Re-Si (Rhenium-Silicon)

H. Okamoto

The Re-Si phase diagram in [Massalski2] was redrawn from [1996Gok] (dashed line in Fig. 1). This system was thermodynamically assessed by [2001Sha]. The calculated phase diagram is shown in two figures in [2001Sha]. They mismatch about 50 °C on the Si side. The one in better agreement with the established melting point of Si is shown in Fig. 1 with solid lines. Naturally, the calculated phase diagram is thermodynamically self-consistent, for example,

the symmetry of ReSi_{1.8}, but it must be confirmed due to the problem described previously.

References

1996Gok: A.B. Gokhale and R. Abbaschian, The Re-Si System (Rhenium-Silicon), *J. Phase Equilibria*, 1996, 17(5), p 451-454 2001Sha: G. Shao, Thermodynamic Analysis of the Re-Si System, *Intermetallics*, 2001, 9(12), p 1063-1068

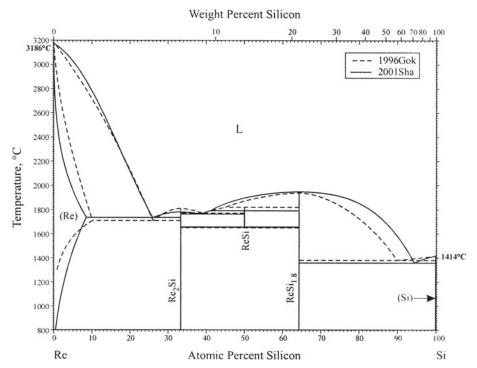


Fig. 1 ReSi phase diagram