

[Available Issues](#) | [Japanese](#)>> [Publisher Site](#)Author: Keyword:

Search

[ADVANCED](#)[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

PRINT ISSN : 0289-8063

STRUCTURAL ENGINEERING / EARTHQUAKE ENGINEERING

Vol. 25 (2008) , No. 2 pp.33s-46s

[\[PDF \(1414K\)\]](#) [\[References\]](#)**FATIGUE DURABILITY EVALUATION OF TROUGH TO DECK
PLATE WELDED JOINT OF ORTHOTROPIC STEEL DECK**Samol YA¹⁾ and Kentaro YAMADA¹⁾

1) Dept. of Environment Eng. and Architecture, Nagoya University

(Received: October 17, 2007)

The present study is intended as analysis investigations of fatigue durability of the trough to deck plate welded joint failed at weld root in deck plate. The investigations are carried out on the basis of three key factors: fatigue strengths of the welded details obtained by analysis method in conjunction with fatigue tests, stress ranges by FEM analyses with a unit wheel load, and the loads and their frequencies for the fatigue evaluations are the wheel loads in service, represented by an equivalent wheel load, assumed from the axle load measurements. Consistency between fatigue strength and stress range is simply demonstrated. Using this method for fatigue evaluation, it is found that large-rib-deck model has longer fatigue life than standard-deck models. An increase in deck plate thickness may prolong fatigue life of the orthotropic steel deck. Load distribution due to the rigidity of pavement may also help enhancement the fatigue life.

Key Words: orthotropic steel deck, trough to deck plate welded detail, fatigue durability evaluation

[\[PDF \(1414K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

To cite this article:

Samol YA and Kentaro YAMADA; ‘FATIGUE DURABILITY EVALUATION OF TROUGH TO DECK PLATE WELDED JOINT OF ORTHOTROPIC STEEL DECK’, *Structural Eng./Earthquake Eng.*, Vol. 25, No. 2, pp.33s-46s, (2008) .

doi:10.2208/jsceseee.25.33s

JOI JST.JSTAGE/jsceseee/25.33s

Copyright (c) 2008 by Japan Society of Civil Engineers



[Japan Science and Technology Information Aggregator, Electronic](#)

