

ANNUAL REPORT 2024



Air, Maritime and Railway Traffic
Accidents Investigation Agency
Department for Railway Traffic
Accidents Investigation
(NIB Croatia)

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INTRODUCTION TO THE REPORT

A National Investigating Body (NIB) operates in the Republic of Croatia as the Department for Railway Traffic Accidents Investigation at the Air, Maritime and Railway Traffic Accidents Investigation Agency (AIA) for conducting independent investigations of railway accidents and incidents according to EU and national legislation. The aim of investigating railway accidents and incidents is to improve the safety of the railway system and prevent future accidents.

Article 24(3) and 25(2) of the Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast) requires the National Investigating Body to publish an annual report by 30th September every year accounting for the investigations carried out in the preceding year, the safety recommendations that were issued and actions taken in accordance with recommendations issued previously and to send it to the European Union Agency for Railways (ERA).

These requirements from the Directive are also transposed into our national legislations, Article 6(4) of the Act of establishing the Air, Maritime and Railway Traffic Accidents Investigation Agency (Official Gazette Nos. 54/2013 and 96/2018) and Article 132(7)(8) of the Act on Safety and Interoperability of the Railway System (Official Gazette No. 63/2020).

1 INTRODUCTION TO THE INVESTIGATING BODY

1.1 Legal Basis

The Directive (EU) 2016/798 of the European Parliament and of the Council of 11 May 2016 on railway safety (recast) is transposed in Croatia by the two national legal Acts, the Act of establishing the Air, Maritime and Railway Traffic Accidents Investigation Agency (Official Gazette Nos. 54/2013 and 96/2018) and the Act on Safety and Interoperability of the Railway System (Official Gazette No. 63/2020).

For accidents and incidents occurring from May 17, 2020, we apply Commission Implementing Regulation (EU) 2020/572 of 24 April 2020 on the reporting structure to be followed in railway accident and incident reports with all 6 titles (summary; the investigation and its context; description of the occurrence; analysis of the occurrence, where necessary in respect of individual contributing factors; conclusions and safety recommendations) and their subtitles. Summary, conclusions and safety recommendations are also translated into a second official European language (English language).

The investigations of accidents and incidents performed by NIB Croatia are independent of any other party and independent of the investigation conducted by other bodies, especially judiciary investigation and the investigation of the causes and circumstances of accidents and incidents conducted by Infrastructure Manager (IM) or Railway Undertakings (RU).

1.2 Role and Aim

The AIA was established on 29 July 2013 by the Act on Establishing of the Air, Maritime and Railway Traffic Accidents Investigation Agency (Official Gazette No. 54/13, 96/18) as a legal person with public authorities. The founder of the AIA is the Republic of Croatia and the founder's rights are exercised by the Government of the Republic of Croatia. The AIA is functionally and organizationally independent of all authorities responsible for air, maritime and railway traffic and of all legal and natural persons.

The aim of NIB Croatia investigations is to make safety recommendations, based on the findings of investigations, in order to prevent accidents and incidents in the future and improve railway safety. It is not the purpose of NIB Croatia investigation to attribute blame or liability.

The national legislation of the Republic of Croatia does not authorize the NIB Croatia to investigate accidents and incidents within trams and light rail vehicle and infrastructure.

