

Deformation and damage mechanisms I: Creep

0056 Negative Creep of Ni-Base Superalloys

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0107 TEM Analysis of Localized, Planar Deformation Events which Govern Creep of Single Crystalline CoNi-Superalloys with γ/γ' Microstructures

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0116 Simultaneous Strain and Chemical mapping by CBED-EDXS of CMSX-4

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0122 Relating Fundamental Creep Mechanisms in Waspaloy to the Wilshire Equations

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0127 TEM Characterization of the Microstructure and Deformation Micromechanisms of New Ni-Based Polycrystalline Superalloys

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0168 Observation of Dislocation Evolution during Straining of a $\gamma-\gamma'$ Superalloy Single Crystal using the CECCI technique.

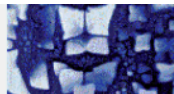
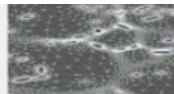
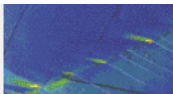
Stefan Zaefferer¹, Zailing Zhu², Roger Reed²

¹Max-Planck-Institut für Eisenforschung, Düsseldorf, DE, ²University of Oxford, Oxford, GB

0186 Thermal Stability and Creep Strength of Allvac718Plus

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Deformation and damage mechanisms I: Creep

0194 Deformation Structures in Crept Co-Base Superalloys Hardened by L₁₂-intermetallic Precipitates

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0201 Dislocations in Strong Internal Stress Fields: γ - γ' in Ni Base Alloys

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0202 Multiscale Modeling of Suzuki Strengthening in γ' Precipitates in Ni- and Co-Base Superalloys

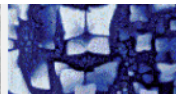
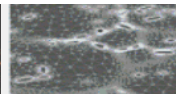
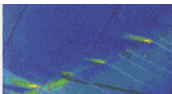
P. Srimannarayana, Sri Raghunath Joshi, K.V. Vamsi, S.K. Verma, S. Karthikeyan
Indian Institute of Science, Bangalore, IN

0204 Nanoscale Characterization of Creep-Induced Elemental Redistribution in a Single-Crystalline Ni-Based Superalloy

Ivan Povstugar, Pyuck-Pa Choi, Aleksander Kostka, Dierk Raabe
Max-Planck-Institut für Eisenforschung, Düsseldorf, DE

0210 Atomistic Investigations of Co-based superalloys - From Density Functional Theory to Structure Maps

Jörg Koßmann, Ralf Drautz, Thomas Hammerschmidt
Ruhr-Universität Bochum, Bochum, DE



Deformation and damage mechanisms II: fatigue, oxidation, crack propagation

0009 A study on Fatigue Crack Initiation in a Polycrystalline Nickel-Based Superalloy by Micro-Mechanical Modelling and In-Situ SEM Experiments

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0030 Dynamic Strain Aging During Cyclic Deformation of Haynes 282 Superalloy

Magnus Hörnqvist, Ceena Joseph, Christer Persson
Chalmers University of Technology, Gothenburg, SE

0062 Thermal Fatigue of Single Crystal Superalloys: Experiments, Crack Initiation and Crack Propagation Criteria

Leonid Getsov¹, Semenov²

¹NPO ZKTI, St. Petersburg, RU, ²Polytechnical University, St. Petersburg, RU

0075 Oxidation of Nickel-Based Superalloys: Modelling & Validation

Yilun Gong, Roger Reed
University of Oxford, Oxford, GB

0091 Fatigue Crack Propagation from In-Service and Handling Surface Anomalies in a Nickel Based Superalloy at High Temperature

Stéphane Gourdin¹, Yves Nadot¹, Gilbert Hénaff¹, Luc Doremus¹, Stéphane Pierret²

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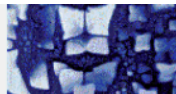
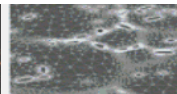
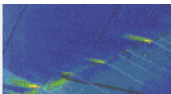
0114 Oxidation of Co-base Superalloys - Initiation Stages and Elementary Processes

Martin Weiser, Sannakaisa Virtanen
University of Erlangen-Nürnberg, Erlangen, DE

0119 Simulation of Oxidation-Nitridation-Induced Microstructural Degradation in a Cracked Ni-Based Superalloy at High Temperature

Kang Yuan¹, Ru Lin Peng¹, Xin-Hai Li², Sten Johansson¹, Yan-Dong Wang³

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Deformation and damage mechanisms II: fatigue, oxidation, crack propagation

0148 Strain Rate and Temperature Effects on Crack Initiation of Inconel 718 Direct Aged

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0209 Cyclic Plasticity and Lifetime of the Nickel-Based Alloy C-263: Experiments, Models and Component Simulations

Gerhard Maier¹, Oliver Hübsch¹, Hermann Riedel¹, Christoph Somsen²,

Jutta Klöwer³, Ralf Mohrmann⁴

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0211 Fatigue Crack Growth of MAR-M247 CC (HIP) - Experiments and Modeling

Christoph Schweizer, Michael Schlesinger

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