NEW LIGHTWEIGHT COMPOSITE CONSTRUCTION MATERIALS WITH
LOW THERMAL CONDUCTIVITY

Authors : Joseph Khedari, Borisut Suttisonk, Naris Pratinthong, Jongjit Hirunlabh
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This paper presents an initial investigation on the use of a new lightweight construction material, composed of cement, sand and fiber of waste from young coconut (Cocos nucifera) and durian (Durio zibethinus). Thermal conductivity, compressive strength and bulk density were investigated. The experimental investigation reveals that the addition of these fibers reduces the thermal conductivity of the composite specimen and yield a lightweight. The composite satisfies the basic requirement of construction materials, and they could be used for walls and roofs. Thus, the potential for development, therefore, seems to be very promising. Finally, apart from saving energy consumption for the building, the proposed materials offer an alternative option to dispose waste of fruit industry.