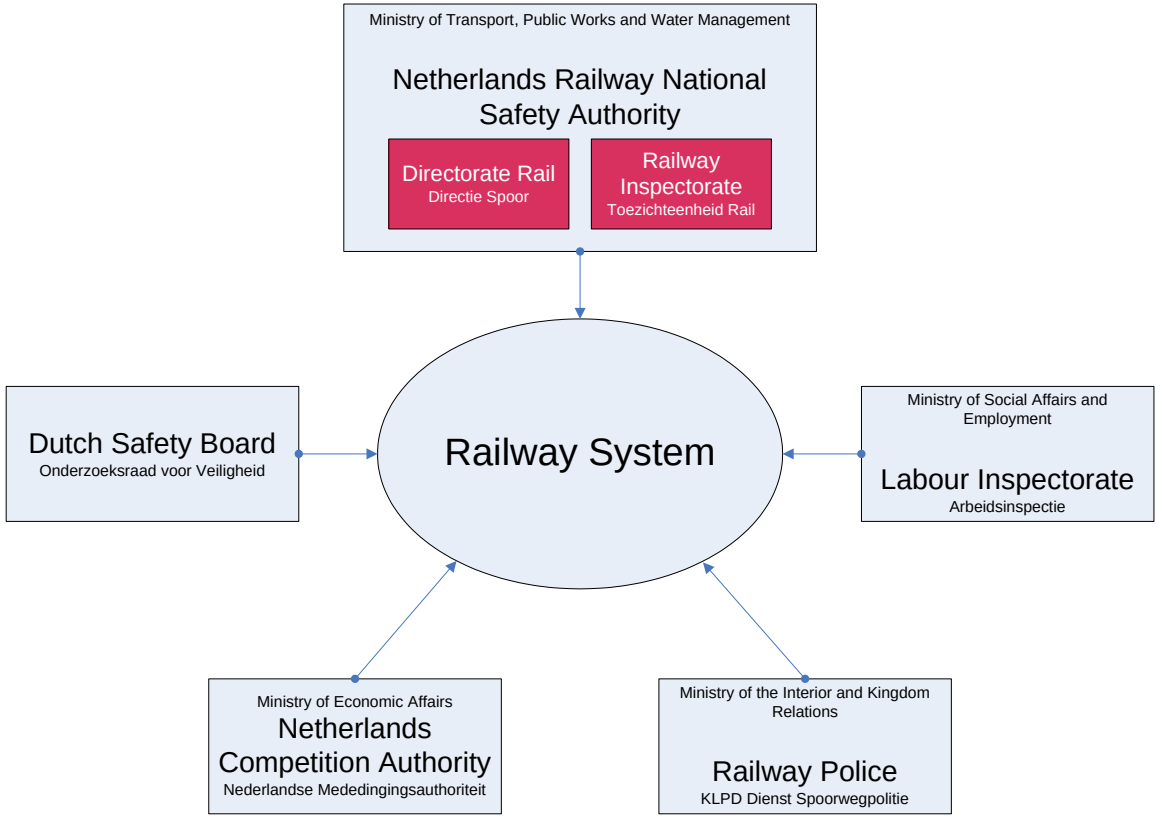
9.2 Annex B: Organisation Charts of the National Safety Authority

9.2.1 B1: Chart: Internal Organisation



The formal NSA is the Minister Transport, Public Works and Water Management. The red marked parts of the Ministry of Transport, Public Works and Water Management together form the practical organisation of the NSA.

9.2.2 B2: Chart: relationship with other National Bodies



9.3 Annex C: CSIs data

The 2006 data on de draft CSIs is presented in the table below. The charts are produced using the Excel-tool provided by the ERA. The excel-files are attached to this report.

