

### Main room

UK time	Day 1: 22nd May 2023
	<b>Chairman: T.U. Kern - S. Lockyer</b>
9:00	Welcome to ECCC2023 - P. Barnard
9:15	93 - Plenary 001: the ECCC history and current activities: the value of the work that we do for the introduction and use of newer materials: A Di Gianfrancesco (Chair of ECCC)
9:45	71 - Plenary 002: Energy sustainability and the need for a balanced approach to ensure adequate energy security: A. Minchener (ICSC) UK
10:15	67 - Plenary 003: The status and forecast of US Advanced UltraSuperCritical fossil fuel power plants. R. Purgert (Energy Industries of Ohio), H. Hack (EPRI) USA
10:45	<b>Coffee break</b>
11:15	65 - Plenary 004: High temperature properties of Reduced Activation Ferritic Martensitic steels for fusion applications in ITER: Status of activities and design needs for EUROFER97 steel: P. LAMAGNERE - CEA France
11:45	91 - Plenary 005: The Need for a Paradigm Shift in High Temperature Design of Nuclear Reactors: Kalle Nilsson (JRC Petten – NL)
12:15	66 - Plenary 006: The Energy Production in South America: status and future projects for hydro, renewable, fossil fuel and gas turbine plants. T. Perez (National Engineering Academy - Energy Commission)

### Main room

12:45	<b>Lunch</b>
	<b>CSEF 1: A. Di Gianfrancesco - B. Purgert</b>
14:15	6 - An Update on the Development of the UK MarBN steel, IBN1 - S. Lockyer - UK
14:45	81 - M625 - a new creep resistant martensitic 10%Cr steel for forgings J.Hald, T. Neddemayer - DK, DE
15:15	78 - Creep and Creep-Fatigue interaction for rotor material made of MarBN (Howeflex) - T.-U. Kern, M. Schwienheer, G. Maier - Germany
15:45	<b>Coffee break</b>
	<b>CSEF 2: G. Merckling - M.Speicher</b>
16:15	41 - Influence of Grain Size on Creep Behaviour of high Cr Martensitic Heat Resistant Steels for Steam Power Plant Application - B. Kocdemir, T.-U. Kern, A. Putschoegl - Germany
16:45	37 - Influence of manufacturing process parameters on 9-12% Cr Creep Enhanced ferritic steel in long term performance - M. Ortolani, A. Ferrara, R. Locatelli - Italy
17:15	73 - Creep Rupture and Tensile Strength of Start of Life and Ex-Service 2¼Cr1Mo Steel - M. W. Spindler - UK
17:45	<b>end of first day -</b>

### Gallery room

12:45	<b>Lunch</b>
	<b>Nuclear: L. Vincent - K. Nilsson</b>
14:15	<b>44 - What's new for the creep analyses in the next 2022 RCC-MRx edition - C. Petesch, T. Lebarbé, P. Lamagnère, Y. Lejeail - France</b>
14:45	11 - Thermal creep properties of virgin and irradiated cladding tubes made of Ti-stabilized DIN 1.4970 (15-15Ti) austenitic stainless steel - S. Holmström, R. Delville, D. Terentyev - Belgium
15:15	54 - Effect of material inhomogeneity and crack driving force for the case of OM-OM and UM-OM interface - R. Upadhyaya, A. Tiwari - India
15:45	<b>Coffee break</b>
16:15	<b>/ continued</b>
16:15	10 - Prediction of 'effective' corrosion rates by in-situ internal pressure creep testing in LBE for Ti-stabilized DIN 1.4970 (15-15Ti) austenitic stainless steel cladding tubes - S. Holmström, E. Stergar, S. Gavrillov, V. Tsisar, J. Joris, E. L. Maia - Belgium
16:45	<b>Negligible creep: K. Kako - F. Kauffmann</b>
16:45	39 - Assessment of Historical Datasets to Determine Negligible Creep C. Bullough, S Holmström, and A. Tonti - UK, BE, IT
17:15	38 - Development of a Model Bolt Testing Method to Determine Negligible Creep - W. Smith, C. Bullough - UK
17:45	<b>end of first day -</b>