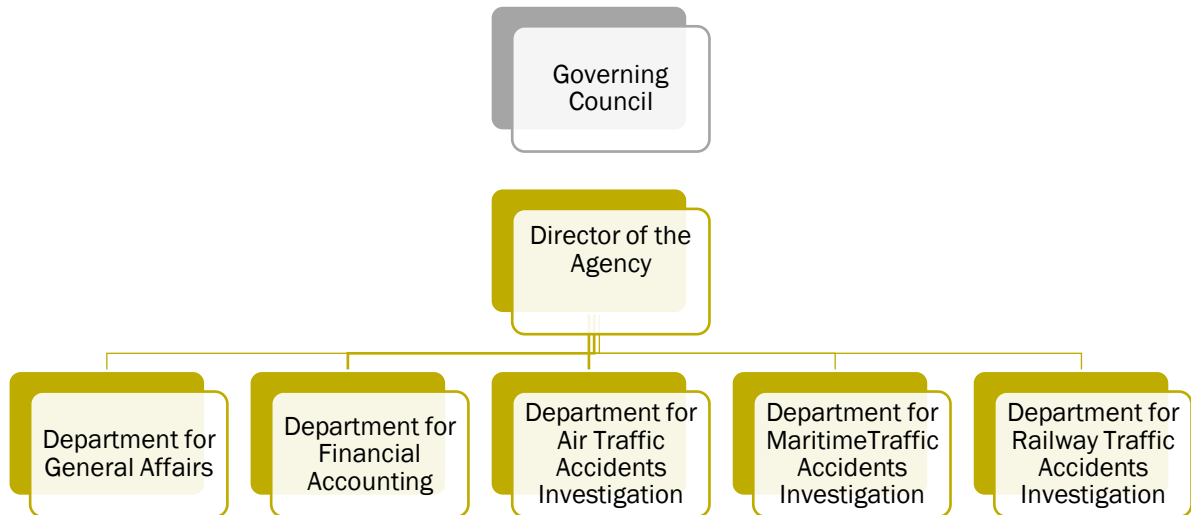
1.3 Organisation

The bodies of the AIA are the Governing Council and the Director, and they are accountable to the Government of the Republic of Croatia for their work.

The AIA is managed by the Governing Council, which consists of three members appointed by the Government of the Republic of Croatia after a public competition for a period of four years, with the possibility of reappointment. The AIA is represented and constituted by the Director, who is appointed by the Governing Council of the AIA, based on a public competition for a period of five years, with the possibility of reappointment.

The Chief investigators, each for a specific area, lead the professional work of the AIA and are responsible for the professional work of the AIA. The Chief Investigators are appointed and dismissed by the Director with the consent of the Governing Council.

Internal organization of the AIA



In 2024, the NIB Croatia consisted of three responsible Railway Accidents Investigators (of which one was the Chief Investigator).

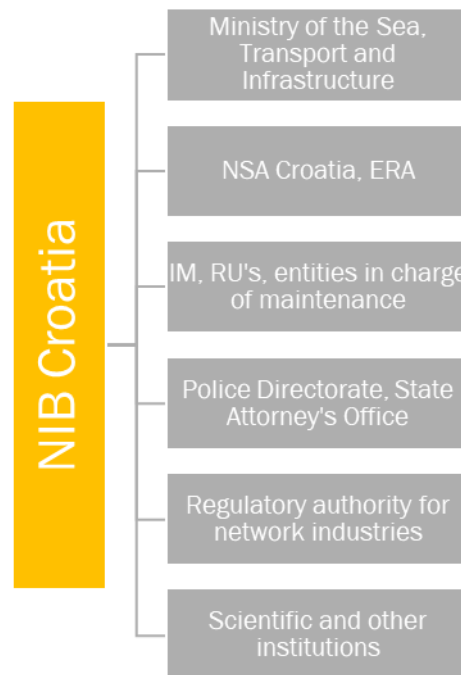
Budget funds of the AIA are granted through the Ministry of The Sea, Transport and Infrastructure budget system.

1.4 Organisational flow

The structure of the railway sector in the Republic of Croatia and relationships among the parties involved are defined in the Act on Safety and Interoperability of the Railway System (Official Gazette No. 63/2020). The bodies responsible for the railway system in the Republic of Croatia are the Ministry of The Sea, Transport and Infrastructure, Railway Safety Agency and AIA.

The Ministry of The Sea, Transport and Infrastructure performs administrative, professional and other tasks, including implementation of the EU legislation. The Railway Safety Agency is the National Safety Authority (NSA) which activities include tasks related to safety certificates, approvals, permits and other authorizations, as well as supervision and inspection with the aim to ensure continuous compliance with railway system safety requirements, keeping prescribed registers and performing other tasks determined by national legislation and EU regulations. The AIA is independent of any party in the railway system.

Below is diagram with interaction of the NIB Croatia with other authorities and institutions in the railway investigation process.



2 INVESTIGATION PROCESSES

2.1 Occurrence to be Investigated

According to national legislation, the NIB Croatia investigates serious accidents and may investigate accidents and incidents which under slightly different conditions might have led to a serious accident, including technical failures of the structural subsystems or of interoperability constituents of the Union rail system. In making decision to investigate accident or incident we take into account: the seriousness of the accident or incident, whether it forms part of a series of accidents or incidents relevant to the system as a whole, its impact on railway safety, and requests from infrastructure managers, railway undertakings, the national safety authority or the Member States.

