



Translation of an excerpt of the investigation report

**“Personal accident Hürth-Kalscheuren station – Brühl station on 04/05/2023”**

Status as of 24/04/2025, version 1.0.

### **Note:**

In accordance with Article 3 of Implementing Regulation (EU) 2020/572, points 1, 5 and 6 of Annex I of an investigation report shall be written in a second official European language. This translation should be available no later than three months after the delivery of the report.

The following English translation is a corresponding excerpt of the investigation report. The German language version is authoritative.

## **Excerpt translation:**

### **1 Summary**

The first section contains a brief description of the event, as well as information on the consequences, primary causes and safety recommendations provided in the individual case.

#### **1.1 Brief description of the event**

On 04/05/2023 at around 11:03 am, a personal accident took place on the moving railway vehicle with the train IC 2005 on the journey from Emden main station to Koblenz main station between the Hürth-Kalscheuren station and Brühl station stops at km 10.4.

#### **1.2 Consequences**

Two people were killed and five people suffered minor injuries. Property damage amounting to an estimated EUR 10,000 was caused to the railway vehicle involved and technical equipment.

#### **1.3 Causes**

During the investigation of the event, the following actions, failures, incidents or circumstances were identified as safety-critical factors. These are differentiated into causal or

contributing and systemic factors according to Implementing Regulation 2020/572. Identified shortcomings in the emergency management are also addressed.

A system with designations in square brackets is used to provide better clarity about the factors and aspects of emergency management.

A detailed assessment of the event with classification as safety-critical factors is provided in the sections below.

What happened: Date/time, and action/failure/circumstance /incident	Causal factor	Contributing factor	Systemic factor
April 2023 Failure by the company performing work to notify the organisation responsible for railway operations of the planned work in the track area	Risk assessment not carried out in full or in a process-compliant manner by the contractor [F1]	-	Lack of safety consciousness on the part of the contractor during the site planning [S1]
Part of the initial situation Failure to consider manual tamping work as part of the application for issuing of the operation and construction instructions	-	Process of site planning and application for the operation and construction instructions [F2]	-
Part of the initial situation No objection was made about the lack of a safety plan during the registration of the work or the preliminary discussion of the work	Intention to commence work in spite of requirements not being met [F3]	-	Lack of safety consciousness on the part of everyone involved during the preliminary discussion of the work [S3]
04/05/2023, from 10:57 am The crew enters the track area	Commencement of work in spite of requirements not being met [F4]	-	Lack of safety consciousness on the part of everyone involved when commencing work [S4]

## 1.4 Safety recommendations

The following safety recommendations are made in accordance with Section 6 of the EUV and Article 26(2) of Directive (EU) 2016/798:

No	Addressee and safety recommendation	Relates to company
06/2025	<p>Safety authority:</p> <p>It is recommended that, in order to control the risks, the organisations involved in the planning and performance of construction work must monitor their employees in relation to occupational health and safety in the working environment and consistently demand compliance. Evidence of this must be provided.</p> <p>(Delegated Regulation (EU) 2018/762, Annex II, point 3.1.1.2)</p>	<p>Infrastructure manager</p> <p>Infrastructure manager's contractor</p>
07/2025	<p>Safety authority:</p> <p>It is recommended that the organisations involved in the planning and performance of construction work must increase awareness of safety consciousness among their employees.</p> <p>(Delegated Regulation (EU) 2018/762, Annex II, point 2.4.1)</p>	<p>Infrastructure manager</p> <p>Infrastructure manager's contractor</p>

## 5 Conclusions

The following section contains a summary of the identified causal, contributing and systemic factors. In addition, two further subsections are provided containing information about measures already taken, and additional comments

### 5.1 Summary and conclusion

The actions, failures, incidents or circumstances identified in this investigation report resulted in the personal accident on the moving railway vehicle between Hürth-Kalscheuren station and Brühl station.

The Federal Authority for Railway Accident Investigation identified three causal, one contributing and three systemic factors that influenced the event.

