VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELGAUM – 590018

A PROJECT REPORT

ON

"SOME STUDIES ON STRENGTH BEHAVIOUR OF CONCRETE DUE TO IMPROPER CASTING IN SEQUENCES"

A Project Report Submitted to Visvesvaraya Technological University in partial fulfillment of requirement for the award of degree

BACHELOR OF ENGINEERING

IN

CIVIL ENGINEERING

Project Associates

KALMESH P	**USN: 2SR08CV012**
MANJULA PACHANGI	**USN: 2SR08CV021**
MANJUNATH R HEBBALLI	**USN: 2SR08CV023**
SUNITHA N.B	**USN: 2SR08CV044**

Under the Guidance of

SMITHA.M M.Tech

Lecturer in Civil Engineering

DEPARTMENT OF CIVIL ENGINEERING

SRI TARALABALU JAGADGURU INSTITUTE OF TECHNOLOGY

RANEBENNUR-581115

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ABSTRACT

Concrete starts attaining strength from the instant of time when water is just added to the dry mass. The mass mixed with water and left exposed to atmosphere for a certain time lag 'total' (hence forth termed as time lag concrete or total-hr concrete) shows a reduction in strength in comparison to that of the mix molded at the same instant of time (t = 0). The reduction in strength in comparison may be largely due to the disturbance of setting process in the mass which commences from the instant of time t=0 upto the initial setting time t_i upto which the concrete is considered to be plastic and workable. Hence, it is obvious that when time lag is equal to or less than the initial setting time t_i of the mass, the amount of decrease in strength compared to that of fresh mix is small. The onset of setting commences in the mass as the time lag crosses the initial setting time. The mass considered in between the time limit becomes partially set. The strength of which naturally differs appreciably from that of fresh mass observed at time lag t=0. However, this observation at times is seen to be violated.

The strength time-lag variation of any mix is dropping in nature. There may be a situation (particularly towards 1hr) when the value of the strength of a mix is a_0 low that it is no use. Moreover the workability being too low to cast for strength observation such mixes are often of no service and may be declared waste.