

NIB-Austria – Annual report 2016

(in accordance with Article 23 Paragraph 3 of Directive 2004/49/EC)

Austrian Safety Investigation Authority

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# List of abbreviations

|  |  |
| --- | --- |
| Abs. | Paragraph |
| ANSF | Italian railways safety agency |
| AVV | Contract for the use of wagons in rail transport |
| Bf | Station |
| BMI | Federal Ministry of the Interior |
| BMJ | Federal Ministry for Justice |
| BMVIT, bmvit | Federal Ministry of Transport, Innovation and Technology [*Bundesministerium für Verkehr, Innovation und Technologie*] |
| Bst | Place of business |
| CSI | Safety indicators |
| DB | auxiliary staff |
| DV | Service regulations |
| EC | European Community |
| EisbBBV | Railway Construction and Operation Regulation |
| EisbG 1957 | Railway Act 1957 |
| EisbKrV 2012 | Railway Crossing Regulation 2012 |
| EK | Railway crossing |
| EKSA | Railway crossing safety equipment |
| EN | European standard |
| ERA | European Railway Agency |
| ERAIL | European database for incidents in railway traffic |
| ES | entry signal |
| EU | European Union |
| EVU | Railway undertaking [*Eisenbahnverkehrsunternehmen*] |
| Hbf | Central station [*Hauptbahnhof*] |
| IM | Infrastructure Manager [*Eisenbahninfrastrukturunternehmen*] |
| iVm | in Verbindung mit (in relation to) |
| NSA | National Safety Authority |
| ÖBB | Austrian Federal Railways [*Österreichische Bundesbahnen*] |
| QM system | Quality management system |
| RCA | Rail Cargo Austria (EVU) |
| RIC | Agreement on the exchange and use of freight cars between rail transport companies |
| RU | Railway Undertaking |
| RJ | Railjet |
| SES | Railway Undertaking |
| StLB | Steiermärkische Landesbahnen (Styrian Provincial Railways) |
| StVO | Road traffic regulations |
| SUB | Federal Safety Investigation Authority |
| TF | Task Force |
| Tfz | Traction unit |
| UIC | International Union of Railways |
| UUG 2005 | Accident Investigation Act (Unfalluntersuchungsgesetz) |
| Vstu | Unmanned station (Verkehrsstelle unbesetzt) |
| Z | Train |
| ZSB | Additional provisions for signalling and operation regulations |

# Introduction

Traffic safety measures are an ethical imperative and should be assessed as economically successful. According to the international standard for accident analysis, as well as the concepts and strategies of transport safety policy of the European Union and the corresponding Community obligations, accidents and disturbances must be rigorously investigated by an independent organisation in order to learn from mistakes, avoid repeated incidents, and promote the improvement of transport safety.

In Austria, this duty is performed by the Federal Safety Investigation Body (Sicherheitsuntersuchungsstelle des Bundes; SUB) in accordance with the Accident investigation Act (UUG 2005). The SUB is a body of the Federal Ministry for Transport, Innovation and technology (bmvit).

According to Article 23 Paragraph 3 of the Railway Safety Directive 2004/49/EC, the Federal Safety Investigation Authority (SUB) has to prepare a comprehensive report on its activities for each previous year and publish it until 30 September.

This safety report for 2016 contains the key facts and figures regarding the investigation activities of the SUB in the Rail Sector in 2016.

For further information, please contact the staff at the SUB or consult the bmvit webpage ([http://www.bmvit.gv.at](https://www.bmvit.gv.at/)).

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# Executive Summary

General

In accordance with Article 23 Paragraph 3 of the Railway Safety Directive (2004/49/EC), this annual report is based on the figures and data provided to the SUB concerning notifiable incidents and those that occurred in the rail sector in the reporting year 2016.

The central task of the SUB is the investigation of accidents and disturbances using a qualified investigation procedure, the determination of possible causes, and if necessary, the development of safety recommendations as proposals for the improvement of traffic safety.

The investigation is not intended to clear culpability or liability; investigation reports are not allowed to contain any statements pertaining to these.

Overview

|  |  |  |
| --- | --- | --- |
|  | Rail | |
| 2015 | 2016 |
| Received reports   * Of which accidents * Of which disturbances | 1957  1179  778 | 2057  1191  866 |
| Total investigations | 15 |  |
| Preliminary procedure   * of which safety investigations launched |  | 32  7 |
| Safety recommendations | 21 | 20 |

Trends

Rail Sector

The number of incidents reported shows a rising trend against the reference period of 2015 in particular as regards reported disturbances. In relation to disturbances, in particular a rise in disturbance types 'Signals passed at danger unauthorised by shunting and auxiliary train movements', 'Movements without order or authorisation' and 'Unauthorised access of railway premises' can be observed.

The number of safety investigations launched in the year 2016 is not fully comparable to the values of the reference period 2015. As of 1 January 2016, 'preliminary procedures' were introduced as a new step in the procedure based on the current QM system. Information on the new step in the procedure can be found under Point 5.4 of the safety report.

Nevertheless, it must be noted that the number of incidents subject to an investigation is generally low. In any case, this development can be attributed to a significant improvement of safety standards in the railway sector.

Achievement of objectives

The findings from safety investigations performed and the resulting measures once more represented an important contribution to the improvement of transport safety in the individual transport sectors in 2016.

Vienna, 24 July 2017



Austrian Safety Investigation Authority

Federal Safety Investigation Authority

## Structure, function, personnel, independence

The Federal Safety Investigation Authority (SUB) is structured multimodally, comprising the Rail, Shipping, Cableway and Civil Aviation Sectors, which makes it possible to achieve synergy and saving effects. These advantages are achieved, for example, in the Rail, Shipping and Cableway Sectors via common transport aspects in the accident investigation, and via a shared reporting office and a central 24-hour on-call service.