2.2 Institutions Involved In Investigations

Following the occurrence of railway accident or incident, various institutions may launch several independent investigations, depending on the occurrence's nature and consequences:

- **IM and RU** conducts accident or incident investigations within the framework of the safety management system,
- **NIB Croatia** investigates the causal and other factors of accidents or incidents and issues safety recommendations,
- **State Attorney's Office and Police Directorate** conducts immediate on-site investigations to determine whether there are elements of a criminal offense.

In order to facilitate the work of the on-site investigation procedure, a Memorandum of Understanding between the Police Directorate, State Attorney's Office and AIA was signed on July 22, 2015.

2.3 Investigation process and approach of the NIB Croatia

Investigation performed by the NIB Croatia, Department for Railway Traffic Accident Investigation, focuses on the following aspects of each occurrence:

- independent investigation of the causal and other factors of railway accidents or incidents to gain knowledge for the prevention of future accidents and incidents, reducing the consequences and increasing the safety of railways.

When notified about an accident or incident by an IM or RU, the NIB Croatia will analyze all preliminary information about the event to make a decision to perform an immediate on-site investigation. In cases where a notification of an event report is received and it is decided that an immediate on-site investigation is not necessary, an office investigation of the reported event may be conducted.

Within 30 days of receiving notification of an accident or incident, the NIB Croatia decides whether to initiate an investigation and informs all involved parties. Also, the NIB Croatia will inform European Union Agency for Railways (ERA) about the same within seven days from the day of making the decision to start the investigation. When deciding whether to initiate an investigation, failure to comply with the safety requirements of the railway system, as well as the seriousness and the probability of such an event occurring again, are taken into account. We also use the *Flowchart for the decision to investigate or not* from the Guidance on the decision to investigate accidents and incidents developed by the NIB Network.

Before the release of the final report, all employees of the NIB Croatia have the opportunity to provide their comments and suggestions. The Draft of Reports are sent to all involved parties. The Director may return the Draft Final Report to the Chief Investigator for revision if the content of the Draft Final Report is not in accordance with the individual department's operational manuals, recommended practices and European standards regarding the conduct of air, maritime and rail accident investigations. All our final reports are available on the AIA website and send to involved parties and ERA.

3 INVESTIGATIONS

The NIB Croatia has ensured telephone availability of railway accident investigators at any time on the basis of 7/24/365, in order to be able to react as soon as possible and perform an immediate on-site investigation. Also, the e-mail address railway.safety@ain.hr has been established in the AIA as a central location where users of railway services can submit all reports of railway accidents and incidents, as well as all other relevant information relating to the field of railway traffic.

In 2024, we received a total of 434 notifications of occurrence in the railway system, of which 7 notifications referred to serious accidents, 58 to accidents, 355 to incidents and 14 notifications related to suicides that the AIA does not investigate. Following the received notifications, in 2024, we decided to perform an immediate on-sites on 15 accidents/incidents, in accordance with national and EU Laws.

On the basis of the immediate on-site investigations and additionally collected information, 5 new investigations were commenced in 2024. From a total of 7 serious accidents, we commenced 2 while other 5 were related to trespass onto the railway line.

In 2024, we completed with Final reports and closed 4 investigations.

3.1 Overview of Investigations completed in 2024, Identifying key trends

Trends of completed Investigations in 2024

Type of accidents investigated	Number of accidents	Number of victims		Damages in € (approx.)	Trends in relation to previous year
		Deaths	Ser. injuries		
Collisions	0	0	0	<150.000	-100%
Derailments	0	0	0	<150.000	0%
LC-accidents	1	0	0	<150.000	0%
Accidents to persons involving RS in motion	1	0	1	<150.000	0%
Fire in RS	0	0	0	<150.000	0%
Other	2	0	0	<150.000	100%