ERA code	Description of data	Value
N00	Total Number of all accident	28
N01	Number of Collisions of trains, including collisions with obstacles within the clearance gauge	4
N02	Number of Derailments of trains	2
N03	Number of Level-crossing accidents, including accidents involving pedestrians at level-crossings	12
N04	Number of Accidents to persons caused by rolling stock in motion, with the exception of suicides	9
N05	Number of Fires in rolling stock	1
N06	Number of Other accidents	0
N07	Number events: suicide	190
PS00	Total number in all accident	10
PS01	In collisions of trains, including collisions with obstacles within the clearance gauge	6
PS02	In derailments of trains	1
PS03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	0
PS04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	1
PS05	In fires in rolling stock	0
PS06	In others	2
SS00	Total number in all accident	1
SS01	In collisions of trains, including collisions with obstacles within the clearance gauge	0
SS02	In derailments of trains	0

SS03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	0
SS04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	0
SS05	In fires in rolling stock	0
SS06	In others	1
LS00	Total number in all accident	2
LS01	In collisions of trains, including collisions with obstacles within the clearance gauge	0
LS02	In derailments of trains	0
LS03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	2
LS04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	0
LS05	In fires in rolling stock	0
LS06	In others	0
US00	Total number in all accident	2
US01	In collisions of trains, including collisions with obstacles within the clearance gauge	0
US02	In derailments of trains	0
US03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	0
US04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	2
US05	In fires in rolling stock	0
US06	In others	0
OS00	Total number in all accident	0
OS01	In collisions of trains, including collisions with obstacles within the clearance gauge	0
OS02	In derailments of trains	0
OS03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	0
OS04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	0
OS05	In fires in rolling stock	0

OS06	In others	0
PK00	Total number in all accident	1
PK01	In collisions of trains, including collisions with obstacles within the clearance gauge	0
PK02	In derailments of trains	0
PK03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	0
PK04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	1
PK05	In fires in rolling stock	0
PK06	In others	0
SK00	Total number in all accident	1
SK01	In collisions of trains, including collisions with obstacles within the clearance gauge	0
SK02	In derailments of trains	0
SK03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	0
SK04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	1
SK05	In fires in rolling stock	0
LK00	Total number in all accident	12
LK01	In collisions of trains, including collisions with obstacles within the clearance gauge	0
LK02	In derailments of trains	0
LK03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	12
LK04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	0
LK05	In fires in rolling stock	0
LK06	In others	0
UK00	Total number in all accident	2
UK01	In collisions of trains, including collisions with obstacles within the clearance gauge	0

UK02	In derailments of trains	0
UK03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	0
UK04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	2
UK05	In fires in rolling stock	0
UK06	In others	0
OK00	Total number in all accident	0
OK01	In collisions of trains, including collisions with obstacles within the clearance gauge	0
OK02	In derailments of trains	0
OK03	In level-crossing accidents, including accidents involving pedestrians at level-crossings	0
OK04	In accidents to persons caused by rolling stock in motion, with the exception of suicides	0
OK05	In fires in rolling stock	0
OK06	In others	0
I00	Total number of incidents and near-misses	469
I01	Total number of broken rails	34
I02	Total number of track buckles	143
I03	Total number of wrong-side signalling failures	unknown
I04	Total number of signals passed at danger	292
I05	Total number of broken wheels on rolling stock in service	0
I06	Total number of broken axles on rolling stock in service	0
C00	Total costs of all accidents	0,000
C01	Costs of deaths	unknown
C02	Costs of injuries	unknown
C03	Costs of replacement or repair of damaged rolling stock and railway installations	unknown
C04	Costs of delays, disturbances and re-routing of traffic, including extra costs for staff and loss of future	unknown

	revenue	
W00	Total number of working hours of staff and contractors lost as a consequence of accidents	unknown
T01	Percentage of tracks with Automatic Train Protection (ATP) in operation	98,00%
T02	Percentage of train kilometres using operational ATP systems	99,90%
T03	Total number of level crossings	2724
T04	Total number of level crossings per line kilometre	4,19E-01
T05	Percentage of level crossings with automatic or manual protection	67,73%
R01	Number of Train*Km	135,000
R02	Number of Passenger*Km	15,600
R03	Number of track kilometres (double track lines are to be counted twice)	6500,000
R04	Total number of working hours	unknown

Colofon

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28 september 2007
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