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USE OF INDUSTRIAL BY-PRODUCTS AND MANUFACTURED SAND IN HIGH STRENGTH CONCRETE DESIGNED FOR DURABILITY

Thesis submitted in partial fulfillment of curriculum prescribed for the award of the degree of

BACHELOR OF ENGINEERING
IN
CIVIL ENGINEERING

by

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ABSTRACT

Concrete a revolutionary invention in Civil engineering has enabled architects and engineers to virtually convert their imaginations and fantasies into reality. Since the past decade, sustainable and eco-friendly living has been a topic of concern to people from all walks of life. However, not much effort has been made towards putting an effective solution on ground for the fast depleting river beds despite the fact that sand plays a very vital role in the construction industry. With the advent of science and technology came in innovations and with innovations came in urbanization, industrialization and an enormous surge in population. As natural sand is nearing depletion near some of the metropolitan areas, use of manufactured sand as a replacement fine aggregate is receiving intense attention these days. This report aims at conveying the overall effectiveness of manufactured sand and blast furnace slag as replacements for river sand and cement respectively. Further, this report reaffirms the scope for use of industrial by-products in the manufacture of concrete in all possible aspects including practicability, economic feasibility and ecological benefits.