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Verkehrssicherheitsarbeit
für Österreich

VERSA
*Working for traffic safety for
Austria*

Federal Office of Transport
Federal Accident Investigation Bureau
Trauzlgasse 1
1210 Vienna
Austria
Tel.: +43/664/818 90 96
E-mail: peter.urbanek@bmvit.gv.at
Web: <http://versa.bmvit.gv.at>

**BUNDESANSTALT FÜR VERKEHR
(FEDERAL OFFICE OF TRANS-
PORT)**

**Unfalluntersuchungsstelle des Bundes
(Federal Accident Investigation Bu-
reau) Bereich Schienenverkehr (Rail
Transport Section)**

ANNUAL REPORT 2009

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1. General

The Austrian Accident Investigation Bureau has a multi-modal structure and has separate sections devoted to aviation, rail transport, shipping and cable cars.

From an organisational point of view, the Austrian Accident Investigation Bureau is part of the Federal Office of Transport. The Federal Office of Transport is an agency within the Austrian Federal Ministry for Transport, Innovation and Technology.

2. Legal framework (Rail Transport Section)

The legal framework for the investigation of occurrences in the Rail Transport Section is as follows:

1. Directive 2004/49/EC ('European Railway Safety Directive')
2. Unfalluntersuchungsgesetz (accident investigation law) BGBl. (Bundesgesetzblatt = Federal Gazette I, No 123, 2005)
3. Railway notification ordinance (BGBl. II, No 279, 2006)
4. Eisenbahngesetz (Railway Act) (version contained in BGBl. I, No 125, 2006)

3. Remit of the Austrian Accident Investigation Bureau

The central remit is to investigate occurrences by conducting an expert enquiry, determine the cause and, if necessary, draw up safety recommendations in the form of suggestions for improving railway safety. These investigations are not intended to establish guilt or liability.

4. Characteristics of investigations of occurrences

Reporting

The railway companies concerned have an obligation to report occurrences. The occurrences to be reported and the timing and form of the report are set out in the notification ordinance.

Initiation of an investigation

An investigation always begins with the report of an occurrence; however, it should be noted that an investigation is not initiated for every report. The decision as to whether to initiate an investigation depends on the extent to which the cause of the occurrence is clear. Where an investigation is initiated, it is necessary to specify whether on-site fact-finding will be required for this investigation.

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Investigation

All investigations have to be carried out immediately and in a straightforward and appropriate manner. In this connection it should be noted that the investigation process is not public and the personnel conducting the investigation have a duty of confidentiality. The powers of the investigating personnel in relation to on-site investigations are set out in the Accident Investigation Act.

Investigation report

Every investigation is concluded with an investigation report, which is distributed to the appropriate parties for comment prior to publication. The final investigation report has to be published and must contain, among other items, details of the occurrence, the modes of transportation involved, the circumstances that contributed to the accident, the investigations carried out and their results, and conclusions as to the cause. The final investigation reports are published on the website of the Federal Office of Transport (<http://versa.bmvit.gv.at>).

Safety recommendations

Safety recommendations are drawn up on the basis of the results of the investigation and take the form of suggestions as to how to improve transport safety. These are directed at those offices able to implement the recommendations in the form of suitable measures. Whether and to what extent safety recommendations once issued are implemented falls within the responsibility of those directly concerned.

1. Activities in 2009

General

In 2009, the rail transport section of the Austrian Accident Investigation Bureau dealt with a reduced number of occurrences compared with 2008.

	2008	2009
Total number of occurrences	1589	1444
of which accidents	1177	989
of which incidents	412	455

This change is partly due to the adoption of particular safety recommendations by the railway undertakings, but also to the set of preventative measures to improve traffic safety.

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In the past year **16 investigations were carried out on site** as well as **36 secondary investigations**. On top of this a number of core themes were set, and these are being continued in 2010 on the basis of developing trends. These core themes include, in particular, occurrences involving rail vehicles (wheelsets, loads), occurrences at level crossings, as well as occurrences in connection with work in the danger area around the track.

Following the incident at Viareggio (Italy) a task force was set up by the European Commission with the remit to suggest measures to prevent accidents in connection with technical problems to do with the running gear of freight wagons (e.g. wheelsets). The Austrian Accident Investigation Bureau is an accredited member of this European Working Group.

