MECHANICAL AND ACOUSTIC PROPERTIES OF CORK OAK REINFORCED VINYL ESTER BIOCOMPOSITES

Yalcin Boztoprak*, Atakan Yalin*, Batuhan Sargın*, Sevda Nur Teberdar*, Emir Erişçi*

Marmara University Technology Faculty Metallurgy and Materials Engineering Istanbul, Turkey

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Abstract

The cork oak extracted from oak trees is using in many areas for isolation purposes. Cork oak is a natural insulating material. Cork oak is using primarily in bottle industry in various fields such as bottle stopper, medicine, shoes, motor industry, floor coverings, heat and sound insulation systems. The physical and mechanical properties of this reinforced cork oak powder and vinyl ester composites were investigated. Cork oak is reinforcement material, and vinyl ester resin is matrix material. Methyl ethyl ketone peroxide (MEK) is hardener, LR 9000 is binder for surface modification of cork oak and dibutyltin dilaurate is catalyst. Tensile, impact, hardness, density and acoustic tests were performed on composite products. With the addition of cork oak, it was observed that the mechanical properties decreased and after a certain rate increased. However, it has been observed that the sound absorbance properties increase. According to the results it is suggested that it can be use as sound insulation material.

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Biography

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Presenting author details
Full name: Sevda Nur Teberdar
Contact number: +90 (5340530463)
Linked In account: linkedin.com/in/sevda-nur-teberdar-704928199
Session name/ number: Advanced Ceramics & Composite Materials
Category: Oral presentation



Presenting author details
Full name: Emir Erişçi
Contact number: +90 (5313400666)
Linked In account: linkedin.com/in/emir-erişçi-931025199
Session name/ number: Advanced Ceramics & Composite Materials
Category: Oral presentation