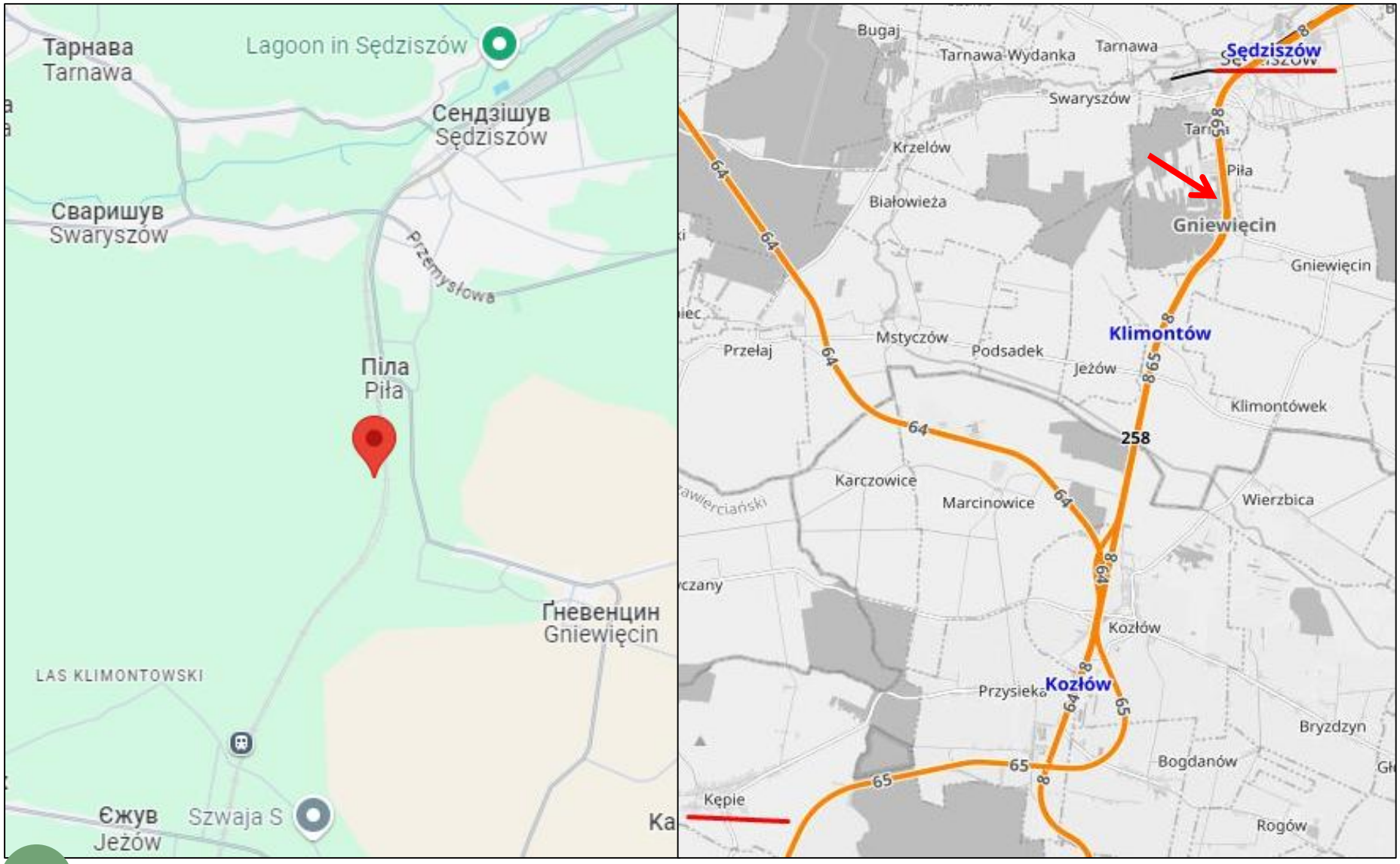
Derailment of wagons in Poland:

important case for future cooperation

Date and place of the transport accident

- On July 21, 2024, an incident occurred on the 321st km of the Sędziszów – Kępie section in Poland, resulting in the derailment of 6 empty gondola cars, including one owned by EU-Trans LLC.
- The incident was classified as a category B-II accident and occurred on July 21, 2024 at 18:57 on the Sędziszów LHS – Kępie LHS section, line No. 65 (Bridge over the Bug River – Sławków Południowy), operated by PKP Linia Hutnicza Szerokotorowa Sp. z o. in Zamość.
- This event was a serious test for our company, and also revealed a number of issues that require attention from both Polish Railways and Ukrzaliznytsia.