The SUB functions in accordance with the requirements of the law of the Union and Austria, it is organisationally independent from any authorities and parties, public and private organisations, whose interests could be in conflict with the tasks of the SUB.

The SUB has been provided with sufficient means to fulfil its tasks independently; it is in the position to either independently conduct a comprehensive safety investigation of incidents, or to oversee a safety investigation.

As of 31 December 2016, the Rail Sector includes the following personnel:

* 1 Head
* 4 Investigators (of whom 2 also responsible for the Cableway and Shipping Sectors)
* 2 investigators in training
* 3 administrative employees (back office, competence centre databases, assistance)

When completing the safety investigations, the investigators are not bound to any instructions by any institutions outside the SUB, subject to Section 3(3) of UUG 2005.

## Legal bases

The international, EU and national regulations cited in the safety report shall always refer to the currently effective version.

### SUB as a whole

* Accident Investigation Act – UUG 2005, BGBl. I No 123/2005 idgF.

### SUB: Rail Sector

* Railway Safety Directive 2004/49/EC, ABl. No L 164 of 30 April 2004
* Railway Safety Directive 2016/798 ABl. No L 138 of 26 May 2016 *Note: This directive replaces Directive 2004/49/EC and has to be transposed into national law until 16 June 2019*
* Railway reporting ordinance, MeldeVO-Eisb 2006, BGBl. II No 279/2006
* Railway Act, EisbG 1957, BGBl. No 60/1957
* Railway Act 2003, BGBl. II No 209/2003
* Railway construction and operation ordinance, EisbBBV, BGBl. II No 398/2008

## Tasks

The central task of the SUB is the investigation of accidents and disturbances using a qualified investigation procedure, the determination of possible causes, and if necessary, the development of safety recommendations as proposals for the improvement of transport safety. The investigation is expressly not intended to clear culpability or liability; investigation reports are not allowed to contain any statements pertaining to these.

## Responsibilities

In accordance with Section 5 Paragraph 1 Point 1 of UUG 2005, railways include the operation of main and secondary railway lines, connection lines, tramway lines, on which rail vehicles move exclusively over their own track (e.g. metro in Vienna), including the operation of rail vehicles on these railways in accordance with Sections 4, 5 and 7 of the Railway Act of 1957.

For the purposes of presentation, the statistics are divided into:

* All railway types
* Connected railways
* Non-connected railways
* Connecting railways
* Underground railways

## Main features of the safety investigation

### General

Subject to Section 5 UUG 2005, incidents include accidents and severe accidents, disturbances and severe disturbances; causes include actions, omissions, events or any combination of these factors that lead to an incident.

### Report

Subject to the provisions of Section 19c of the Railway Act of 1957, the railway undertaking has the obligation to report to the SUB without delay any accidents and disturbances that occur during the operation of a public railway or connecting railway. The scope and the form of the reports by railway operators are to be determined by regulations.

The scope and form of reports of accidents and disturbances occurring during the operation of a railway are governed by the effective Reporting Ordinance of 2006.

Furthermore, for the SUB, there is an additional obligation to report to ERA in cases where a safety investigation was initiated for an incident.

### Initiation of a safety investigation

A safety investigation is generally initiated with the report of an incident; what is decisive, however, is that not every report warrants a comprehensive investigation procedure. The nature and scope of a safety investigation should rather follow the severity of the incident and particularly the new findings that could improve transport safety and are expected to be found.

Subject to Section 9 of UUG 2005, the SUB assigns an investigator to each single safety investigation who will assume the responsibility for the organisation, completion, and supervision of the respective investigation.

Subject to Section 9 of UUG 2005, all serious accidents must be investigated. Furthermore, the safety investigation of incidents that are not serious accidents must always be conducted if it is to be expected that a safety investigation can lead to new findings that can help avoid future incidents.

### Preliminary procedure

As of 1 January 2016, 'preliminary procedure' was introduced as a new step in the procedure based on the QM system in the interest of a transparent representation of the activities of the SUB and at the same time the procedure 'Further investigations' was cancelled without replacement.

If further information is required for a decision on the initiation of a safety investigation, the preliminary procedure is launched. If after the examination of available information the decision is made not to initiate a safety investigation, this is documented in the preliminary procedure together with the corresponding reasoning. If after the examination of available information the decision is made to initiate a safety investigation, this is also documented in the preliminary procedure with the note 'Safety investigation initiated'.

Initiated and then later concluded preliminary procedures are published on the website of bmvit ([https://www.bmvit.gv.at](https://www.bmvit.gv.at/)).

### Safety investigation

Each safety investigation is to be conducted immediately, and in the simplest possible and expedient manner, whereby it has to be taken into account that the investigation procedure is not public, and that the investigators are bound by their obligation of confidentiality. The scope of authority of the investigator in relation to conducting safety investigations is stipulated in Section 11 of UUG 2005.

### Investigation report

Each safety investigation is to be finalised with an investigation report, which must be submitted before the publication of a commenting procedure. The investigation report must in its contents correspond with the nature and seriousness of the incident, referring exclusively to the objective of the corresponding safety investigation. Among other incident details, the investigation report must contain data about the vehicles involved, the circumstances that led to the accident, the investigation conducted and its conclusions, as well as the determination of possible causes, and, if any, safety recommendations.

The investigation reports are not intended **to clear legal issues and may in particular contain no statements concerning culpability and reliability issues**.

All investigation reports are published on the website of bmvit ([https://www.bmvit.gv.at](https://www.bmvit.gv.at/)).

### Safety recommendations

Based on the results of the investigation, safety recommendations, if any, should be developed as proposals for improvement of traffic safety, to be submitted to the organisations that can implement these as appropriate measures. It is the responsibility of the parties specifically affected by the given safety recommendations, whether to implement these safety recommendations or not, and to what extent.

For the Rail Sector, the Railway Safety Directive (2004/49/EC) stipulates that the SUB must be notified at least annually of any measures taken or planned in response to the safety recommendations made.

