Selected Readings: Physical Metallurgy of Superalloys

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The following are selected readings for the physical metallurgy of superalloys reviewed by an advisory group of TMS subject matter experts

PAPER TITLE	AUTHOR(S)	SOURCE	MORE
"The Stability of Superalloys"	*S. T. Wlodek*	Long Term Stability of High Temperature Materials, Warrendale, PA: TMS, 1999, P. 1-38	Acquire this paper
"Topologically Close Packed Phases in an Experimental Rhenium-Containing Single Crystal Superalloy"	*C.M.F. Rae, M.S.A. Karunaratne, C.J. Small, R.W. Broomfield, C. N. Jones, and R. C. Reed*	Superalloys 2000, Warrendale, PA: TMS, p. 767-776	Read the Full Paper
"Formation of Topologically Closed Packed Phases in Nickle Base Single Crystal Superalloys"	*R. Darolia, D.F. Lahrman, R.D. Field and R. Sisson*	Superalloys 1988, Warrendale, PA: TMS, p. 255 - 264	Read the Full Paper
"Relative Stability of Carbide and Intermetallic Phases in Nickel-Base Superalloys"	*H. E. Collins*	Superalloys 1968, Warrentdale, PA: TMS, p. 171-198	Read the Full Paper
Ni-Based Superalloys for Turbine Discs	David Furrer and Hans Fecht	JOM, January 1999, pp. 14-17	Read the Full Paper
"Orientation Dependence of Directional Coarsening in a Single Crystal Nickel-Base Superalloy"	*Y.B. Xu, Y.H. Sha, J.H. Zhang, and Z.Q. Hu*	Fatigue and Fracture Behavior of High Temperature Materials, TMS, 2000, p. 95-96	Acquire this paper
"On the Microstructural Instability of an Experimental Nickel-Based Single-Crystal Superalloy"	*M.S.A. Karunaratne, C.M.F. Rae, and R.C. Reed*	Metallurgical and Materials Transactions A, October 2001	Acquire this Paper
"Microstructure and Texture Effect on the Thermal Expansion of a Variously Aged Polycrystalline Superalloy IN738LC"	*Ercan Balikci, R.A. Mirshams, and A. Raman*	Metallurgical and Materials Transactions A, November 1999	Acquire this Paper