Contribution ID: **34** Type: **Poster Presenter**

EFFECT OF BRICK DUST AND LIME POWDER ON THE PERFORMANCE OF PLAIN CEMENT CONCRETE

This paper illustrates the partial replacement of cement by brick dust and lime powder. The environmental condition is getting worse around the globe. One of the major causes of environment is waste generated from factories and working sites. The waste goes into dumping which not only occupy land but also cause ill effects to living. This unruly can be solved up to some de-gree by using these wastes in concrete as a cement replacement. An effort is made in this research to use lime powder and brick dust in plain concrete as cement replacement. The lime powder and brick dust was first used separately in concrete and then used as combination of brick dust and lime powder. Lime powder and brick dust was used separately in concrete up to 20% replacement with 5% interval. Then 5% brick dust was used with 15% lime powder, 10% brick dust with 10% lime powder, 15% brick dust with 5% lime powder. Using 20% brick dust separately in concrete gives good workability but less compressive strength compared to control sample. Replacing cement by 20% lime powder enhanced 3% compressive strength compared to control mix. Whereas replacing cement with 15% lime powder and 5% brick dust gives optimum compressive strength compared to control mix. The results shows that lime powder increase the compressive strength compared to concrete made with brick dust. Using 20% lime and brick dust can save cost of cement in range of 7.2%- 12.5% which ultimately save the cost of a project.

Author: Mr BASIT, Abdul (Swedish College of Engineering & Technology, WahCantt)

Co-authors: Mr KHAN, Muhammad Aftab (Swedish College of Engineering & Technology, WahCantt); Mr AHMED, Ibrar (Swedish college of engineering and technology wah cantt); Mr KHAN, Muhammad Nasir Ayaz (Swedish college of engineering and technology wah cantt); Mr LIAQAT, Nabeel (Swedish college of engineering and technology wah cantt); Mr UMAR, Muhammad (Swedish college of engineering and technology wah cantt)

Presenter: Mr BASIT, Abdul (Swedish College of Engineering & Technology, WahCantt)

Track Classification: Civil & Construction Engineering