Welcome to Chengdu

——天府成都欢迎您！

Organizers

Chinese Nuclear Society
Atomic Energy Society of Japan
Korean Nuclear Society
American Nuclear Society
European Nuclear Society

Co-organizers

Chengdu Municipal Government
Westinghouse Electric Company
Science and Technology on Reactor Fuel and Materials Laboratory
Science and Technology on Reactor System Design Technology Laboratory
China Jianzhong Nuclear Fuel Co., Ltd

In cooperation with

International Atomic Energy Agency

Preliminary Program

2011 Water Reactor Fuel Performance Meeting/ LWR/Top Fuel

"Safety and Evolution of Nuclear Fuel"

September 11–14, 2011·Chengdu, China

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WELCOME MESSAGE

Dear colleagues,

The 2011 Water Reactor Fuel Performance Meeting/LWR/Top Fuel will be conducted on September 11 to 14, 2011, Chengdu, China. On behalf of the organizers, I am pleased to welcome nuclear experts and engineers from around the world to participate in this event.

As a way to satisfy increasing energy requirements and an important part of a low-carbon economy, nuclear power is undoubted one of the best choices for sustainable development.

We recognize the importance of international academic exchange to enhance nuclear development and safety. As the world's premier fuel conference, WRFPM/LWR/Top Fuel 2011 sets various tracks to cover aspects of nuclear fuel. A program of keynote speeches, plenary speeches, and technical sessions will be staged for participants show their technical progress recently.

We are honoured to organize such a prestigious meeting to promote learning and communication between worldwide nuclear professionals. We would like to give special thanks to all the authors and reviewers, your contributions will guarantee a successful conference.

Chengdu is one of the most liveable cities in China. It is known as "the country of heaven", or more often seen "the Land of Abundance". Chengdu takes pride in its history and culture. We wish you a happy and memorable stay!

Sincerely,

Guanxing Li
Conference Chairperson of the WRFPM/LWR/Top Fuel 2011
President of the Chinese Nuclear Society

Conference Chairperson

Guanxing Li, Chinese Nuclear Society, China

Steering Committee

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Bangxin Zhou, Shanghai University, China

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Zhenhua Zhang, CNNC Third Qinshan Nuclear Power Co., Ltd., China
Zhuoqun Li, Nuclear Power Institute of China, China
Yonggang Ren, China North Nuclear Fuel Co., Ltd, China
Yuhong Ren, China Jianzhong Nuclear Fuel Co., Ltd, China
Haojie Liu, CNNC New Energy Nuclear Industry Engineering Co., Ltd, China
Yixin Zhang, China Guangdong Nuclear Power Holding Co., Ltd, China
Jihong Fan, State Nuclear Power Technology Corporation, China
Guoxing Gu, Shanghai Nuclear Engineering Research & Design Institute, China
Yang Wang, Chinese Academy of Engineering Physics, China
Kan Wang, Tsinghua University, China
Yinzhong Shen, Shanghai Jiao Tong University, China
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Sadaaki Abeta, Mitsubishi Corporation, Japan
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Kun Woo Song, Korea Atomic Energy Research Institute, Korea
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Sumit Ray, Westinghouse Electric Company, USA
Samim Anghaie, University of Florida, USA
Vladimir Slugen, European Nuclear Society, Slovak

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Youqian Ding, China Institute of Atomic Energy, China
Sadaaki Abeta, Mitsubishi Corporation, Japan
Kan Sakamoto, Nippon Nuclear Fuel Development, Japan
Dong-Seong Sohn, Korea Atomic Energy Research Institute, Korea
Kyu Tae Kim, Dongguk University, Korea
Zhengfeng Ma, Chinese Nuclear Society, China

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Chuanhong Pan, Chinese Nuclear Society

Co-Chairs

Yongjun Jiao, Nuclear Power Institute of China
Yuemin Zhou, China Guangdong Nuclear Power Group
Shengyi Si, Shanghai Nuclear Engineering Research and Design Institute

Track 1: Fuel Design, Test and Fabrication

Track Chair

Yongjun Jiao, Nuclear Power Institute of China

Track Co-Chairs

Jiazheng Liu, Shanghai Nuclear Engineering Research and Design Institute
Kazuyuki Kusagaya, Global Nuclear Fuel－Japan
Hideyuki Teshima, Mitsubishi Nuclear Fuel
Kyeung Lak Jeon, KEPCO Nuclear Fuel
Hyung Kyu Kim, Korea Atomic Energy Research Institute
Yang-Pi Lin, Global Nuclear Fuels
Carl Beyer, Pacific Northwest National Laboratory
Jean-Noel Canat, AREVA
Pierre Mollard, AREVA
Ron Knott, Westinghouse Electric Company

Track 2: Fuel Performance and Operational Experience

Track Chair

Shengyi Si, Shanghai Nuclear Engineering Research and Design Institute

Track Co-Chairs

Mingjun Chen, CNNC Third Qinshan Nuclear Power Co, Ltd
Shinji Ono, Nuclear Fuel Industries
Kan Sakamoto, Nippon Nuclear Fuel Development
Jae Ik Kim, KEPCO Nuclear Fuel
Sung Tae Yang, Korea Hydro Nuclear Power
Patrick Raynaud, U.S. Nuclear Regulatory Commission
Scott Ferguson, Wolf Creek Nuclear Operating Corporation
Jeff Bradfute, Westinghouse Electric Company
Francois Billon, ONET Technologies
Gregory Kessler, AREVA

Track 3: Transient Fuel Behavior and Safety Related Issues

Track Chair

Hongxing Yu, Nuclear Power Institute of China

Track Co-Chairs

Guobao Shi, Shanghai Nuclear Engineering Research and Design Institute
Yoshihiro Tsuchiuchi, Nuclear Fuel Industries
Toyoshi Fuketa, Japan Atomic Energy Agency
Sweung-Woong Woo, Korea Institute of Nuclear Safety
Yong-Hwan Jeong, Korea Atomic Energy Research Institute
Ken Geelhood, Pacific Northwest National Laboratory
Steven Shelton, GE Hitachi Nuclear Energy
Nicolas Vioujard, AREVA
Anghel Enica, Westinghouse Electric Company
Jinzhao Zhang, Tractebel Engineering (GDF SUEZ)
Nicolas Waeckel, EDF

Track 4: Fuel Cycle, Spent Fuel Storage and Transportation

Track Chair

Xiaoqing Li, CNNC Everclean Co., Ltd

Track Co-Chairs

Shibo Wang, China North Nuclear Fuel Co., Ltd
Koji Shirai, Central Research Institute of Electric Power Industry
Keizo Ogata, Japan Nuclear Energy Safety Organization
Jong-Won Choi, Korea Atomic Energy Research Institute
Chan Bock Lee, Korea Atomic Energy Research Institute
Harold Adkins, Pacific Northwest National Laboratory
Bob Einziger, U.S. Nuclear Regulatory Commission
Bob Fetterman, Westinghouse Electric Company
Bernard Rottner, ONET Technologies
Petra-Britt Hoffman, AREVA

Track 5: Advances and Innovation in Nuclear Fuel Technology

Track Chair

Min Xiao, China Nuclear Power Technology Research Institute

Track Co-Chairs

Songtao Ji, China Institute of Atomic Energy
Bing Liu, Tsinghua University
Hiroaki Muta, Osaka University
Toshiya Kido, Nuclear Development Corporation
Kwangheon Park, Kyunghee University
Yang-Hyun Koo, Korea Atomic Energy Research Institute
Atul Karve, Global Nuclear Fuels
Marius Stan, Argonne National Laboratory
Lawrence Mercier, AREVA