3.2 Investigations completed and commenced in 2024

Investigations completed in 2024

Date of occurrence	Title of the investigation (Occurrence type, location)	Type of occurrence	Completed (date)
22 June 2023	Train collision near miss between trains numbers 45997 and 69029 at station Sušak Pećine	I	10 June 2024
05 May 2023	Train collision near miss between passenger trains numbers 2018 and 2011 between stations Andrijevcı and Garčin	I	26 July 2024
15 February 2024	LC „Stare Plavnice“, accident between train No. 787 and road vehicle	A	12 December 2024
27 September 2023	Train number 89135 running over worker on the track between stations Zagreb Žitnjak and Velika Gorica	A	20 December 2024

SA-Serious accident, A-Accident, I-Incident

Investigations commenced in 2024

Date of occurrence	Title of the investigation (Occurrence type, location)	Type of occurrence
15 February 2024	LC „Stare Plavnice“, accident between train No. 787 and road vehicle	A
18 July 2024	Untimely protection of Level Crossing “Krčeni put”	I
08 August 2024	Derailment of a wagon as part of train No. 81292 between stations Ogulinski Hreljin and Gomirje	A
30 September 2024	Accident at the pedestrian crossing “Buzin”	SA
09 October 2024	Derailment of five freight wagons as part of train No. 81111 at station Karlovac	SA

SA-Serious accident, A-Accident, I-Incident

3.3 Research studies (or Safety Studies) commissioned and completed in 2024

Safety Studies completed in 2024

Date of commission	Title of the Study (Occurrence type, location)	Type of occurrence	Completed (date)
31 January 2024	Analysis of the movement of freight train no. 81218 on the section Drivenik – Plase – Meja – Škrljevo (Train collision between train No. 81218 and a special purpose vehicle, between stations Meja and Škrljevo on 11 December 2023)	SA	24 April 2024

SA-Serious accident, A-Accident, I-Incident

Safety Studies commenced in 2024

Date of commission	Title of the Study (Occurrence type, location)	Type of occurrence
31 January 2024	Analysis of the movement of freight train no. 81218 on the section Drivenik – Plase – Meja – Škrljevo (Train collision between train No. 81218 and a special purpose vehicle, between stations Meja and Škrljevo on 11 December 2023)	SA

SA-Serious accident, A-Accident, I-Incident

3.4 Summaries of investigations completed in 2024

See the Annex 1/3 of this Annual report.

3.5 Comment and Introduction or background of the investigations

Investigations commenced in 2024 and not followed

Date of occurrence	Title of the investigation (Occurrence type, location)	Type of occurrence	Reason of non-following or suspension of investigations	Who, why, when (decision)
	none			

3.6 Accidents and Incidents Investigated during last five years (In 2020-2024)

Rail Investigations completed in the period 2020–2024

Accidents investigated		2020	2021	2022	2023	2024	TOTAL
Serious accidents	Train collision	0	0	1	1	0	2
	Train collision with an obstacle	0	0	0	0	0	0
	Train derailment	0	0	0	0	0	0
	Level-crossing accident	0	1	1	0	0	2
	Accident to person caused by RS in motion	0	0	1	1	0	2
	Fire in RS	0	0	0	0	0	0
	Involving dangerous goods	0	0	0	0	0	0
Other	0	0	0	0	0	0	

Accidents	Train collision	0	0	0	1	0	1
	Train collision with an obstacle	0	0	0	0	0	0
	Train derailment	5	3	1	0	0	9
	Level-crossing accident	2	2	1	1	1	7
	Accident to person caused by RS in motion	0	0	0	0	1	1
	Fire in RS	0	1	0	0	0	1
	Involving dangerous goods	0	0	0	0	0	0
	Other	0	0	0	1	0	1
Incidents	1	2	1	0	2	6	
TOTAL	8	9	6	5	4	32	

