

ABSTRACT

Roof tiles are the protection of the roof frame of a building as a whole against hot weather, rain, wind and others. Good tile quality indicators have characteristics; lightweight, waterproof, strong durability, can absorb heat, durable, and long lasting. Based on BPSTH data (2019) the most percentage of households in DKI Jakarta are community-owned residences, namely 47.12%, while according to the aspect of the floor area of houses DKI Jakarta has a floor of 20-49 m² (35.55%), so from the presentation of the main building materials for roofs is increasing. Along with this increase, the raw materials for making roof tiles will also increase, where the raw materials will decrease if used continuously. in Indonesia, especially the Lamongan area is an area with a high amount of siwalan shell waste and also shells. Both of these wastes are one of the causes of environmental pollution. Based on this explanation, researchers are innovating to create tiles that are environmentally friendly as well as economical. This study used an experimental method by testing several samples, the research resulted from a comparison of waste siwalan shells and clam shells: sample I (70%: 30%), sample II (50%: 50%), sample III (30%: 70 %). The three samples were tested for impermeability, appearance, water absorption, and resistance tests. After the trials were carried out on the three samples, the most suitable sample according to SNI roof tiles will be selected.

Keywords: Shells, roof tiles, and siwalan shells