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**COLD MIX FOR MAINTENANCE OF
ROAD SURFACES**

BY

R.WEERARATNE

 University of Moratuwa, Sri Lanka.
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DR. J M S J BANDARA

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DEPARTMENT OF CIVIL ENGINEERING
UNIVERSITY OF MORATUWA
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DR. J M S J BANDARA

**A PROJECT REPORT SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF
ENGINEERING IN HIGHWAY AND TRAFFIC ENGINEERING**

DEPARTMENT OF CIVIL ENGINEERING

UNIVERSITY OF MORATUWA

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Abstract

The maintenance of roads net work in the country is a very important activity and it directly effects the people and the economy of the country. At present the road maintenance system in Sri Lanka has lead to some criticism in the society though the government spends lot of money annually in order to avoid this critical problem .

The identification of current road maintenance system and the materials used for maintenance works, and the identification of problems in respect of road maintenance works are considered.

Materials utilized for road construction and maintenance were considered and road construction material which is frequently and widely used in Sri Lanka was selected. In this case cold mix was selected in comparison with hot mix due to the wide usage, availability in Sri Lanka, process of production, lesser environmental pollution and lesser restrictions in utilization.

The main objective of this research was the investigation of possible quality improvement of cold mix by varying its composition and recommendations are made on how to use the improved material in the field more effectively under various climatic and weather conditions.

In addition to changing the major components of the cold mix, examine any improvement in the quality of cold mix by incorporating a small percentage of some other binder material as a filler such as cement to fine aggregate when mixing in the cold mix and recommendations of effective way of utilization the cold mix in the field under the different climatic and weather conditions.

Finally, recommendations on after care treatments for the utilization of cold mix in surfacing and maintenance works to ensure the quality and durability of the completed works.

This research was not aimed to obtain a unique proportion for cold mix. Mixed proportion depends on traffic condition of road, Climatic condition of area, weather conditions and the quality of aggregates and binder material. The research leads the guidance to select the appropriate mix in respect of above situations.

Based on the results of the trial mixes tested in the laboratory and in the field and the observations the recommendations are made on how to use the material in the field more effectively and after care treatments for the utilization of cold mix in surfacing and maintenance works to ensure the quality and durability of the completed works.

ACKNOWLEDGEMENT

I express my deepest gratitude to Dr. J S M J Bandara, Senior Lecturer of Department of Civil Engineering, University of Moratuwa in respect of supervising and guiding me in carrying out the research project and in preparation of the report.

I also wish to thank Prof. M Gunaratne of South Florida University, USA who helped me a lot in this project in various stages. My sincere thanks should convey to Dr. U G A Pusswewela in respect of correcting and preparation of final project report.

My sincere thanks are due to Mrs. T Wijewardena, Chief Engineer and Mr. U T Withane, former Executive Engineer of Road development Authority, Matara who allowed me to carry out the trials in RDA laboratories and on RDA roads.

I should thank the staff of the laboratories and field staff of BAT International SpA and Keangnam Enterprises in World Bank Contract 3 and 4 in assisting me to carry out the research in the laboratories and in the field.



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Finally I am grateful to Mr. M B S Fernando former Chairman of Road Development Authority and Road Construction and Development Company and late Mr. N W G Laksmana, former Provincial Director of Southern Province, RDA for sponsoring and helping me to follow the Master of Engineering course at University of Moratuwa.

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