## Cooperation (authorities and other organisations)

### bmvit

Periodically and in relevant cases, comprehensive exchange of information and opinions takes place with the competent specialist departments of BMVIT.

### Judicial authority (prosecutor’s office)

The cooperation with judicial authorities (prosecutor’s office) takes place on the basis of agreements that were put into effect by the resolution of the Federal Ministry of Justice on 7 August 2012. When investigating the facts of the case, it must be made sure that both the responsible prosecutor and the investigator assigned by the SUB can fulfil their legally stipulated tasks without limitations on the basis of the principle of mutual cooperation and consideration. The safeguarding and safekeeping of evidence as well as possible use of evidence for ongoing investigations must take place in accordance with the agreement achieved via mutual consultations.

### Security and executive authorities

If necessary, the investigator assigned by the SUB is supported by security and executive authorities when investigating the facts of the case — especially at the site of the accident. For major damage events, the cooperation is regulated by the “Guideline for identifying disaster victims after major damage events (DVI Disaster Victim Identification)” issued by the Federal Ministry for the Interior and the published DVI manual.

SUB employees must be periodically trained by specialists of the Ministry for the Interior with a focus on securing evidence and interview techniques. Furthermore, meetings should take place —also periodically— with regional criminal investigation offices for comprehensive exchange of information and opinion.

### Undertakings

For the purposes of investigating the circumstances, the investigator assigned by the SUB must be supported by the undertakings involved in the incident, particularly by providing data necessary for the investigation and relevant documents.

### Experts

Certain parts of investigations cannot be completed using SUB’s own resources. These specifically include the investigations of components or materials that require specialised instruments or devices, or standardised measurement and investigation procedures: e.g. metallographic investigation of components with a scanning electron microscope.

SUB works with a large number of experts (expert bureaus, technical schools, universities), so that specialist assessments can be ordered if needed by the investigators.

## International relations

### NIB-Network

The Rail Sector represents Austria in the network of the European safety and investigation bodies (NIB network) of the ERA.

The tasks of the NIB network include, aside from comprehensive exchange of information and opinion, specifically the development of methods for unified Europe-wide investigation of incidents that take into account the technical and scientific progress. Specific tasks are handled in specially established task forces. As a rule, three meetings of the NIB network take place per year.

### Task forces of the NIB network

The Rail Sector also represents Austria in the following task forces established by the NIB network of the ERA:

#### TF ERAIL

Further development of the European ERAIL database for incidents in the railway traffic area was provisionally suspended on the level of ERA. Currently, no meetings of TF ERAIL have been planned.

#### TF HUMAN FACTOR

The human factor is of very high importance when investigating incidents. TF HUMAN FACTOR develops unified European-wide principles for assessing the human factor in incidents. Two meetings take place per calendar year. The completion of the activities was initially planned for 2016; however, due to the large scope of the matters concerned, it was postponed until 2017. At European level, a pool of experts with specialists in the Human Factor area was established, and it can be accessed by all European safety and accident investigation bodies.

#### TF PEER REVIEW

In accordance with the provisions of Article 22 Paragraph 7 of Regulation (EU) 2016/796 (revised version of Directive 2004/49/EC), European safety and accident investigation bodies have the obligation to engage in an active exchange of opinions and experience. European safety and accident investigation bodies also have to develop a programme for mutual review (peer review). This programme is intended to monitor the efficiency and independence of European safety and accident investigation bodies.

The TF PEER REVIEW was created for the purpose of developing this programme. Two meetings per calendar year are planned. The work of the TF is planned to be concluded in 2018; the first mutual reviews based on this programme should begin in 2018.

### Cross-border exchange of information

There is constant exchange of information and opinion among the European safety and accident investigation bodies. Furthermore, in the Rail Sector, there are regular meetings of the European safety and accident investigation bodies (e.g. with Germany, Switzerland, Czech Republic, Hungary, Luxembourg and Estonia).

### Cross-border safety investigation

Cross-border safety investigations in the Rail Sector take place in cooperation with the safety and accident investigation bodies of the states concerned. The respective safety and accident investigation body of the other state may be invited as an on-site observer for the investigation, or conduct an investigation for the incident in question in their own country, to provide the obtained information for study.

## Statistics

### National database

The Rail Sector has a database recording all the reported incidents. The datasets contained in the database make it possible to conduct relevant assessments based on various criteria at any time.

Every reported incident is assigned a single category (main incident) in order to avoid duplicate registration. Consequential events or causes related to a main incident can be entered in the entry fields 'Consequences' and 'Causes', and can later be queried.

An exact definition of what data should be included in the query is required for each evaluation. So for example a query for 'Signals passed at danger' incidents would only show incidents, which were entered as main incidents in the 'Incident' field. It is however possible that the passing of a signal at danger is only recorded as a cause for the given incident.

|  |  |  |
| --- | --- | --- |
| Main incident | Consequential events | Cause |
| Collision of a train with another train | Train derailment | Unauthorised movement in violation of the signal |
| Vehicle fire |
| Dangerous goods |

The work on and the development of the planned new database had to be put on hold until certain issues related to technical implementation are resolved (incorporation into the hardware and software landscape at the bmvit). It is planned to clear these issues in the course of the year 2017.

From 2017, there will be a fundamental change in the classification of incoming reports of incidents. This means that every incoming report of an incident – independent of the evaluation given by the reporting party in the report – will contain a disturbance and will be classified as such. It has to be checked independent of the classification as disturbance whether it is necessary to also classify the event as an accident. The reporting party will also be statistically recorded for each incoming report.

### ERAIL database

The operation of this database began in mid-2012, it is used for obligatory Europe-wide recording of all Rail Sector incidents investigated by European safety and accident investigation authorities. The concept of the ERAIL database is based on the ECCAIRS database, which for several years was responsible for recording incidents in the Civil Aviation Sector.