MEETING SCHEDULE

Date	Time	Content	Location
Sept. 11	08:00-18:00	Registration	Hotel Hall
	18:00-19:00	Welcome Reception	Xiyuan
Sept. 12	08:30-09:30	Opening Ceremony	Xiyuan
	09:30-12:00	Keynote Speech	Xiyuan
	12:00-13:10	Working lunch	Dongyuan
	13:40-15:40	Parallel Sessions	Xiyuan/Furong Building
	15:40-16:00	Break	Xiyuan/Furong Building
	16:00-18:00	Parallel Sessions	Xiyuan/Furong Building
	18:00-20:00	Banquet	Dongyuan Dinning Room
Sept. 13	08:30-10:30	Plenary Speech	Xiyuan
	10:30-10:50	Break	Xiyuan
	10:50-12:10	Plenary Speech	Xiyuan
	12:10-13:10	Working lunch	Dongyuan Dinning Room
	13:40-15:40	Parallel Sessions	Xiyuan/Furong Building
	15:40-16:00	Break	Xiyuan/Furong Building
	16:00-18:00	Parallel Sessions	Xiyuan/Furong Building
Sept. 14	08:30-10:30	Plenary Speech	Xiyuan
	10:30-10:50	Break	Xiyuan
	10:50-12:10	Plenary Speech	Xiyuan
	12:10-13:10	Working lunch	Dongyuan Dinning Room
	13:40-15:40	Parallel Sessions	Xiyuan/Furong Building
	15:40-16:00	Break	Xiyuan/Furong Building
	16:00-18:00	Parallel Sessions	Xiyuan/Furong Building
Sept. 15	07:00-18:00	Technical Tour	CJNF Co., Ltd

Attentions:

(1) The time length for the oral presentation should be less than 20 minutes.

(2) A computer will be arranged besides the registration desk to collect the PPT files.

OPENING CEREMONY & KEYNOTE

Sept. 12, Monday, 08:30-12:00 Chaired by Dr. LIU Changxin

Opening Speech

Zengguang Lei, Chief Engineer, China National Nuclear Corporation

Congratulation Remarks

TBA, Chengdu Municipal Government

Keynote Speech

Status of the IAEA Activities in the Area of Fuel Engineering

Victor Inozemtsev, International Atomic Energy Agency

Nuclear Fuel Industry of China

Guanxing Li, President, Chinese Nuclear Society

Timeless Way of Safety and Extraction of Values from Nuclear Fuel

Shuichi Iwata, Chair of Division of Nuclear Fuel, Atomic Energy Society of Japan

R&D Activities on LWR Fuel in Korea

Kun Woo Song, Vice President, Nuclear Fuel & Materials, Korea Atomic Energy Research Institue

Future of Nuclear Power in the US

Rosa Yang, Vice President, Electric Power Research Institute

TBA

TBA, European Nuclear Society

Sept 13, Tuesday, 08:30 -10:30
Plenary speech
Location: Xiyuan
Session Chair:

Advanced Methodology to Predict In-reactor Bow of PWR Fuel Assemblies for Efficient Design Optimization: Background, Validation, Examples
J. Stabel, B. Dressel, V. Marx, C.J. Muench, A. Horvath, C. Brun, E. Montigny, C. Song, AREVA
T1-006

Utilization of PWR Reprocessed Uranium in Chinese CANDU Reactors
Zhenhua Zhang, Mingjun Chen, Zhiliang Meng, CNNC Third Qinshan Nuclear Power Company Ltd, Sermet Kuran, Yangqiang Ruan, AECL, Yongjun Jiao, Hua Pang, Nuclear Power Institute of China, Jun Wang, Aiguo Wu, China North Nuclear Fuel Corporation
T1-005

Zero by 2010 and Recent U.S. Fuel Reliability Experience
K. Edsinger, B. Cheng, R. Daum, J. Deshon, D. Hussey, A. Kucuk, E.V. Mader, M. Pytel, S.K. , Yagnik, K. Yueh, Electric Power Research Institute
T2-041

Reduction of AXIOM™ Alloy and ZIRLO ® Irradiation Growth and Irradiation Creep
John Paul Foster, Rita Baranwal, Westinghouse Electric Company
T2-024

A Detailed Model for Cladding Oxidation during LOCA Based on Diffusion Equations
Xiaoqiang He, Hongxing Yu, Guangming Jiang, Nuclear Power Institute of China
T3-009

Cladding Hydrogen Content Based Regulations in the United States
Patrick A.C. Raynaud, Andrew S. Bielen, United States Nuclear Regulatory commission
T3-031

Sept 13, Tuesday, 10:50 -12:10
Plenary speech
Location: Xiyuan
Session Chair:

TBA
T4-

Practice and Expectation of the Advanced Nuclear Fuel Management and Fuel Technology for PWR in China
Min Xiao, Lei Li, China Nuclear Power Technology Research Institute
T5-002

Advanced Codes & Methods - AREVA's Key to Successful Licensing of High-Performance Fuel Products and Full Support to Customer
Florin Curca-Tivig, AREVA
T5-006

Sept 14, Wednesday, 08:30 -10:30
Plenary speech
Location: Xiyuan
Session Chair:

Investigation of Vibration Reduction in PWR Grids
Paul M. Evans, Michael E. Conner, Roger Y. Lu, Westinghouse Electric Company LLC
T1-021

Indian Experience on Manufacture, Quality Control and Performance of PHWR & BWR Fuels
R.N. Jayaraj, Department of Atomic Energy Government of India
T1-044

Hydrogen-Induced Crack Initiation and Propagation in Zr-Lined Zircaloy-2 Cladding Tubes
Keizo Ogata, Toshikazu Baba, Katsuichiro Kamimura, Japan Nuclear Energy Safety Organization,
Toru Higuchi, Kan Sakamoto, Yoshinori Etoh, Nippon Nuclear Fuel Development Co., Ltd, Akihiko Sawada, Global Nuclear Fuel-Japan Co., Ltd
T2-037

3D Simulation with ALCYONE of On-line Measurements of Clad Deformation during a Power Transient
Frederic Michel, Chrystelle Nonon, Jerome Sercombe, CEA, DEN, DEC
T2-003

NRC LOCA Testing Program at Studsvik, Results on High Burnup Fuel
Peter Askeljung, Studsvik Nuclear AB
T3-039

Micro-nano Hetero Structured Fuel Impact on Nuclear Reactor's Performances
Liviu Popa-Simil, LAVM LLC
T5-016

Sept 14, Wednesday, 10:50 -12:10
Plenary speech
Location: Xiyuan
Session Chair:

Gray Rod Cluster Assembly Design for the Westinghouse AP1000 Reactor
Ronald P. Knott, Michael Hone, Radu Pomirleanu, Westinghouse Electric Company
T5-012

Development of Composite Zirconium Materials with Increased Level of Properties for New Generation LWR Active Core
S.V. Ivanova, E.M. Glagovsky, Nuclear Industrial Technology Institute of National Research Nuclear University, I.A. Shlepov, K.Y. Nikonorov, V.V. Rozhko, Joint Stock Company
T5-020

Need for Fuel and Reactor Designs that will Withstand Severe Accidents
Tom Geer, Westinghouse Electric Company

Nuclear Power Plant Life Cycle Improvements from Enriched Material Utilization
Debra Wiedenmann, Ceradyne

Sept 12, Monday, 13:40-15:40
Parallel Sessions: Track 1, Track 2
Location: Xiyuan
Session Chair:

Fretting Wear Performance of PLUS7™ Fuel
Yonghwan Kim Youngki Jang, Ilkyu Kim, Haesik Jung, Kyunglak Jeon, KEPCO Nuclear Fuel , Seungtae Yang, Korea Hydro and Nuclear Power Co. Ltd, Yongbum Jeon, Korea Atomic Energy Research Institute
T1-001

