A review of crumb rubber in compressed earth brick applications

ABSTRACT

The escalating amount of tyres waste observed every year corresponding to the increases in demand and usages of vehicles around the globe. This tyres waste disposal has been a sizzling issue among researchers due to the growing amount annually, detrimental impact to the environment and eventually the possible solutions to these problems. The disposal of waste tyres is problematic due to the complexity of the structure, composition and quality of the rubber. Recently, crumb rubber which is the product recycled from tyres waste after undergoing a separation process attracts the attention of researchers due to its potential as a raw material in the production of construction material that can be used as a replacement of natural resources. Depending on the quality and category, crumb rubber can be used in many civil engineering works which can help to make the project more economic and sustainable. Further research and development of the processing and application method of crumb rubber possibly will improve the recycling rates of tyres waste and eventually lower the environmental issues due to the tyres waste landfilling. The foremost intention of this study is to review the previous research on crumb rubber especially on the properties, processing method and rates of applications in the constructions industry. This review may help to encourage and further promote the use of crumb rubber on a mass scale in civil engineering projects.