In the ERAIL database, criteria for queries can be set individually, and statistical assessments can be conducted.

Further development of the ERAIL database was provisionally suspended on the level of ERA. The currently planned further steps include, among other things, a comprehensive restructuring of the database.

### Definition of 'Accident / serious accident / significant accident'

In accordance with Directive 2004/49/EC in conjunction with the provisions of UUG 2005, every undesirable or unintentional sudden event with consequences has to be considered an accident. Accidents are in particular divided into collisions, derailments and accidents in railway crossings. Serious accidents are defined as train collisions or train derailments with at least one fatality or at least five seriously injured persons, or with considerable damage to the trains, the infrastructure or the environment, as well as other comparable accidents with an obvious impact on the railway safety regulation or the safety management. Considerable damage means that the immediate costs estimated by the safety or accident investigation authority at least amount to a total of EUR 2 million.

For serious accidents, there is always an obligation to conduct a safety investigation, in accordance with the provisions of Article 19 Paragraph 1 of the Railway Safety Directive (2004/49/EC).

In Directive 2009/149/EC “Common Safety Indicators and common methods to calculate accident costs” the term “significant accident” is used. Significant accidents include any accidents that involve at least one moving rail vehicle, at least one fatality or one seriously injured person, or considerable material damage to vehicles, rails, other equipment or the environment, or material damage occurring due to significant disturbances in operation. Accidents in workshops, warehouses or depots are excluded here. Material damage to vehicles, rails, other equipment or the environment is viewed as such if it equals or exceeds EUR 150 000.

#### Definition of 'train collision'

The following definitions apply to collisions involving trains:

A **collision involving a train and a rail vehicle** is the collision of the nose of a train with the nose or rear of another train, another rail vehicle or a shunting unit (shunt) or a lateral collision of a part of a train with a part of another train, another rail vehicle or a shunting unit (shunt).

A **collision of a train with an obstacle within the clearance gauge** is a collision of a part of a train with solid objects or objects temporarily positioned on the track or by its side (with the exception of objects at railway crossings, which were left behind by a crossing vehicle or a user), including collisions with catenaries.

#### Definition of 'derailment'

A **derailment** is an event, during which at least one wheel of the train loses contact with the rails.

#### Definition of an 'accident at railway crossings/level crossings'

An 'accident at railway crossings/level crossings' is an event in the defined crossing area between the rails and the road involving a rail vehicle, one or several vehicles crossing the tracks, other crossing users such as pedestrians or other objects temporarily positioned on the track or by its side and those left behind by a crossing vehicle or a user.

## Quality management (QM) system

With the introduction of a certified QM system at the SUB, it is ensured that the standardisation of processes enables the activities of all employees to be conducted to the same standards, without redundancies or unnecessary additional effort and costs.

The defined quality indicators make it possible to determine the deficiencies affecting the entire system and to define the corresponding improvements.

An important part of the QM system in the Rail Sector is, among other things, the registration of the costs of a safety investigation. The “cost and resource planning” tool allows determining the actual costs of a safety investigation according to a standardised procedure, at the same time offering the option of conducting “target vs. actual” comparisons.



## Online presence of the SUB:

In order to ensure the unified online presence of the bmvit, it was decided that the information on SUB previously published on the website of the Federal Institute for Transport should be integrated into the website of the bmvit.

The data published by the SUB is available on the bmvit website under the following address:

<https://www.bmvit.gv.at/verkehr/sub/index.html>

## Activities in 2016

### Received reports

|  |  |  |
| --- | --- | --- |
|  | 2015 | 2016 |
| Total number of incidents | 1957 | 2057 |
| * Of which accidents | 1179 | 1191 |
| * Of which disturbances | 749 | 866 |
| * Of which incidents not regarded as such under the MeldeVO-Eisb 2006\*) | 29 | - |

\*) Events not subject to a reporting obligation according to MeldeVO-Eisb 2006 and are not recording statistically, yet were reported.

### Total investigations

|  |  |  |
| --- | --- | --- |
|  | 2015 | 2016 |
| On-site investigations | 4 |  |
| Off-site investigations / Ongoing investigations | 11 |  |
| Preliminary procedure |  | 32 |
| * Of which initiated safety investigations |  | 7 |

\*) As of 1 January 2016, 'preliminary procedures' were introduced in the Rail Sector as a new step in the procedure based on the current QM system (see Point 5.4).