Numerical Simulation and Experiments on Fretting Damage of Fuel Rod Cladding Tube
Lichen Tang, Yongzhong Huo, Surong Ding, Lifen Chen, Fudan University, Hao Qian, Yongcheng Xie, Dong Ning, Jiazheng Liu, Shanghai Nuclear Engineering Research & Design Institute
T1-026

PWR Fuel Bottom Grid Fretting Wear Simulation and Mechanism Study
Roger Y. Lu, David L. Chapin, Westinghouse Electric Company LLC
T1-028

Experimental Research on Mixing Coefficient of Fuel Assembly in Single-Phase
Nian Cao, Xuemei Lang, Donghua Lu, Jieliang Ma, Jiwei Kang, Nuclear Power Institute of China
T1-037

Experimental Studies of Proper and Forced Oscillations of Fuel Assemblies in the Coolant Flow
V.V. Makarov, A.V. Afanasiev, I.V. Matvienko, OKB "Gidropress", S.V. Volkov, A.B. Dolgov, JSC "TVEL"
T1-048

PIE of HANA Cladding Irradiated in Halden Research Reactor
Paul M Evans, Michael E. Conner, Roger Y. Lu, Westinghouse Electric Company LLC
T2-021

Sept 12, Monday, 16:00-18:00
Parallel Sessions: Track 2, Track 3
Location: Xiyuan
Session Chair:

Evaluation of the Advanced Cladding Creep Model for the Full Spectrum of Stresses
Jaemyung Choi, Jongsung Yoo, Hyeongkoo Kim, Bumjin Cho, Kyeonglak Jeon, KEPCO Nuclear Fuel, Jeong-Yong Park, Hyun-Gil Kim, Yong Hwan Jeong, Korea Atomic Energy Research Institute, Tae-Wan Kim, Yong-Bae Yoon, Han-Gug Lee, Korea Hydro and Nuclear Power Co. Ltd
T2-038

Mechanical Performance of Westinghouse BWR Control Rod of the Type Cr 99 at High Depletion Levels
Guido Ledergerber, Kernkraftwerk Leibstadt, Per Seltborg, Bjorn Rebensdorff Westinghouse Electric Sweden AB
T2-042

Impact of New LOCA Acceptance Criteria on the LOCA Performance of Cofrentes NPP
P. Sedano, A. Concejal, Iberdrola Ingenieria y Construccion
T3-002

Development of a Computer Code for Modeling Zirconium Alloy Cladding Oxidation Kinetics in a Loss of Coolant Accident
Wenfeng Liu, John Alvis, Robert Montgomery, Anatech Corp, Ken Yueh, Electric Power Research Institute
T3-023

Steam Pressure Effects on Zr-Alloy Oxidation at High Temperatures
Kwangheon Park, Kyung Hee University, Sungwoo Yang, Korea Atomic Energy Research Institute, Kwangil Ho, Suwon University
T3-029

Influence of Pre-Transient Oxide on LOCA High Temperature Steam Oxidation and Post-Quench Mechanical Properties of Zircaloy-4 and M5™ Cladding
M Le Sauxa, J.C. Brachet, V. Vandenberghe, CEA-DEN, Section for Applied Metallurgy Research, D. Gilbon, CEA-DEN, Nuclear Material Department, J.P. Mardonc, AREVA, AREVA NP, B. Sebbari, EDF-SEPTEN
T3-040

PARALLEL SESSIONS ON MONDAY

Sept 12, Monday, 13:40-15:40
Parallel Sessions: Track 4, Track 5
Location: Furonglou Building
Session Chair:

Evaluation of Spent Fuel Leak Tightness in Long Term Wet Storage in Slovakia and Strategy of Spent Fuel Management
Vladimir Slugen, Matus Stacho, Martin Petriska, Slovak University of Technology Bratislava
T4-001

Design and Application of Fuel Assembly Repairing Equipment
Jie Ding, Jiazheng Liu, Libing Zhu, Yingen Cai, Shanghai Nuclear Engineering Research and Design Institute
T4-006

SCC Evaluation Test of Multi-Purpose Canister
K. Shirai, T. Arai, J. Tani, H Takeda, M Wataru, T. Saegusa, Central Research Institute of Electric Power Industry
T4-012

Tests for Radioactive Material Packages Safety in CIRP
Guoqiang Li, Bing Zhao, Jiangang Zhang, Xuexin Wang, Anping Ma, China Institute for Radiation Protection
T4-020

Testing and Modeling of Long-Term Creep of Modern LWR Cladding in Dry Storage and Transport
Gunnar Wikmarka, ALARA Engineering AB, Goran Erikssonb, Lars Hallstadiusb, Westinghouse Electric Sweden AB, Albert Machielsc, John Kesslerc, EPRI, Pol Bouffiouxd, EDF - R&D, Studsvik Nuclear AB, Cecilia Janzone, Axpo AG, Christian Hellwigf, Guido Ledergerberg , John Fosterg, Westinghouse Electric Company
T4-021

Sub-channel Analysis of Annular-Fuel SCWR Assembly
Yong Zhang, Jue Yang, Jianqiang Shan, Donghua Lu, Xiangang Fu, China Nuclear Power Technology Research Institute, Yuanbing Zhu, Bo Zhang, Xi'an Jiaotong University
T5-019

Sept 12, Monday, 16:00-18:00
Parallel Sessions: Track 5
Location: Furonglou Building
Session Chair:

Annular Fuel Performance Analysis Code Development
Xiaojun He Songtao Ji, Yingchao Zhang, China Institute of Atomic Energy
T5-008

Application of HANA Alloys to High Performance Fuel Components
Jeong-Yong Park, Hyun-Gil Kim, Byung-Kwon Choi, Sang-Yoon Park, Yang-Il Jung, Dong-Jun Park, KAERI
T5-009

In-Pile Behavior of M-MDATM, Advanced PWR Fuel Cladding Irradiated up to 73 GWd/T (R) in a Commercial Reactor
Daiki Sato, Mitsubishi Nuclear Fuel Co., Ltd, Toshiya Kido, Nuclear Development Corporation, Yasuyuki Mazaki, Kansai Electric Power Co. INC
T5-021

Surface Modification Technology, Fresh Green to Mitigate Corrosion and Hydrogen-Pickup of Fuel Cladding
M Furuya, S. Kitajima, T. Sonoda, T. Sawabe, M Tokiwai, M Kinoshita, Central Research Institute of Electric Power Industry
T5-026

In-Situ TEM Observation of Growth Process of Zr Hydrides in Zircaloy-4 during Hydrogen Ion Implantation
Yasunari Shinohara, Nuclear Development Corporation, Hiroaki Abe, Tohoku University, Naoto Sekimura, University of Tokyo
T5-14

Overview of Physical Assumptions and Models behind CFD Codes for PWR Fuel Design
Javier Riverola, ENUSA Industrias Avanzadas S.A.
T5-024

Sept 13, Tuesday, 13:40-15:40
Parallel Sessions: Track 1
Location: Xiyuan
Session Chair:

AREVA Expertise in MOX Fuel Design
Patrick Blanpain, Gilbert Trillon, Wolfgang Goll, Kevin McCoy, AREVA NP
T1-008

Characterization of Plutonium-Uranium Mixed Oxide Fuel by Synchrotron Radiation Techniques
Claude Degueldre, Cedric Cozzo, Goutam Kuri, Johannes Bertsch, Laboratory for NuclearMaterials, Matthias Martin, Divison Hotlab, Paul Scherrer Institut
T1-009

Fuel Design and Fabrication Technology for LWR MOX Fuel in Japan
Ryoichi Yoshida, Hiroshi Ota, Shuichi Osaka, Akira Oe, Japan Nuclear Fuel Ltd.
T1-017