## Main room

Day 2: 23rd May 2023	
UK time	<b>CSEF 3: J. Hald - R. Locatelli</b>
8:30	58 - Implications of creep damage susceptibility in creep strength enhanced ferritic steels - I. Perrin, J. Siefert - USA
9:00	30 - Evaluation of Metallurgical Risk Factors in Post-test, Advanced 9%Cr Creep Strength Enhanced Ferritic (CSEF) Steel - X. Zhang, S. Robertson, M. Jepson, S. Hogg - UK
9:30	79 - Microstructure Evolution of Grade P91 during Creep Test by Metallic Replica Non-Destructive Assessment - L. Pellegrino, F. Bisaglia, E. Sfameli, L. Casiraghi, G. Merckling - IT
10:00	84 - Analysis of ECCS Cross-Weld Creep Test Data on Grade 92 Steel - D. J. Allen - UK
10:30	<b>Coffee break</b>
	<b>CSEF 4: H. Hack - C. Kontermann</b>
11:00	49 - Creep behaviour and microstructure evolution of P91 steel after 200,000 hours at 600 °C - M. Speicher, D. Willer, R. Scheck, J. Hald - De, DK
11:30	<b>45 - Steel Grades 91 and 92 Microstructure and Precipitate Evolution Atlas and life assessment tool - A. Tonti, A. Alvino, A. Antonini, C. Delle Site, D. Lega, S. Matera, O.Tassa - IT</b>
12:00	25 - Microstructural changes of Modified 9Cr-1Mo Steels under Long-Term Creep Conditions - K. Kako, S. Yamada, M. Yaguchi, Y. Minami - Japan
12:30	77 - Microstructure development after long-term creep testing of 600/620°C turbine materials with Boron - F. Kauffmann, Y. Wang, J.-M. Haan - Germany
13:00	<b>Lunch</b>
	<b>CSEF 5: D. Allen</b>
14:15	63 - Service experience of wrought tees fabricated from Grade 91 and Grade 92 steel - J. Siefert, T. Sambor, I. Perrin - USA
14:45	69 - Influence of incomplete cooling below Ms on microstructure and properties of X20 steel - S. Allies, R.D. Knutsen, J.E. Westraadt - South Africa
15:15	75 - Substructure versus fracture toughness of CB2 cast steel - S.T. Mandziej, A. Vyrostkova - Nederland, Slovakia
15:45	<b>Coffee break</b>

## Gallery room

Day 2: 23rd May 2023	
UK time	<b>Austenitics 1: K. Sawada - P. Barnard</b>
8:30	12 - Preparation of an ECCS Creep Datasheet on Sanicro 25 Tubes for Power Generation and Petrochemical Use - C. Bullough, M. Spindler, G. Chai, P. Barnard - ECCS
9:00	92 - Factors that affect extra-high creep performance of Alleima 3R60TM (316L_316LN) steel at 700°C - Chai, Lautrup & Gustavsson - Sweden
9:30	29 - Creep Crack Growth Characterization of SS316LN - A. K. Mishra, A. Gopalan, M. Nanibabu, A. Tiwari, V.Karthik - India
10:00	40 - Influence of temperature and stress condition on long-term structural stabilities of the low and high Ni austenitic alloys - O. Öhlin, R. Siriki, G. Chai - Sweden
10:30	<b>Coffee break</b>
	<b>Austenitics 2: I. Perrin - G. Chai</b>
11:00	33 - Creep strength degradation in 18Cr-9Ni-3Cu-Nb-N steel - K. Sawada, T. Hatakeyama, K. Sekido, K. Kimura - Japan
11:30	87 - Comparison of Uniaxial Creep Properties using True and Engineering Stress Strain-Rate Analyses for Type 316H Stainless Steel - J De Andres, C M Davies, M Jones - UK
12:00	60 - Microstructure and creep behavior of long-term service aged and lab creep tested Super 304H (UNS S30432/ DIN 1.4907/EN X10CrNiCuNb18-9-3) - T. Lolla, J. Siefert & H. Lee - USA
12:30	26 - Effect of precipitation microstructure on the creep deformation behavior of 25Cr-20Ni-Nb-N steel - T. Hatakeyama, K. Sawada, K. Sekido, T. Hara, K. Kimura - Japan
13:00	<b>Lunch</b>
	<b>Superalloys 1: P. Schraven - D. Ripamonti</b>
14:15	<b>80 - ECCS Working Group 3C – Superalloys, Overview on the activities and future perspectives - E. Poggio, D.J. Allen, P. Barnard, C. Bullough, E. Debruycker, R. Krein, A. Gotti, A. Riva, M. Schwienheer, M. Speicher, M. Spindler - ECCS</b>
14:45	95 - Characterisation of creep cavitation process on grain boundaries in a polycrystalline Nickel-base Alloy 247 - O. Jordan, T.D. Nguyen, P. Lion, T. Beck - Germany
15:15	18 - Creep of LPBF IN738LC: Effect of Build Orientation and Twinning - S. Megahed, A. Udoh, M. Krämer, C. Heinze, C. Kontermann, S. Weihe, M. Oechsner - Germany
15:45	<b>Coffee break</b>

