Dear Reader

Prof. Pasala Dinakar, our Guest Editor of this edition is a an Associate Professor in the Department of Civil Engineering, School of Infrastructure at Indian Institute of Technology (IIT), Bhubaneshwar. He is also the Chairman of Indian Concrete Institute (ICI), Bhubaneswar Chapter and is an active consultant to varied industries in the field of design, repair and rehabilitation and construction. Durability, corrosion of steel in concrete and waste utilisation in concrete are his specialisation areas. He has in all 70 papers published in several national and international journals.

We would like to bring to the notice of all our readers and contributors, **ICJ promotes original content and does not allow any form of plagiarism.** Plagiarism is considered to be a serious breach of ethics by the entire academia community and industry. We constantly take suggestions from our Panel of Experts on avoiding any malpractice of publication ethics. We recommend our **Authors to submit only original technical manuscripts** dealing with diverse topics on civil engineering, concrete construction. Incidents of plagiarism in a manuscript or published paper whether detected or reported will be dealt with seriously.

We thank our Guest Editor, all our Reviewers, Authors and our team members for their exemplary support and for their best efforts to complete this edition timely. We are facing the worst pandemic in recent times. There are so many men and women across our country and the world over too, who are selflessly working round-the-clock to keep everyone safe. With the Government and the health authorities doing their best to combat the spread of COVID-19, please display solidarity #StayHome#StaySafe.

Production Editor
Indian Concrete Journal

Dear Colleague

We are pleased to bring to you this edition of the ICJ. Most of the papers in this edition focus on the use of high strength concrete (HSC), wherein exceptional benefits, both technical and economical, could be derived using high-strength concrete. Because of these benefits, high-strength concrete is now being regularly used in many applications, including buildings, offshore structures, bridge elements, overlays, and pavements. Designing high strength concrete mixtures for various applications with varied physical, chemical, and mechanical properties, resulting in concrete with intended in-situ performance under prescribed loading conditions and possible harsh environment is certainly a technical challenge. The papers in this edition deal with the use of high strength concretes for repair, shear performance of beams, in the development of geopolymer concrete and temperature resistant concretes. We also have few interesting case studies in this edition.

Here is a brief overview of papers in this edition : first paper by Murugun and Sengupta, examined the application of self-compacting HSC as a jacketing material to enhance the shear strength of the beam-columns specimens. The study revealed that HSC is suitable for increasing the shear capacity of columns with thin jackets.

An interesting case study paper by Kalaga focused on the challenges encountered during the design of two reinforced concrete drilled shafts situated in poor soils when subjected to very large reactions. Some of the difficulties like limitations on deflections, shaft top projections, effects of frost depths, evaluation of skin friction contribution to axial resistance and rebar arrangement were effectively addressed to avoid later-stage problems and to include skin friction while estimating axial or vertical load resistance.

Paper by Chand and his co-workers reviewed the shear performance of high strength steel fibre concrete beams and concluded that when the shear span to effective depth ratio (*'a/d'*) is more than 3 the results are scattered. So, a more rational and analytical models need to be developed for predicting the shear strength of HSC structures.

In an another interesting paper the development of ambient cured high strength geopolymer concrete using various industrial wastes is well presented by Mohapatra and his co-workers. They concluded that as the molarity increases the compressive strength increases.

Next paper the experimental investigation on the effect of elevated temperature on high strength fly ash concrete at different ages is presented. The test results indicate that there is significant increase in compressive strength at low elevated

temperatures whereas at high elevated temperatures there is a degradation in the strength of the concrete.

Paper contributed by Rizal and others on trials conducted on several types of concrete panels with bamboo reinforcement can be used and able to withstand the hydrostatic load of water so it can be used as a plate on the water gate and can be used in the construction of sluice gates.

Discussion and Comments to the paper authored by Dipti Ranjan Sahoo on IS 456 provisions, published in the ICJ April edition, is definitely an interesting read.

In concluding this editorial, I would like to draw attention to the concrete research in India and the progress made in the recent three years, indicates the speed with which we can achieve success in our concrete industry. We thank all our reviewers and authors for their contribution that led to compiling of this edition. Enjoy this edition and please do share your feedback with us. Please do stay safe and we will overcome this crisis together.

Pasala Dinakar
Guest Editor, ICJ

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