Optimization of N18 Zirconium Alloy for Fuel Cladding of Water Reactors
Bangxin Zhou, Meiyi Yao, Shanghai University, Zhongkui Li, Northwest Institute for Non-ferrous Metal Research, Xiaomin Wang, Nuclear Power Institute of China, Jun Zhou, Northwest Institute for Non-ferrous Metal Research, Chongsheng Long, Nuclear Power Institute of China, Qing Liu, Baifeng Luan, Chongqing University
T1-027

Stress Relaxation and Dynamic Strain Aging of Zr-Sn-Nb Alloy
Jun Tan, Hong Zou, Wei Cai Li, Yue Min Zhou, China Guangdong Nuclear Power Holding Co., Ltd
T1-030

Effect of Water Chemistry Variations on Corrosion of Zr-Alloys for BWR Applications
Yang-Pi Lin, Global Nuclear Fuel-Americas, Young-Jin Kim, GE Global Research Center, Daniel Lutz, Global Nuclear Fuel-Americas, Aylin Kucuk, Bo Cheng, Electric Power Research Institute
T1-013

Sept 13, Tuesday, 16:00-18:00
Parallel Sessions: Track 3
Location: Xiyuan
Session Chair:

Pretest Modeling of CABRI CIP3-1 Test with FRAPCON-3/FRAPTRAN Codes
Anne Huguet, Isabel Vallejo, Luis Enrique Herranz, CIEMAT
T3-006

Code Analysis on Transient Behavior of LWR MOX Fuel during the Test-Irradiation in Halden Reactor
Motoe Suzuki, Fumihisa Nagase, Japan Atomic Energy Agency
T3-014

SCANAIR a Computer Code Validated for Reactivity Initiated Accident
Kwangheon Park, Kyung Hee University, Sungwoo Yang, Korea Atomic Energy Research Institute, Kwangil Ho, Suwon University
T3-026

Extension of Parametric Calculations of the Expansion due to Compression Test using FEM Model
Martin Dostal, Mojmir Valach, Jiri Zymak, Nuclear Research Institute Rez plc
T3-032

An Improvement of Thermal FGR Model Describing Grain Boundary Bubble Interconnection Process
WenjieLi, YongjunJiao, Nuclear Power Institute of China
T3-013

Dimensional and Micro Structural Changes of High Burnup Fuel, Ramp Tested in the SCIP Program 2004-2009
Rikard Kallstrom, Anna Maria Alvarez, Ulf Engman, Kalin Lafchiev, Gunnar Lysell, Studsvik Nuclear AB, Gang Zhou, Westinghouse Electric Sweden, Ioan Arimescu, AREVA NP
T3-016

Sept 13, Tuesday, 13:40-15:40
Parallel Sessions: Track 5
Location: Furonglou Building
Session Chair:

On the Gap Size Variation of Dual Cooled Fuel Rods
Hyung-Kyu Kim, Jae-Yong Kim, Kang-Hee Lee, Young-Ho Lee, Kyung-Ho Yoon, Heung-Seok Kang, Korea Atomic Energy Research Institute
T5-017

Challenges in the Development of Silicon Carbide Advanced Fuel Cladding for Light Water Reactor Application
E. Lahoda, S.C. Johnson, Westinghouse Electric Company
T5-010

Silicon Carbide as a IMF Deep Burn Transuranic Transmutation Fuel
James Tulenko, Andrew Cartas, Ronald Baney, University of Florida
T5-003

Innovative Fuel Development in ULBA (Kazakhstan) and Testing in the Halden Reactor
Y. Russin, Y. Shakhvorostov, A. Gagarin, JSC UMP, M McGrath, B.Volkov, HRP
T5-013

Compatibility of Uranium-Zirconium hydride fuel with molten lead-bismuth-tin alloy
R. Q. Zhang, X. M. Wang, Nuclear Power Institute of China
T5-011

Domestic Production and Research of Advanced Zircaloy Used in Nuclear Power Plant
Baoshan Chen, State Nuclear Baotai Zirconium Industry Company

Sept 13, Tuesday, 16:00-18:20
Parallel Sessions: Track 2
Location: Furoulou Building
Session Chair:

Performance of MOX Fuel from Nonproliferation Programs
Kevin McCoy, Patrick Blanpain, AREVA, Robert Morris, Bruce Bevard, Oak Ridge National Laboratory
T2-20

Thermal Models for Fuel Rod Performance Code Development
Yuxiang Zhang, Tong Liu, Yuemin Zhou, Qisen Ren, Yebin Han, CNPRI
T2-027

Thermo-Mechanical Modeling of LWR Fuel with ALCYONE
Vincent Marelle, Jerome Sercombe, Bruno Michel, Rachid Tawizgant, CEA
T2-028

Validation Assessment of Neutron Calculations for Radial and Azimuthally Distributions of Actinides and Fission Products in PWR Rods
Francette Lemoine, David Bernard, Eric Federici, CEA
T2-031

Fission Gas Behaviour in a Multiscale Context 10 Years of Research at SCK CEN
K. Govers, Belgian Nuclear Research Center
T2-043

The Effect of Heterogeneity on Fission Gas Release in LWR-MOX Fuel
Xiaojun He, Songtao Ji, China Institute of Atomic Energy
T2-025

Determination of Retained Fission Gas Concentration in Irradiated Oxide Fuel Samples
S. D. Park, Y. S. Park, J. S. Kim, Y. K. Ha and K. Song, Korea Atomic Energy Research Institute
T2-035

Feasibility of Performing Pool-Side Fission Gas Release Measurements on Fuel Rods with Short Decay Time
Scott Holcombe, Knut Eitrheim, OECD Halden Reactor Project, Staffan Jacobsson Svard, Uppsala University, Christofer Willman, Lars Hallstadius, Adolfo Reparaz, Westinghouse Electric Sweden AB
T2-009

Sept 14, Wednesday, 13:40-15:40
Parallel Sessions: Track 1
Location: Xiyuan
Session Chair:

China FA300 Fuel Assembly Extended Burnup to 40,000 MWD/MTU and Post-Irradiation Examination
Qin Zhou, Liuhua Shen, Yu Chen, Libing Zhu, Yulin Zhang, Shanghai Nuclear Engineering Research and Design Institute
T1-010

Fuel Element Design for Carem 25 Reactor
M. Markiewicz, E. Estevez, CNEA
T1-019

The University of Florida Advanced Nuclear Fuel Assembly
James S. Tulenko, Ronald Baney, University of Florida
T1-046

Evaluation of an On-Off Hold-down Spring Design and Its Characteristics
Seong-Soo Kim, Joon-Kyoo Park, Jung-Min Suh, Kyeong-Lak Jeon, KEPCO Nuclear Fuel
T1-014

Fuel Element Stability Analysis
Wenchi Yu, Weicai Li, Yan Guo, Yuxiang Zhang, China Nuclear Power Technology Research Institute
T1-020

Mechanical Modeling of Internal-Conical-Mandrel Test for Toughness Measurement of Nuclear-Fuel Cladding
Arnaud Courcelle, David Le Boulch, Brice Bourdiliau, Jean-Pierre Pizzanelli, Chantal Cappeleare, CEA, Pol Bouffioux, Alain Miquet, EDF
T1-022

Sept 14, Wednesday, 16:00-18:00
Parallel Sessions: Track 3
Location: Xiyuan
Session Chair:

Zircaloy-2 Ductility Recovery under RIA Transient Conditions
Ken Yueh, Slava Grigoriev, Yang-Pi Lin, Dan Lutz, David Schrire, Electric Power Research Institute
T3-033

A Split Failure of PWR Fuel during Power Transient
Kazuaki Yanagisawa, JAEA
T3-004