## Cellar room

Day 2: 23rd May 2023	
UK time	<b>Modeling 1 : P. Lamargne - M. Schwienheer</b>
8:30	24 - Assessment of Long-term Creep Life of Modified 9Cr-1Mo Steel by Monkman–Grant Relationship Considering Dependence of Creep Ductility on Loading Conditions - Masatsugu YAGUCHI - JAPAN
9:00	31 - Rupture Strength Prediction of Martensitic Power Plant Steels - Z. Guo, J. Hu, N. Saunders, J.P. Schillé - UK
9:30	32 - Stochastic and systematic deviations of creep experiments in martensitic steels - B. Krenmayr, B. Sonderegger, F. Mueller - Austria
10:00	19 - Quantitative physical modeling of the effect of precipitates in the subgrain interior on the creep curve and service life of P91 - L. Witzmann, J. Mergl, F. Riedlsperger, B. Krenmayr, G. Zuderstorfer, B. Sonderegger - Austria
10:30	<b>Coffee break</b>
	<b>Modeling 2: M. Spindler - M Yaguchi</b>
11:00	14 - Evolution and criteria for early creep damage - R. Pohja, S. Holmström, P. Auerkari, P. Vilaça - Finland
11:30	57 - Experimental investigations on a model of a power plant flange under steady state and transient load - K. Kettler, A. Klenk, S. Weihe - Germany
12:00	<b>9 - Some important considerations in creep modeling of ferritic steels and nickel-based superalloys - R. Oruganti - India</b>
12:30	28 - Recent progress in the microstructurally-based creep modelling of Ni-based alloy 617 - F. Riedlsperger T. Wojcik, R. Buzolin, L. Witzmann, G. Zuderstorfer, B. Krenmayr, C. Sommitsch, B. Sonderegger - Austria
13:00	<b>Lunch</b>
	<b>Modeling 3: T. Coppola - R. Oruganti</b>
14:15	21 - Temperature Measurement for High Temperature Mechanical Testing – a Code of Practice - M.S. Loveday, H. Klingelhoefter - UK, DE
14:45	27 - Accurate very-high temperature creep-life prediction of Incoloy 800H addressing effects of creep mechanism transition and nitridation - C. Rojas-Ulloa, H. Morch, V. Tuninetti, L. Duchêne, A.M. Habraken - Belgium, Chile
15:15	50 - Crystal plasticity model for simulating creep and relaxation deformation/damage of OFP copper - T. Andersson, M. Lindroos, R. Pohja, J.Rantala, Janne Pakarinen - Finland
15:45	<b>Coffee break</b>

	<b>Superalloys 2: E. Poggio - O. Jordan</b>
16:15	89 - Correlations between primary creep and stress relaxation in a single crystal nickel-based superalloy - Donnini et al - Italy
16:45	16 - On the Dominant Effect of Crack Shielding in Superalloys Failure at High Temperature - M. Elsherkisi, M. Elsherkisi, T. Huyghe, M. Kothari, F. Duarte Martinez, S. Gray, G. M. Castelluccio - UK
17:45	<b>end of second day - Poster Session + Conference Dinner</b>