Place of derailment: "Sędziszów – Kępie" section



https://maps.app.goo.gl/MmPnp7UhGpFeXDTb9

Photo of derailed wagons

Circumstances of the incident

- According to the information received, before the departure of the train with the wagons, their inspection was carried out, during which no violations of the technical condition were detected. The train, consisting of 46 wagons, was moving at a speed of 74 km/h. (with a permitted speed of 80 km/h.).
- Before the railway crossing, made on wooden sleepers, traces of damage were noticed, indicating that part of the wagon was dragged along the track. As a result of the initial inspection of the wheelset of the wagon that was the culprit of the incident, traces of an impact with a concrete crossing were found. It is quite likely that this collision caused the wagon to derail. The concrete block was torn off and thrown to the side of the road, and the wheelset was off the track. At the time of the inspection by the railway commission, the accident site had already been repaired, and train traffic was operating normally.

The immediate location of the derailment is a railroad crossing

Circumstances of the incident

- Preliminary assessments show that it was a hit against a concrete block, which caused the train to further break and derail. The culprit wagon was moving behind the train for almost the entire braking distance, leaning only on the front wheelsets. The remaining wagons were scattered on both sides of the track: two wagons on the left, three on the right. The wagon of LLC "EU-Trans" was lying on its side, without brakes and wheelsets, like the other damaged wagons.
- During the inspection of the scene, two super-spring beams and one side frame were found missing from the wagon "EU-Trans", which were then found only later.
- Initial assessments show that the wagons are beyond repair, since they overturned during a transport incident, which could have damaged the backbone beam. According to eyewitnesses, it will be very difficult to lift the wagons due to the lack of space for installing a crane.

Circumstances of the incident

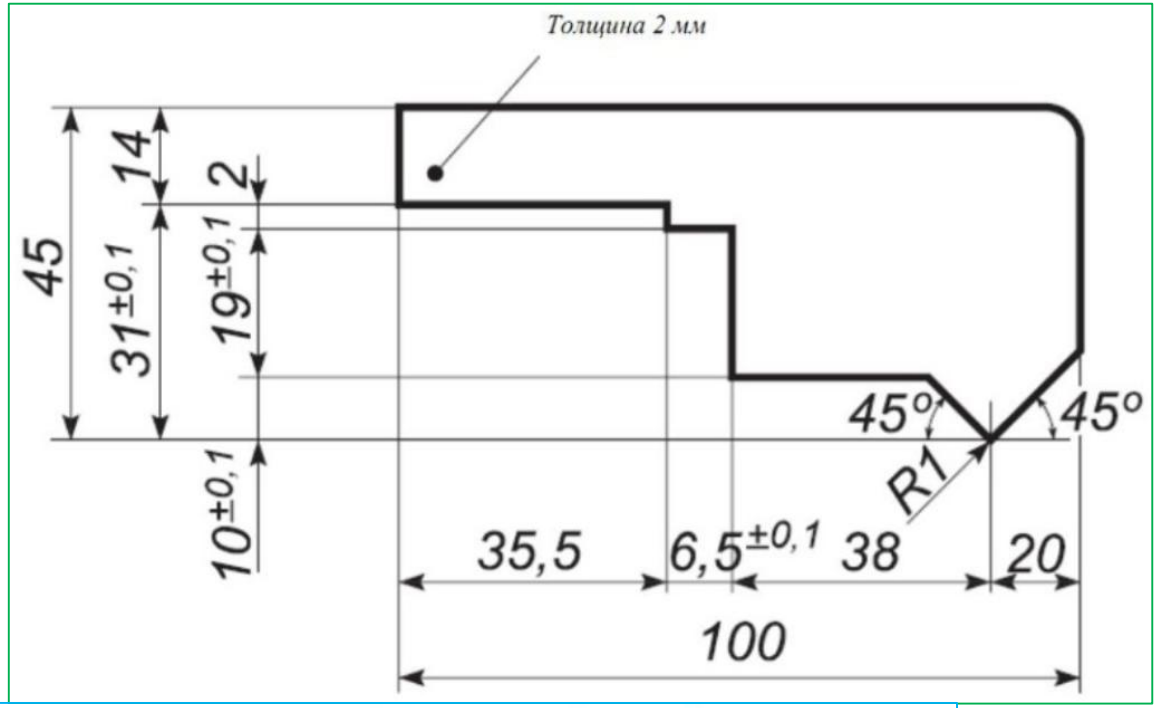
- According to the investigation materials provided by the Polish Railway Commission, the main cause of the incident was the exceeding of technical parameters (Qr – crest steepness and Og – crest thickness) on 4 of the 6 wagons, i.e. their non-compliance with the established standards. During the investigation, the need for more thorough inspection of the wagons at the stages of transfer between Ukraine and Poland was revealed. The Commission also drew attention to shortcomings in the process of information exchange between the parties.
- In addition, it was found that in Poland a laser profilometer was used to measure the wheelsets, which allows for quick and accurate (with an accuracy of up to 0.01 mm) recording of measurement parameters without the need to remove the wheelsets from the wagon. However, this device differs from the one used in Ukraine, namely, a special template described in the PGV Agreement, and the accuracy of measurements of which is significantly lower. This leads to discrepancies in the measurement results.

