
Ternary and Higher Order Aluminum Phase Diagram Updates

Ternary aluminum phase diagrams have been compiled by ASM International (*Handbook of Ternary Alloy Phase Diagrams*, eds., P. Villars, A. Prince, and H. Okamoto, Volumes 3-4) and by VCH Verlagsgesellschaft, Germany (*Ternary Alloys*, eds., G. Petzow and G. Effenberg, Volumes 3-8). They cover the period from 1900 to 1990 or so. A large number of new publications have appeared in the literature in the last 15 years. It is the purpose of this Addendum to review briefly the new information, using as the starting point either the data compiled in the ASM volumes or any other later evaluation.

Aluminides based on Ti-Al alloys have a low density and are known for their excellent creep strength and oxidation resistance. Attempts have been made to improve their ambient-temperature ductility and high-temperature properties by adding other elements such as Cr, Mn, Mo, Nb, Ni, Si, Ta, and V. This issue carries updates on five ternary systems: Al-Mn-Ti, Al-Ni-Si, Al-Ni-Ti, Al-Ni-V, and Al-Ti-V and two quaternary systems Al-Mn-Ni-Ti and Al-Ni-Ti-V.

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V. Raghavan

Editor

*Phase Diagrams of Ternary Iron Alloys
Parts 1, 2, 3, 5, and 6*