17:45 **end of second day - Poster Session + Conference Dinner**

17:45 **end of second day - Poster Session + Conference Dinner**

<b>POSTER SESSION</b>	
98 - Mechanical Behaviour of AISI 314, 316Ti and 321 Steels at Elevated Temperatures - G. Vukelić, J. Brnić - Croatia	
106 - A machine learning approach to creep life prediction of austenitic steels - W Harrison - UK	
100 - Creep behaviour of notched specimens of MarBN-cast-steel - L. Woellmann, F. Mueller, M. Oechsner, B.Krenmayr, C. Sommitsch - Austria, Germany	
106 - Technical Scientific Report vgb-TW 531: Martensitic 9 to 12% Cr Steels – Design, Production, Operation, and Safety Concepts - Germany	
103 - Uniaxial Tensile and Creep Testing of Hot Isostatic Pressed P91 and 316H Steels - C. Parker, C. M. Davies - UK	
104 - Role of Crack Interactions on Rate of Failure in Nickel Superalloys Exposed to Intermediate Temperatures - M. Elsherkisi, F. Duarte Martinez, S. Gray, G. M. Castelluccio - UK	

Main room		Gallery room		Cellar room	
UK time	Day 3: 24th May 2023		Day 3: 24th May 2023		Day 3: 24th May 2023
	<b>Creep: Y. Hosegawa - H. Klingelhoeffer</b>		<b>Miniature tests 1: A. Di Gianfrancesco - M. Loveday</b>		<b>Fatigue and Creep-Fatigue 1: R. Pohja - G. Ozeki</b>
8:30	55 - Creep Rupture Data Assessment - new uncertain challenges require new uncertain answers - M. Schwienheer, F. Kölzow - Germany	8:30	1 - The status and forecast of lifetime assessment using small samples in Japan for fossil fuel power plants - Masatsugu YAGUCHI, Shin-ichi KOMAZAKI - Japan	8:30	59 - Creep-Fatigue Life Estimation of Circumferential Welds in Thermal High Energy Piping System - I. Nonaka - Japan
9:00	15 - Crack driving forces under creep conditions in presence of material inhomogeneity - A. Tiwari, A. Kumar Mishra - India	9:00	42 - Creep Property Assessment of Service-Exposed 2.25Cr-1Mo Steel Boiler Piping by Small Punch Test - S. Komazaki, K. Murakami, T. Mitsueda - Japan	9:00	86 - Creep Fatigue Component Testing in the High Temperature Test Loop HWT - A. Klenk, M. Huang, T. Bender, K. Metzger - Germany
9:30	3 - Fundamental Mechanisms of Creep - M. E. Kassner - USA	9:30	52 - Development of creep model for large stress range and application to small punch creep - D. Baraldi, K.-F Nilsson, S. Holmström, I. Simonovski - JRC, BE	9:30	48 - Fatigue and creep-fatigue behavior of martensitic/ferritic steels and nickel-based alloys and their welded joints at the temperature range 500°C-750°C - O. Daniel, A. Gotti, F. Kauffmann, A. Klenk, S. Weihe - IT, DE
10:00	34 - On the description of stress relaxation by means of creep models based on standard and non-standard validation experiments - M. M. Khan, C. Kontermann, M. Oechsner - Germany	10:00	13 - Mechanical properties assessment of additively manufactured Ti64 alloy using Small Punch Tests - M. Lalé, B. Viguier- France	10:00	64 - Creep Deformation and Rupture Behaviour of Mod.9Cr-1Mo Steel Under Variable Loading - S. Zhang, Y. Takahashi - Japan
10:30	<b>Coffee break</b>	10:30	<b>Coffee break</b>	10:30	<b>Coffee break</b>
11:00	<b>Workshop - Round table - MAIN ROOM - Data Requirements and Assessment Methods for Flexible Plant Operation (Chair Prof. Scott Lockyer - UNIPER - UK)</b>				
12:30	<b>Lunch</b>	12:30	<b>Lunch</b>	12:30	<b>Lunch</b>
