Listing of Halden Reports for 2003-2004

	REPORTING IN THE FUEL AND MATERIALS AREA 2003 - 2004		
Ch. 2	Report No.	Fuel High Burnup Capabilities in Normal Operating Conditions	
	HPR-362/7	B.C. Oberländer, M. Sobieska, M. Espeland, H.K. Jenssen (IFE): "Post irradiation examination of two MOX fuel rods re-irradiated in IFA-648/629.3".	
	HPR-362/8	H.K. Jenssen, B.C. Oberländer, M. Sobieska, M. Espeland (IFE): "Post-irradiation examination of two high burnup UO2 fuel rods, with and without gadolinia, irradiated in rig IFA-515".	
	HWR-729	A. Horvath: "The MOX fuel behaviour test IFA-597.4/5/6/7: Summary of in-pile fuel temperature and gas release data".	
	HWR-755	H. Horn: "In-reactor creep of various fuel claddings: Results from IFA-663".	
	HWR-761	B. Volkov, V. Lestinen: "Review of WWER fuel behaviour compared with PWR fuel in IFA-503".	
	HWR-763	P. Blair, J. Wright: "The IMF/MOX comparative test, IFA-651.1: Results after four cycles of irradiation".	
	HWR-764	J. Wright: "The SBR MOX and UO2 comparison test in gas flow rig IFA-633: Results after seven cycles of irradiation".	
	HWR-765	J.A. Turnbull: "The high initial rating experiment: IFA-677; A review of important phenomena and predictions of its behaviour".	
	HWR-767	T. Tverberg, J.C. Kim, B. Volkov: "Qualification of in-pile power and data on UO2-Gd2O3 fuel performance in IFA-636".	
	HWR-769	H. Koike, N. Murakami, E. Kolstad, T. Tverberg: "Ramp tests with two high burnup UO2 fuel rods in IFA-629.4".	
Ch. 3	Report No.	Fuel Response to Transients	
	HWR-762	V. Lestinen: "LOCA testing at Halden, first experiment IFA-650.1".	
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	HPR-362/3	P. Bennett: "Results from the second cycle of the PWR crud deposition test (IFA-665.2)".
	HPR-362/5	B. Beverskog: "PWR fuel crud; theoretical aspects".
	HWR-727	A. Horvath: "Results from the 1st - 4th interim inspections of coupons and fuel rods from the PWR corrosion and hydriding test IFA-638".
	HWR-731	P. Bennett: "Results from the first cycle of the PWR crud deposition test (IFA-665.1)".
Ch. 5	Report No.	Plant Lifetime Assessments
	HPR-362/4	T.M. Karlsen: "In-pile results from crack initiation test (IFA-660) and crack growth tests (IFA-657 and IFA-658)".
	HPR-362/9	J.P. Foster, T.M. Karlsen, R. Van Nieuwenhove: "Irradiation stress relaxation test status and update".
	HWR-725	T.M. Karlsen: Minutes of Halden IASCC Review Meeting 1st November 2002".
	HWR-730	P. Bennett: "In-core ECP and conductivity measurements in IFAs-648, -657, -658, -660".
	HWR-770	T.M. Karlsen, A. Horvath; "Final report on the in-pile crack growth behaviour of irradiated compact tension specimens in IFA-639".
	HWR-771	T.M. Karlsen: "Minutes from IASCC review meeting 12 May 2004".
	2003-2004	4 Papers and Reports in the MTO Area
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	HWR-724	P.Ø. Braarud, A. Bye, E. Lois, G. Andresen, S. Collier, M. Larsen, K. Laumann, J.T. Ludvigsen, S. Massaiu, E. Nystad, Halden Project: "The Halden Reactor Workshop Meeting on Review of Methods and R&D Needs to Address Issues Related to Human Reliability Assessment".
