

— NEAR-FINAL PROGRAM – June 22, 2006 —
ADVANCED FRACTURE METHODS FOR LWR COMPONENTS WORKSHOP
 JULY 17 – 20, 2006 – Tremont Plaza Hotel, Baltimore, MD, USA

SESSION	CONTRIBUTOR/LOCATION/ORGANIZATION			PRESENTATION
	USA	EUROPEAN	JAPAN	TITLES

July 17 (1600 – 2100)	Workshop Registration	Registration, Badging, and Distribution of Workshop Materials		All Workshop Attendees
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July 18 (0800 – 0910)		I. Introduction		Claud Pugh, Session Moderator pughce@comcast.net
0800 – 0810	Mark EricksonKirk, U.S. NRC, MTK@nrc.gov			Welcome by U. S. Chairman
0810 – 0820		David Lidbury, Serco Assurance, david.lidbury@serco.com		Welcome by European Chairman
0820 – 0840	Mark EricksonKirk, U.S. NRC, MTK@nrc.gov			<i>U. S. Approach to Advancing RPV Integrity Technology.</i>
0840 – 0900		Nigel Taylor, JRC Nigel.TAYLOR@cec.eu.int		<i>Role of European Networks (Including "NULIFE") in Advancing RPV Integrity Technology</i>
0900 – 0910	Session Discussion – Moderator & Rapporteur Panel			

0910 – 1245		II. Irradiation Damage Modeling-A (Nano & Microscale)		Randy Nanstad, Session Moderator Nanstadrk@ornl.gov
30 min. each (20 presentation & 10 discussion) 0910 – 0940	Roger Stoller, ORNL, stollerre@ornl.gov			<i>The Influence of Displacement Rate on Microstructural Evolution in Reactor Pressure Vessel Steels</i>
0940 – 1010		Stéphane Bugat, EdF, Stephane.bugat@edf.fr		<i>PERFECT Project: a Short Overview of the RPV-2 and Toughness Modules for Irradiation Damage Prediction and Toughness Evaluation of RPV Steels</i>
1010 – 1040		Dominique Moinereau Dominique.moinereau@edf.fr		<i>Overview of the RPV Collective Exercise of the User Group of PERFECT</i>

Coffee Break (1040 – 1055)

1055 – 1125	Robert Odette, UC – Santa Barbara, odette@engineering.ucsb.edu			<i>The Microstructural Basis for Embrittlement</i>
1125 – 1155			Hiroshi Matsuzawa, Japan Nuclear Energy Safety Organization, matsuzawa-hiroshi@jnes.go.jp	<i>Updated Trends of Research and Regulatory Code on Fracture Toughness of Reactor Vessels in Japan</i>
1155 – 1225		Tim Williams, Rolls-Royce plc, Tim.Williams@rolls-royce.com		<i>Development of Mechanistically-Based Correlation Models of Irradiation Shift in RPV Steels in the Context of Through-Life Toughness Prediction</i>
1225 – 1245	Session Discussion – Moderator & Rapporteur Panel			

July 18 (1245 – 1400) LUNCH

July 18 (1400 – 1805)	III. Advanced Fracture Modeling-A (Nano & Microscale)			Dominique Moinereau, Moderator dominique.moinereau@edf.fr
1400 – 1430		Olivier Diard, EdF, Centre des Renardières, and J.-P. Mathieu, ENSAM Metz Olivier.diard@edf.fr		<i>A Micro-Mechanical Approach for Direct Computation of Local Probability of Fracture from Metallographic Information</i>
1430 – 1500	Marjorie EricksonKirk/ Matthew Wagenhofer, PEAI, erickson.peai@verizon.net			<i>A Theoretically-derived, Fully Predictive Model of Fracture Toughness Behavior of Ferritic Steels in the Transition Region</i>
1500 – 1530	Paul Williams et al., ORNL, and M. Wagenhofer, PEA williamspt@ornl.gov			<i>On Development of the Dislocation-Based Fracture (DISFRAC) Computer Program – An Implementation of a Dislocation-Based Transference Model with Extensions to Cleavage Initiation in Ferritic Steels</i>
1530 – 1600	Robert Dodds et al., UI-Urbana, rdodds@uiuc.edu			<i>Recent Developments in the Weibull Stress Model for Prediction of Cleavage Fracture in Ferritic steels</i>

Coffee Break (1600 – 1615)

1615 – 1645		Kim Wallin , VTT, Kim.Wallin@vtt.fi		<i>Brittle Fracture Integrity Assessment of Real and Postulated Flaws Based on the Master Curve</i>
1645 – 1715		Hansjakob Schindler , Mat-Tec AG Schindler@mat-tec.ch		<i>Use of Standard Fracture Toughness and Reference Temperature To in Engineering Models for Fracture Processes</i>
1715 – 1745		E. Lucon et al., SCK/CEN, and R. Gerard, Tractebel Engr., elucon@SCKCEN.BE		<i>Safety Margins Generated by the Application of the Master Curve Approach to RPV Surveillance Materials</i>
1745 – 1805	Session Discussion – Moderator & Rapporteur Panel			

