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座長:麓隆行(土木),今本啓一(建築)

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[1212]FRESH AND HARDENED PROPERTIES OF ALKALI-ACTIVATED CONCRETE INCORPORATING BLAST FURNACE SLAG AND CASTING SAND DUST

Amr Moussa¹, Chikako FUJIYAMA¹ (1.横浜国立大学)

Keywords:alkali-activated concrete、 casting sand dust utilization、 waste material recycling、 compressive strength analysis、 concrete workability

This study examines the inclusion of casting sand dust in alkali-activated concrete. Challenges with workability and strength were improved by replacing Fly Ash with Blast Furnace Slag in the mix. Improved results were observed with a 30% replacement of casting sand dust in concrete, showing a strength of 35 MPa, and with a 40% replacement in mortar, which exhibited a strength of 43 MPa after seven days. This research underscores the practicality of casting sand dust in concrete mixtures, aiding in the use of industrial by-products.