



UNIVERSITI TEKNOLOGI MARA
CAWANGAN BUKIT BESI

MEC299
MECHANICAL AND PHYSICAL PROPERTIES OF
BRASS AND STEEL

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ABSTRACT

Every material around us has its own mechanical and physical properties. A material's mechanical properties are defined as those that influence the material's reaction to applied loads. Mechanical properties determine how a material would behave in a given application. Strength, toughness, ductility, and resilience are some of the mechanical qualities of a material. This study is to help the manufacturers and engineers decide on the best materials for particular applications such as for construction and electrical equipment. The project aims to investigate and compare the mechanical characteristics of brass and steel and relate them to theoretical analysis. This research will also study the microstructural properties of brass and steel at different magnifications. Hardness and tensile tests will be performed to compare the mechanical properties between brass and steel. Hence, the expected result from this project is steel is stronger and high ductility. Therefore, construction companies and industries preferably use steel applications than brass due to its mechanical and physical properties. At the end of the project, the samples will be characterized, evaluated, and compared to theoretical analysis at various magnifications.[1]

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