Username:

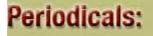
HOME CONTACT My eBook



**FULLTEXT SEARCH** 



NEW: Advanced Search



#### **MSF**

> Materials Science Forum

#### **KEM**

> Key Engineering Materials

# SSP

- > Solid State Phenomena
- DDF > Defect and Diffusion Forum

# AMM

> Applied Mechanics and Materials

### AMR

> Advanced Materials Research AST

> Advances in Science and Technology

#### **JNanoR**

> Journal of Nano Research

### JBBTE

> Journal of Biomimetics, Biomaterials, and Tissue Engineering

#### **JMNM**

> Journal of Metastable and Nanocrystalline Materials

#### **JERA**

> International Journal of Engineering Research in Africa

#### AEF

> Advanced Engineering Forum

#### NH

> Nano Hybrids

> @scientific.net

## **CONFERENCE**



Identification of Iron Rusts on Rail by X-Ray Diffract	
Journal	Advanced Materials Research (Volume 409)
Volume	THERMEC 2011 Supplement
Edited by	T. Chandra, M. lonescu and D. Mantovani
Pages	581-585
DOI	10.4028/www.scientific.net/AMR.409.581
Citation	Yasutomo Sone et al., 2011, Advanced Materia
Online since	November, 2011
Authors	Yasutomo Sone, Junichi Suzumura, Naoya Ka
Keywords	Corrugation, Rail, Railway, Raman Scattering, (XRD)
Abstract	A periodical unevenness of the running surface tunnel. One of the causes has been concluded induced by some kinds of iron oxides and oxyl has not been made clear yet. In this study, X-ra attempted to identify iron rusts on the rail as a many railway companies.
Full Paper	Bet the full paper by clicking here

# First page example

http://www.scientific.net/AMR.409.581



**11/13/2012 - 11/15/2012** The International Conference on Advanced Er **8/24/2012 - 8/25/2012** AMMT 2012: 2012 International Conference of **8/24/2012 - 8/26/2012** 2012 2nd International Conference on Materia

more...

Advanced Materials Research Vol. 409 (2012) pp 581-585 Online available since 2011/Nov/29 at www.scientific.net © (2012) Trans Tech Publications, Switzerland doi: 10.4028/www.scientific.net/AMR.409.581

## Identification of Iron Rusts on Rail Ana

Yasutomo Sone<sup>1, a</sup>, Junichi S

## and Toshih

<sup>1</sup>Railway Technical Research Institute, 2-8-38

<sup>2</sup>Department of Materials Science and Engin Kanazawa, Ishikav

> <sup>a</sup>ysone@rtri.or.jp, <sup>b</sup>suzumura@rtri <sup>d</sup>sasakit@kenroki

Keywords: Railway, Submarine tunnel, Rail, ( Vibrational spectroscopy

Abstract. A periodical unevenness of the runnin submarine railway tunnel. One of the causes has friction and wheel load variation induced by so various coefficients of friction on the rail, though diffraction and Raman scattering spectroscopic a rail as a process to solve the periodic unevenness

#### Introduction

On ascending slope of submarine railway tunn rails is occasionally formed. They are often called large but slight longitudinal roll-slip phenomenon load variation excited by trains passing on rail we friction between a wheel and a rail is regarded oxyhydroxides with various coefficients of friction the corrugated rail before lifetime of rail itself. O ascending slope of mountain tunnel. The author between the submarine tunnel and the mountain t

In this study, the kinds of iron oxides and oxyl rail in both the submarine tunnel and mountai facilitated analytical methods to identify the kinds have been attempted. Especially, Raman scatter applying the vibrational energy between atoms on has been focused on. These days, Raman spectror expected to be the on-site analyzing method.

After the identification of the rusts artificial diffraction (XRD) and Raman scattering spectrobeen compared. In this paper, the authors report the

### Experiments

Sample Preparation Process. At first, iron specimens in the environment like submarine tuni wet conditions, dry conditions and 1% sodium ch for steel plate specimens' preparation were decid they are shown in Fig. 1. We carried out XRD on materials, and then carried out Raman analysis an

All rights reserved. No part of contents of this paper may be reproduced or to www.tip.net. (ID: 114.246.153.228-20/12/11.02:46:12)