Influence of Coolant Temperature and Power Pulse Width on Fuel Failure Limit under Reactivity-Initiated Accident Conditions
Tomoyuki Sugiyama, Yutaka Udagawa, Motoe Suzuki, Fumihisa Nagase, Japan Atomic Energy Agency
T3-022

Control Rod Ejection Accident Analysis for the AP1000? PWR Using Multi-Dimensional Kinetics
Robert J. Fetterman, Peter A. Hilton, Westinghouse Electric Company LLC
T3-015

Advanced Mixing Vane Design in NPIC
Hong Zhang, Weihong Chen, Qing Lu, Ping Chen, Tao Lei, Deyong Hu, Chunming Ren, Xuemei Lang, Jiwei Kang, Jie Chen, Nuclear Power Institute of China
T3-012

Grid-to-Rod Fretting Evaluation in PWR Fuel Assembly Inlet Region
Jin Yan, Kun Yuan, Emre Tatli, David Chapin, Zeses Karoutas, Westinghouse Electric Company LLC
T3-041

Sept 14, Wednesday, 13:40-15:40
Parallel Sessions: Track 2
Location: Furonglou Building
Session Chair:

17x17 RFA Fuel Assembly Dimensional Stability
Enrique Gutierrez, Alberto Cerracin, Mariano Morales, ENUSA Industrias Avanzadas S.A.
T2-004

EPRI BWR Channel Distortion Program
E.V. Mader, EPRI, M. Reitmeyer, Exelon Nuclear, P. Garcia Sedano, Iberinco / Iberdrola, J. Morris, AREVA NP Inc., P. Cantonwine, Global Nuclear Fuels, L. Hallstadius, Westinghouse Electric Sweden, G. Potts, H. R. Peters, W. Li, Finetech Inc.
T2-001

Performance Analysis of Bowed Fuel Rod in WWER-1000 Reactor
Xiaochuan Jiang, Xin Jin, China Nuclear Power Engineering Company
T2-019

Recent Channel Bow Events and AREVA's Integrated Solution
Ali Zbib, Dirk Blavius, Jeffrey Morris, Mark Smith, Steven Cole, Norman Garner, AREVA NP
T2-023

Ni-BASE Alloy Spacer Material Corrosion in BWR Environment
Audrius Jasiulevicius, Vattenfall Nuclear Fuel AB, Roger Gotthardsson, Forsmarks Kraftgrupp AB, Marcus Nilsson, OKG Aktiebolag, Hans Maresch, Vattenfall Europe Nuclear Energy GmbH, Bjorn Claesson, Studsvik Nuclear AB, Kenneth Goransson, Britta Helmersson, Westinghouse Electric Sweden AB
T2-017

Towards Advanced Modeling of MPS-Assisted Cladding Failure during Power Ramps Using the FALCON Code
G. Khvostov, M.A. Zimmermann, PSI M. Pytel, EPRI, W. Lyon, ANATECH
T2-030

Sept 14, Wednesday, 16:00-18:20
Parallel Sessions: Track 2 Track 1
Location: Furonglou Building
Session Chair:

Zinc Addition Experience at Spanish PWR Plants
N. Doncel, C. Munoz-Reja, ENUSA Industrias Avanzadas, SA, J. Antonio Gago, J. Luis Gago, Sandra Rodriguez, Asociacion Nuclear Asco-Vandellos II
T2-033

Fuel Performance Improvement in Qinshan CANDU
Wenli Wang, CNNC TQNPC
T2-002

The Key Microscopic Restructuring for the High Burnup Fission Gas Release Studied by MD Method-Pathway Building due to Growth of Planer Fault in UO_2 Grain
Jiacheng Shang, Nuclear Power Institute of China, Fumihiro Chiba, Motoyasu Kinoshita
T2-026

Fuel Performance and Operational Experience with the Application of Platinum On-line
Guido Ledergerber, Wilfried Kaufmann, Kernkraftwerk Leibstadt, Lena Oliver, Britta Helmersson, Eva Fredriksson, Westinghouse Electric Sweden AB, Aylin Kucuk, Bo Cheng, Electric Power Research Institute
T2-010

The Low Temperature Sintering Technology to UO2 Fuel Pellets and Its Creep Properties in High Temperature
Rui Li, Zhou Zhou, Jun Chen, Lihong Nie, Guoliang Zhang, China Nuclear Power Technology Research Institute
T1-032

Fuel Diversification Strategy at China Guangdong Nuclear Power Group
Shilei Li, Zhou Zhou, Rongsheng Zhou, China Guangdong Nuclear Power Group
T1-018

Natural Uranium Equivalent (NUE) Fuel Bundles Fabrication in Baotou
Jun Wang, Jie Zhang, China North Nuclear Fuel Co.,Ltd
T1-040

Time: Sept. 12 - 14, 08:30 - 18:00
Location: Xiyuanting (T1, T2, T3); Furonglou Building(T4,T5)
Poster size: Standard A0 size 841mm(width)× 1189(height)

T1-002 PIE of LEU Fuel Elements with T6061 Cladding
Fei Wang, Nuclear Power Institute of China

T1-004 Preliminary Feasibility Study on Utilization of Thorium Resources in Chinese CANDU Reactors,
Zhenhua Zhang, Mingjun Chen, Zhiliang Meng, CNNC TQNPC

T1-007 Application of Statistical Technology on Quality Control for Fuel Pellet
Deng Wei, China Jianzhong Nuclear Fuel Co. Ltd

T1-012 Determination of Gadoliniain of UO_2-Gd_2O_3 Pellets
Lan Chen, Cheng Han, Qi Liao, China Jianzhong Nuclear Fuel Co. LTD

T1-015 Experimental Survey on Dynamic Characteristics of Annular Fuel Rod According to Rod-Support Condition and the Inclusion of Inner Channel Still Fluid
Kang-Hee Lee, Heung-Seok Kang, Hyung-Kyu Kim, KAERI

T1-016 Fabrication and Characteristic Tests of the Large Grain UO_2 Pellets for HIPER Fuel
Seung-Jae Lee, Dong-Hyun Jung, Jae-Ik Kim, KEPCO Nuclear Fuel

T1-023 Mechanical Tests and Analysis of Adapter and Perforated Plates of PWR Fuel Assembly
Syed Waseem Akhtar, Pakistan Atomic Energy Commission

T1-031 The Fabrication Process and Performance Examination of (U-Mo)-Al Dispersion Fuel Element
Jiangang Chen , Changgeng Yin, Changlong Sun, et al., Nuclear Power institute of China

T1-038 Preliminary In-Pile Performance Models of HANA Claddings
Jaemyung Choi, Jongsung Yoo, Hyeongkoo Kim, et al., KEPCO Nuclear Fuel

T1-039 Welding Process of PWR Fuel Assemble Skeleton
Bo Liu, China Jianzhong Nuclear Fuel Corporation

T1-041 The Construction of the PWR Fuel Plant of CNNFC
Shibo Wang, Erping Wang, Xiaolin Gu, China North Nuclear Fuel Co., Ltd

T1-042 Fabrication of AP1000 Nuclear Fuel Assembly
Shuangqing Shi, Huirong Zhao, China North Nuclear Fuel Co., Ltd

T1-043 Thermo Physical Properties of Thorium Oxide
Hiroaki Muta, Osaka University, Masayoshi Uno, Yukihiro Murakami, Fukui University

T1-047 A Study of the Friction and Wear Processes of the Structural Components of Fuel Assemblies for Water-Cooled and Water Moderated Power Reactors
V.V.Makarov, A.V.Afanasiev, I.V. Matvienko, OKB GIDROPRESS,

