

Ternary and Higher Order Aluminum Phase Diagram Updates

Ternary aluminum phase diagrams were 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. A large number of new publications have appeared in the literature in the last two decades. 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.

The addition of Sc to Al alloys leads to the formation $ScAl_3$ precipitate particles, which can serve as a grain refiner in the Al melt, a dispersoid to control the grain structure and a hardening agent. This issue carries updates on 6 ternary and 4 higher order systems containing Al and Sc: Al-Sc-(Be, Co, Li, Mn, Mo, or Zn), Al-Co-Sc-Ti, Al-Li-Mg-Sc, Al-Mg-Sc-Zn and Al-Mg-Sc-Ti-Zr. Other updates included are: Al-Cu-Rh, Al-Fe-Si and Al-Pd-Ru and Al-Co-Ni-Ti.

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Editor

Phase Diagrams of Ternary Iron Alloys

Parts 1, 2, 3, 5 and 6