

Reviewer 1

1. Unnecessary - there is only one corresponding author.

Ad. 1 Verse 9. Note was taken into account.

2. This should be in the Acknowledgments section, not in the Abstract. According to the Instructions for Authors, Abstract should also include summarized main findings and main conclusions.

Ad.2 Verse 350-351. The information was saved in "Acknowledgments". Conclusions and findings were added to the abstract.

3. A bridge expansion joint is not a gap! It is a structural component designed to provide smooth passage over the gap between adjacent sides of a bridge deck joint, while also permitting relative translation and/or rotation of the two sides of a bridge deck. It is also called "deck movement joint".

Ad.3. Verse 29-31. The authors improved the meaning of the word bridge expansion joint, confirming the correct definition of the reviewer.

4. The problem occurs everywhere where there are vehicles traveling over bridges with expansion joints, not just in Europe, Japan, China and Australia.

Ad.4. Verse 40-42. The authors reworded the sentence regarding the occurrence of the analyzed problem.

5. See reference [2]: "There are two components of noises or sounds; one is "joint sound", which is radiated when moving vehicles pass over the expansion joints of bridges and another is "span sound", which is radiated when vehicles run through the spans." Vehicles do not travel THROUGH objects.

Ad. 5. Verse 43. The authors reworded the sentence changing "through" to "over".

6. „over”

Ad. 6. Verse 51. The authors improved the translation for "over".

7. Why are these studies relevant for the paper?

Ad. 7 Verse 56-61. The modular expansion joints are one of the most commonly used expansion joints. From an acoustic point of view, however, they are one of the louder ones. One way to improve the acoustic climate within this type of expansion joint is to use steel overlays in the shape of e.g., rhombus. The object analyzed by the authors was also equipped with this type of expansion joints. The authors decided to devote one paragraph to the description of issues related to this type of dilatation in relation to the available literature.

8. Why is this study relevant for the paper?

Ad.8. Verse 69-74. The authors wanted to emphasize the issues related to the impulse noise, which may affect the migration of wild animals at the animal crossings. Currently, due to the development of the linear infrastructure, which is directly related to the construction of new engineering facilities, more and more often the problem of impulse noise created at the junction

of the wheel-bridge dilatation concerns a wider group not only of society, but also of the ecosystem.

9. Vehicles are passing over, not through the expansion joint.

Ad. 9. Verse 93. The authors corrected the translation.

10. What is "material sound"? Is it noise generated by vibrations of the elements?

Ad.10. Verse 96-97. The material sound is created by vibrations that occur when the car passes the expansion joint, in steel elements (main girders and cross-members) of the bridge. In other words, it is the sound induced in the bridge structure.

11. Sound intensity near a hard surface is enhanced (because the reflected wave adds to the incident wave).

Ad.11. Verse 98-99. The comment was taken into account by the authors.

12. It is unclear what is a "typical acoustic impact generated by passing vehicles" - impact from rolling noise and engine/transmission noise?

Ad.12. Verse 99-100. The authors confirm that by typical acoustic impact from passing vehicles they understand the rolling noise and engine noise.

13. Noise generated by the vehicles passing over the joints is not "natural".

Ad.13. Verse 107. The authors took into account the reviewer's comment.

14. The acoustic cover is a noise damper, not a noise barrier - it is attached to the structure that is transmitting vibrations (and therefore noise).

Ad. 14. Verse 109. The authors changed it to the "acoustic cover".

15. A-weighted?

Ad. 15. Verse 115. The authors confirm the reviewer's comment. The measurement results were presented using an equivalent A-weighted sound level.

16. Are these acoustic tests road traffic noise measurements (conducted to determine "typical acoustic impact generated by passing vehicles")?

Ad.16. Verse 158. The authors explain that the measurements were carried out to determine the reduction of noise caused by the acoustic cover in the vicinity of the object, and not to determine the level of the road noise. Due to the very high distortion, this was not possible, as the authors wrote in the paper.

17. Describe input parameters for the road traffic noise model which were used in the calculation. What noise prediction software was used?

Ad.17. Verse 165-169. The note was taken into account by the authors.

18. What method for industrial noise calculation was used? Which in-situ measurements were used to verify the model (only the measurements conducted under the expansion joints)? What was the noise source power?

Ad.18. Verse 173-176. The note was taken into account by the authors. For the acoustic calculations of industrial noise, the method described in the ISO 9613-2: 1996 „Acoustics — Attenuation of sound during propagation outdoors — Part 2: General method of calculation, was used.

19. "Sound cover" is also used.

Ad.19. Verse 185. The authors have included the reviewer's comment.

20. Rw is "weighted sound reduction index".

Ad.20. Verse 202. The authors have included the reviewer's comment.

21. What kind of materials were used? What are their characteristics and sound absorption coefficients? On what part of the interior is each type used and why?

Ad.21. Verse 229-233. Inside the acoustic cover, materials were used, the description of which is given in the paper, and the view is shown in Figure 8. The authors extended the description, taking into account the reviewer's comment regarding the characteristics of the sound absorption coefficient.

22. Use difference maps instead (only for day and night period).

Ad.22. Verse 309 and 311. The authors have included the reviewer's comment.

23. Compare your results with those from similar studies. Future research directions should also be highlighted.

Ad.23. Verse 338-344. The results of the acoustic tests of the cover in question were not compared with other devices, because no literature results were found for solutions of the same type (sound-absorbing-insulating cover). In addition, the lack of a uniform testing methodology often prevents such comparisons. The reviewer's comment was taken into account in the directions of further research.

24. <https://doi.org/10.1006/jsvi.1996.0270>

Ad.24. Verse 387. The authors added the DOI number to the reference No. 12 .