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ISEC 9 Manuscript Reviewed

1 pesan

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10 Maret 2017 pukul 19.56

Thank you for your participation in ISEC 9. Your manuscript, version #1, for paper St-134 has been reviewed.

Ref. ID:	St-134
Time:	Sun, Feb 26th, 2017 12:35 pm HST
Title:	NUMERICAL PARAMETRIC STUDIES FOR THERMOGRAPHIC INSPECTION IN CONCRETE
Authors:	Rilya Rumbayan, Glenn Washer
Track:	Structures
Sub Track:	Concrete and masonry structures
Abstract:	Thermographic imaging technique provides a practical tool for the detection of subsurface delaminations in concrete from a distance without direct access to the surface. In the previous study, a numerical model to predict the thermal contrasts resulting from subsurface voids (i.e., delaminations) in concrete under a given set of environmental conditions was developed using the finite element method. The model was verified using the experimental test data, and the results indicated that the model could be an effective tool to support the thermography inspection of the concrete. In this present study, the use of the verified model to evaluate the effects of other key parameters expected to influence the detectability of the subsurface voids, such as the depth and thickness of a subsurface delamination. The effect of these parameters on the thermal contrast developed on the surface above a subsurface delamination was assessed under a specific set of environmental conditions. The results shown that the maximum thermal contrast decreased exponential by a constant multiple of 0.98 as the void depth increased and the maximum thermal contrast increased nonlinearly with increasing thickness of the void.

Copied below is the review results for this latest manuscript submission for St-134.

Editor's Decision:	Accept
Review Results:	<p>Reviewer #1: This interesting paper can be accepted for presentation in ISEC-9.</p> <p>Reviewer #2: In the reviewer's opinion, the stage where the authors are in this research allows them to perform in the near future a new non destructive inspection method to assess lamination into concrete. However, the aspect in which I have some doubts would be the correlation between experimental and numerical results. We all know that in experimental field there are diffuse results which are sometimes difficult to understand. Maybe, authors want to clarify this point in the oral presentation. The paper is accepted in its current form.</p> <p>Editor's Comments:</p>

To review the full status of this submission, please go to the following link and log in to the ISEC 9 website:

https://www.isec-society.org/ISEC_09/abstractsAndPapers/?request=paperWorkspace&papers_id=429

If your manuscript has been fully accepted, than there is nothing more for you to do right now. Your paper will be copy edited. If the copy editor has any questions, you will be contacted. Please be on alert for that email. Please note, acceptance is subject to copy-editing, appropriate revisions, and payment of registration fee.

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Sincerely,

ISEC
Editorial Staff



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ISEC 9 Manuscript Acceptance and Invitation to Attend

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10 Maret 2017 pukul 19.55

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Thank you for your participation in ISEC 9. Your latest manuscript for paper St-134 has been accepted and you are invited to attend and present your paper. Please view and save the linked documents for your records.

Ref. ID:	St-134
Title:	NUMERICAL PARAMETRIC STUDIES FOR THERMOGRAPHIC INSPECTION IN CONCRETE
Authors:	Rilya Rumbayan, Glenn Washer

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Rilya Rumbayan <rilya.rumbayan@gmail.com>

ISEC Manuscript Submission Confirmation

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4 Maret 2017 pukul 17.48

Thank you for your manuscript submission to ISEC 9. Your manuscript will be reviewed soon.

Ref. ID:	St-134
Title:	NUMERICAL PARAMETRIC STUDIES FOR THERMOGRAPHIC INSPECTION IN CONCRETE
Authors:	Rilya Rumbayan, Glenn Washer
Track:	Structures
Sub Track:	Concrete and masonry structures
Manuscript Version:	Version #1
Submission Time:	Fri, Mar 3rd, 2017 23:48 pm HST

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Rilya Rumbayan <rilya.rumbayan@gmail.com>

ISEC 9 Abstract Submission Confirmation

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27 Februari 2017 pukul 06.35

Thank you for your abstract submission. Your abstract will be reviewed soon.

For all future correspondence, kindly remember to mention the reference ID: *St-134*.

Your submission details are as follows:

Ref. ID:	St-134
Time:	Sun, Feb 26th, 2017 12:35 pm HST
Title:	Numerical parametric studies for thermographic inspection in concrete
Track:	Structures
Sub Track:	Concrete and masonry structures
Author #1: (Corresponding Author)	Rilya Rumbayan rilya.rumbayan@gmail.com +6282395821162 Department of Civil Engineering, Manado State Polytechnic Kampus Politeknik, Jl. Raya Politeknik, Ds. Buha, Manado, Indonesia 95252 Manado 95252 Indonesia
Author #2:	Glenn Washer washerg@missouri.edu 573-884-0320 Department of Civil and Environmental Engineering, University of Missouri University of Missouri E2503 Lafferre Hall Columbia, MO 65211 Columbia MO 65211 United States
Abstract:	Thermographic imaging technique provides a practical tool for the detection of subsurface delaminations in concrete from a distance without direct access to the surface; however, the effectiveness of the technique is dependent on environmental conditions when a thermal image is captured. A numerical model to predict the thermal contrasts resulting from subsurface voids (i.e. delaminations) in concrete under a given set of environmental conditions was developed using the finite element method. The model was verified using the experimental test data, and the results indicated that the model could be an effective tool to support the thermography inspection of the concrete. In this present study, the use of the verified model to evaluate the effects of other key parameters expected to influence the detectability of the subsurface voids, such as the depth and thickness of a subsurface delamination. The effect of these parameters on the thermal contrast developed on the surface above a subsurface delamination was assessed under a specific set of environmental conditions. The results shown that the maximum thermal contrast decreased exponential by a constant multiple of 0.98 as the void depth increased and the maximum thermal contrast increased nonlinearly (as a logarithm function) with increasing thickness of the void.

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