Effect of quarry dust as a sand replacement on the properties of interlocking brick

ABSTRACT

Global sand crisis is being such a great concern these days and it has greatly influenced the world in various means including in the construction field. One of the effective alternatives that can be implemented is by using the waste material for the construction purpose. This paper investigates the physical and mechanical properties of compressed brick containing quarry dust as a replacement of sand in the brick's materials. The compressed brick specimens were mixed with quarry dust in different proportions having 20%, 50% and 100% as a sand replacement and tested for compressive strength, water absorption and density test. The result indicates that the optimum proportion of quarry dust is at 20% replacement of cement as it showed the highest compressive strength, with range of 10% to 12% water absorption and high density at 28 days curing period.