**In relation to the causal factor: “Risk assessment not carried out in full or in a process-compliant manner by the contractor” [F1]:**

The duty of M+K Tief- u. Kabelbau GmbH was initially to conduct a risk assessment to determine whether journeys might cause hazards for its employees during the planned work. As the contractor determined on the basis of this risk assessment that there could be potential hazards for its employees, the organisation responsible for railway operations should subsequently have been notified of the work in order to define and stipulate safety measures. Instead of this, the company performing the work bypassed the organisation responsible for railway operations and directly commissioned the safety company involved to plan and implement safety measures for the free route between Hürth-Kalscheuren station and Brühl station. The provision of the two flagmen also revealed that, although no information was known about the upcoming work, the employees were speculatively sent to the assignment to determine how to make the track work safe.

The process steps described both in framework guideline 132.0118 and in the BGI/GUV [Professional association information on statutory accident insurance] 1781 were not complied with by M+K Tief-u. Kabelbau GmbH in the application for safety measures. The company performing the work was responsible for initiating this process. The existing pre-qualification should ensure that M+K Tief- u. Kabelbau GmbH was aware of the processes of DB Netz AG and implemented these processes.

It was the contractor's obligation of the company performing the work to notify the organisation responsible for railway operations as per the requirements from framework guideline 132.0118 and DGUV [German statutory accident insurance regulation] 78 in order, as a result of this, to obtain a safety plan for the planned work. As a result of the investigations, the Federal Authority for Railway Accident Investigation determined that the contractor's obligation was not met in relation to the complete and process-compliant risk assessment and notification of the work.

**In relation to the contributing factor: "Process of site planning and application for the operation and construction instructions" [F2]**

Operation and construction instructions F 351038 23, which were used by the technical representative for registering the work, envisaged "Inspections, monitoring and surveying work (West Rhine electronic signal box)" on routes 2630 and 2631. The manual tamping work carried out by the crew on the day of the event was not considered in the scope of the regulations in the operation and construction instructions.

When these investigation results are considered, this leads to the finding that the processes within the construction site planning and application for the operation and construction instructions must be assessed as a contributing factor for this event. If the application for the operation and construction instructions had been correct, operation and construction instructions would have been issued that included the manual tamping work.

**In relation to the causal factor: "Intention to commence work in spite of requirements not being met [F3]"**

When preparing the registration of work, the company conducting the work incorrectly confirmed that a safety plan was available. The subsequent provision of the employees of M+K Tief- u. Kabelbau GmbH and the safety company was carried out on the basis of this registration of work.

Although the lack of safety plan should have been apparent no later than the discussion in preparation for the work between the company conducting the work, safety company and the rail construction supervisor in the role of the technical representative, further preparations were made for the upcoming manual tamping work on the day of the event. Possible

monitoring mechanisms, such as a dual control principle, were evidently not used or were not effective.

In spite of the missing process step of notifying the organisation responsible for railway operations of work in the track area, see [F1], two employees from the safety company were scheduled for the safety measures on the day of the event. Why the safety company intended to perform the safety measures, evidently without agreement with the organisation responsible for railway operations, remained unclear. Safety planning adapted to the situation was not possible without using the risk assessment procedure of the organisation responsible for railway operations.

**In relation to the causal factor: “Commencement of work in spite of requirements not being met [F4]”**

After the crew arrived at the intended work site, the technical representative was still clarifying the need to block the tracks to perform the manual tamping work with the responsible signaller, even though there was neither a safety plan nor operation and construction instructions that would have legitimised the work. The crew ultimately entered the track area with work equipment without authorisation.

**In relation to the systemic factors:**

- **Lack of safety consciousness on the part of the contractor during the site planning [S1]**
- **Lack of safety consciousness on the part of everyone involved during the preliminary discussion of the work [S3]**
- **Lack of safety consciousness on the part of everyone involved when commencing work [S4]**

The investigations showed that all organisational levels of the companies involved in the event demonstrated deficient and absent safety consciousness for the safe performance of construction work in the track area.

