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The sound insulation property of composite from waste printed circuit board and unsaturated polyester

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Abstract:

The sound insulation property of Waste printed circuit boards (WPCBs) / unsaturated polyester (UP) composite plate has been investigated. The effect of WPCB particle size and mass ratio on the surface density, elastic modulus and weighted sound reduction index has been studied. The results showed that WPCB addition caused the surface density increase especially for coarse particle because of the metal particle existence. The elastic modulus value was susceptible to the UP sufficiency to high WPCB mass ratio. The WPCB-UP composite plate shows sound insulation application potential because the maximum weighted sound reduction index of composite plate with particle size <0.71mm reaches 28.4dB. The composite sound transmission loss, which is the sound insulation property at different frequency,

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