The development of the automotive industry in the twentieth century has increased the production of motor vehicles, generating an increase of the national fleet, and the consumption of tires reached staggering numbers. By this reason, the amount of solid wastes generated and deposited in the environment has grown considerably. In order to minimize the impacts arising from this deposition, some environmental agencies have created resolutions to ensure proper disposal of scrap materials.

1. At the end of its service life, the wasted tires, without shooting conditions or reforms, are difficult to recycle because the vulcanization process makes the material infusible and of difficult processability. When discarded in inappropriate locations, tires may serve as a medium for the development of disease vectors besides releasing oil, which can contaminate the water table [2].

2. In order to reduce the amount sent to the landfill, some environmental agencies have created resolutions to ensure proper disposal of scrap materials. The X-ray powder diffraction analysis was fulfilled to identify and quantify the content according to the resolutions. The X-ray powder analysis was used to verify whether the material complies with the limits specified by the resolutions. Acoustic analysis of transmission loss and external noise were performed to attenuate the sound waves. Acoustic analysis of attenuation by the composite. Acoustic analysis of noise reduction in the composite.

3. Acoustic analysis of attenuation by the composite. Acoustic analysis of noise reduction in the composite.

Minimization of noise pollution through the noise emission of pollutants; additionally, it ensures the safety of the vehicle, optimizing fuel consumption and reducing the environmental impact. The authors of the paper [3] demonstrate that the addition of tire powder to the composite reduces the transmission loss and external noise, providing a reduction of the piece weight and thus the fuel consumption.

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5. The development of the automotive industry in the twentieth century has increased the production of motor vehicles, generating an increase of the national fleet, and the consumption of tires reached staggering numbers. By this reason, the amount of solid wastes generated and deposited in the environment has grown considerably. In order to minimize the impacts arising from this deposition, some environmental agencies have created resolutions to ensure proper disposal of scrap materials. The X-ray powder diffraction analysis was fulfilled to identify and quantify the content according to the resolutions. The X-ray powder analysis was used to verify whether the material complies with the limits specified by the resolutions. Acoustic analysis of transmission loss and external noise were performed to attenuate the sound waves. Acoustic analysis of attenuation by the composite. Acoustic analysis of noise reduction in the composite.

6. The development of the automotive industry in the twentieth century has increased the production of motor vehicles, generating an increase of the national fleet, and the consumption of tires reached staggering numbers. By this reason, the amount of solid wastes generated and deposited in the environment has grown considerably. In order to minimize the impacts arising from this deposition, some environmental agencies have created resolutions to ensure proper disposal of scrap materials. The X-ray powder diffraction analysis was fulfilled to identify and quantify the content according to the resolutions. The X-ray powder analysis was used to verify whether the material complies with the limits specified by the resolutions. Acoustic analysis of transmission loss and external noise were performed to attenuate the sound waves. Acoustic analysis of attenuation by the composite. Acoustic analysis of noise reduction in the composite.

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Keywords: tire powder, X-ray diffraction, engine encapsulation.