On-site investigations

Date	Incident
18.02.2009	U2 collision with buffers in Stadion station
26.03.2009	Collision of Z21023 with Z48007 in Kritzendorf station
08.04.2009	Derailment of Z41186 between Neufeld an der Leitha station and Ebenfurth station
09.04.2009	Derailment of Z45904 in St. Peter-Seitenstetten station
30.05.2009	Power failure in the OMV branch line, Schwechat
03.07.2009	Derailment of Z3225 in Sattledt station
13.07.2009	Collision of Z7637 with shunting movement on the east side of Vienna South station
25.07.2009	Derailment of Z48286 near Villach Seebach halt
01.09.2009	Derailment of Z49581 in Ebenfurth station
10.09.2009	Collision of Z26471 with works train in Vienna Matzleinsdorf station
19.09.2009	Derailment of Z47022 between Semmering and Breitenstein stations
28.10.2009	Derailment of Z47046 in Süßenbrunn station
25.11.2009	Derailment of Z96905 in Gratwein-Gratkorn station

On site investigations (occurrences at level crossings)

Date	Incident
15.01.2009	Visit to the scene of the incident on the level crossing at Bad Fischau-Brunn station

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05.05.2009	Collision of Z3309 with a lorry on the level crossing at Piesendorf station
23.05.2009	Collision of Z7250 with a car on the level crossing in Pirawarth station

Further investigations

Date	Incident
20.01.2009	Fire on motive power unit 2068 in Dornbirn station
27.01.2009	Collision of Z2970 with Z2720 in Tauchen-Schaueregg Station
02.02.2009	Collision of Z78402 with shunting movement in Feldkirch Station
05.02.2009	Collision of a shunting movement with a lorry on a level crossing in Ebensee station
02.03.2009	Derailment of Z2101 between Imfritz station and Hötzelsdorf-Geras station
04.03.2009	Collision of Z85609 with works equipment in Himberg station
04.03.2009	Signal release for Z28401 in Vienna Hütteldorf station without preconditions
01.04.2009	Endangering of staff at Rabensburg halt
29.04.2009	Technical examination of vehicles after a derailment in Germany
04.06.2009	Injury of a member of staff in Ried station in the inner circle
10.06.2009	Collision of Z54754 with building vehicle between Knittelfeld and Zeltweg stations
22.06.2009	Unauthorised passing of signal at danger in Jedlersdorf station
22.06.2009	Run away of vehicles in Innsbruck freight yard
22.06.2009	Fire on vehicle in Z247
24.06.2009	Leakage of dangerous goods in Sulzau station
25.06.2009	Unauthorised passing of signal at danger in Förderlach station
29.06.2009	Defective line test Z6829 in Ober Grafendorf station
30.06.2009	Shunting collision in Villach station
05.07.2009	Dragging brakes on Z52446 (RoLa) between junction Innsbruck 1 and crossover Innsbruck 2
05.07.2009	Collision of Z53336 with works train between junction Innsbruck 1 and crossover Innsbruck 2
14.07.2009	Derailment of a shunting movement in Innsbruck Westbahnhof station
16.07.2009	Dragging brakes on Z43850 (RoLa) between junction Fritzens-Wattens 2 and crossover Innsbruck 1
18.07.2009	Signal passed at danger by Z767 in Hallwang-Elixhausen station
31.07.2009	Un-protected level crossing between Peggau-Deutschfeistritz and Gratwein-Gratkorn stations
09.09.2009	Power failure in Groß Schwechat station
09.08.2009	Power failure in Salzburg Gnigl station
29.08.2009	Collision of Z48780 with car on level crossing between Bischofshofen station and St. Johann station in Pongau

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15.09.2009	Injury to a member of staff of a track laying firm
17.09.2009	Collision of Z72191 with a car on the level crossing at Wieselburg station
22.09.2009	Collision of a shunting locomotive with a rake of wagons in Hall station in Tirol
23.09.2009	Collision of a shunting locomotive with Z54939 in Linz marshalling yard
25.09.2009	Derailment of Z54999 in Villach Westbahnhof station
26.09.2009	Collision of Z88542 with a dredging shovel between Innsbruck 1 and crossover at Innsbruck 2
28.09.2009	Collision of two shunting movements in Salzburg main station
28.12.2009	Collision of Z2309 with shunting movement in Bernhardsthal station
28.12.2009	Incorrect approach of Z4789 to Graz East station

Safety recommendations

In 2009 a total of 70 safety recommendations were issued.

