



FRC-Corrosion 2019



Cherry Tunnel in Tomioka (提供 富岡町役場、provided by Tomioka Town Hall)

Fukushima Research Conference
on
“Corrosion Prediction and Mitigation for Key
Components of Fukushima Daiichi NPS”
- Key Corrosion Issues to Maintain Structural Integrity
for the Next Three Decades? -

December 9-11, 2019
Tomioka Town, Fukushima Prefecture, Japan

JAPAN ATOMIC ENERGY AGENCY
TOHOKU UNIVERSITY

Scope

Eight years have passed since Fukushima Daiichi NPS (Nuclear Power Station) accident. Decommissioning is progressing step by step and safety. Also, the procedures to retrieve nuclear fuel debris from the reactor are almost prepared. It is, however, considered to take more than thirty years to complete the decommissioning. There are number of important components which bear the safety functions, such as primary containment vessel, piping system etc. One of the potential concern about ageing degradation of the important components of is “corrosion” of metals and alloys. The conference focuses on potential corrosion phenomena to predict and mitigate those to maintain the key components for the next three decades.

The key topics

- ✧ Long-term prediction of uniform corrosion of carbon steels
- ✧ Passivation and localized corrosion of carbon steels in borate-containing solution
- ✧ Critical condition for re-passivation of crevice corrosion of stainless steels and other corrosion resistant alloys
- ✧ Radiolysis effect on corrosion
- ✧ Microbially induced corrosion
- Corrosion management of piping systems
- Corrosion management of primary containment vessels
- Corrosion deterioration of reinforcing steel bars in damaged RC structures and others

- ✧ : Topics more general and fundamental
- : Topics more specific to the particular components

Sessions

Opening Session

Session 1 : General Corrosion of PCV materials (Carbon steel)

Session 2 : Microbially Induced Corrosion

Session 3 : Radiolysis Effect on Corrosion

Session 4 : Passivation and Localized Corrosion

Session 5 : Corrosion of RC Structure in Radiation Condition.

Poster Session

Wrap-up Session

Schedule

	December 9 (Monday)	December 10 (Tuesday)	December 11 (Wednesday)
9:00			
10:00	Opening Session	Session 3	Tour of Fukushima Daiichi NPS Lunch & Shopping
11:00	Invited Lecture	Coffee Break	
12:00	Photo Session	Session 3	
13:00	Lunch	Poster Session & Lunch	
14:00	Session 1	Session 4	
15:00	Session 2	Coffee Break	
16:00	Coffee Break	Session 5	
17:00	Session 3	Wrap-up Session	
18:00	Evening Session (@Hotel HOJINKAN)		
19:00			

Venue

Main Conference Room : Tomioka Town Art & Media Center “MANABI-NO-MORI”,
Tomioka Town, Fukushima Prefecture.

Evening Session : Hotel HOJINKAN, Tomioka Town, Fukushima Prefecture

Chairperson

Prof. Damien FÉRON, Commissariat à l'énergie atomique et aux énergies alternatives (CEA)
Director of Research, INSTN Professor,
President of World Corrosion Organization, France

Vice-chairs

Prof. Yutaka WATANABE, Tohoku University, Japan
Prof. Masahiro YAMAMOTO, JAEA & Tohoku University, Japan

Keynote and invited lecturers

From abroad

Prof. Damien FÉRON, CEA, France
Dr. Frazer KING, Integrity Corrosion Consulting Ltd., Canada
Dr. Young-Jin KIM, FNC Technology Co., Ltd., Korea
Dr. Yan LE PAPE, Oak Ridge National Laboratory (ORNL), USA
Prof. Robert MELCHERS, University of Newcastle, Australia
Prof. Bernard NORMAND, Institut National Des Science Appliquées (INSA) Lyon, France
Prof. Tsung-Kuang YEH, National Tsing Hua University, Taiwan

From Japan

Senior Assist. Prof. Hitoshi ABE, Tohoku University
Mr. Tomoyuki ARAI, Tokyo Electric Power Company Holdings (TEPCO)
Dr. Kuniki HATA, JAEA
Assoc. Prof. Tomoya NISHIWAKI, Tohoku University
Dr. Kyohei OTANI, JAEA
Assoc. Prof. Eiji TADA, Tokyo Institute of Technology (TITECH)
Dr. Junichi TAKAGI, Toshiba Energy Systems & Solutions Corporation
Dr. Satoshi WAKAI, Japan Agency for Marine-Earth Science and Technology (JAMSTEC)
Prof. Yutaka WATANABE, Tohoku University

Organizer



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