	HWR-757	K. Laumann, J.T. Ludvigsen, P.Ø. Braarud, H. Svengren, Halden Project: "Effects of Task Complexity on Operators' Performance in Eight Medium LOCA Scenarios (Recovery Experiment 2002)"

	HWR-758	P.Ø. Braarud, K. Laumann, H. Svengren, Halden Project: "Task Complexity and Plant Conditions Experiment 2003"
	HWR-756	J.T. Ludvigsen, S. Collier, H. Svengren, Halden Project: "Contextually Anchored Scenario Transcripts (CAST): A Framework for Describing the Context of Experimental Scenarios"
	HWR-759	G. Andresen, H. Svengren, J. Heimdal, S. Nilsen, J.E. Hulsund, R. Bisio, X. Debroise, Halden Project: "Procedure Automation: The Effect of Automated Procedure Execution on Situation Awareness and Human Performance"
	Paper	A.B.M. Skjerve, S. Strand, G. Skraaning Jr., Halden Project: "Extended Teamwork: Team Performance in Highly Automated Nuclear Power Plants"
	HWR-760	S. Massaiu, A.B.M. Skjerve, G. Skraaning Jr., S. Strand, I. Wærø, Halden Project: "Studying Human-automation Interactions: Methodological Lessons Learned from the Human-centred Automation Experiments 1997-2001"
	HPR-361	G. Skraaning Jr., Halden Project: "Experimental Control Versus Realism: Methodological Solutions for Simulator Studies in Complex Operating Environments"
	HPR-360	A. Drøivoldsmo, Halden Project: "New Tools and Technology for the Study of Human Performance in Simulator Experiments"
	HWR-747	S. Nilsen, R. Bisio, J.T. Ludvigsen, Halden Project: "Knowledge Management in the NPP Domain"
	Paper	J.T. Ludvigsen, Halden Project: "Organisational Learning - Literature Review and Plans for 2004"
Ch. 7	Report No.	Control Room Engineering and HSI Design and Evaluation
	Paper	T. Gunnarsson, OKG, J.E. Farbrot, Halden Project: "The Control Room Upgrade in the Oskarshamn 1 Modernisation Project"
	HWR-750	Ø. Veland, Halden Project: "State-of-the-Art Report on Ecological Interface Design"
	HWR-752	G. Andresen, M. Friberg, A. Teigen, Halden Project, D. Pirus, EdF: "Function-oriented Display System: Background and First Prototypes"
	Paper	R. Welch, A.O. Braseth, Ø. Veland, Halden Project: "Information Rich Display Design"

	Paper	C. Nihlwing, H. Svengren, Halden Project: "Innovative Displays for BWR Process Surveillance"
	HWR-754	J. Heimdal, G. Skraaning jr., P.Ø. Braarud, Halden Project: "Integrated System Validation: Status and Research Needs"
	HWR-751	N. Førdestrømmen, Halden Project: "Task-based Displays - Rationale, Design, User Test and Assessment"
	HWR-753	Ø. Veland, Halden Project: "Workshop Meeting on "Innovative Human-System Interfaces and their Evaluation", 1st - 2nd September 2003"
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	HWR-732	A. Drøivoldsmo, A. Olsen, S. Helgar, Halden Project, M. Reigstad, NTNU: "Distributed Decision Making and Wearable Computing"
	HWR-733	A. Drøivoldsmo, P. Johansen, A. Olsen, S. Helgar, Halden Project, O.M. Strand, M. Reigstad, NTNU: "Interaction and Control in Wearable Computing"
	HWR-734	A. Sebok, E. Nystad, Halden Project: "Training in Virtual Reality: A Comparison of Technology Types"
	HWR-720	A. Sebok, S. Helgar, E. Nystad, Halden Project: "Navigation in Desktop Virtual Environments: An Evaluation and Lessons-Learned During Experimental and Usability Studies"
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Ch. 9	Report No.	Plant Operation and Maintenance Support
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	HWR-741	A. Kirschner, M. Hoffmann, Halden Project:
	HWR-742	"Peano NNPLS: Advancements in 2002-2003" and M. Hoffmann, F. S. Gran, H. P-J. Thunem, Halden Project: "On-line Monitoring for Calibration Reduction"
	Paper	P. F. Fantoni, Halden Project, G. A. Zanetta, L. Gregori, CESI: "The Use of PEANO for On-line Monitoring of Fossile Power Plants"
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	HWR-746	P. F. Fantoni, Halden Project: "NPP Wire System Aging Assessment and Condition Monitoring: State-of-the-Art Report"