Reported occurrences (all railways)

Reported occurrences	Number	of which serious accidents
Reported accidents (accidents and incidents)	1444	-
of which reported accidents	989	103
of which reported incidents	455	-

Reported accidents by accident type (all railways)

Accident type	Number	of which serious accidents
Train collision	125	3
Collision during shunting / running on branch lines	128	2
Train derailment	13	-
Derailment during shunting / running on branch lines	140	1
Accidents at railway crossings	167	43
Damage during the transportation of hazardous goods	28	-
Injury / death of persons caused by rail vehicles	67	42
Injury / death of persons caused by other accidents	55	11
Fires / explosions, vehicles	48	1
Fire / explosions, infrastructure	98	-
Suicide / attempted suicide	120	-

Reported incidents by incident type (all railways)

Incidents	Number
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Unauthorised passing of a signal by a train	31
Unauthorised passing of a signal during shunting / running on branch lines	30
Unauthorised entry into occupied sections of track	2
Incorrect entry or exit or signalling	10
Driving without being instructed to do so or without authorisation	25
Rail vehicles rolling away	10
Technical defects on installations and rail vehicles	33
Trains parting	125
Incorrect loading / securing of load	20
Impairment of safe operation as a result of the violation of railway regulations	83
Endangerment of persons during work in the track area by passing trains	5
Failure to secure level crossings	64
Road vehicles entering level crossings in the process of closing	17

Accidents to persons, including suicide - (all railways)

	Deaths	Seriously injured	Minor injuries
Networked railways	128	67	105
Non-networked railways	2	5	21
Connecting railways	2	1	2
Inner-city local transport	3	7	28
Total	135	80	156

Accidents to persons by category of person (all railways)

	Deaths	Serious injuries	Minor injuries
Passengers	1	15	79
Employees	-	11	18
Users of level crossings	14	30	35
Other persons	2	7	12
Unauthorised persons	21	9	10
Suicide / attempted suicide	97	8	2
Total	135	80	156

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Reported occurrences (network railways)

Reported occurrences	Number	of which serious accidents
Reported occurrences (accidents and incidents)	1162	-
of which reported accidents	795	88
of which reported incidents	367	-

Reported accidents by type of accident (networked railways)

Type of accident	Number	of which serious accidents
Train collision	124	3
Collision during shunting / running on branch lines	92	2
Train derailment	12	-
Derailment during shunting / running on branch lines	83	1
Accidents at level crossings	133	36
Damage during the transportation of hazardous goods	28	-
Injury / death of persons caused by rail vehicles	57	37
Injury / death of persons caused by other accidents	29	8
Fires / explosions, vehicles	35	1
Fire / explosions, infrastructure	92	-
Suicide / attempted suicide	110	-

Reported incidents by incident type (networked railways)

Incidents	Number
Unauthorised passing of a signal by a train	25
Unauthorised passing of a signal during shunting / running on branch lines	29
Unauthorised entry into occupied sections of track	1
Incorrect entering or leaving, incorrect signalling	8
Driving without being instructed to do so or without authorisation	27
Rail vehicles rolling away	8
Technical defects on installations and rail vehicles	23
Trains parting	125
Incorrect loading / securing of load	20
Impairment of safe operation as a result of the violation of railway regulations	17
Endangerment of persons during work in the track area by passing trains	3
Failure to secure level crossings	64
Road vehicles entering railway crossings in the process of closing	17

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Accidents to persons, including suicides, by accident type (networked railways)

	Deaths	Serious injuries	Minor injuries
Train collision	-	3	27
Accidents at level crossings	12	29	34
Injury / death of persons caused by rail vehicles	21	16	18
Injury / death of persons caused by other accidents	1	12	24
Suicide / attempted suicide	94	7	2
Total	128	67	105

Accidents to persons by category of person (networked railways)

