Ag-Gd (Silver-Gadolinium)

H. Okamoto

The Ag-Gd phase diagram in [Massalski2] was redrawn from [1988Gsc], which is primarily based on [1970Gsc] and [1972Kie].

Figure 1 shows the Ag-Gd phase diagram obtained by thermodynamic assessment by [2008Wan] based on the same phase boundary data as used by [1988Gsc] and thermodynamic data available in the literature. The difference in the phase diagrams of [1988Gsc] and [2008Wan] is most noticeable in the form of the $\text{Ag}_{51}\text{Gd}_{14}$. [2008Wan] assumed that this phase is stoichiometric due to lack of reliable experimental data whereas [1988Gsc] assumed a constant width of about 5 at.% below $\sim 800^\circ\text{C}$. Naturally, the phase diagram of [2008Wan] seems to be thermodynamically more normal than that of [1988Gsc].

References

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Fig. 1 Ag-Gd phase diagram