

Founded in 1927

Published by ACC Limited, L.B. Shastri Road, Near Teen Haath Naka, Thane (W) 400604.

The contents of this journal are contributions of individual authors, and reflect their independent opinions, findings, conclusions and recommendations and do not necessarily imply that they reflect the views of the Publisher, ACC Limited. The Publishers are not liable for any damage or inconvenience, caused to anyone who may have acted on the information contained in the publication.

The Indian Concrete Journal, ISSN 0019-4565 Copyright © 2018 ACC Limited.

ACC Limited - Registered Office – Cement House, 121, Maharshi Karve Road, Mumbai 400 020.

The copyright, database rights and similar rights in all materials published in The Indian Concrete lournal are owned by ACC Limited. None of this material may be used for any commercial or public use, other than for the purpose of fair dealing, research or private study, or review of the contents of the journal, in part or in whole, and may not be reproduced or stored in any media for mass circulation without the prior written consent of the publisher.

'UBLISHING / EDITORIAL / ADVERTISEMENT AND CIRCULATION OFFICE

he Indian Concrete Journal

CC Limited

.B. Shastri Road, Near Teen Haath Naka lext to Eternity Mall, Thane (West) 400 604, Aaharashtra, INDIA.

al: 00-91-22-33027646

/ebsite: www.icjonline.com -mail: info@icjonline.com icj@acclimited.com

litor: Ashish Patil litorial Team: lhas Fernandes



Mul

Cover image source: www.centennialenergythailand.com

TECHNICAL PAPERS

SPECIAL ISSUE - DESIGN

12

Performances of columns reinforced with PSWC-bars and other rebars Anil K. Kar, Urmil V. Dave and Ritesh S. Varu

18

Study on flexural behaviour of reinforced high strength concrete beams V.V. Arora, Brijesh Singh and Vikas Patel

28

Flexural behavior of reinforced concrete beam strengthened by textile reinforced concrete: Experimental and numerical study Huy-Cuong Nguyen and Dang-Quang Ngo

44

Design of rectangular coal bunker of large capacity R.L. Dinesh and Sandhya Krishnamurthy

56

Optimization study of pile foundation for stacker reclaimer Sanjoy Chowdhury

65

Efficient preliminary design of reinforced concrete frames with vulnerability indices

Arshad K. Hashmi, Syed Muhammad Ibrahim and Alok Madan

74

Performance of composite steel-concrete shear walls with encased vertical steel sections

P.P. Phadnis, D.K. Kulkarni, A.B. Kulkarni and V.V. Karjinni

82

Study on beam-column joints wrapped with woven glass fiber reinforced polymer composites
Pranoy Roy and P. Sachithanantham

FEATURES

04

EDITORIAL

06

NEWS & EVENTS

89

POINT OF VIEW: A critical study on empirical period - height relationship for reinforced concrete moment resisting frame buildings Shilpa P. Kewate and M.M. Murudi

95

POINT OF VIEW: Challenges in analysis, design and construction of sea water cooling system

Anirban Bhattacharya and A. Mhatre