A STUDY ON QUALITY CONTROL AND ASSURANCE MEASURES IN USING ASPHALT CONCRETE

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ABSTRACT

During the past two decades, Sri Lanka achieved rapid industrial and economic development. The increased development activities have created sudden surge on traffic volume on roads. Hence, the government has given priority to road development programmes in which more than 75% of the roads are going to be over laid by asphalt concrete.

It was observed that, the recently laid asphalt concrete surfaces recently laid by various contractors have failed within 5 years after construction. The failure of above asphalt surfaces may be due to various problems associated with designing, mixing, laying and environmental factors during service.

This research was carried out to identify the problems associated with asphalt concrete surfaces, to investigate the possible causes of them and to suggest better quality control and assurance measures to eliminate the above problems.

Using the information collected from site investigations, past research papers, discussions, text books etc, the main causes for asphalt concrete deformations were identified and cause and effect diagram was drawn. The causes were analyzed in more detail in relation to cause and effect diagram to make conclusions and recommendations.

Recommendations were made in relation to the methods of mix design, type and quantity of bitumen used for production of asphalt and remedial measures to be taken during production and laying asphalt concrete.

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