T2-005 A Study of FMEA (Failure Mode and Effects Analysis) of Failed Fuel Assemblies for the Enhancement of Fuel Reliability
Sung-Tae Yang, Kyung-Ho Roh, NETEC of KHNP

T2-006 Advantages of the MSHIM Operating Strategy in the AP1000 PWR
Keith J. Drudy, R. Wade Miller, Sumit Ray, Westinghouse Electric Company LLC

T2-007 Development of Expert System for Fuel Monitoring and Analysis in WWER-1000 Units
V.V. Likhanskii, I.A. Evdokimov, A.A. Sorokin, V.D. Kanukova, V.G. Zborovskii, T.N. Aliev, SRC RF TRINITI

T2-012 Hydrogen Pickup Models for Zircaloy-2, Zircaloy-4, M5™ and ZIRLO®

Kenneth Geelhood, Carl Beyer, Pacific Northwest National Laboratory

T2-014 Latest Development in Fuel On-Site Services to Support the Asian Utilities
Denis Pachtem, AREVA NP

T2-015 Multicycle Loading Pattern Searches for End-of-Life Scenarios with ROSA
H.P.M. Gibcus, F.C.M. Verhagen and J.T. van Bloois, NRG

T2-016 New Progress on the Fuel and Reactor Core Design
Long Gu, Shangdong Nuclear Power Company

T2-022 Primary Study on Core Fuel Management of AP1000
Hua Li, CNNC Hunan Taohuajiang Nuclear Power Co., Ltd

T2-032 Westinghouse New Pin Power Methodology to Meet the Challenges of AP1000 Core and Advanced PWR Fuel Assembly Designs
Baocheng Zhang, Larry Mayhue, Boyan Ivanov, Fausto Franceschini, Westinghouse

T2-036 Exploratory Studies for Challenges to Design Constraints with Higher Enrichment II
Atul A. Karve, Russell E. Stachowski, Russ M. Fawcett, GNF

T2-039 Cause Investigation of High Burn-Up Fuel Leakage, and Evaluation of Fretting Wear
Norihiro Kitashiba, Mitsubishi Nuclear Fuel Co., Ltd.

T3-005 Westinghouse Fuel Heat Transfer Test Facilities
Stig Andersson, Anders Hallehn, Dong-Yuan Sheng, Westinghouse Electric

T3-007 3D Pin-by-Pin Power Density Profiles with High Spatial Resolution in the Vicinity of a BWR Control Blade Tip with Respect to PCI Effects
Jingjing Li, Kay Nunighoff, Hans-Josef Allelein, Sicherheitsforschung und Reaktortechnik

T3-010 A Statistical LOCA Analysis Methodology with Alternative Acceptance Criteria
Bin Chen, Hongxing Yu, Yu Zhang, Xiaoqiang He, NPIC

T3-011 Advanced Fuel Performance Modeling - ENIGMA-B and CMS
Andrew Worrall, UK National Nuclear Laboratory, Arthur S. DiGiovine, Studsvik Scandpower

T3-017 ENUSA Experience in the Feasibility and Licensing of a Power Uprate in a Spanish PWR; Benefits of the Almaraz Nuclear Plant Analyzer
Marisol Corisco, Javier Riverola, ENUSA Industrias Avanzadas S.A J.C. Martinez Murillo, ALMARAZ-TRILLO

T3-021 Importance of Moderator and Doppler Feedback in Calculating Axial Power Oscillations in Operating Pressurized Water Reactors
Magnus Kruners, Gerardo Grandi, Studsvik Scandpower AB/Inc

T3-025 Reflooding Behavior under Flow Blockage Conditions
Dan Wu, Tsinghua University, Hongxing Yu, Nuclear Power Institute Of China

T3-027 Simulation of Fission Gas Release during Bump Test by Copernic Code
Jun Wang, Yebin Han, Qisen Ren, Tong Liu, Yuemin Zhou, China Nuclear Power Technology Research Institute

T3-028 Statistical Analysis of Fuel Failures in Accident Conditions
Asko Arffman, Jukka Rintala, VTT Technical Research Centre of Finland

T3-034 The Impact on PCT of High Fuel Burnup in LB LOCA Analysis for CPR1000
Ting Wang, Xianghui Lu, Chengjun Zhang, Jun Cui, CNPRI

T3-035 Evidence of Two Crystalline Phases in a Sample of High Burn-Up Structure
Y. Pontillon, L. Desgranges, M. Marcet, Ch. Valot, Th. Blay, CEA

T3-038 Effects of LOCA Transient Time-Temperature History on the Extent of Clad Embrittlement due to Oxygen & Hydrogen
Anand Garde, Dave Mitchell, Robert Comstock, Westinghouse Electric Company

T4-004 Application of MACSTOR-400 Technology for Spent Fuel Dry Storage in Chinese CANDU Reactors
Zhenhua Zhang, Renhua Sun, Dianzi Song, Third Qinshan Nuclear Power Co., Ltd, Minghui Weng, Junyu Lu, Shanghai Nuclear Engineering Research and Design Institute

T4-008 Heat Transfer Analysis of Spent Fuel Dry Storage Module (QM-400)
Hongyi Jia, Xin Zhou, Pu Fan, Libing Zhu, SNERDI

T4-009 Research on 60Co Production in CANDU-6 Reactor
Yunqing Zhou, Libing Zhu, Bo Yang, Qiliang Mei, Ping Yang, Xin Liu, SNERDI

T4-010 Roadmap Design for Thorium-Uranium Breeding Recycle in CANDU
Jianfeng Shi, Guangwen Bi, Bo Yang, SNERDI

T4-013 Self- Separative Micro-Hetero Structured Fuel with High Burnup Improves Fuel Cycle
Liviu Popa-Simil, LAVM LLC

T5-001 Depth Profiles of Crystal Structure and Compressive Stress in Oxide Layer of Zr-based Alloys
K. Sakamoto, K. Une, Nippon Nuclear Fuel Development Co., Ltd., M. Aomi, Global Nuclear Fuel Japan

T5-004 A CFD Analysis on Heat Transfer and Flow with Mixing Vanes in Rod Bundles at Supper Critical Pressure
Donghua Lu, Jue Yang, Qianhua Su, Xiangang Fu, Jun Xing, CNPRI

