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Spectroscopic Interrogations and Study on the Insulating Property of Magnesite

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Abstract : Abstract :Magnesite is a magnesium carbonate mineral because of its thermal stability and inertness. All the three grades of magnesite both in raw and sintered forms have vast applications. The FTIR spectra of raw magnesite and sintered magnesite samples have been recorded in the mid - infrared region of 4000-450 cm^{-1} . In general, vibrational spectroscopy detections can qualitatively and quantitatively distinguish the spectral assignment of specific bands between corresponding bonds and functional groups, as also the observation of spectral profiles can be used to define and differentiate the magnesite. The present work is aimed to make an investigation with reference to the insulating property of the magnesite. The dielectric measurements were carried out to analyze the insulating property of magnesite. It is observed that dielectric constant and dielectric loss of magnesite decrease with increase in frequency. However magnesite it is noted that there is an increase in the dielectric strength of the material, as it possess low dielectric constant as well as dielectric loss.

Keywords : Magnesite, FTIR, LCR Meter.

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