

Recommendations

The shortcomings and underlying problems result in the Board's submission of the following two recommendations.

1. To the Minister of Transport, Public Works and Water Management:
 - a) Call the rail companies to account, in accordance with the Railways Act, for their individual and shared responsibility for rail traffic safety. This can be achieved by effective supervision and stringent enforcement of their duty of care for safety. In addition, require the rail companies to demonstrate that they have reduced the safety risks to ALARP level.
 - b) Achieve adequate control of the goods-train derailment risk by:
 - arranging for the direction of the consultations and the decision-making on the implementation of control measures;
 - imposing specific targets for the reduction of the derailment risk.
2. To Railion, ProRail and NS-Reizigers:
 - a) Extend the safety management to the risks to the relevant company's operations that are caused by other companies and/or require a joint approach.
 - b) Make sure that the available technical options for defect and derailment detection are used to reduce the goods train derailment risk to ALARP level.

Supplementary investigation

The Board is also of the opinion that the results from the investigation give cause to supplementary investigations by the relevant companies in two areas.

- The inspection of the defective axle box did not reveal any indications of maintenance shortcomings. Nevertheless, the Board is of the opinion that a critical evaluation of the maintenance regime is required for the following two reasons. Firstly, the derailment was caused by the failure of a bearing less than three years into the ten-year overhaul period. Secondly, the technical condition of one of the other twenty bearings from the derailed wagons that were examined for reference purposes gave cause for concern. The examination revealed chipping in the raceway that gave cause to the suspicion that the bearing would fail within the remaining term of the overhaul period.
- The examination of the other twenty bearings also revealed that a number of the bearings had current-flow damage. In the longer term damage of this nature can result in chipping of the raceway and, ultimately, the failure of the bearing. For this reason the Board is of the opinion that a further investigation of the cause of this damage is required. This investigation should also extend to the conditions in which the wagons are used, including those parts of the locomotive and rail infrastructure that can be of influence on the return current.

The Board is of the opinion that the performance of this supplementary investigation is the duty of the companies that bear the primary responsibility for the maintenance of the axle box bearings (Xpedys), the use of the wagons and the technical condition of the relevant locomotives (Railion) and the rail infrastructure (ProRail). For this reason the Board submits the following two recommendations:

3. To Xpedys:

Evaluate the periodic maintenance of the axle boxes of the series of wagons involved in the Muiderpoort derailment, with due regard for the chipping damage encountered in one of the bearings of the derailed wagons.
4. To Railion and ProRail:

Carry out an investigation of the current-flow damage to the axle box bearings observed with the wagons involved in the Muiderpoort derailment and make sure that the necessary measures are implemented to prevent this form of damage.