4 RECOMMENDATIONS

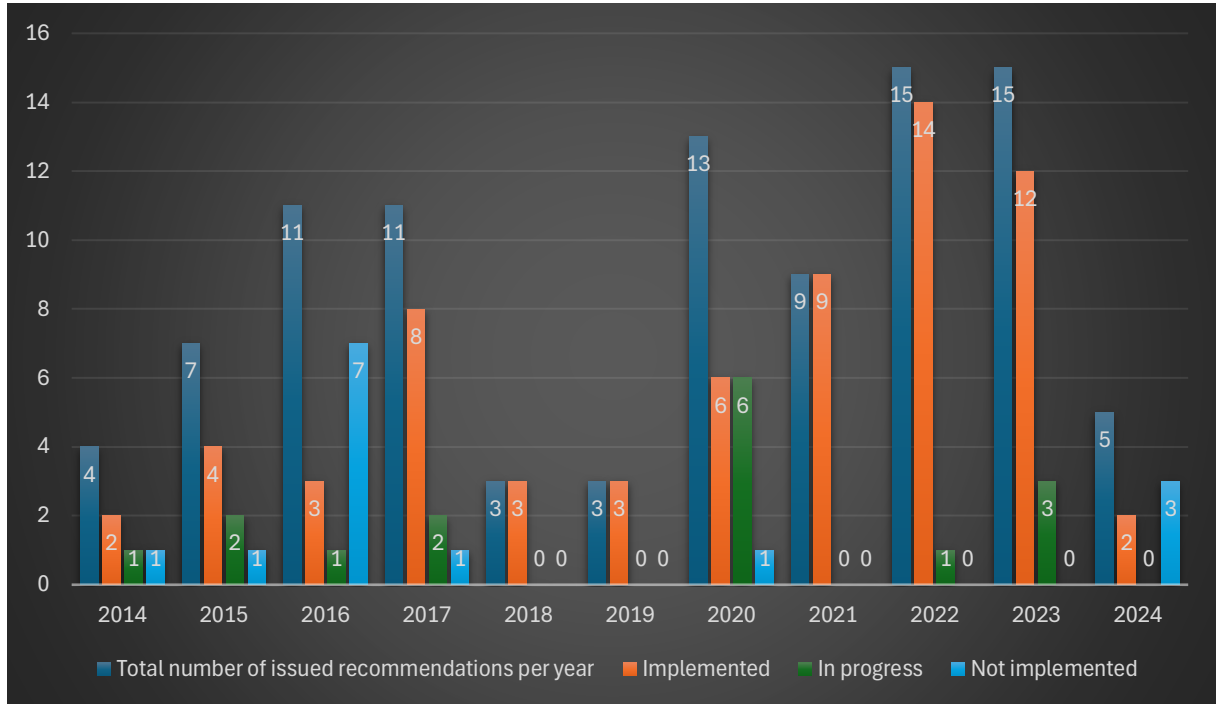
4.1 Short review and presentation of recommendations

The safety recommendations issued by the NIB Croatia are aimed to improve safety and prevent other similar accidents or incidents. Safety recommendations are addressed to the NSA Croatia and other competent authorities or involved parties.

Implementation of recommendations during 2014 – 2024

Recommendations issued		Recommendation implementation status					
		Implemented		In progress		Not implemented	
Year	[No.]	[No.]	[%]	[No.]	[%]	[No.]	[%]
2014	4	2	50%	1	25%	1	25%
2015	7	4	57%	2	29%	1	14%
2016	11	3	27%	1	9%	7	64%
2017	11	8	73%	2	18%	1	9%
2018	3	3	100%	0	0%	0	0%
2019	3	3	100%	0	0%	0	0%
2020	13	6	46%	6	46%	1	8%
2021	9	9	100%	0	0%	0	0%
2022	15	14	93%	1	7%	0	0%
2023	15	12	80%	3	20%	0	0%
2024	5	2	40%	0	0%	3	60%
TOTAL	96	66	69%	16	17%	14	14%

The below diagram shows the ratios of the total number of issued safety recommendations to those implemented, in progress and not implemented.



4.2 Recommendations Issued In 2024

No. of the recommendation: SR 1/24	
Date of occurrence	Title of the investigation
22 June 2023	Train collision near miss between trains numbers 45997 and 69029 at station Sušak Pećine
Addressed to the NSA	
The railway undertaking, RCCC, during the practical training of train drivers, should pay more attention to the part about braking procedures, ensuring against self-starting of trains and performing braking tests, especially on tracks with greater slopes in order to avoid in the future similar incidents.	
STATUS: Implemented (RU - Rail Cargo Carrier Croatia Ltd.)	