	HWR-744	D. Roverso, J.E. Farbrot, F. S. Gran, M. Hoffmann, Halden Project: "Condition Monitoring and Diagnostic Systems Integration - Guiding Principles and Practical Examples"
	HWR-749	S. Sunde, J. Bánáti, Halden Project: "Robust Data Reconciliation with TEMPO"
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	Paper	J. Porsmyr, A. Hornæs, K.T. Hansen, Halden Project, A.Ionov, V. Adeev, S. Burlov, Kola NPP: "User Experiences Using the Operator Support Systems SCORPIO and SPDS at Kola NPP"
	Paper Paper	J. Porsmyr, T. Bodal, W.H. Beere, Halden Project, Y. Kobayashi, T. Maeda, TEPCO Systems Corporation: "SCORPIO-BWR: Status and Future Plans", and J. Porsmyr, H.Ø. Kvilesjø, Halden Project, M. Ijiri, K. Miyawaki, Yonden Engineering Corporation: "A Study of the Advancement of a Reactor Core Design Environment"
	HWR-748	R. Bisio, J.E. Hulsund, S. Nilsen, Halden Project: "Computer-Assisted Procedure Maintenance"
Ch. 10	Report No.	System Safety and Reliability
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	HWR-728	N. Salabashyan, Halden Project: "Standard-based Criteria for the Evaluation of Documentation of a Computer Based System".
	Paper	G. Dahll, Halden Project: "Joint Activities on Software Safety between TÜV-Nord, GRS/ISTec and the Halden Project"
	HWR-737	A. P-J. Thunem, H. P-J. Thunem, F. S. Gran, Halden Project: "Application of PEANO and ALADDIN in Fault Detection and Diagnosis of Real-Time Software"

	HWR-738	T. Sivertsen, Halden Project: "PetriNets - Part 1: Concepts and Application Areas"
	HWR-739	G. Dahll, Halden Project: "Error Propagation/Error Containment - A Survey"
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	HWR-740	B.A. Gran, R. Fredriksen, A. P-J. Thunem, Halden Project: "Model-based Risk Assessment - the CORAS Framework"
	Paper	A. Helminen, VTT Industrial Systems, B.A. Gran, M. Kristiansen, R. Winther, Halden Project: "Use of Operational Data for the Assessment of Pre-existing Software"
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	HWR-726	T. Sivertsen, Halden Project: "Effective Quality Auditing"
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J 0	Report No.	Human Performance
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	<u> </u>	"The Man without a Face, and other Stories about Human-Centred Automation in Nuclear Process Control". G. Skraaning Jr., A.B.M. Skjerve. Paper presented at HCI International 2003, 22-27 June
	IFE/HR/E-2003/014	"The Man without a Face, and other Stories about Human-Centred Automation in Nuclear Process Control". G. Skraaning Jr., A.B.M. Skjerve. Paper presented at HCI International 2003, 22-27 June 2003, Heraklion, Crete, Greece "A Classification of Validation Criteria for New Operational Design Concepts in Nuclear Process Control". A.B.M. Skjerve and G. Skraaning. Paper presented at the SEGHOF Workshop "Modifications at Nuclear Power Plants - Operating Experience, Safety Significance and the Role of Human Factors & Organisation",
	IFE/HR/E-2003/014 IFE/HR/E-2003/022	"The Man without a Face, and other Stories about Human-Centred Automation in Nuclear Process Control". G. Skraaning Jr., A.B.M. Skjerve. Paper presented at HCI International 2003, 22-27 June 2003, Heraklion, Crete, Greece "A Classification of Validation Criteria for New Operational Design Concepts in Nuclear Process Control". A.B.M. Skjerve and G. Skraaning. Paper presented at the SEGHOF Workshop "Modifications at Nuclear Power Plants - Operating Experience, Safety Significance and the Role of Human Factors & Organisation", Paris, France, 6-8 October, 2003 "Experiments in the Halden Human-Machine Laboratory (HAMMLAB) investigating Human Reliability". G. Andresen, P.Ø. Braarud, A. Bye, F. Øwre. Paper presented at EUROSAFE 2003,

	IFE/HR/E-2004/005	"Task Complexity as a Factor for Human Reliability Assessment" P.Ø. Braarud, K. Laumann, H. Svengren. Paper presented at PSAM7/ESREL'04 Conference, 1418. June, 2004, Berlin.
