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SOUND INSULATION OF ENCLOSING STRUCTURES OF BUILDINGS AND MONUMENTS

Abstract: In the article given of definition of a theoretical method of calculation of air noise of layers thin enclosing structures.

Key words: Enclosing structures, calculation, sound insulation, layers, thin.

Language: English

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Introduction

Nowadays, people are always under the influence of noise. The noise mainly generated from roads, railways, air traffic, while indoors a large part of the din arises from the ventilation system, computers, television set and so on. All these noises combine to create a sound environment in which we live. The impact of noise, unlike other environmental problems, is a continuing problem and particularly observed in cities. Cities contain the largest concentration of people, where there are large buildings. All the places that need good acoustics, they should be fully functional. In standard of living,

we spend almost 75-85 percent of our time indoors, where a lot of surface noise greatly enhanced.[1]

Currently, the thin protecting designs, which occupy to 30% of the surface area of protections, possess the smallest sound insulation. Thus, noise from the premises penetrates into the environment, mainly thin enclosing structures.

Aim of research

Based on this, one of the main tasks of thin walling is a theoretical method of calculating the determination of air noise sound insulation elements according to NR 2.01.08-96 "Noise of protection". This issue is covered in more detail in the reference

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manual to "design of sound insulation of enclosing structures of residential and public buildings". However, the method of determining the theoretical method of calculating the air noise of two-layer thin surrounding structures is not available [2,3,4,5].

NR mentioned reference in the matter of development of thin walling leads his theoretical and practical method for single layer thin walling airborne noise, limiting the overall requirements to its content, which determines the relevance of the topic of this study.

Based on the above, that the conduct of scientific research on the theme "sound insulation of two – layer thin surrounding structures of buildings" is in the theoretical and practical relationship is very relevant and timely.

The object of the study is a thin double-layer surrounding structures of buildings in the Republic of Uzbekistan.

The purpose of the scientific research will be to develop the theoretical and practical provisions of two-layer thin building envelopes, specifically, in the creation of a theoretical method of calculation.

In accordance with the set goal, the following tasks will be solve in the research work:

- theoretical and methodological approaches and provisions to the formation of double-layer thin enclosing structures in Uzbekistan and abroad were studied on printed and dissertation sources;

- factors determining technical parameters of two-layer thin protecting designs are revealed and structured;

- classification by external and internal construction and technical parameters of positions of two-layer thin protecting designs and degree of their influence on rational use of resources will be carried out;

- graph-analytical model of calculation of two-layer thin protecting designs will received;

- technical parameters of two-layer thin protecting designs providing noise isolation according to requirements of norms will be defined;

- program of the automated calculation of two-layer thin protecting designs will be developed and

recommendations on its use in practice of design are made.

The methods of use. To solve the problems in the thesis will be use in a complex of theoretical and empirical methods, including: in the review part of the methods of scientific analysis, synthesis, in the construction of the working hypothesis - hypothetical-deductive, abstraction, idealization, in the justification of the method of two - layer thin enclosing structures-graph-analytic modeling, information technology. When writing the thesis text, attention will be paid to strict adherence to the dialectical law of the party (structural and temporal), correct definition of concepts. As a means of research in scientific work will be used information, mathematical and linguistic means of research. In General, the presentation of dissertations will pay attention to the internal connection of logical constructions, enhanced by the use of accepted grammatical and stylistic turns of speech of the scientific language

The information and normative basis of the research will be based on the legal acts of the Republic of Uzbekistan, standards and guidance documents of the state Committee of Architecture of the Republic of Uzbekistan, materials published in scientific monographs and periodicals, as well as own calculations of the dissertation.

Rationale we have developed a theoretical method tailored to the requirements of norms in construction will be determined by the theoretical importance and its use in the design phase of a thin two-layer enclosing structures, which would represent a practical significance of the scientific research

Conclusion

The scientific novelty of the work determined by the author's development to substantiate the theoretical and methodological provisions and practical recommendations for the formation of the mechanism of automated calculation of noise insulation of two-layer thin surrounding structures of buildings.

References:

1. Rashidov, J. (2017). *Sound-insulation technology for ventilated facades, The most urgent issues of the city building and its convergence*. Collection of scientific works on the results of Republican scientific-technical conference. (pp.10-13). Tashkent, November 10-11, 2017 Part 3.
2. (2003). Construction norms and regulations "Protection against noise"[Stroitel'nye normy i pravila SNIp23-03-2003 «Zashhita ot shuma»]

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3. (2003). Code of rules for the design and construction of SP23-103-2003 "Design of sound insulation of enclosing structures of residential and public buildings"[Svod pravil po proektirovaniju i stroitel'stvu SP23-103-2003 «Proektirovanie zvukoizoljicii ograzhdajushhih konstrukcij zhilyh i obshhestvennyh zdaniy]
4. (n.d.). Norms and regulations 2.01.08-96 "Protection against noise" [KMK 2.01.08-96 «Zashhita ot shuma»]
5. (n.d.). *site of norms and regulation of Republic of Uzbekistan*. Retrieved 2019, from www.norma.uz
6. (n.d.). Retrieved 2019, from www.mininnovation.uz
7. (n.d.). Retrieved 2019, from www.strategy.uz