### Preliminary procedures (details)

|  |  |
| --- | --- |
| Date | Incident |
| 12 January 2016 | Derailment of Z 54081 at Wels main station |
| 15 January 2016 | Injury of one person at Wels main station |
| 28 January 2016 | Injury of one person at Bad Schallerbach-Wallern station |
| 29 February 2016 | Derailment of a shunting train at St. Veit an der Glan station |
| 28 March 2016 | Derailment of Z 29266 at Wiener Neustadt station |
| 30 March 2016 | Collision of Z 7208 with a cyclist on a crossing between the Purgstall and Scheibbs stations |
| 16 April 2016 | Collision of Z 91208 with a shunting train at Wien central shunting station |
| 25 April 2016 | Collision of Z 88736 with a car on a crossing between the Wolfsberg and Frantschach-St. Gertraud stations |
| 26 April 2016 | Signal passed at danger unauthorised by Z 5751 at Wolfurt station |
| 25 May 2016 | Derailment of Z 3264 at the Vöcklabruck station |
| 31 May 2016 | Loss of a part of the train RJ 160 at St. Pölten main station |
| 11 June 2016 | Derailment of Z 1063 at the Fulpmes station |
| 17 June 2016 | Caternary disturbance between Unter Purkersdorf station and Hadersdorf junction |
| 28 June 2016 | Danger to persons at the crossing near Leobendorf-Burg Kreuzenstein stop |
| 30 June 2016 | Fire of Z 1867 between Abfaltersbach and Thal stations |
| 2 July 2016 | Derailment of Z 49580 at the Wartberg station |
| 5 July 2016 | Collision of Z 3200 with a truck on a crossing between Sattledt station and Unterhart stop |
| 26 July 2016 | Collision of Z 91344 with a truck on a crossing between the Zellerndorf and Haugsdorf stations |
| 28 July 2016 | Collision of Z 28 with a car on a crossing at Mittersill station |
| 7 August 2016 | Collision of Z 4713 with a cyclist on a crossing near Jennersdorf station |
| 27 August 2016 | Derailment of Z 90051 at Graz main station |
| 12 September 2016 | Derailment of Z 91001 between the Peggau-Deutschfeistritz and Frohnleiten stations |
| 23 September 2016 | Collision of ICE 90 with vehicle parts in the Stiefschweiffeld tunnel |
| 19 October 2016 | Collision of a freely rolling wagon with Z 7012 at Wieselburg an der Erlauf station |
| 21 October 2016 | Collision of Z 3171 with a moped at a crossing between the Ottensheim and Rottenegg stations |
| 28 October 2016 | Derailment of Z 3206 at the Steinhaus station |
| 17 November 2016 | Collision of Z 7033 with a car in a crossing between the Purgstall and Wieselburg an der Erlauf stations |
| 29 November 2016 | Collision of Z 25055 with a freely rolling wagon at Wien Hütteldorf station |
| 2 December 2016 | Collision of two trains of the U4 underground line at the Braunschweiggasse stop |
| 20 December 2016 | Collision of Z 159 with a car at the crossing between the Aschau and Erlach stations |
| 22 December 2016 | Derailment of Z 48141 at the Gramatneusiedl station |
| 26 December 2016 | Derailment of Z 48600 at the Spittal am Millstättersee station |

### Safety investigations initiated during a preliminary procedure (details)

|  |  |
| --- | --- |
| Date | Incident |
| 29 March 2016 | Derailment of Z 29266 at Wiener Neustadt station |
| 31 May 2016 | Loss of a part of the train RJ 160 at St. Pölten main station |
| 5 July 2016 | Collision of Z 3200 with a truck on a crossing between Sattledt station and Unterhart stop |
| 23 September 2016 | Collision of ICE 90 with vehicle parts in the Stiefschweiffeld tunnel |
| 19 October 2016 | Collision of a freely rolling wagon with Z 7012 at Wieselburg an der Erlauf station |
| 29 November 2016 | Collision of Z 25055 with a freely rolling wagon at Wien Hütteldorf station |
| 26 December 2016 | Derailment of Z 48600 at the Spittal am Millstättersee station |

### Safety recommendations (announced in 2016)

See Annex 1.

## Incident statistics 2016

### Reported incidents

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Total reports | 2057 | 1856 | 20 | 81 | 100 |
| * Of which accidents | 1191 | 1050 | 17 | 75 | 49 |
| * Of which disturbances | 866 | 806 | 3 | 6 | 51 |

### Reported accidents by the type of accident

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Train collisions | 468 | 466 | - | - | 2 |
| Collision involving switching/auxiliary rolling stock | 102 | 70 | - | 32 | - |
| Train derailment | 16 | 15 | 1 | - | - |
| Derailment involving switching/auxiliary rolling stock | 94 | 64 | - | 28 | 2 |
| Accidents on railway crossings | 125 | 105 | 14 | 6 | - |
| Damage cases when carrying hazardous goods | 23 | 22 | - | 1 | - |
| Injury/death of persons caused by rail vehicles | 90 | 74 | 2 | 3 | 11 |
| Injury/death of persons caused by other accidents | 30 | 25 | - | 4 | 1 |
| Fires/explosions of vehicles | 33 | 28 | - | - | 5 |
| Fires/explosions of infrastructure | 76 | 64 | - | 1 | 11 |
| Other accidents | 12 | 9 | - | - | 3 |
| Suicides / suicide attempts | 122 | 108 | - | - | 14 |

### Reported serious accidents by the type of accident (Directive 2004/49/EC, UUG 2005)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Train collisions | 2 | 2 | - | - | - |
| Collision involving switching/auxiliary rolling stock | - | - | - | - | - |
| Train derailment | 2 | 2 | - | - | - |
| Derailment involving switching/auxiliary rolling stock | 1 | 1 | - | - | - |
| Accidents on railway crossings | 16 | 14 | 2 | - | - |
| Injury/death of persons caused by rail vehicles | 17 | 17 | - | - | - |
| Injury/death of persons caused by other accidents | 1 | 1 | - | - | - |

### Reported significant accidents by the type of accident (Directive 2009/149/EC, CSI)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Train collisions | 7 | 7 | - | - | - |
| Collision involving switching/auxiliary rolling stock | 1 | 1 | - | - | - |
| Train derailment | 5 | 5 | - | - | - |
| Derailment involving switching/auxiliary rolling stock | 3 | 2 | - | 1 | - |
| Accidents on railway crossings | 34 | 31 | 3 | - | - |
| Injury/death of persons caused by rail vehicles | 44 | 39 | - | - | 5 |
| Injury/death of persons caused by other accidents | 8 | 6 | - | 2 | - |
| Fires/explosions of vehicles | - | - | - | - | - |
| Other accidents | 1 | 1 | - | - | - |

