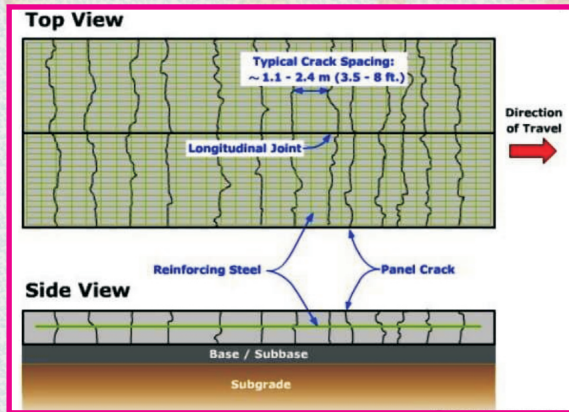


Life Cycle Cost Study and use of Continuously Reinforced Concrete Pavements in National Highway Projects



INSTITUTE FOR STEEL DEVELOPMENT & GROWTH (INSDAG)

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INSDAG

Steel is the backbone of all industries and the basic ingredient for growth and development of a country. Traditionally, the fortunes of the steel industry have been linked to the economic cycle of the country. Per capita consumption of steel speaks volumes about the relative position of the country on the development frontier. In India the per capita consumption of steel stands low compared to developed and developing countries. Moreover, steel is completely recyclable and environment friendly. Hence, a large potential exists in furthering the usage of steel in various segments of industry. Institute of Steel Development & Growth (INSDAG), a non-profit making, member based organization established by Ministry of Steel and the major steel producers of the country. The Institute primarily works towards the development of advanced design methodologies & technical marketing by expanding applications of steel in different segments of industry, upgrading skills & know-how, creating awareness amongst potential users and communicating the benefits of steel. Our founding members are SAIL, Tata Steel Ltd., RINL, JSW Steel Ltd., and Arcelor Mittal Nippon Steel India Limited (AM / NS) apart from Ministry of Steel. INSDAG has got very good networking among the member organisations/professionals for exchange of ideas. The Institute is registered as a "Society" under Societies Registration Act of West Bengal.

Director General looks after the daily affairs of the Institute and Executive Council provides guidance and direction. Two other functional committees namely the Working Group and Project Review Committee provide administrative and technical guidance respectively. The Institute has defined its mission, role, and functions and has evolved its short, medium and long term Activity Plans. The Institute primarily works towards the development of technology in steel usage and the market for the steel fraternity. Some of its roles are:

- Ø Creating awareness amongst potential users on affordability of steel.
- Ø Bringing out technical publication on steel applications.
- Ø Providing technical advisory services on materials, construction practices etc.
- Ø Upgrading the skills of work force by refresher courses / training programmers.
- Ø Communicating the benefits of steel through life cycle cost studies.
- Ø Providing requisite thrust to increase steel consumption in rural areas.
- Ø Assisting in the development of ancillary industries for creating new market.

LCC Study and Use of CRCP in National Highway Projects

*Life Cycle Cost Study and Use of
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LCC Study and Use of CRCP in National Highway Projects

*Life Cycle Cost Study and Use of
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National Highway Projects*

By:

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Our Mission Statement

To work in unison for all the stakeholders in the steel industry so as to evolve ways and means for more efficient usage of steel and provide optimum value to the customer

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FORE WORD

This publication titled “**Life Cycle Cost Study and Use of Continuously Reinforced Concrete Pavements in National Highway Projects**” was mainly prepared by Mr. Pydi Lakshmana Rao, General Manager (Civil & Structural) based on project work carried out by him and the technical contents of the document were reviewed both internally and externally.

The external review was done by Dr. Saroj Mandal Professor in Civil Engineering Department, Jadavpur University, Kolkata having vast experience in the field of structural engineering. Valuable suggestions and inputs by him have been included in this publication. INSDAG expresses its heartfelt thanks for his valuable contribution.

Director General extended all necessary facilities to bring out the publication.



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Message from Reviewers

December 20, 2022

I have gone through the report titled “Life Cycle Cost Study and Use of Continuously Reinforced Concrete Pavement (CRCP) in National Highway Projects” prepared by Sri Pydi Lakshmana Rao from INSDAG.

In this report the life cycle cost study of CRCP and other alternate options have been explained very elaborately. This book serves the authorities to study various options available for a particular pavement especially for National Highway Projects.

CRCP is well established technology in advanced countries like USA, Belgium, Spain etc. because of its cost effectiveness and virtually maintenance free service life.

The investments in road building are very high, proper investigation needs to be made while choosing the right type of pavement. On life cycle cost basis CRCP is very economical although it is more expensive on initial cost basis. CRCP can be recommended for ongoing National Highway Projects considering its low life cycle costs.

I feel that the public benefits from CRCP through fuel savings and comfortable riding, the government gains from almost maintenance-free service, lower foreign capital outlay, steel industries profit from increasing use of steel in road construction, and the nation as a whole benefits from improved roads. Hence, I strongly recommend that the decision making authorities should take advantage of the analysis made in the report and take initiative to implement CRCP on National Highways Projects.

Saroj Mandal

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