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**A STUDY OF ELECTRICAL CONDUCTIVITY OF
NATURAL RUBBER CONTAINING SOME
SELECTED ADDITIVES**

A PROJECT REPORT PRESENTED

BY

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ABSTRACT

Natural rubber itself is an insulator with electrical conductivity of the order 10^{-10} S/cm. It was attempted to impart increased conductivity to natural rubber by adding various compounds such as MgO, ZnO, Zn - Stearate, Stearic acid, ZnBr₂, LiBr and ZnCl₂.

These compounds were incorporated into natural rubber using two different methods. Milling natural rubber with the compound to be incorporated and dissolving natural rubber and the salt in a solvent and evaporating the solvent.

ZnBr₂ was added in the weight ratio of one mole of ZnBr₂ to three moles of repeating units of natural rubber by evaporation method. This showed a conductivity of the order 10^{-8} Scm⁻¹ at room temperature, 10^{-7} Scm⁻¹ at 50°C and 60°C temperature and 10^{-6} Scm⁻¹ at 70°C and 80°C temperature.