	IFE/HR/E-2004/006	"Improving the Empirical Basis for Human Reliability Assessment by Simulators Experiments" A. Bye, P.Ø. Braarud. Paper presented at PSAM7/ESREL'04 Conference, 1418. June, 2004, Berlin.
	IFE/HR/E-2004/008	"Methods for Design of Human Automation Interaction" A. Bye. Paper presented at the Fourth American Nuclear Society Internantional Topical Meeting on Nuclear Plant Instrumentation, Controls and Human-Machine Interface Technologies (NPIC&HMIT 2004), Colombus, Ohio, September 2004.
	IFE/HR/E-2004/028	"Usability Evaluation of the HAMBO Alarm System". M. Kaarstad. 2004-11-09.
Ch. 7	Report No.	Design and Evaluation of Human System Interface and Control rooms
	IFE/HR/E-2004/010	"Status and Further Plans for the Halden MMS Activities", F. Øwre, G. Andresen, A. Drøivoldsmo, N. Førdestrømmen, C. Nielwing, H. Svengren, Ø. Veland. Paper presented at "The 6 th International Conference on Nuclear Thermal Hydraulics, Operations and Safety (NUTHOS-6), Nara, Japan, October 4-8, 2004.
Ch. 8	Report No.	Virtual Reality for Design, Planning and Training
	IFE/HR/E-2003/002	"Using Wearable Equipment for an Augmented Presentation of Radiation". A. Drøivoldsmo, T. Johnsen, M.N. Louka, M. Reigstad. Paper presented at the EPRI Wireless Conference, Orlando, Florida, 2002-11-19 - 11-21
	IFE/HR/E-2003/003	"Using wearable equipment for an augmented presentation of radiation". A. Drøivoldsmo, T. Johnsen, M.N. Louka, M. Reigstad. Paper presented at the EPRI Wireless Conference, Orlando, Florida, 19-21 November 2002.
Ch. 9	Report No.	Operation and Maintenace in a Competitive Electricity Market
	IFE/HR/E-2003/004	"Development and Validation of Steam Generator Models for Thermal Performance Monitoring". J. Bánáti, S. Sunde. Paper presented at the 11 th International Conference on Nuclear Engineering, Tokyo, Japan, April 20-23, 2003 ICONE11-36392.
	IFE/HR/E-2003/009	"An Algorithm for generating Modular Hierarchical Neural Network Classifiers: a Step towards larger Scale Applications". D. Roverso. Paper presented at the AeroSense conference, Orlando, Florida, USA, 21-25 April, 2003.
	IFE/HR/E-2003/010	"Fault Diagnosis with the Aladdin Transient Classifiers". D. Roverso. Paper presented at the AeroSense conference, Orlando, Florida, USA, 21-25 April, 2003.

