

Dear Readers,

We are pleased to share with you the latest ICJ edition covering key research work on recent developments in the construction industry, and materials.

Dr Suman Saha is an Assistant Professor at the Department of Civil Engineering, National Institute of Technology (NIT) Durgapur, West Bengal, India. Prior to join NIT Durgapur, he worked as Assistant Professor in the Department of Civil Engineering at National Institute of Technology (NIT) Calicut, Kerala, India. He received PhD and M. Tech. degrees both from National Institute of Technology (NIT) Karnataka, Surathkal, India and B. E. from Jadavpur University, Kolkata, India. His research interest includes alternative construction materials towards sustainability and advancement in concrete technology.

We hope you enjoy reading this edition and look forward to your feedback!

Production Editor
Indian Concrete Journal



Dear Readers,

Greetings from the Indian Concrete Journal (ICJ)!

I am pleased to bring out the current edition with significant insight into the recent developments in the construction industry, and materials. This edition comprises

five articles, which focused mainly on early-age temperature development in large concrete structures, performance evaluation of different type of concrete, namely geopolymer concrete, textile reinforced concrete and stripping time of the formwork for reinforced cement concrete work.

The first article concentrated on the temperature gradient in the large concrete structure and developed a finite-difference computational approach for modelling the time-temperature development in one of the layers in a sequentially cast concrete structure. With the help of these types of models, engineers can design and develop a suitable construction approach that can satisfy the requirements for the limits of concrete temperature while minimising the number of joints as well as the required construction time.

The next article focused on the environmental issues caused by the manufacture of ordinary Portland cement. This research work considered geopolymer concrete for achieving environmental sustainability and conducted experimental work to assess mechanical and durability properties of M20, M40 and M60 grade concrete containing different types of fibres such as steel, glass and hybrid fibres. The observations from the study concluded that concrete containing hybrid fibres exhibited better performances than that of mono-fibre concrete.

In the next article, authors carried out a study focusing on the stripping time of formwork, which plays a significant role in safety and the economic issues of reinforced cement concrete work. A summarized overview on the stripping time of formwork is provided by exploring the codal provisions of the different developed and developing countries such as India, UK, USA, Japan, Germany, and Uganda.

In following article, authors conducted experimental work to assess the performance of geopolymer concrete exposed to acidic environments. This research work used ferrochrome slag as partial alternative for natural coarse aggregate. Scanning electron microscopy (SEM), Fourier-transform infrared spectroscopy (FTIR) and x-ray diffraction (XRD) analyses were

conducted to investigate the properties of geopolymer concrete at microstructural level. Improvement in strength and durability characteristics was found for the geopolymer concrete mixes with ferrochrome slag.

The last article focused on the development of different thin-sectioned structural forms with textile-reinforced concrete (TRC), using various fabrication techniques. A summarised review of the advantages of TRC and previous usage across the globe is presented in this article.

On behalf of ICJ, I would like to extend my gratitude to authors and to our reviewers. We are delighted to publish this edition and believe this will benefit both the researchers and the practicing engineers equally.

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Best regards,

Dr Suman Saha

National Institute of Technology Durgapur
suman.saha@ce.nitdgp.ac.in