

PROJECT REPORT
8th SEMESTER, B.E, CIVIL

Visvesvaraya Technological University

BELGAUM, KARNATAKA

ವಿಶ್ವೇಶ್ವರಯ್ಯ ತಾಂತ್ರಿಕ ವಿಶ್ವವಿದ್ಯಾಲಯ

ಬೆಳಗಾವಿ, ಕರ್ನಾಟಕ



**“Experimental Study on Utilization of Erode Steel
Plant Blast Furnace Slag in Concrete”**

***A PROJECT SPONSERED BY KARNATAKA STATE COUNCIL FOR
SCIENCE & TECHNOLOGY***

A project report submitted in partial fulfillment of the requirement for the award of the
degree of Bachelor of Engineering in Civil Engineering.

BY

LOHITH T K

SHILPA SHET S

SHRUTHI S

SNEHA R

GUIDE

Dr. S. Rajendra M.E. (Const. Tech.), M.S.(Soft.Sys). Ph.D
Professor, Dept. of Civil Engineering



Department of Civil Engineering
Jawaharlal Nehru National College of Engineering
SHIVAMOGGA-577204

June, 2010

SYNOPSIS

Concrete is a man made material and most commonly employed construction material. It consists of hard inorganic material called aggregate, such as gravel and crushed stone etc., mixed with cement and water. After few hours of mixing the materials undergo chemical reaction and form the product of hydrated calcium silicate which binds the composition and makes the mixture monolithic. Once the solidification starts the concrete attains great strength and it posses high compressive strength with age.

New building materials are used to accelerate the construction work in which the admixtures play an important role. Admixture is defined as a material other than cement, water and aggregate that is used as an ingredient of concrete and is added to the batch immediately before or during mixing of concrete. The admixture plays an important role in modifying the properties of concrete like strength and workability. The admixtures are used according to situation and construction.

Cement concrete has in the last 150 years been used for various purposes and has become an important building material. In the past, attempts have been made to improve the properties of concrete like compressive strength, water absorption, workability, etc., by the use of slag.

Huge quantity of blast furnace slag is available in Erode Steel Plant which creates a problem for disposal. In this project attempts were made to study the compressive strength, flexural strength and workability of blast furnace slag concrete.

Blast Furnace Slag can be effectively used in concrete by replacement of cement in different proportions and effects on compressive strength, flexural strength and workability were studied in this project.