Laser profilometer

- Designed for measuring the outer contour of rims and rimless wheels. Its main advantage is the ability to perform very fast and accurate measurements of the necessary parameters without the need to dismantle the wheels.
- Video-1: https://youtu.be/w01VLd-3P_w?si=v6p3mDtrGlCwNyaI
- Video-2: https://youtu.be/Qj19obwEIRA?si=dzLsiCu3tFJelyF8

Template for checking the size of the crest

- Addition 19 to PGV, page 101.



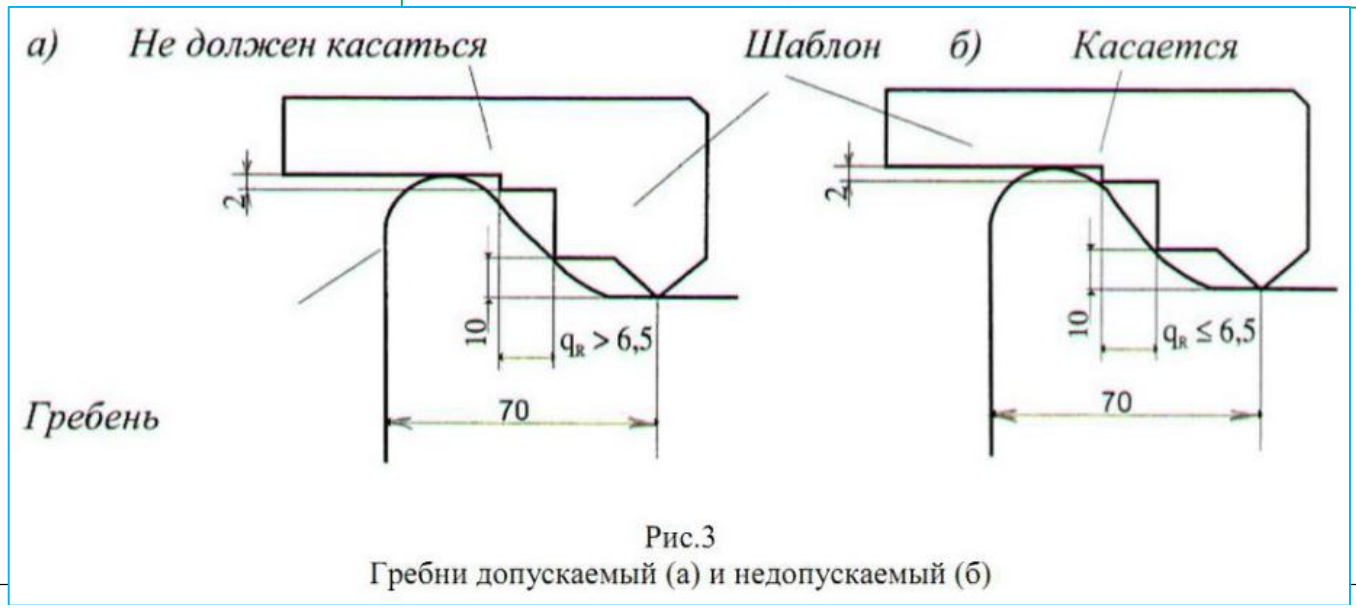


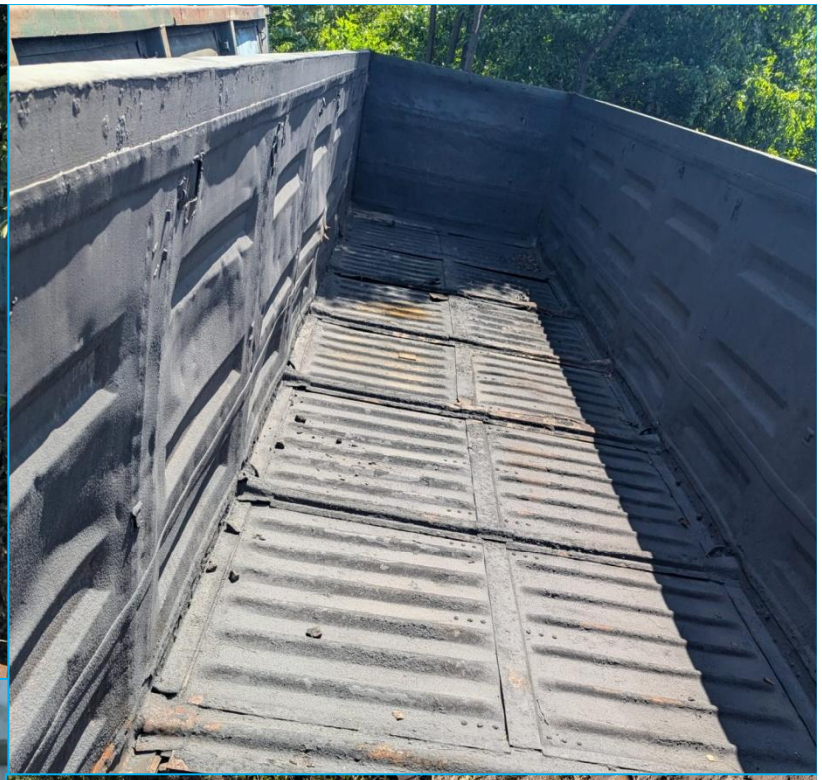
Рис.3
Гребни допускаемый (а) и недопускаемый (б)

Commission decision

- According to the resolution of the Minister of Infrastructure and Construction of Poland, the investigation of cases of wagon derailments is regulated by special regulations that oblige the railway commission not only to identify the causes of the events, but also to develop preventive measures, i.e. to initiate and propose solutions to avoid similar situations in the future, in particular, in this case, taking into account the differences in measurement and control methods between countries.
- To date, there is no known case of wagon derailments for this reason in Ukraine, and in Poland this is perhaps the first such case. Therefore, the question arises: was the excess of the wheel crest parameters really the main cause of the derailment? We also note that none of the several Ukrainian specialists we interviewed knew about the methods and means of measuring wheel parameters in Poland. Therefore, this problem should be given maximum attention and all possible measures taken to solve it.

Impact on our company's operations

- For the company "EU-Trans" this incident caused significant material losses, and also created difficulties in organizing transportation, despite the fact that there are no claims to our wagon. We see that such cases undermine trust between the parties and require clearer coordination of actions. It is especially important to take into account the specifics of wagons registered in other countries and adapt the procedures for checking and accepting rolling stock.



