Research status on Electrical and Electronic Waste as a Construction Material: An Overview

SKM Pothinathan[1], S. Pream Kumar[2], S. Christopher Gnanaraj[3,] Muthukannan Muthaiya[4]

[1] Assistant Professor, Department of Civil Engineering, Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu, 626126, India.
[2] Student, Master of Structural Engineering, Department of Civil Engineering, Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu, 626126, India.
[3] Associate Professor, DC School of Architecture and Design, Idukki, Kerala, 685503, India.
[4] Professor, Department of Civil Engineering, Kalasalingam Academy of Research and Education, Krishnankoil, Tamilnadu, 626126, India.
s.k.m.pothinathan@klu.ac.in

ABSTRACT

Electronic waste is the most emerging issues nowadays. Every year huge amount of electronic waste is generated globally. In formal handling of electronic waste causes environmental, problems and cause treats to public health. Dealing with disposal of e waste becomes a difficult problem because there is a possibility of emission of hazardous substance in environment during recycling process. One of the safe disposals of electronic waste is to use as a part of construction material. As the cost of the ordinary construction material increases, it forces the civil engineers to find suitable substitutes. E-waste is used as a substitute for construction materials like coarse aggregate and fine aggregate if it satisfies the concrete property requirement. This paper presents an overview on possible use of E-waste as construction material by the different researchers in recent years. Their research strongly shows possibility of E-waste being used as replacement of fine aggregates and coarse aggregates in different building components. The electronic waste was used in huge amount as construction materials, reduces the cost of construction, saving the natural resources and protect the environment and making as green concrete.

Keywords: *E-waste, partial replacement, strength test, concrete.*