Ch. 10	Report No.	Digital System Safety report
	IFE/HR/E-2004/029	"Human-Machine Communication". J.E. Farbrot, Chr. Nihlwing, H. Svengren. Paper presented at: "Digital Leittechnik und Computereinsatz in KKW-Prozessen", 2 nd -3 rd December, Brugg-Windisch, Switzerland.
	IFE/HR/E-2004/022	"On-line Monitoring Sytems Integration - Challenges and Prospects". D. Roverso. Paper presented at the IAEA Technical Meeting - Increasing Instrument Calibration Interval through On-Line Monitoring Technologies, 27 th -29 th September 2004, Halden, Norway.
	IFE/HR/E-2004/017	"An Approach to Incorporate the Operator Actions in the Simulation of Accident Sequences". A. Expósito, J.A. Quiroga, A. Ibarra, J. Hortal, J-E. Hulsund, R. Bisio, S. Nilsen. Paper presented at the International Conference Nuclear Energy for New Europa 2004, Portoroz, Slovenia, September 6-9, 2004.
	IFE/HR/E-2004/016	"Human Factors Engineering Guidance for Computerized Operator Support Systems HSI Design", D. Roverso, Ø. Berg, P.F. Fantoni, J.E. Farbrot, M. Hoffmann, S.R. Nilsen, J.O. Porsmyr, and S. Sunde. To appear in Proceeding of NPIC&HMIT-2004, the 4th American Nuclear Society International Topical Meeting on Nuclear Plant Instrumentation, Control and Human-Machine Interface Technologies, September 19-22, 2004, Columbus, Ohio.
	IFE/HR/E-2004/015	"On-Line Early Fault Detection & Diagnosis with the Aladdin Transient Classifier", D. Roverso, To appear in Proceeding of NPIC&HMIT-2004, the 4th American Nuclear Society International Topical Meeting on Nuclear Plant Instrumentation, Control and Human-Machine Interface Technologies, September 19-22, 2004, Columbus, Ohio.
	IFE/HR/E-2004/009	"On-line Calibration Monitoring with PEANO", M. Hoffmann. Paper presented at NPIC/HMIT 2004, Columbus, Ohio, 19 th -22 nd September, 2004.
	IFE/HR/E-2004/002	"Artificial Intelligence Techniques for On-Line Monitoring of Fossil Power Plants". P. Fantoni, L. Gregori, G.A. Zanetta. Paper presented at IMTC 2004 - Instrumentation and Measurement Technology Conference, Como, Italy, 18-20 May, 2004.
	IFE/HR/E-2004/001	""Enhancing Cross-Correlation Analysis with Artificial Neural Networks for Nuclear Power Plant Feedwater Flow Measurement" D. Roverso, D. Ruan. Paper printed in Real-LTime Systems - Vol. 27, no 1 (May 2004), pp 85-96
	IFE/HR/E-2003/015	"The Use of NNPLS Algorithm for On-line Calibraiton Monitoring". A. Kirschner. Paper presented at EUSFLAT 2003, Zittau, Germany 10th-12th September, 2003.

IFE/HR/E-2003/012	"The HALDEN Open Dependability Demonstrator". B.A. Gran, R. Fredriksen, R. Winther, S. Mathisen. Published in Safety and Reliability - Bedford and van Gelder (eds), Swets & Zeitlinger, Lisse, The Netherlands, 2003. ISBN 90-5809-551-7.
IFE/HR/E-2003/013	"Experiences from Application of Model-based Risk Assessment". R. Fredriksen, B.A. Gran, K. Stølen, I. Djordjevic. Published in Safety and Reliability - Bedford and van Gelder (eds), Swets & Zeitlinger, Lisse, The Netherlands, 2003. ISBN 90-5809-551-7.
IFE/HR/E-2003/016	"Modelling of Knowledge Intensive Computerised Systems Based on Capability-Oriented Agent Theory (COAT)". A. P-J. Thunem. Paper presented at KIMAS'03, Boston, USA, 30 th September - 3 rd October, 2003.
