ACOUSTIC DESIGN OF MULTIPURPOSE ROOM IN THE THEATER A ITS WITH MODULAR DESIGN

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ABSTRACT

The design of a large multifunctional space with the function of speech and music are often made without involving the proper design of the room acoustic, so that much happened complaint that is caused not information attend to the fullest. This happens also in Theatre A of ITS, which according to the measurement of reverberation time and background noise criteria showed a high yield. Criteria noise background shows value of 43.92 and room reverberation time demonstrate the value of 2.22 seconds. Both the value of these parameters indicate that the Theatre A disability acoustics. The conclusion is also reinforced by the results of manual calculations reverberation time values in Theatre A with 2.21 seconds worth Sabine methods and subjective data obtained from the distribution of questionnaires to the respondents user Theater A shows the scale of the average the seven questions asked of 4.6 on a scale of 1 -7. Therefore we need a redesign of Theatre A using simulation architect software to improve the quality of acoustic space as a function of both speech and music functionality with a modular system. The simulation results show a decrease reverberation time for speech function to be 1.19 second and 1.24 second, for music 1.22 second and 1.62 second. These results are in accordance with the rules of reverberation time for a multifunctional space.

Keyword: a multifunctional room, the criteria for background noise, reverberation time