### Reported disturbances by the type of disturbance

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Unauthorised movement in violation of the signal, trains | 60 | 60 | - | - | - |
| Unauthorised movement in violation of the signal, switching/auxiliary rolling stock | 55 | 55 | - | - | - |
| Unauthorised admission of moving vehicles in occupied rail sections | 10 | 10 | - | - | - |
| Faulty driving in/out, misrouting | 3 | 3 | - | - | - |
| Driving without order or driving permission | 34 | 33 | 1 | - | - |
| Rolling away of rail vehicles | 11 | 9 | - | 2 | - |
| Technical faults in installations and rail vehicles | 220 | 208 | 1 | 2 | 9 |
| Train separations | 65 | 63 | - | 2 | - |
| Faulty loading / load securing | 106 | 106 | - | - | - |
| Endangerment of safe operation by violating train traffic laws | 116 | 114 | - | - | 2 |
| Lack of safeguards at railway crossings | 41 | 41 | - | - | - |
| Near-collisions at railway crossings | 10 | 10 | - | - | - |
| Road vehicles driving into closing railway crossings | 2 | 2 | - | - | - |
| Unauthorised entering of railway installations | 45 | 6 | - | - | 39 |
| Brake malfunctions, trains | 59 | 58 | - | - | 1 |
| Danger from trains to persons working on/around the tracks | 2 | 2 |  |  |  |
| Other malfunction | 27 | 26 | 1 | - | - |

### Persons involved in an accident (excluding suicides / suicide attempts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Persons killed | 34 | 33 | 1 | - | - |
| Persons with serious injuries | 69 | 59 | 1 | 4 | 5 |
| Persons with minor injuries | 131 | 114 | 3 | 5 | 9 |

### Persons killed by the type of accident (excluding suicide attempts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Train collisions | - | - | - | - | - |
| Train derailment | - | - | - | - | - |
| Accidents on railway crossings | 15 | 14 | 1 | - | - |
| Injury/death of persons caused by rail vehicles | 18 | 18 | - | - | - |
| Injury/death of persons caused by other accidents | 1 | 1 | - | - | - |

### Persons with serious injuries by the type of accident (excluding suicide attempts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Train collisions | 5 | 5 | - | - | - |
| Train derailment | 1 | 1 | - | - | - |
| Accidents on railway crossings | 25 | 24 | 1 | - | - |
| Injury/death of persons caused by rail vehicles | 31 | 24 | - | 2 | 5 |
| Injury/death of persons caused by other accidents | 7 | 5 | - | 2 | - |

### Persons with minor injuries by the type of accident (excluding suicide attempts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Train collisions | 15 | 15 | - | - | - |
| Train derailment | - | - | - | - | - |
| Accidents on railway crossings | 46 | 44 | 2 | - | - |
| Injury/death of persons caused by rail vehicles | 47 | 37 | 1 | 3 | 6 |
| Injury/death of persons caused by other accidents | 23 | 18 | - | 2 | 3 |

### Persons killed by categories (excluding suicide attempts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Travellers | - | - | - | - | - |
| Employees | 1 | 1 | - | - | - |
| Users of railway crossings | 15 | 14 | 1 | - | - |
| Other persons | 5 | 5 | - | - | - |
| Unauthorised persons | 13 | 13 | - | - | - |

### Persons with serious injuries by categories (excluding suicide attempts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Travellers | 18 | 18 | - | - | - |
| Employees | 10 | 7 | - | 3 | - |
| Users of railway crossings | 25 | 24 | 1 | - | - |
| Other persons | 6 | 3 | - | 1 | 2 |
| Unauthorised persons | 10 | 7 | - | - | 3 |

### Persons with minor injuries by categories (excluding suicide attempts)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Travellers | 73 | 66 | 1 | - | 6 |
| Employees | 14 | 9 | - | 5 | - |
| Users of railway crossings | 38 | 36 | 2 | - | - |
| Other persons | 6 | 3 | - | - | 3 |
| Unauthorised persons | - | - | - | - | - |

### Suicides and suicide attempts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Number | | | | |
| All railway types | Connected railways | Non-connected railways | Connecting railways | Underground railways |
| Killed as a result of suicide | 108 | 99 | - | - | 9 |
| Suicide attempts — persons injured | 12 | 8 | - | - | 4 |
| Suicide attempts — no injuries | 2 | 2 | - | - | - |

### Accidents on railway crossings

|  |  |
| --- | --- |
|  | Number |
| Total accidents | 125 |
| * of which with technical protection (traffic lights, barrier system) | 49 |
| * of which with non-technical protection (visual, acoustic signals) | 76 |

### Accidents on railway crossings – Persons involved in an accident

|  |  |
| --- | --- |
|  | Number |
| Persons killed (excluding suicide) | 15 |
| Persons with serious injuries | 25 |
| Persons with minor injuries | 46 |

### Accidents on railway crossings – Users

|  |  |
| --- | --- |
|  | Number |
| Cars | 98 |
| Trucks | 8 |
| Busses | 1 |
| Utility/Agricultural vehicles | 4 |
| Two-wheeled motor vehicles | 3 |
| Bicycles | 6 |
| Pedestrians | 5 |

### Number of railway crossings

|  |  |
| --- | --- |
|  | Number |
| Total (excluding non-public railway crossings) | 3891 |
| * of which with technical safeguards (traffic lights, barrier system) | 1925 |
| * of which with non-technical safeguards (visual, audible signals) | 1966 |
| Non-public railway crossings | 1502 |

## Safety recommendations

The order of the safety recommendations is according to the publication date, and not to the date of the incident.