	<b>Welding 1: M.E. Kassner - V. Voradek</b>		<b>Miniature tests 2: A. Tonti - B. Viguier</b>		<b>Fatigue and Creep-Fatigue 2: A. Klenke - I. Nonaka</b>
13:45	61 - Variability in the Performance of Grade 91 Longitudinally Seam Welded Components - A. Bridges, J. Siefert - USA	13:45	20 - Long-term Isothermal Ageing of Type N and Type K mineral insulated metal sheathed (MIMS) thermocouples - M.S. Loveday, D. McLennan, T. Ford, T. Fry, M. Brooks, P. Mildeovad, D. Tuckerd - UK	13:45	17 - Cyclic Softening Behaviour of CSEF Steels under Load-controlled Low Cycle Fatigue at Elevated Temperatures: Ratcheting & Constraint Effect - R. Ragab, Y. Pang, T. Liu, N. Neate, M. Li, W. Sun - UK, China
14:15	4 - Metallographic analysis of the Type IV damaged HAZ with reference to the Electromagnetic (EM) inspection technology - Y. Hasegawa, J.W. Wilson, D.J. Allen, T. Peyton, A. Shibli, M. Kodama	14:15	53 - Application of a new creep model for large stress range to finite element analyses of small punch test - K.-F Nilsson, D. Baraldi, S. Holmström, I. Simonovski - JRC, BE	14:15	22 - Investigations into low cycle fatigue and creep-fatigue interaction behaviour of cast 625 alloy - G. V. S. N. Rao, A. Kumar, R. Kannan, A. Nagesha - INDIA
14:45	43 - Welding P91 Steel with Nickel-Based Weld Metal - S J Brett - UK	14:45	56 - Geometrical Dependence of Creep Deformation in Miniature Small Punch Test - R. Gupta, K. Kumar, A. Tiwari - India	14:45	23 - Effect of Overload on Deformation, Crack Growth Behavior and Crack Initiation/Growth Lives of a C(T) Specimen for 12Cr Steel under Creep-Fatigue Condition - G. OZEKI, A. T. YOKOBORI Jr, D. KOBAYASHI - Japan
15:15	<b>Coffee break</b>	15:15	<b>Coffee break</b>	16:15	<b>Coffee break</b>
	<b>Welding 2: K. Kako - W. Gamble</b>		<b>Special testing: S. Komazaki - S. Holmstrom</b>		<b>Fatigue and Creep-Fatigue 3: C. Bullough - N. Rao</b>
15:45	68 - Matching filler development and welding procedure optimization for the Thor® 115 CSEF steel grade - T. Melfi, A. Ferrara, M. Ortolani - IT-USA	15:45	70 - CEN Workshop Agreement on Impression Creep – Round Robin Testing - J H Rantala, W Sun, J Eaton-McKay, A Bridges, S J Brett - FL-UK-USA	15:45	97 - Prediction of mechanical response due to creep-fatigue loading using unified mechanics theory in nickel-based superalloy - Saurabh Mangal, Sri Krishna Sudhamsu Kambhammettub & Lakshmana Rao C - India
16:15	99 - Creep Behaviour & Microstructure Evolution in Super 304H–P92 Heterogeneous Welds; V. Vodárek, Z. Kuboň, R. Palupčíková, K. Hradečný, S. Langer, P. Váňová - Czech Republic	16:15	74 - Uniform Elongation Measurements on Creep Specimens by a Novel 3D-Scanning System - C. Kontermann, A. Erbe, V. Knauth, M. von Buelow, T.-U. Kern, M. Oechsner - Germany	16:15	94 - Interaction and supposition of creep damage and high-cycle fatigue behaviour of coarse-grained Nickel-base Alloy 247 - O. Jordan, T.D. Nguyen, P. Lion, T. Beck - Germany
16:45		16:45	90 - INTERLABORATORY STUDY (ILS) On Load-Controlled Creep Test Using The Creep Reference Material – CRM-425 - S. Budano et al - Italy	16:45	88 - Creep crack-growth behaviour in miniature and standard size compact tension geometries - Calvert, De Andres, Davies - UK
17:15	<b>Main Room - Conference closure - prospects for ECCC2026 - Augusto Di Gianfrancesco</b>				