

Plan Overview

A Data Management Plan created using DMPTool-Stage

Title: STUDY OF ACUSTIC ABSORPTION OF CONCRETE BARRIERS WITH THE ADDITION OF RUBBER AND VERMICULITE RESIDUES

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Project abstract:

The high levels of noise pollution can cause physical and mental damage, affecting hearing, being motor vehicles the main source of noise in urban and road environments. One way to mitigate noise dissipation is by installing acoustic barriers that act as obstacles between noise-generating sources and receivers. Acoustic barriers can be made with the addition of minerals, such as concrete, bricks, glass, aluminum panels, wood, acrylic sheets and metal. After the gap is detected in the literature, it is proposed the study of an ideal concrete composition containing rubber residues and vermiculite that meet the required properties for acoustic barriers. At this stage of the project, a dosage study will be carried out to obtain a concrete trace containing rubber residues and vermiculite. Next, we intend to construct two concrete acoustic barrier prototypes, one of them produced with concrete containing rubber residues and vermiculite, and the other produced with traditional concrete. These prototypes will be subjected to tests to determine the level of noise absorption which shall provide parameters for the calculation of the total sound intensity level, and the adjustment to the effect of barriers to determine the equivalent level of sound pressure. In this manner, besides providing subsidies for the use of rubber residues and vermiculite in concrete, the main technological contributions of this project are the composition of a special concrete for acoustic barriers and the noise tests that are not usually performed in Brazil, presenting a significant advance for this field in a global context.

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STUDY OF ACUSTIC ABSORPTION OF CONCRETE BARRIERS WITH THE ADDITION OF RUBBER AND VERMICULITE RESIDUES

Informações quantitativas e qualitativas acerca do desempenho do Concreto com resíduos de borracha e vermiculita, tanto no estado fresco do concreto, como no estado endurecido.

nome dos autores

titulo do trabalho

resumo

palavras-chave

Os dados serão obtidos por meio de leituras realizadas em Máquina universal de ensaios, equipamentos de laboratório, anotados em tabelas (Excel, word). E analisados por meio de gráficos, correlações, substituições em equações de acordo com Normas.

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