IFE/HR/E-2003/017	"Fuzzy-Neuro Risk Assessment of Distributed Real-Time Systems Through Formal and Object-Oriented Systms Modelling". A. P-J. Thunem. Paper presented at EUSFLAT'03, Zittau, Germany 10 th -12 th October, 2003.
IFE/HR/E-2003/025	"The Need for Risk Assesment of Health Care Information Systems". B.A. Gran. Presented at Tromsø Telemedicine Conference, 15-17 June 2003, Tromsø, Norway.
IFE/HR/E-2003/026	"CORAS a Modell-based Approach for Risk Assessment". B.A. Gran. Tutorial presented at the Workshop on Informatin Security in the Health Care Sector in Tromsø 18 September 2003.
IFE/HR/E-2003/027	"The CORAS Methodology for Model-based Risk Assessment". B.A. Gran. Tutorial presented at Safecomp 2003, 23 September, Edinburgh, Scotland.
IFE/HR/E-2003/031	"A Framework for Dependable Development Process of Complex Computerised Systems". A. P-J. Thunem. Paper presented at PSAM7 - ESREL'04, Berlin, Germany, June 14-18, 2004.
IFE/HR/E-2003/032	"An Information Retrieval Terminology for Model-Based Risk Assessment". A. P-J. Thunem, R. Fredriksen, B.A. Gran. Paper presented at PSAM7 - ESREL'04, Berlin, Germany, June 14-18, 2004.
IFE/HR/E-2003/033	"Fault Detection in Real-Time Software Systems using Neuro-Fuzzy Tools for Signal Validation and Diagnosis". H. P-J. Thunem, A. P-J. Thunem. Paper presented at PSAM7 - ESREL'04, Berlin, Germany, June 14-18, 2004.
IFE/HR/E-2004/020	"An Approach for Model-Based Risk Assessment". B.A. Gran, R. Fredriksen, A. P-J. Thunem. Paper presented at SAFECOMP 2004, Sept. 21-24, Potsdam, Germany. Published in Computer Safety, Reliability, and Security (LNCS 3219). Heisel, M. Liggesmeyer, P. Wittmann, S. (Eds). pp 311-324, Springer Berlin-Heidelberg, 2004.
IFE/HR/E-2004/021	"Undefinedness vs. Underspecification in Halden ASL". T. Sivertsen. Published in Nordic Journal of Computing 11 (2004), 12-34.

IFE/HR/E-2004/030	"An Information Retrieval Terminology for Model-Based Risk Assessment". A. P-J. Thunem, R. Fredriksen, B.A. Gran. Presented in the joint PSAM 7-ESREL'04 International Conference, Berlin, 14-18, 2004. Printed in the conference proceedings, ISBN 1-85233-827-X, pp 418-423.
IFE/HR/E-2004/033	"Fault Detection in Real-Time Software Systems using Neuro-Fuzzy Tools for Signal Validation and Diagnosis". H. P-J. Thunem, A. P-J. Thunem. Presented in the joint PSAM 7-ESREL'04 International Conference, Berlin, 14-18, 2004. Printed in the conference proceedings, ISBN 1-85233-827-X, pp1858-1863.
IFE/HR/E-2004/034	"A Framework for Dependable Development Process of Complex Computerised Systems". A. P-J. Thunem. Presented in the joint PSAM 7-ESREL'04 International Conference, Berlin, 14-18, 2004. Printed in the conference proceedings, ISBN 1-85233-827-X, pp 902-907.
IFE/HR/E-2004/035	"Computerised Systems' Availability, Safety and Security Research at the OECD Halden Reactor Project". A. P-J. Thunem. Presented in the Fourth American Nuclear Society International Topical Meeting on Nuclear Plant Instrumentation, Controls and Human-Machine Interface Technologies (NPIC&HMIT 2004), Columbus, Ohio, September 19-22, 2004. Published in the conference proceedings, pp 1740-1746