

**Mise en forme, microstructure et propriétés d'usage des superalliages base nickel polycristallins**

***Processing, microstructure and in-service behavior of polycrystalline Nickel-base superalloys***

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**Kinetics of Second-Phase Dissolution during the High-Temperature Heat Treatment of Nickel- and Titanium-Base Alloys**

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**Usual and unusual recrystallization phenomena in polycrystalline nickel base superalloys**

*Bozzolo N., Franchet J.M., Bernacki M.*



**Influence of strain rate on dynamic and post-dynamic recrystallization of Inconel 718**

*Nicolay A., Franchet J.M., Cormier J., Bozzolo N.*

**Dynamic and post dynamic microstructure evolutions during forging of the new nickel based superalloy - VDM Alloy 780**

*Nathalie Bozzolo, Bodo Gehrmann, Masood Hafez, Juhi Sharma*

**Composition and temperature stability of  $\eta$  and  $\delta$  phases for future nickel-base superalloys for turbine discs application**

*Vincent Maurel, Loïc Nazé, Vladimir A. Esin, Laurane Finet*



**Precipitation concomitant to post-dynamic recrystallization in the AD730™ nickel base superalloy**

*Seret A., Moussa C., Bernacki M., Bozzolo N.*



**Full field modeling of recrystallization in polycrystalline nickel base superalloys**

*Bernacki M., Bozzolo N., Franchet J.M., Flipon B., Fausty J., Alvarado K., Blaizot J., Dumont C.*



**Anisotropic grain boundary energies and their effects on simulations of grain growth in polycrystals**

*Fausty L., Bozzolo N., Bernacki M.*



**Experimental and simulation study of the effect of precipitation distribution and grain size on the AD730 Ni-based polycrystalline superalloy tensile behavior**

*Panella M., Signor L., Cormier J., Bernacki M., Villechaise P.*



**Long-term stability of René 65 Ni-based superalloy: a methodology to objectively evaluate the impact of TCP on creep and dwell-fatigue properties**

*Laurence A., Billot T., Franchet J.M., Pettinari-Sturmel F., Hantcherli M., Momprou F., Cormier J., Villechaise P.*



**On the high temperature crack propagation in the nickel-based superalloy AD730™**

*Mrozowski N., Hénaff G., Villechaise P., Rouffié A.L., Franchet J.M., Cormier J.*



**Influence of non-metallic inclusions density on mechanical properties of the nickel-based superalloy AD730™**

*Govaère A., Cormier J., Villechaise P., Rouffié A.L., Franchet J.M., Crozet C., Devaux A.*



**Slip-system and EBSD analysis on tensile deformed polycrystalline  $\gamma$ - $\gamma'$  nickel-based superalloy**  
*Vilalta Clemente A., Cormier J., Villechaise P.*



**On the usefulness of Ni-based single crystal superalloys to understand the mechanical behavior of polycrystalline disk superalloys**  
*Thébaud L., Panella M., Signor L., Bernacki M., Crozet C., Devaux A., Franchet J.M., Rouffié A.L., Villechaise P., Cormier J.*



**Metallurgical mechanisms occurring in the AD730TM superalloy during stress relaxation annealing**  
*Durand M., Cormier J., Villechaise P., Katnagallu S., Kontis P., Gault B., Franchet J.M., Dumont C., Bozzolo N.*

**In-situ analysis on neutron instruments to monitor the evolution of microstructure and residual stresses during ageing treatment of Inconel 718**  
*Pierre-Emmanuel ABA-PEREA*

**Microstructural evolutions in the Ni-based polycrystalline AD730 superalloy evidenced by SEM and TEM experiments**  
*Patrick Villechaise, Jonathan Cormier, Joël Douin, Bénédicte Warot-Fonrose, Robin Cours, Muriel Hantcherli, Winnie Vultos, Maud Tisseyre, Cécile Marcelot, Florence Pettinari-Sturmel*

**Oxidation as a way to reveal local niobium enrichments in alloy 718**  
*Lydia Laffont, Eric Andrieu, Suzanne Vernier*

**Coarse grain C&W AD730 disk superalloy for high temperature applications**  
*Alexandre Devaux, Jean-Michel Franchet, Catherine Ramusat, Didier Locq*

**Understanding deformation mechanisms in superalloys through systematic atomic scale microanalysis**  
*Paraskevas Kontis, Baptiste Gault, Dierk Raabe, Jonathan Cormier, Alice Cervellon, Philipp Kürnsteiner*

**Mise en forme de couches par Cold Spray de superalliage base nickel**  
*Francesco Delloro, Vincent Guipont, François Borit, Cléa Plouze*