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Hyunjin Ju, Deuck Hang Lee, Kang Su Kim

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Minimum Torsional Reinforcement Ratio for Reinforced Concrete

Members with Steel Fibers

by

Hyunjin Ju, Deuck Hang Lee, and Kang Su Kim*

AUTHOR AFFILIATIONS

Hyunjin Ju, Ph.D.

Post-Doctoral Research Fellow
Department of Civil Engineering,
School of Engineering, Nazarbayev University
53 Kabanbay Batyr ave., Astana, Rep. of Kazakhstan, 010000
Tel: 7-702-485-1735
E-mail: hju9027@gmail.com

Deuck Hang Lee, Ph.D.

Assistant Professor
Department of Civil Engineering,
School of Engineering, Nazarbayev University
53 Kabanbay Batyr ave., Astana, Rep. of Kazakhstan, 010000
Tel: 7-717-270-4614
E-mail: deuckhang.lee@nu.edu.kz

*Kang Su Kim, Ph.D., Corresponding author

Professor
Department of Architectural Engineering, University of Seoul
163 Seoulsiripdaero, Dongdaemun-gu, Seoul 02504, Rep. of Korea
Tel: 82-2-6490-2762, Fax: 82-2-6490-5509
E-mail: kangkim@uos.ac.kr

ABSTRACT

The current design codes for concrete structures suggest the minimum torsional reinforcement ratio to induce minimum ductile failure after cracking in reinforced concrete (RC) members subjected to torsional moment. However, as the member strengths are quite often lower than the torsional cracking moment strengths even when satisfying minimum torsional reinforcement ratio specified in the current codes, it may not serve the original purpose of preventing brittle failure immediately after cracking. In this study, a rational equation is thus presented for calculating the minimum torsional reinforcement ratio that could provide a sufficient margin of safety in design. The minimum fiber factor to be applied in steel fiber reinforced concrete (SFRC)

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