

Design of Roller Compacting Concrete Pavement

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Abstract : The quality of concrete is usually defined by compressive strength, but flexural strength is the most important characteristic of concrete in a pavement which control the mix design of concrete instead of compressive strength. Therefore, the aggregates which are selected for the pavements are affected by higher flexural strength. Roller Compacting Concrete Pavement (RCCP) is not a new construction method. The other characteristic of this method is no bleeding and less shrinkage due to the lower amount of water. For this purpose, a roller is needed for placing and compacting. The surface of RCCP is not smooth; therefore, the most common use of this pavement is in an industrial zone with slower traffic speed which requires durable and tough pavement. For preparing a smoother surface, it can be achieved by asphalt paver. RCCP decrease the finishing cost because there are no bars, formwork, and the lesser labor need for placing the concrete. In this paper, different aspect of RCCP such as mix design, flexural, compressive strength and focus on the different part of RCCP on detail have been investigated.

Keywords : flexural strength, compressive strength, pavement, asphalt

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