

EVALUATION OF RED BRICK QUALITY CLASSIFICATION BASED ON PHYSICAL AND MECHANICAL PROPERTIES TESTING IN SUNGAI APIT DISTRICT

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ABSTRACT

Red brick is a building material widely used in construction, particularly for walls. Brick quality is determined by its physical and mechanical properties, which must meet applicable standards. This study aims to evaluate the quality of red bricks produced in Sungai Apit District based on physical and mechanical testing and compare them with SNI 15-2094-2000.

The method used was an experiment, with testing conducted on six factories (Y1–Y6). Testing included physical properties such as size, appearance, water absorption, bulk density, and suction power, as well as mechanical properties such as compressive strength. Data were analyzed quantitatively and qualitatively and then compared to standards.

The results showed that the brick size deviated from the standard, the appearance properties were not uniform, and the water absorption ranged from 20.93%–22.12%, exceeding the SNI limit. The suction power value was high, while the bulk density was relatively low. The compressive strength ranged from 13.23–23.48 kg/cm², thus falling below Grade III.

It was concluded that the red bricks produced in Sungai Apit District do not meet the requirements of SNI 15-2094-2000, so improvements to the production process are needed to improve quality.

Keywords: *red bricks, physical properties, compressive strength, SNI 15-2094-2000.*