No. of the recommendation: SR 2/24	
Date of occurrence	Title of the investigation
05 May 2023	Train collision near miss between passenger trains numbers 2018 and 2011 between stations Andrijevci and Garčin
Addressed to the NSA	
The infrastructure manager, HŽI, should improve its own safety management system by increasing the estimated hourly rate in the implementation plans of regular training on the subject of prescribed processes when performing works on technical infrastructure subsystems and regulating traffic.	
STATUS: Implemented (IM - HŽ Infrastruktura Ltd.)	

No. of the recommendation: SR 3/24	
Date of occurrence	Title of the investigation
15 February 2024	LC „Stare Plavnice“, accident between train No. 787 and road vehicle
Addressed to the NSA The Railway Undertaking HŽPP should update the risk when the train speed prescribed in the electronic timetable book is exceeded by applying all its own procedures and methods, and implement an additional safety measure for risk management in cases when the driver does not comply with the speed prescribed in the timetable book or other document for the section of the track on which the train is moving.	
STATUS: Not implemented (RU - HŽ Putnički prijevoz Ltd.)	

No. of the recommendation: SR 4/24	
Date of occurrence	Title of the investigation
15 February 2024	LC „Stare Plavnice“, accident between train No. 787 and road vehicle
Addressed to the NSA The Infrastructure Manager should, in accordance with Minutes No. 1325/24 HŽI, within two years from the issuance of the recommendation, install auto stop device balises on the control signals at the automatic LC's secured by the type device "Iskra KS" with control signals, in order to prevent the possibility of the train passing by the control signal when it signals that the device for securing the LC is faulty. On devices for securing LC's of the type "Iskra KS" where it is not possible to install auto stop device balises, it is necessary to install an event recorder within two years of the issued recommendation.	
STATUS: Not implemented (IM - HŽ Infrastruktura Ltd.)	

No. of the recommendation: SR 5/24	
Date of occurrence	Title of the investigation
27 September 2023	Train number 89135 running over worker on the track between stations Zagreb Žitnjak and Velika Gorica
Addressed to the Hidrostres Ltd. The company "Hidrostres" d.o.o., as a contractor, should complemented existing Risk Assessment from occupational safety by introducing safety measures to reduce the level of danger of a train striking workers in order to achieve safe work performance and worker behavior when temporary construction sites are located within the railway belt.	
STATUS: Not implemented (Hidrostres Ltd.)	

Annex 1/3

SUMMARIES OF INVESTIGATIONS COMPLETED IN 2024

Train collision near miss between trains numbers 45997 and 69029 at station Sušak Pećine, on 22 June 2023

Type of occurrence:	Incident
Date and time:	22 June 2023, 09:28 a.m.
Occurrence type:	Train collision near miss
Description:	<p>On June 22, 2023, at 09:28 a.m., on the line M202 Zagreb GK – Rijeka, at station Sušak Pećine at km 641+461 was trains collision near miss between freight trains No. 45997 and 69029. Freight train No. 45997 should have stopped in front of the entrance signal "A" of the station Sušak Pećine at km 641+208, but due to the untimely activation of the brakes, it extended the journey to km 641+461. Freight train No. 69029 was coming from station Rijeka and was supposed to cross at station Sušak Pećine with freight train No. 45997 at 09:30 a.m. Freight train No. 69029 stopped at switch number 6 at 09:30 a.m. and then entered the third track of station Sušak Pećine. After completed investigation of the joint investigation commission, at 12:05 p.m., train No. 45997 started towards the destination station Rijeka. After starting, the train driver notices that the train is not braking, he reports the same to the train dispatcher at the station Sušak Pećine, who sets the path for the train on the truncated track via switches number 6 and 7a, and the train stops at the end of the truncated track at 12:09 p.m.</p>
Type of train:	Freight trains
Location:	Line No. M202, station Sušak Pećine
Participants:	HŽ Infrastruktura Ltd. (IM), Rail Cargo Carrier Croatia Ltd. (RU), HŽ CARGO Ltd. (RU)
Consequences:	There were no injured persons in the incident, and no material damage to railway vehicles and railway infrastructure.
Direct cause:	- the not stopping of train No. 45997 in front of the entrance signal "A" of station Sušak Pećine, which showed the signal sign "STOP".
Contributing factor:	- track slope 27.00 %.
Systemic factors:	- procedures for braking and securing against self-starting train no. 45997, - procedures when performing the braking test of train no. 45997.
Safety recommendation:	AIN/06-SR-01/2024: The railway undertaking, RCCC, during the practical training of train drivers, should pay more attention to the part about braking procedures, ensuring against self-starting of trains and performing braking tests, especially on tracks with greater slopes in order to avoid in the future similar incidents.

