



AGENDA

28th International QUENCH Workshop*

Karlsruhe Institute of Technology, Campus North, H.-von-Helmholtz-Platz 1, 76344 Egg.-Leopoldshafen, Germany
5-7 December 2023

Meeting Location: Fortbildungszentrum für Technik und Umwelt (FTU), Auditorium (Aula)

Tuesday, 5 Dec 2023

8:10	Pick-up at the hotels	
8:30	Registration	
9:00	Welcome	W. Tromm/M. Steinbrück, KIT
9:20	Update of the QUENCH Program	M. Steinbrück, KIT
	<u>LONG-TERM DRY STORAGE – SYSTEM ZR-H</u> (Chair: M. Wolff, ENSI)	
9:40	Update of the SPIZWURZ project investigating the hydrogen behavior in zirconium alloys	M. Grosse, KIT
10:10	Hydrogenation of claddings in the new developed HOKI oven and performance of the long-term bundle test under dry storage conditions in the framework of the SPIZWURZ project	J. Stuckert, KIT
10:40	Coffee break (Group Photo)	
11:10	Neutron imaging investigations of hydrogen in cladding tubes	S. Weick, KIT
11:30	Structural integrity of hydrided Zircaloy and its implications for safety of extended dry storage	Y. Lee, SNU
12:00	Hydrogen diffusion and precipitation in fuel cladding under stress, at various temperatures and under the influence of a liner, using neutron imaging	J. Bertsch, PSI
12:30	Lunch	
	<u>ATF CLADDING</u> (Chair: M. Grosse, KIT)	
13:30	Accident Tolerant Fuel: Cr Coated Cladding Development at Westinghouse	K. Frederick, WEC
14:00	Exploring safety limits of Cr-coated ATF cladding using separate effect and integral LOCA experiments	Y. Lee, SNU
14:30	Chromium coating (on zirconium based-cladding substrate) cracking monitoring and characterization under thermomechanical loadings	A. Charbal, CEA
14:50	Preliminary BDBA test results of Cr-coated Zr alloy cladding at DEGREE facility	K. Nakamura, CRIEPI
15:10	Coffee break	

* In Cooperation with the International Atomic Energy Agency (IAEA)

15:40	The CODEX-ATF experiment	R. Farkas, CER(EK)
16:00	Oxidation of various ATF cladding concepts	A. Endrychova, UJP
16:20	Transition of the Zr(Cr, Fe) ₂ intermetallic phase up to the eutectic temperature	A. Mohamad, JAEA
16:40	Recent and ongoing experiments on the high-temperature oxidation and degradation of Cr-coated Zr alloy	M. Steinbrück, KIT
17:15	Bus transfer to the hotel	

Wednesday, 6 Dec 2023

8:30	Pick-up at the hotels	
	<u>MODELLING AND CODE APPLICATION</u> (Chair: E. Rouge, IRSN)	
9:00	Modelling of hydride morphology in zirconium tubes loaded by internal pressure after slow cooling	M. Kolesnik, KIT (presented by J. Stuckert)
9:20	Development of a preliminary model for Cr-coated Claddings for the System Code Package AC ²	G. Stahlberg, GRS
9:40	Simulation of QUENCH-15 and QUENCH-03 scenarios with modified AC ² for Cr-coated claddings	T. Hollands, GRS
10:10	Coffee break	
10:40	NPP accident analyses under LOCA and SBO conditions using system computer codes	M. Valincius, LEI
11:00	KIT Validation Activities of the ASTEC code against the QUENCH Bundle Experiments: Results and Outlook	M. Cazado, KIT
11:20	Estimation of melt oxidation kinetics	J. Stuckert, GRS
12:00	Lunch	
	<u>INTERNATIONAL PROGRAMS</u> (Chair: H. Esmaili, USNRC)	
13:30	IAEA ongoing activities to support advanced nuclear fuel technologies development	A. Khaperskaia, IAEA
14:00	Improving chemical thermodynamics knowledge of severe accidents within the OECD-TCOFF2 Project	D. Bottomley, JRC
14:30	Update on NEA activities supporting ATF development	J.F. Martin, OECD-NEA
14:50	Overview on the OECD-NEA Joint Undertaking QUENCH-ATF	M. Steinbrück, KIT
15:20	Coffee break + Time for discussion	
16:15	Bus to former nuclear power station Philippsburg and invited dinner (Löwenbräu Philippsburg)	
ca. 22:00	Arrival at KIT and in hotels	

Thursday, 7 Dec 2023

8:30	Pick-up at the hotels	
	EXPERIMENTS (Chair: J.- Stuckert, KIT)	
9:00	PNNL Research and Testing Capabilities	G. Wang, PNNL
9:30	A separate effects study of secondary hydriding during a LOCA transient	A.M. Kpemou, IRSN
10:00	High Temperature Creep of Zr Alloys with Internal Overpressure	V. Boucek, UJP
10:20	Coffee break	
10:50	The EC SCORPION Project on SiC cladding: Overview and first results	M. Grosse, KIT
11:10	Analysis of Fuel Fragment Dispersal During Post-Burst Vibration Event	P. Doyle, ORNL
11:30	Closure of the Workshop	M. Steinbrück, KIT
12:00	Lunch	
13:00	Bus for train station and hotel	
13:30	QUENCH ATF Program Review Group Meeting Building 681, Room 214 <i>Only for QUENCH-ATF PRG Members</i>	
Friday	QUENCH ATF Management Board Meeting Building 681, Room 214 <i>Only for QUENCH-ATF MB Members</i>	
9:00		