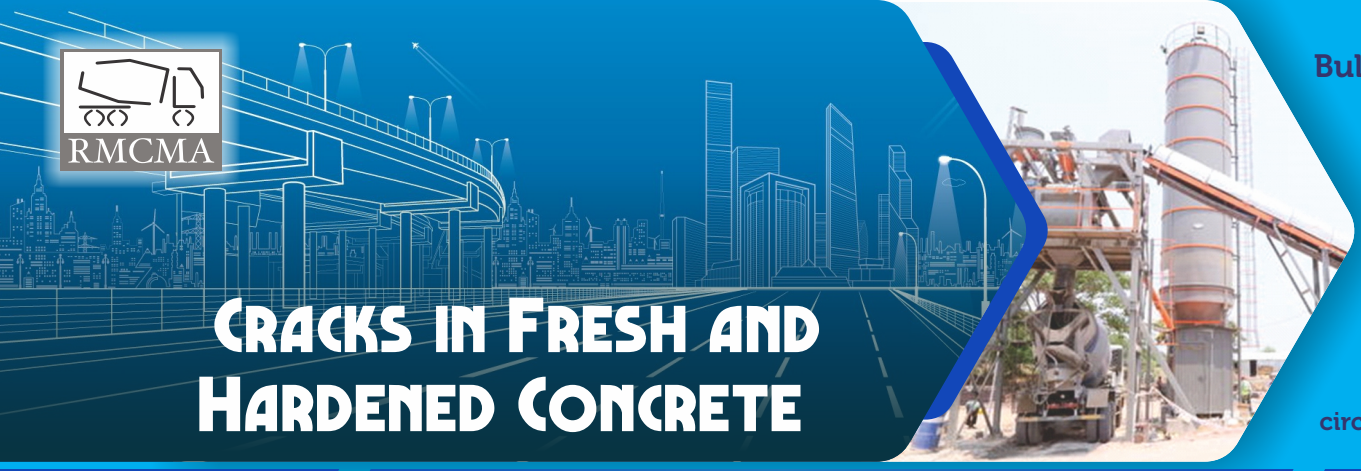
Bulletin No.5



# Cracks in Fresh and Hardened Concrete

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## Causes and Preventive Measures

## PRESIDENT'S MESSAGE

Concrete is most extensively used material in construction worldwide. Concrete is strong in compression but weak in tension and has limited ductility, and cracks in concrete are inevitable. The consequences of cracks can be from trivial to catastrophic and their repairs are expensive and complex.

The Bulletin on "Cracks in fresh & hardened concrete - causes & preventive measures", is deliberated to understand the causes of concrete cracks and circulated among all the stake-holders across supply chain, to take preventive measures to avoid them.

I would also like to emphasis on the use of latest materials/technologies, in the process of making concrete structures more durable and sustainable. Amongst - the first comes, use of lower water-cement ratio concrete mixes, use of PP fibers as mandatory ingredient in all mixes, followed by application of curing compound irrespective of type of application of concrete . These measures will help in minimising the cracks both at wet & hardened state.

I urge construction Industry to graduate to self-healing & bacterial concrete that are new innovations and offers solution to long term cracks and to avoid major repair of concrete structures. It is time to bring relevant specifications of the same for larger field application.

Industry needs to focus more on sustainability by eliminating water as curing material, minimize cracks in concrete, thus enhance the service life of the structures beyond their design life, so that the natural materials can be saved for the future generation.

Hope that, future of concrete lies in the crack free concrete structures that are produced by using right materials and following correct construction practices.

Er. Ramesh Joshi
(President, RMCMA)