|  |  |
| --- | --- |
| Incident date | Incident |
| 28 March 2016 | Derailment of Z 29266 at Wiener Neustadt main station  A-2016/001 (safety recommendation in accordance with Section 16 Paragraph 2 of the UUG 2005)  It has to be ensured that all traction units of the 4020 series immediately undergo a technical examination for comparable faults in a qualified procedure.  The technical examinations have to be concluded within four weeks from the date of receipt of the safety recommendation.  A report about the technical inspections performed has to be submitted to the NSA. The defects established during the examination also have to be recorded in the report with reference to the given vehicle.  *Measures*  In the period between 31 March 2016 and 2 April 2016 altogether 26 traction units of the 4020 series were examined; defects were identified in 13 of the traction units examined, which were rectified immediately. The complete documentation of the examined traction units, including the defects established and the measures taken is available. The documentation e.g. contains a chart illustrating when the affected traction units were examined and when the defects were corrected.  Independent of the immediate measures taken, additional measures were initiated. These involve constructive changes to the suspension elements of the affected compressors, but above all also additional requirements for regular examination of the effectiveness of the constructive changes, and for the examination of the appropriate fastening of the underfloor components. The measures initiated also include more detailed stipulation of maintenance requirements and additional trainings of staff responsible for maintenance and inspection.  The effectiveness of the constructive changes to the suspension elements of the affected compressors was examined by the expert of a civil engineering company. From his opinion, it can be concluded that the changes made to the suspension elements of the compressors represent a reliable constructive solution, which is sufficiently safe. |
| 5 May 2015 | Collision of Z 8762 with Z 8787 at the unmanned station at  Waldstein A-2016/002  It has to be examined, whether the rules, which regulate the behaviour of staff (e.g. work requirements, instructions) should be approved without exception by the supreme railway authority.  *Measures*  Currently, there is no information regarding any initiated or implemented measures. |
| 5 May 2015 | Collision of Z 8762 with Z 8787 at the unmanned station at Waldstein (continued)  A-2016/003  It has to be ensured that activities, which are not directly linked to normal operations, can not be ordered. It has to be noted in this context that in accordance with the provisions of Section 132 Paragraph 8 of the EisBBv, staff employed in transport services are not allowed to use sound and video reception and reproduction equipment during operations for other than occupational purposes.  *Measures*  Conducting phone calls while on service duty is forbidden (except for phone calls absolutely necessary for work). On the one hand, this is stipulated in the relevant operational requirement, and also the instructions dated 2 February 2006 stipulate that conducting private calls on mobile phones while performing service duty is strictly forbidden.  A-2016/004  It has to be ensured that changes or amendments to the current regulations on operations (e.g. update of work instructions) are appropriately updated and communicated.  *Measures*  Currently, there is no information regarding any initiated or implemented measures.  A-2016/005  It has to be ensured that the provisions of MeldeVO-Eisb 2006 in relation to the appropriate reporting of accidents and disturbances to the SUB are observed.  *Measures*  Currently, there is no information regarding any initiated or implemented measures. |
| 31 May 2016 | Loss of a part of the train RJ 160 at St. Pölten main station  A-2016/006  It has to be ensured by way of an appropriate procedure that after work is performed in the underfloor section of railjet models (e.g. water filling, toilet tank draining, and similar), the appropriate closing and locking of the covers to prevent unintentional opening before trips is checked. It also has to be ensured that this inspection is performed by staff trained and authorised in accordance with Section 13 of ZSB 31.  *Measures*  Every site, where Railjet models are filled with water or drained, will apply the four-eyes principle in relation to checking the locking of covers.  New skirt locks were installed in three Railjet models (RJ 25,43,48). These are tested in operation for approx. six months (over 150 000 km). If the trial operation is evaluated positively, all Railjet models will be retrofitted. The new locks are continuously inspected during preventive maintenance.  A-2016/019  In accordance with the provisions of Section 42 Paragraph 8 of ZSB 31, an inspection concept has to be drawn up for the type, scope, location and frequency of technical management of wagons in accordance with Section 42 Paragraph 3 of ZSB 31. It has to be checked whether such inspection concepts are subject to a permit procedure of the authorities.  *Measures*  The safety recommendation is under review as part of a currently running supervisory procedure of the bmvit. |
| 31 May 2016 | Loss of a part of the train RJ 160 at St. Pölten main station (continued)  A-2016/020  In relation to the provisions of ZSB 31 on vehicle inspections, the obligations under Section 63 Paragraph 4 of service regulation DV V3 for train guards and train drivers have to be assessed to establish whether or to what extent these provisions have to be applied. Later it should also be assessed whether for the activities described under Section 63 Paragraph 4 of service regulation DV V3 training in accordance with Section 13 of ZSB 31 is required.  *Measures*  The safety recommendation is under review as part of a currently running supervisory procedure of the bmvit. |
| 15 July 2015 | Collision of Z 35438 with Z 48071 at the Leopoldau station  A-2016/007  For the purpose of planned future rebuilding measures of safety equipment at the Leopoldau station, it is recommended to construct a signal gantry for the ES X005, the Z012 and the Y011.  *Measures*  For the unambiguous identifiability of the signals concerned, the construction of a signal gantry for the entry signals X005, Z012 and Y011 should be completed by 31 December 2018 similar to the one at km 10.137. The signal X005 has to be secured with a 500Hz magnet until 30 April 2017.  A-2016/018  The signals 'Identification' (Kennzeichnung), which may only be installed to announce main signals are no longer clearly recognisable for the ES X005. The three signals installed on the catenary mast are partly very weather-beaten and unrecognisable, and should be replaced during the next inspection.  *Measures*  The signals 'Identification' (Kennzeichnung) were all replaced my the IM. |