Train collision near miss between passenger trains numbers 2018 and 2011 between stations Andrijevci and Garčin, on 05 May 2023

Type of occurrence:	Incident
Date and time:	05 May 2023, 12:30 p.m.
Occurrence type:	Train collision near miss
Description:	<p>On May 05, 2023, at 12:30 p.m., on the line M104, between stations Andrijevci and Garčin was trains collision near miss between passenger trains 2018 and 2011. Train no. 2018 stopped at km 199+270 because the train driver noticed another train driving towards him on the same track and due to a received phone call from the train operator of the station Andrijevci warning him to stop, while train no. 2011 stopped at km 200+750 because while driving spatial signal 301 changed to the signal sign „Stop“ and at the same time noticed another train driving towards him on the same track. At the time of the incident, there were a total of 127 passengers in the trains (45 passengers in train number 2011 and 82 passengers in train number 2018), no one was injured and there was no material damage. At the time of the incident, construction work was being carried out for the mechanical regulation of switches and the arrangement of the LC in the station Garčin. The planned closure of the left track between stations Andrijevci-Garčin began on May 5, 2023 at 07:00 a.m. and ended at 10:27 a.m., while the closure of the right track between stations Andrijevci-Garčin began on the same day at 10:50 a.m. and ended at 1:56 p.m.</p>
Type of train:	Passenger trains
Location:	Line No. M104, between stations Andrijevci and Garčin
Participants:	HŽ Infrastruktura Ltd. (IM), HŽ Putnički prijevoz Ltd. (RU)
Consequences:	There were no injured persons in the incident, and no material damage to railway vehicles and railway infrastructure.
Direct cause:	- train number 2018 was dispatched from station Andrijevci on the irregular left track towards station Garčin without the prior permission of station Garčin due to reduced situational awareness of train operator of station Andrijevci which led to omission while performing work task.
Contributing factor:	- workload of train operator of station Andrijevci while regulating the safe movement of railway vehicles due to simultaneously performed construction works, from 07:00 a.m. traffic was carried out only on the right track, and from 10:50 a.m. only on the left track.
Systemic factor:	- none.
Safety recommendation:	AIN/06-SR-02/2024: The infrastructure manager, HŽI, should improve its own safety management system by increasing the estimated hourly rate in the implementation plans of regular training on the subject of prescribed processes when performing works on technical infrastructure subsystems and regulating traffic.

LC „Stare Plavnice“, accident between train No. 787 and road vehicle, on 15 February 2024

Type of occurrence:	Accident
Date and time:	15 February 2024, 04:55 p.m.
Occurrence type:	LC accident
Description:	On February 15, 2024, at 4:55 p.m. at the LC "Stare Plavnice", actively secured (light, sound and half-bumper) on the line marked L203 Križevci - Bjelovar - Kloštar at km 029+865 when train number 787 passed over the mentioned LP, train struck a road motor vehicle with the front left side of a diesel motor train marked 95 78 7121 008-5 in the direction of travel. The train was operating on the route Zagreb - Virovitica.
Type of train:	Passenger train
Location:	Line No. L203, LC „Stare Plavnice“
Participants:	HŽ Infrastruktura Ltd. (IM), HŽ Putnički prijevoz Ltd. (RU)
Consequences:	The driver of the road motor vehicle was injured in the accident, and there was major material damage to the road motor vehicle and minor material damage to the diesel motor train.
Direct cause:	- a combination of events related to the failure of the signaling safety device for the protection of the LC and passing of train number 787 over the railway level crossing which was not secured at that moment, resulting in the train colliding with a road motor vehicle with the front left side of the train in the direction of train movement.
Contributing factor:	- not determined.
System factors:	- periodicity of maintenance of signal safety devices, - driving the train at a speed higher than the prescribed speed according to the timetable book.
Safety recommendations:	<p>AIN/06-SR-03/2024: The Railway Undertaking HZPP should update the risk when the train speed prescribed in the electronic timetable book is exceeded by applying all its own procedures and methods, and implement an additional safety measure for risk management in cases when the driver does not comply with the speed prescribed in the timetable book or other document for the section of the track on which the train is moving.</p> <p>AIN/06-SR-04/2024: The Infrastructure Manager should, in accordance with Minutes No. 1325/24 HŽI, within two years from the issuance of the recommendation, install auto stop device balises on the control signals at the automatic LC's secured by the type device "Iskra KS" with control signals, in order to prevent the possibility of the train passing by the control signal when it signals that the device for securing the LC is faulty. On devices for securing LC's of the type "Iskra KS" where it is not possible to install auto stop device balises, it is necessary to install an event recorder within two years of the issued recommendation.</p>