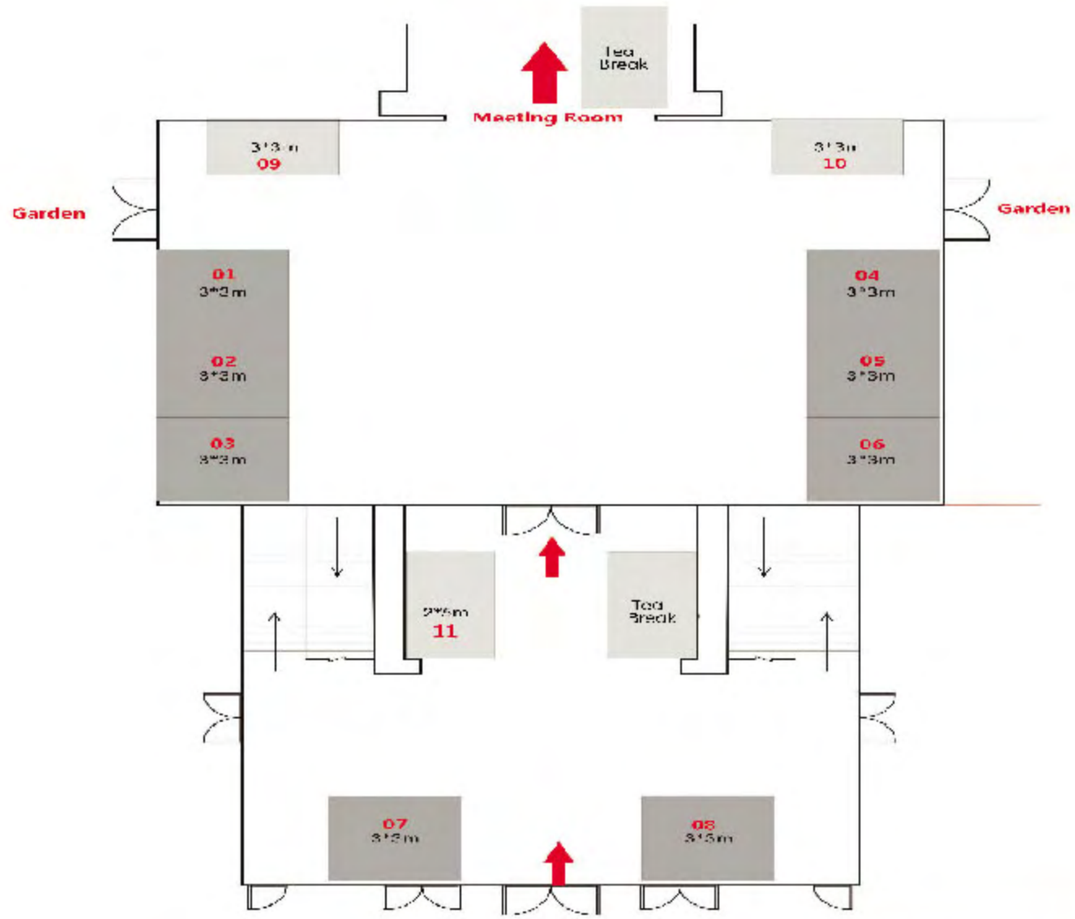
T5-005 A Theoretical Approach to the Problem of Predicting Corrosion Properties of Zirconium Alloys
V. Likhanskii, T. Aliev, I. Evdokimov, M. Kolesnik, V.G. Zborovskii, SRC RF TRINITI

T5-018 Study on Fuel Management Strategy for AP1000 Nuclear Power Plants
Xuesong Li, Sanmen Nuclear Power Company, Ltd

T5-023 Simulation of Irradiation Damage Effects in Inert Matrix Fuel Elements
Shurong Ding, Qiming Wang, Yijie Jiang, Yongzhong Huo, Fudan University

P1-001 Programme and Results of Developing Novel Zirconium Materials for VVER-1000 Fuel Claddings
V.A. Markelov, V.V. Novikov, A.Yu. Gusev, A.G.Mal'gin, A.A. Kabanov, ISC "VNIINM"

P3-001 Breakaway Oxidation of E110 Zirconium Alloys
T. Novotny, E. Perez-Fero, A. Pinter-Csordas
Hungarian Academy of Sciences KFKI Atomic Energy Research Institute



Exhibition Schedule

Installation
September 11 AM

Exhibition
September 11 18:00-20:30
September 12-14 08:30-18:30

Dismantlement
September 14 13:40-18:00

Company & Organization	Booth Number
Nuclear Power Institute of China	01, 02
Westinghouse	04, 05
AREVA	03
Shanghai Nuclear Engineering Research & Design Institute	06
CNNC Everclean Co, Ltd	07
CJNF	08
Studsvik	09
Mitsubishi Fuel	10
Ceradyne Nuclear Products	11

Science and Technology on Reactor Fuel and Materials Laboratory

Science and Technology on Reactor Fuel and Materials Laboratory was founded in 1992 in Chengdu, China. It's the only professional laboratory in China on the preparation, the fundamental research, the operation evaluation for nuclear fuel and materials and keeping on pushing the development forward in this field.

Research Domain

Research and develop the new materials for reactor; investigate material preparation, microstructure and performance; understand the fundamental phenomena and resolve some engineering problems; study the irradiation effect of reactor materials; research and develop the nondestructive testing techniques for fuel elements and components.

Facilities

TEM, XRD, DSC, X-fluorescence spectrometer, SEM, MTS, Fatigue-fracture test machine, Synthetical corrosion test loop, SSRT machine for SCC, Hot isostatic pressing machine, Electron Beam Welder, Ultrasonic detect system

Research Teams

New type fuel research group; Materials research group; Irradiation effect study group; Non destructive testing group

Contact

Tel: 86-28-85903862 Email: strfml@npic.ac.cn

Science and Technology on Reactor System Design Technology Laboratory

"Science and Technology on Reactor System Design Technology Laboratory " was founded in 2003 in Chengdu, China. It's the only lab in China studying nuclear system design technology.

Research Domain

Reactor core design technology

Research of reactor theory; Reactor core loading technology; Design, analysis and research of fuel assembly

Reactor thermal hydraulic analysis & research; Development of software for nuclear reactor core design, etc

Reactor structure & system design technology

Reactor cooperative design technology; Application technology of reactor digital mockup; CAX application technology

Simulation technology; Multi-discipline optimization design technology; Development & Research of key equipment, etc

Nuclear safety analysis technology

Reactor accident analysis; PSA; Research of visualization technology; Research of environment evaluation technology, etc

Nuclear power reactor I&C technology

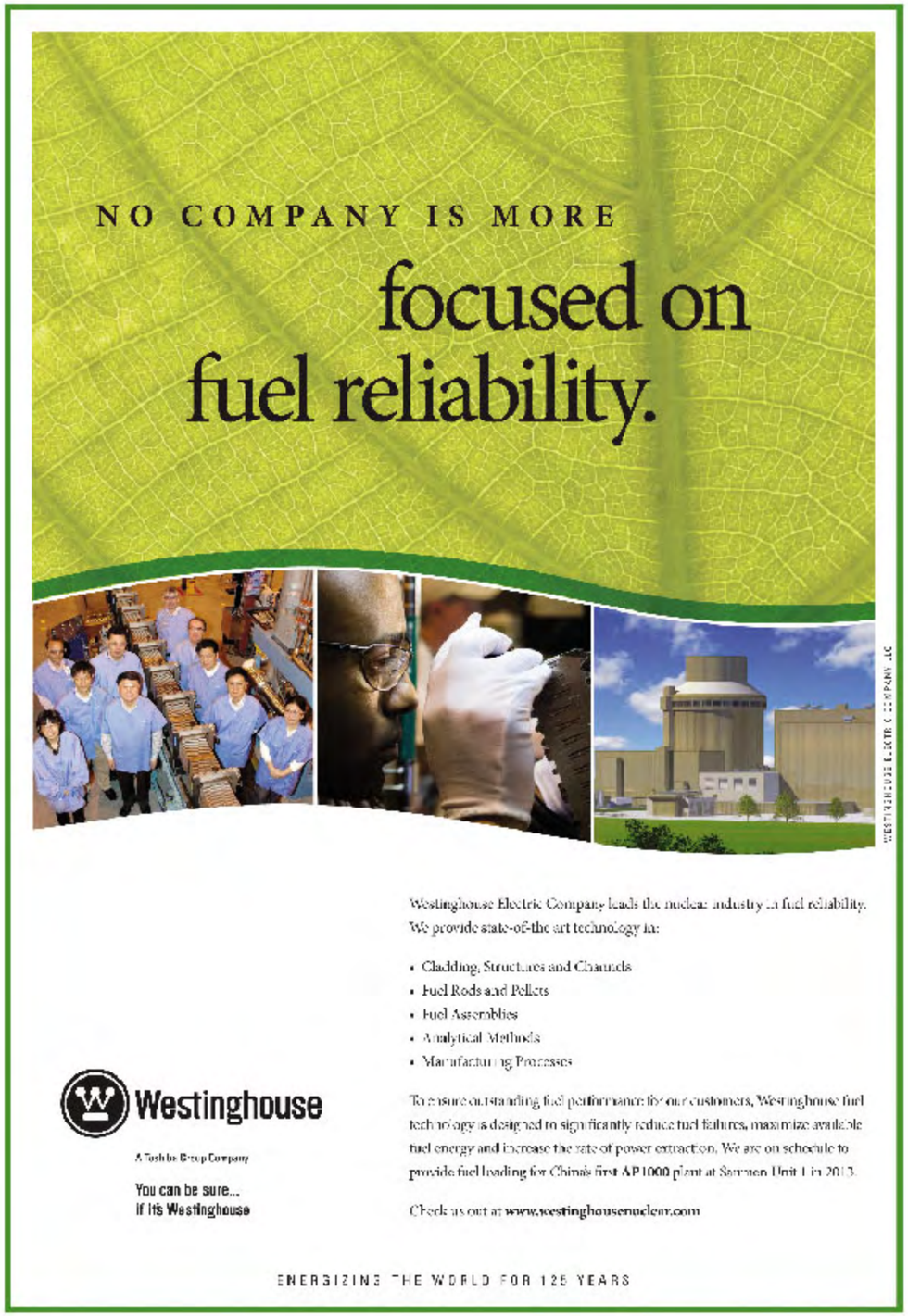
Reactor system control technology; Reactor protection technology; Operation information technology; Digital Instrument & Control technology; Control simulation technology, etc

