

Author's Accepted Manuscript

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under Torsion

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PII: S2352-7102(17)30486-2
DOI: <https://doi.org/10.1016/j.jobee.2018.04.024>
Reference: JOBE469

To appear in: *Journal of Building Engineering*

Received date: 18 August 2017
Revised date: 23 April 2018
Accepted date: 23 April 2018

Cite this article as: L.F.A. Bernardo and M.M. Teixeira, Modified Softened Truss-Model for PC Beams under Torsion, *Journal of Building Engineering*, <https://doi.org/10.1016/j.jobee.2018.04.024>

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Modified Softened Truss-Model for PC Beams under Torsion

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Abstract:

This article presents a computation procedure developed to predict the global behaviour of prestressed concrete (PC) beams under pure torsion. This computation procedure constitutes an extension of a theoretical model previously proposed, the Modified Variable Angle Truss-Model (MVATM) for Reinforced Concrete (RC) beams under torsion. The modifications incorporated in the MVATM and the calculation procedure are presented. The obtained theoretical predictions are compared with experimental results available in the literature. It is shown that the proposed computation procedure provides good predictions for the global behaviour of PC beams under torsion, including for low loading stages.

Key words: Prestress Concrete, Beams, Torsion, Softened Truss-Model

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