Train number 89135 running over worker on the track between stations Zagreb Žitnjak and Velika Gorica, on 27 September 2023

Type of occurrence:	Accident
Date and time:	27 September 2023, 08:05 a.m.
Occurrence type:	Accident to person caused by RS in motion
Description:	<p>On September 27, 2023, at 08:05 a.m., an accident to persons caused by rolling stock in motion occurred on the line M407, between stations Zagreb Žitnjak and Velika Gorica at km 013+764. Around the site of the accident, during the closure of the railway, construction work was being carried out to repair the road overpass. On that day, the planned closure of the track, disconnection of the voltage in the contact network and the road overpass repairing work should have started immediately after passing train number 89135. At the moment when train number 89135 passed under the road overpass, a worker who was standing on the left side of the track, within the free track profile, was struck. In the aforementioned accident, an employee of the company that was performing repairing work on the road overpass passing over the line M407 was seriously injured, material damage to the railway vehicle and railway infrastructure was not recorded. The injured worker did not work that day, but came to the construction site to deliver remittance for sick leave, and on the way he wanted to check at what stage was the repairing works.</p>
Type of train:	Locomotive
Location:	Line No. M407, between stations Zagreb Žitnjak and Velika Gorica
Participants:	HŽ Infrastruktura Ltd. (IM), Log Rail Ltd. (RU)
Consequences:	The worker was seriously injured in the accident, material damage to the railway vehicle and railway infrastructure was not recorded.
Direct cause:	- reduced situational awareness of the worker who was not aware of the danger or the approach of the train but focused on checking the repair phase of the works, the worker did not take into account the risk of standing close to the track and did not use his knowledge and experience to ensure his safety, when checking the repair works of the road overpass, the worker stood on the left side of the track, within the free track profile, while the track was still open for traffic.
Contributing factor:	- possible background noise from traffic due to nearby roads and highways, as well as the nearness of the airport.
Systemic factor:	-lack of safety measures in the Risk Assessment from occupational safety of the contractor when construction works are carried out within the railway belt.
Safety recommendation:	AIN/06-SR-05/2024: The company "Hidrostrom" d.o.o., as a contractor, should complemented existing Risk Assessment from occupational safety by introducing safety measures to reduce the level of danger of a train striking workers in order to achieve safe work performance and worker behavior when temporary construction sites are located within the railway belt.

Annex 2/3

Classification of occurrences:

‘Serious accident’ means any train collision or derailment of trains resulting in the death of at least one person or serious injuries to five or more persons or extensive damage to rolling stock, the infrastructure or the environment, and any other accident with the same consequences which has an obvious impact on railway safety regulation or the management of safety; ‘extensive damage’ means damage that can be immediately assessed by the investigating body to cost at least EUR 2 million in total.

‘Accident’ means an unwanted or unintended sudden event or a specific chain of such events which have harmful consequences; accidents are divided into the following categories: collisions; derailments; level crossing accidents; accidents to persons involving rolling stock in motion; fires and others.

‘Incident’ means any occurrence, other than an accident or serious accident, affecting the safety of railway operations.

Annex 3/3

ABBREVIATIONS

AIA/AIN	Air, Maritime and Railway Traffic Accidents Investigation Agency
NIB	National Investigating Body
EU	European Union
IM	Infrastructure Manager
RU	Railway Undertaking
NSA	National Safety Authority
ERA	European Union Agency for Railways
LC	Level crossing
RS	Rolling stock
SA	Serious accident
A	Accident
I	Incident
SR	Safety Recommendation
KM	Kilometer position of the railway

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