	Deaths	Serious injuries	Minor injuries
Passengers	1	9	56
Employees	-	9	13
Users of level crossings	12	27	27
Other persons	2	7	1
Unauthorised persons	19	8	6
Suicide / attempted suicide	94	7	2
Total	128	67	105

Reported occurrences (non-networked railways)

Reported occurrences	Number	of which serious accidents
Reported accidents (accidents and incidents)	39	-
of which reported accidents	31	6
of which reported incidents	8	-

Reported accidents by accident type (non-networked railways)

Type of accident	Number	of which serious accidents
Train collision	1	-
Train derailment	1	-
Derailment during shunting / running on branch lines	2	-
Accidents at level crossings	26	6
Fires / explosions, vehicles	1	-

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Reported incidents by incident type (non-networked railways)

Incidents	Number
Incorrect entry and exit movements, incorrect signalling	2
Driving without being instructed to do so or without authorisation	2
Technical problems on rail vehicles	1
Impairment of safe operation as a result of the violation of railway regulations	3

Accidents to persons, including suicides by type of accident (non-networked railways)

	Deaths	Serious injuries	Minor injuries
Train collision	-	-	1
Accidents at level crossings	2	5	20
Total	2	5	21

Accidents to persons by category of person (non-networked railways)

	Deaths	Serious injuries	Minor injuries
Passengers	-	1	10
Employees	-	2	4
Users of level crossings	2	2	6
Other persons	-	-	1
Total	2	5	21

Reported occurrences (connecting railways)

reported incidents	Number	of which serious accidents
Reported accidents (accidents and disturbances)	109	-
of which reported accidents	102	3
of which reported incidents	7	-

Reported accidents by accident type (connecting railways)

Type of accident	Number	of which serious accidents
Derailment during shunting	55	-
Collision during shunting / running on branch lines	35	-
Accidents at level crossings	8	1
Injury / death of persons caused by other accidents	2	2
Fires / explosions, vehicles	2	-

Reported incidents by incident type (connecting railways)

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Incidents	Number
Unauthorised passing of a signal during shunting / running on branch lines	1
Rail vehicles rolling away	2
Technical problems on rail vehicles	2
Technical problems on equipment / installations	2

Accidents to persons, including suicide, by accident type (connecting railways)

	Deaths	Serious injuries	Minor injuries
Accidents at level crossings	-	1	2
Injury / death of persons caused by other accidents	2	-	-
Total	2	1	2

Accident to persons by category of person (connecting railways)

	Deaths	Serious injuries	Minor injuries
Users of level crossings	-	1	2
Unauthorised persons	2	-	-
Total	2	1	2

Reported occurrences (inner city local transport)

Reported occurrences	Number	of which serious accidents
Reported accidents (accidents and incidents)	134	-
of which reported accidents	61	6
of which reported incidents	73	-

Reported accident by type of accident (inner-city local transport)

Type of accident	Number	of which serious accidents
Derailment during shunting / running on branch lines	1	-
Injury / death of persons caused by rail vehicles	10	5
Injury / death of persons caused by other accidents	24	1
Fires / explosions, vehicles	10	-
Fire / explosions, infrastructure	6	-
Suicide / attempted suicide	10	-

Reported incidents by incident type (inner-city local transport)

Incident type	Number

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Incidents	Number
Unauthorised passing of a signal by a train	6
Unauthorised entry into occupied sections of track	1
Endangerment of persons during work in the track area by passing trains	2
Technical problems on equipment / installations	1
Impairment of safe operation as a result of the violation of railway regulations	63

Accidents to persons, including suicide, by accident type (inner-city local traffic)

	Deaths	Serious injuries	Minor injuries
Injury / death of persons caused by rail vehicles	-	5	5
Injury / death of persons caused by other accidents	-	1	23
Suicide / attempted suicide	3	1	-
Total	3	7	28

Accidents to persons by category of person (inner-city local traffic)

	Deaths	Serious injuries	Minor injuries
Passengers	-	5	13
Employees	-	-	1
Other persons	-	-	10
Unauthorised persons	-	1	4
Suicide / attempted suicide	3	1	-
Total	3	7	28

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6. Analysis

The data sets contained in the statistics database of the Austrian Accident Investigation Bureau make it possible to perform some immediate analyses using different criteria.