Starting with the safety culture of M+K Tief- u. Kabelbau GmbH, the company conducting the work, organisational features meant that the contractor not complying with processes allowed employees to be provided to work at the construction site on the track between

Hürth-Kalscheuren and Brühl without there being a valid safety plan. The same applied for the safety company, which planned the safety service independently without having been commissioned by the organisation responsible for railway operations. Ultimately, however, other parties involved such as the safety supervisor and the rail construction supervisor did not complain about the lack of safety plan, which would have resulted in the planned manual tamping work being stopped. Verifying the presence of a valid safety plan and verifying compliance with the safety procedures stipulated by the organisation responsible for railway operations is a central element of occupational health and safety when working in the area of and on the track. For this reason, the Federal Authority for Railway Accident Investigation is issuing safety recommendation No 06/2025. It is recommended that, in order to control the risks, the organisations involved in the planning and performance of construction work must monitor their employees in relation to occupational health and safety in the working environment and consistently demand compliance. Evidence of this must be provided. (Delegated Regulation (EU) 2018/762, Annex II, point 3.1.1.2)

The employees involved in the crew, consisting of four track construction workers and two flagmen, were experienced in working in the track area and had been briefed by their employers. They had already been working together in the track area to perform manual tamping work since the morning of 04/05/2023.

The repetitive and similar work processes probably resulted in a certain work routine and group dynamic within the crew, however the crew lacked a shared responsibility for safety. Although there was neither a valid safety plan for this work on the track nor an order from the rail construction supervisor, the crew ultimately proceeded to enter the track area at their own initiative. It was not possible to conclusively determine why the crew finally decided to enter the track area even though there was no protection.

As a result, it was determined that, even though there was evidence that they had been briefed by their respective employers about the hazards resulting from railway operations, the employees in the crew did not have any situational awareness about entering the track area without authorisation. Resulting from this, it can be determined that in principle briefings are required in order to prepare employees for hazardous work in the track area. However, in the case of this event, this briefing had been carried out and remained ineffective in practice. In addition to the briefing of employees that is already needed based on statutory requirements,

it is indispensable that the companies create a safety culture within their organisation, in which the employees are aware of the great importance of acting correctly on and in the area of the track when performing work. This process starts at the management level of every company and should be communicated from there to the employees, suppliers and other contractors.

In the case of this event, a lack of safety consciousness in relation to the hazards arising from rail operations was clear to see among the companies involved, the people with supervisory roles on site and the personnel from the crew conducting the work, and this needs to be improved in future in order to avoid similar events. For this reason, the Federal Authority for Railway Accident Investigation is issuing safety recommendation No 07/2025. It is recommended that the organisations involved in the planning and performance of construction work must increase awareness of safety consciousness among their employees. (Delegated Regulation (EU) 2018/762, Annex II, point 2.4.1)

## **5.2 Measures taken since the event**

After the event, the rail construction supervisor was blocked for further work by DB Netz AG. The Federal Authority for Railway Accident Investigation does not know whether further measures were arranged by the infrastructure manager in addition to this.

## **5.3 Additional observations**

Not applicable.



## 6 Safety recommendations

The following safety recommendations are made in accordance with Section 6 of the EUV and Article 26(2) of Directive (EU) 2016/798:

No	Addressee and safety recommendation	Relates to company
06/2025	<p>Safety authority:</p> <p>It is recommended that, in order to control the risks, the organisations involved in the planning and performance of construction work must monitor their employees in relation to occupational health and safety in the working environment and consistently demand compliance. Evidence of this must be provided.</p> <p>(Delegated Regulation (EU) 2018/762, Annex II, point 3.1.1.2)</p>	<p>Infrastructure manager</p> <p>Infrastructure manager's contractor</p>
07/2025	<p>Safety authority:</p> <p>It is recommended that the organisations involved in the planning and performance of construction work must increase awareness of safety consciousness among their employees.</p> <p>(Delegated Regulation (EU) 2018/762, Annex II, point 2.4.1)</p>	<p>Infrastructure manager</p> <p>Infrastructure manager's contractor</p>