Research Teams

Reactor core design group; Reactor structure & system design group; Nuclear safety analysis group; Nuclear power reactor I&C group

Contact

Tel: 86-28-85908540 Email: lrsdt@npic.ac.cn



REGISTRATION

Registration Desk

A Registration Desk will be set-up in the Lobby of Jinniu Hotel from Sept 11 to 12, 09:00-18:00. Participants may pick up their conference kits, badges, invitation coupons at the registration desk. Any inquiries about the registration, social events, tours, etc. may be answered by approaching any of the staff at the registration desk.

Entitlements

For full registered participant and student:

- CD copy of Proceedings
- Final Program Book
- Conference Kit
- Reception
- Banquet
- Working Lunches
- Coffee Breaks
- Technical Visit to CJNF Co., Ltd

For registered accompanying person:

- Reception
- Banquet
- Technical Visit to CJNF Co., Ltd

SCIENTICE INFORMATION

Meeting Facilities

Multimedia LCD projectors will be available in all meeting rooms.

Language

The official language of the conference is English.

PPT. Collecting

The PPT. Collection Desk will be next to the Registration Desk. Please submit your ppt.file on the Desk when you register on-site. You could try your ppt. file there.

Name Badges and Invitation Coupons

Please do wear your Conference name badge at all times. In addition, invitation coupons are issued in your registration package must be presented for social events.

TECHNICAL VISIT

China Jianzhong Nuclear Fuel Co., Ltd (CJNF)

China Jianzhong Nuclear Fuel Co. Ltd (CJNF) is the largest fuel assembly manufacturer in China, supplying types of fuel assemblies from 300 MW to 1000 MW NPP. In 1987, the first self-designed nuclear fuel line for NPP was set up to manufacture fuel assembly for Qinshan NPP, the first NPP in the mainland of China. In 1994, the CJNF began to manufacture fuel assembly using the French technology. Now, the CJNF provides all PWR fuel assembly in China, its manufacturing capacity is 1000tU/y in 2010.

September 15

07:00-11:00 Bus to Yibin

11:00-13:00 Lunch

13:00-15:00 Visit

15:00-19:00 Bus to Chengdu

SPECIAL EVENT

Welcome Reception	Sept. 11, 18:00-19:30	Dongyuan, Jiaozi Room
Conference Banquet	Sept. 12, 18:00-12:00	Dongyuan, Jiaozi Room
Working Lunches	Sept.12-14, 12:00-13:00	Dongyuan, Jiaozi Room

TOURS INFORMATION

Giant Panda Breeding and Research Base

Sept 12/13/14 08:30-17:30

The base is a non-profit organization engaged in wildlife research, captive breeding, conservation education, and educational tourism. It covers an area of 106 hectares and will be enlarged to 200 hectaresin near future. Red pandas, golden monkeys and other wild and/or endangered species live and breed here. Furthermore, it was awarded the Global 500 Award by United Nations Environment Programme (UNEP) in 1995.

Sanxingdui Museum

Sept 12/13/14 08:30-17:30

It is believed that Sanxingdui was capital of the ancient "Shu Culture". This particular discovery, would rewrite Chinese history by unearthing a culture contemporary with the first civilizations of China but that had left no clues in historical records, that seemingly disappeared without a trace and which left artifacts never before discovered elsewhere in China. The unique Sanxingdui Museum is located in the northeast of the Sanxingdui remains, near the Yazi River. Covering 200,000 square meters, the Museum is equipped with modern facilities, featured for its relics, architecture, demonstration and gardens.

Wuhou Temple

Sept 12/13/14 08:30-17:30

Situated in the south suburb of Chengdu, Wuhou Temple covers an area of 3.7 hectares. It is dedicated to the memory of the Zhuge Liang (181-234), Prime Minister of the Kingdom. of Shu in the Three Kingdoms period (220-280). During his tenure as prime minister, the kingdom enjoyed political stability and economic prosperity, and the local people lived a peaceful life. Today Zhuge Liang is considered the personification of wisdom, and enjoys great prestige and widespread admiration.

Jin Li Street

Sept 12/13/14 08:30-17:30

"Jinli" is the name of an old street in Han-dynasty in Chengdu, meaning "make perfection still more perfect and hide the universe in the universe". The ancient Jinli was one of the oldest and the most commercialized streets in the history of West Shu and had been well-known throughout the country in Qin, Han, and Three Kingdoms Periods. The new Jinli Street has condensed the essence out of the worldly life in Chengdu: teahouses, inns, restaurants, bars, theatrical stages, handicrafts, local snacks and specialties.

GENERAL INFORMATION

Kuan and Zhai Alley

Sept 12/13/14 08:30-17:30

Being in the list of Chengdu Historical and Cultural Protection Project, Kuan and Zhai Alley is composes of Kuan (which means broad) Alley, Zhai (which means narrow) Alley and Jing (which means paralleled)Alley, among which, there are lots of traditional courtyards, Siheyuan, and western style architectures

HOTEL INFORMATION

Address: Jinniu Hotel, NO. 2 Jinquan Road, Jinniu District

地 址:成都市金牛区金泉路 2 号金牛宾馆

Tel: 0086-28-87306666 Fax: 0086-28-87305555

VISITOR INFORMATION

Currency Exchange

In China, only Renminbi (RMB) is used. However, exchange centers can be found at airport, most hotels and large shopping centers. The exchange is about US $1=RMB 6.5 Yuan. When exchanging money, please keep your receipt by which you can change any remaining RMB back to foreign currency when leaving China. Visa, Master, American Express Dinners Club and JCB are accepted in many depart stores and hotels. It may be difficult to draw cash with credit cards.

Electricity

The electrical voltage in China is 220 V 50Hz. Power sockets available in China are Type A, Type I and Type C plugs.

Weather

The average daily temperature in Sept in Chengdu is around 25℃(77℉)

Business Center

There is a business center in the lobby. It provides facilities and services, such as network, fax, photocopying and typing service. Office hours: 09:00-17:00

Taxi Note

会议地点:成都市金牛区金牛宾馆

Conference Venue: Jinniu Hotel

电话(Tel):0086-28-87306666

Shuttle buses are available on Sept. 11. The departure time from Chengdu Shuangliu International Airport to Jiniu Hotel are 10:00, 14:00, 17:00 and 21:00. If you want to take a taxi, you may ask the volutreers to help you at any time in the airport.

HOTEL MAP