However, every analysis requires a precise definition of the data that ultimately should be presented. Thus, for example, a query for the event 'Passing a signal at DANGER' only produces those events that are contained in the 'Ereignis' ('Event') field as the main event. It is perfectly possible that, in a given event, the passing of a signal at DANGER is only contained in the database as the cause of the relevant occurrence.

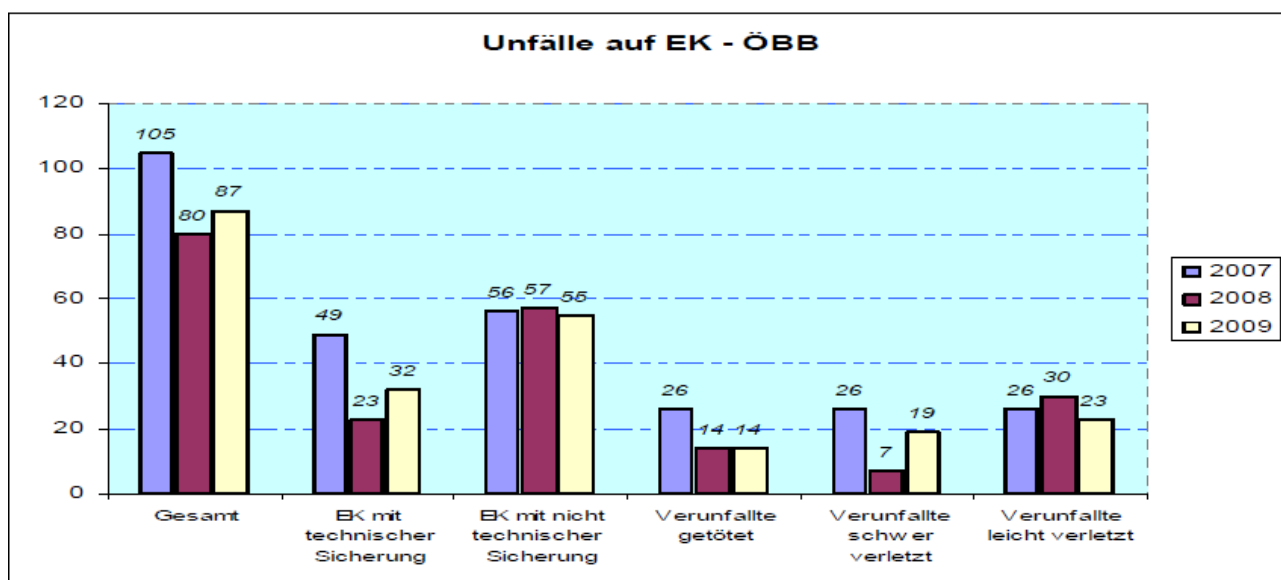
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As a general rule, the highest value occurrence is always shown; there may be occurrences contained in the data input fields 'Folgen' ('Consequences') and 'Ursache' ('Cause') that have a causal relationship to the main event, and a query can be conducted on this basis:

Main event	Consequential events	Cause
Train – train collision	Train derailment	Unauthorised passing of a signal at danger
	Vehicle fire	
	Hazardous goods	

It is possible to analyse the data both in tabular and graphical form.

Accidents on level crossings - ÖBB



Legend

Gesamt	EK mit technischer Sicherung	EK mit nicht technischer Sicherung	Verunfallte getötet	Verunfallte schwer verletzt	Verunfallte leicht verletzt
Total	Level crossings with technical safety measures	Level crossings with non-technical safety measures	Accidents to persons involving fatalities	Accidents to persons involving severe injuries	Accidents to persons involving slight injuries

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List of abbreviations

Abzw	Junction	Bf	Station
BGBI	Österreichisches Bundesgesetzblatt (<i>Austrian Federal Gazette</i>)	EK	Level crossing
Hst	Halt (small station)	LKW	Lorry
Lz	Light locomotive	PKW	Passenger car
ÖBB	Österreichische Bundesbahnen (<i>Austrian Federal Railways</i>)	Tfz	Motive power unit
SKI	Small, heavy wagon (construction service vehicle)	Tfzf	Locomotive driver
Üst	Crossover	Z	Train

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Federal Office of Transport
Head of the Federal Accident Investigation Bureau
Peter Urbanek [signed on original]