

THE POTENTIAL OF CONDUCTIVE KNITS TO MITIGATE ELECTROMAGNETIC RADIATION

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Abstract: This paper gathers information about the ubiquity of electromagnetic radiation in modern society for human health and well-being. The pervasive use of wireless technologies such as WiFi and mobile networks, individuals are continuously exposed to high-energy radiation. The aim of this research is to explore the potential of conductive knits to mitigate electromagnetic radiation, serving as both structural material and shielding in construction. Utilizing recycled and conductive yarns, various knitted structures will be fabricated using the CMS 530 Ki BcW multi-gauge electronic knitting machine. The research is focusing on measuring the Transmission Coefficient and Electromagnetic Shielding Effectiveness (EMSE) of the above knits. Findings from the research will contribute to the development of innovative solutions for reducing electromagnetic radiation exposure in built environments.

Keywords: *weft knitted structures, conductive fabrics, electromagnetic shielding*

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