"EU-Trans" wagon

Options for solving the problem

To solve this issue, several practical steps can be suggested:

- Create a joint working group.
- Include representatives of Ukrzaliznytsia, Polish railways, wagon manufacturers, repair depots and factories, as well as measurement experts.
- Develop unified measurement standards and control procedures.
- Harmonize measurement methods.
- Organize exchange of experience between Ukrainian and Polish specialists.
- Agree on the use of the same measurement devices and templates.
- Finalize the regulatory framework.
- Make amendments to national and international regulatory acts (including the PGV Agreement) to prevent discrepancies in the assessment of technical parameters of wagons.
- Mandatory inspection of wagons before transfer.

Call for dialogue

- We sincerely hope that this incident will become an occasion for a constructive dialogue between Ukrainian and Polish railways. It is important not only to determine the causes of the incident, but also to develop joint mechanisms to prevent similar situations.
- Our company is ready for an open discussion of issues related to the safety and efficiency of rail transportation. We also call on the public and interested parties to pay attention to this incident in order to achieve transparency and justice in such situations through joint efforts.

Conclusion

- Railway incidents are not just a problem of one company or country. It is a challenge that requires the joint efforts of all participants in international rail traffic. We believe that cooperation and readiness for dialogue will help create safer and more efficient conditions for transportation in the future.
- “EU-Trans” remains open to proposals and is ready to cooperate with Polish partners to solve current and future tasks.