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July 19 (0800 – 1235)	IV. Irradiation Damage Modeling-B (Engineering Scale)			Nigel Taylor, Moderator Nigel.TAYLOR@cec.eu.int
0800 – 0830		Kim Wallin , VTT, kim.wallin@vtt.fi		<i>Methods for Estimating Irradiated Material Fracture Toughness when no Irradiated Fracture-Toughness Tests are Available</i>
0830 – 0900		Boris Margolin et al., PROMETHEY margolin@prometey2.spb.su and D. Lidbury , Serco Assurance, david.lidbury@serco.com		<i>Collaboration Between Prometey (ISTC Project 3072) and Project PERFECT on Development of Cleavage Fracture Models</i>
0900 – 0930	Mikhail Sokolov and Randy Nanstad, ORNL, sokolovm@ornl.gov			<i>Fracture Toughness Evaluation of Highly Embrittled Reactor Pressure Vessel Steels</i>
1000 – 1030		Milan Brumovsky , Nucl. Res. Institute Rez, plc., bru@ujv.cz		<i>Engineering Approach to Prediction of Radiation Embrittlement in RPV Materials</i>

Coffee Break (1030 – 1045)

1045 – 1115	Randy Lott, Westinghouse, lottrg@westinghouse.com			<i>Propagation of Uncertainties in Fracture Toughness Estimates for Irradiated Pressure Vessels</i>
1115 – 1145			Minoru Tomimatsu, Mitsubishi Heavy Industries, Ltd. minoru1_tomimatsu@kbg.kobe.mhi.co.jp and H. Matsuzawa, JNES	<i>Method for Evaluating the Structural Integrity of Reactor Vessels with Low Upper Shelf Energy in Japan</i>
1145 – 1215	Robert Odette, UC – Santa Barbara, odette@engineering.ucsb.edu			<i>Multi-scale Modeling and Experiments on Cleavage in Ferritic Alloys</i>
1215 – 1235	Session Discussion – Moderator & Rapporteur Panel			

July 19 (1235 – 1400) LUNCH

July 19 (1400 – 1805)	V. Advanced Fracture Modeling-B (Engineering Scale)			Richard Bass, Moderator bassbr@ornl.gov
1400 – 1430		Andrew Sherry, Univ. Manchester, a.sherry@manchester.ac.uk		<i>Application of Miniaturised Testing & Local Approach Methods for Structural Integrity Assessment</i>
1430 – 1500	Bruce Bishop, Westinghouse, bishopba@westinghouse.com			<i>Extension of PFM Techniques for RPV Pressurized Thermal Shock to Other Applications</i>
1500 – 1530		Elisabeth Keim and M. Hümmer, AREVA, Elisabeth.Keim@framatome-anp.com		<i>Prediction of Component Behavior by Local Approach Models</i>
1530 – 1600		Mike Smith, British Energy, mike.smith@british-energy.com and Nigel Taylor, JRC, Nigel.TAYLOR@cec.eu.int		<i>How Practicable are Constraint-Based Engineering Fracture Assessments of Operating Plant? Lessons from the NESC European Collaborative Network</i>

Coffee Break (1600 – 1615)				
1615 – 1645	Randy Nanstad et al., ORNL, nanstadrk@ornl.gov			<i>Experimental Evaluation of Deformation and Constraint Characteristics in Three-Point Bend Specimens</i>
1645 – 1715	Jim Joyce et al., U.S. Naval Academy, jaj@usna.edu			<i>Developments in Crack Arrest Testing</i>
1715 – 1745	Marjorie EricksonKirk, PEAI, erickson.peai@verizon.net , and Mark EricksonKirk, US NRC			<i>The Relationship between the Transition and Upper Shelf Fracture Toughness of Ferritic Steels</i>
1745 – 1805	Session Discussion – Moderator & Rapporteur Panel			

July 19 (1900 – 2100) GROUP DINNER (Restaurant to be Announced)

July 20 (0800 – 1200)	VI. Technical Discussions and Conclusions		
	1. Summary by Rapporteur Panel and Moderators	Rapporteur Panel and Moderators	
	2. Group Discussion re Workshop Goals	All Participants	
	3. Development of Conclusions and Recommendations	Workshop Chairmen	
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Notes:

1. **Rapporteur Panel members: David Lidbury, Mark EricksonKirk, Ken Yoon, Elisabeth Keim, and Nigel Taylor.**
2. Each presentation is allocated 30 minutes total time (20 minutes for presentation and 10 minutes discussion).
3. Each session is allocated 20 minutes at its conclusion for discussion and identification of points for further consideration/research (led by moderators and rapporteur panel).
4. A workshop dinner will be held on the evening of July 19.