

UTILIZATION OF INDUSTRIAL BY-PRODUCTS IN CONCRETE

Author(s)

R. Siddique

*Department of Civil Engineering,
Thapar University, Patiala 147004,
Punjab (India)*

Abstract

Increasing urbanization and industrialization increases the industrial waste generation in both developed and developing countries. With increased environmental awareness and its potential hazardous effects, recycling/utilization of industrial waste by-products have become an attractive alternative to disposal. Several studies have been reported on utilization of waste materials and by-products such as waste foundry sand (WFS), coal bottom ash (CBA), cement kiln dust (CKD) and wood ash (WA) in making cement-concrete and controlled low-strength material (CLSM). This paper presents an overview of the work published on physical, chemical, and mineralogical composition, mechanical properties such as workability, setting times, compressive, splitting and flexural strength, permeability etc. of concrete and CLSM made with waste foundry sand, coal bottom ash, cement kiln dust and wood ash.

Keywords : Cement kiln dust; Concrete, Coal bottom ash; Waste foundry sand; Wood ash.