| 22 May 2015 | Collision of Z 7028 with a truck on a crossing between the Purgstall and Scheibbs stations  A-2016/008  Checking whether during the annual inspection of the crossing by the IM in accordance with Section 9 Paragraph 1 and applying Section 91 Paragraph 4 of the EisbKrV, all legally required equipment and danger signs should be inspected. If deficiencies are found, the body responsible for road construction and the Road Regulatory Authority (Straßenaufsichtsbehörde) should be informed.  *Measures*  The responsibility for road signs is borne by the body responsible for road construction. In accordance with the provisions of ÖBB DV B 6 (service regulation about securing level crossings) the body responsible for road construction informed if deficiencies are found in relation to road signs. Railway undertakings are also not entitled to order the body responsible for road construction to install road signs. Only the district office has this right as a road authority.  A-2016/009  Examining whether from the time of the establishment of the crossing's non-compliant condition until the reinstatement of the appropriate conditions (e.g. by the body responsible for road construction, ...), the crossing should be closed for road traffic.  *Measures*  Currently, there is no information regarding any initiated or implemented measures. |
| 22 May 2015 | Collision of Z 7028 with a truck on a crossing between the Purgstall and Scheibbs stations (continued)  A-2016/010  Checking whether during the inspections in accordance with the EisbKrV more level crossings and non-public crossings can be replaced with level crossing equipped with technical protection.  *Measures*  The ÖBB-Infrastruktur AG continuously works on reducing the number of crossings and will continue to pursue this also on the rail section concerned. An agreement was already signed for this purpose in 2013 by the state, the Land Lower Austria and the ÖBB-Infrastruktur AG, in order for the optimisation of the track including closing or merging crossings and level crossings.  A-2016/011  Conducting particular information events on site about the crossings in general and the correct behaviour of road users in particular (e.g. in municipalities, in schools, directly at the crossing, etc.).  *Measures*  Conducting particular information events on site about the crossings in general and the correct behaviour of road users in particular (e.g. in municipalities, in schools, directly at the crossing, etc.) is not part of the duties of a railway undertaking.  In order to increase the awareness of road users, however the ÖBB implemented measures or is in the process of implementing them.  In order the increase the awareness of railway users of dangerous situations and to make available compact and understandable information for safety on railway premises and safe railway transport, already in 2012 the ÖBB launched the campaign 'Stay on the safe side' (Bleib auf der sicheren Seite), which it continuously extends.  As an additional activity related to the ÖBB safety campaign, the ÖBB-Infrastruktur AG launched 'safety events at schools' in January 2016. The aim is to win over youngsters of 12 to 14 years of age as ambassadors of safety on railway premises.  At the meeting of the association of driving school owners in 2015 the ÖBB-Infrastruktur AG informed participants about accident risks and safety precautions at level crossings. The video about the forces in a train crash at a level crossing (crash simulation) was put at the disposal of driving school by ÖBB-Infrastruktur AG for training purposes. The aim of the cooperation is to achieve that driving schools point out the special situation at level crossings already during training.  Every year large events are held all over the world on International „Level Crossing Awareness Day“ (ILCAD), all under the motto 'Level crossings - safety has priority'. The ÖBB also participates in the campaign days in addition to the campaigns organised throughout the whole year, and has activities for awareness raising in the form of press information and TV reports. The ÖBB produced a video for this purpose in order to show the danger and dramatic effect of a collision of a train with a car. For the campaign day 2016 the new video 'Emergency manoeuvres at railway crossing barriers – what to do if you are caught between the barriers'. |
| 22 May 2015 | Collision of Z 7028 with a truck on a crossing between the Purgstall and Scheibbs stations (continued)  A-2016/012  Repeated controls of key issues by the executive in relation to the behaviour of road users when using level crossings.  *Measures*  Currently, there is no information regarding any initiated or implemented measures.  A-2016/013  Checking whether the behaviour of road users when using level crossings stipulated in the EisbKrV should be adopted in the StVO.  *Measures*  The crossing was always inspected as scheduled in the maintenance plan and its condition is compliant with regulations. The results of the inspections and the crossing's data sheet were consulted still on the day of the accident as the basis for an immediate review, which did not find shortcomings. The acoustic signals can be heard at the crossing.  The construction on the adjacent plot is not completely legal. A garden shed was built without a permit under railway law and in breach of the permit a fence was built without the approval of the IM. The case was reported.  However, both the shed and the fence are located on the side of the crossing protected by acoustic signals and have no influence on the audibility of the peep signal. Accordingly, the garden shed and the fence did not obstruct visibility. Further structures and buildings were discussed with ÖBB Infrastruktur.  A-2016/014  Checking whether the DV B 6 of the ÖBB 'Service regulation on the protection of level crossings' should be adjusted to the provisions of the EisbKrV.  *Measures*  The ÖBB DV B6 service regulation mirrors the EKVO 1961, with additional contents on maintenance. These contents were also incorporated into the maintenance plans. The ÖBB DV B6 service regulation was last updated in 1987, and no changes were made in the maintenance regulations since that time.  Contents not stipulated by the ÖBB DV B6 service regulation have been stipulated since 2012 in the EisbKrV, and as a result the need for them to be stipulated in a legal regulation in accordance with Section 21a Paragraph 3 EisbG no longer arises. |
| 23 September 2016 | Collision of ICE 90 with vehicle parts in the Stiefschweiffeld tunnel  A-2016/015 (safety recommendation in accordance with Section 16 Paragraph 2 of the UUG 2005)  Ensuring that the trains D 408 and D 409 undergo a vehicle inspection upon being handed over by the neighbouring states' railways (ČD and TI).  *Measures*  Safety inspections were ordered as an immediate measure on the Austrian-Czech and Austrian-Italian border crossing by specially trained employees.  A-2016/016 (safety recommendation in accordance with Section 16 Paragraph 2 of the UUG 2005)  Checking whether passenger carriages used in Austria have to be equipped with a side-selective door release mechanism and a central door locking mechanism controlled from the cab over the 12-core wiring (similarly to the regulations of the ANSF - see RIC, Appendix II - Special conditions for joining vehicles to passenger trains, country code 83)  *Measures*  Currently, there is no information regarding any initiated or implemented measures. |
| 23 September 2016 | Collision of ICE 90 with vehicle parts in the Stiefschweiffeld tunnel  A-2016/016 (safety recommendation in accordance with Section 16 Paragraph 2 of the UUG 2005)  Checking whether passenger carriages used in Austria have to be equipped with a side-selective door release mechanism and a central door locking mechanism controlled from the cab over the 12-core wiring (similarly to the regulations of the ANSF - see RIC, Appendix II - Special conditions for joining vehicles to passenger trains, country code 83)  Measures  Currently, there is no information regarding any initiated or implemented measures. |