

Workshop Agenda
MATISSE/JPNM workshop on cross-cutting issues in structural materials R&D
for future energy systems

Meeting room: FORUM ECN - Entrance JRC-IET gate (not ECN gate)

Day 1/November 25 th	
08:45-09:00	Welcome
09:00-09:15	Presentation EERA Joint Programme Nuclear Materials
09:15-09:55	Keynote lecture Steve ZINKLE ORNL, USA: Research synergies for development of high performance materials
09:55-10:15	Coffee break
10:15-12:55	Session 1: High Temperature Steels/Alloys Chairman: Karl Fredrik NILSSON, JRC
10:15-11:35	Keynote lectures <ul style="list-style-type: none"> ○ Stuart HOLDSWORTH, EMPA Switzerland: Cross-cutting issues relating to high temperature integrity ○ Chris BULLOUGH, Alstom Power: Responsive power generation: materials models and life technologies for high-temperature plant
11:35-12:55	<ul style="list-style-type: none"> ○ Jana KALIVODOVA, CV REZ: Candidate materials for GFR concept ALLEGRO and R&D related activities ○ Michael RIETH, KIT: The EUROfusion program on 9CrWVTa steels ○ Pertti AUREKARI, VTT: High temperature steels in conventional thermal plants – views on trends ○ Stefan HOLMSTROM, JRC: Advances in high temperature property determination for Gen-IV materials
13:00-14:00	Lunch break
14:00-16:00	Session 2: Behavior under aggressive environment Chairwoman: Konstantza LAMBRINO, SCK.CEN
14:00-15:20	Keynote lectures <ul style="list-style-type: none"> ○ Peter HOSEMANN, Berkeley University: Liquid Metal coolants for high power heat transport systems ○ Jürgen KONYS, KIT: Compatibility of structural steels with Heavy Liquid Metals (HLMs): a cross cutting view
15:20-16:00	<ul style="list-style-type: none"> ○ Marta NAVAS, CIEMAT: Compatibility of structural materials with molten salts and liquid metals for CSP applications ○ Marco UTILI, ENEA: Compatibility of structural materials under high temperature thermal flux with Helium Cooling System for Fusion Reactor and Coolant Purification System
16:00-16:20	Coffee break
16:20-18:20	Session 3: Design Codes for Mechanical Components Chairman: Stefan HLMSTROM, JRC

16:20–17:40	<p>Keynote lectures</p> <ul style="list-style-type: none"> ○ Cécile PÉTESCH, CEA: RCC-MRx code: context, overview, on-going developments ○ Mike SMITH, Manchester University: Structural Performance of next-generation nuclear components: lessons from the UK's R5 and R6 structural integrity assessment procedures
17:40–18:20	<ul style="list-style-type: none"> ○ Karl Fredrik NILSSON, JRC: Design Code Development in EERA JPNM: Work done and future needs ○ Hyeong-Yeon LEE, Korea Atomic Energy Research Institute (KAERI): Comparison of RCC-MRx and ASME Subsection NH as Elevated Temperature Design Codes
19:30	Dinner

Day 2/November 26 th	
08:30-10:15	Session 4: Ceramics, Refractory Materials and Composites Chairman: Claudio Mingazzini, ENEA
08:30–09:50	<p>Keynote lectures</p> <ul style="list-style-type: none"> ○ Jon BINNER, University of Birmingham: Rapid fabrication of fibre reinforced CMCs by microwave CVI ○ Jacques LAMON, LMT: Issues for the life prediction of Ceramic Matrix Composite components
09:50–10:10	Coffee break
10:10–11:10	<ul style="list-style-type: none"> ○ Konstantza LAMBRINO, SCK.CEN: Exploring the potential of MAX phases for select applications in extreme environments ○ Antonio RINALDI, ENEA: Possible applications of SiC-based technology for durable design in CSP ○ Michael RIETH, KIT: Possible Cross-cutting Applications for EUROfusion High Heat Flux Materials
11:10–12:50	Session 5: Advanced Steels (new alloys, novel manufacturing technologies etc) Chairwoman: Marta SERRANO, CIEMAT
11:10–12:30	<p>Keynote lectures</p> <ul style="list-style-type: none"> ○ Pertti AUREKARI, VTT: Advanced steels for thermal power – status, challenges and progress ○ Pascal JACQUES, UCL: Tailoring the Mechanical Response of Advanced High Strength Steels Through Microstructure Design
12:30–13:30	<ul style="list-style-type: none"> ○ Marta SERRANO, CIEMAT: Activities on ODS steels for Gen IV cladding tubes ○ Bernd KUHN, FZ JUELICH: Microstructure stability of ferritic-martensitic, austenitic and fully ferritic steels under fluctuating loading conditions
13:30–14:30	Lunch break
14:30–15:30	Wrap-up session
16:00	End of meeting