Fe-Gd (Iron-Gadolinium)

H. Okamoto

The Fe-Gd phase diagram in [Massalski2] was redrawn from [82Kub]. Since then, this system was evaluated by [93Oka1], but the assessed phase diagram did not differ much from that of [82Kub] due to the absence of new experimental data and reasonable thermodynamic modeling.

The Fe-Gd phase diagram shown in Fig. 1 was calculated by [95Liu]. The liquidus composition of this diagram differs as much as ~20 at.% from the diagram of [93Oka1] at the peritectic melting point of Fe_2Gd . In view of the systematic trends of the Fe-RE systems [93Oka2], the diagram of [95Liu] appears to be more reasonable. [95Liu] included experimental phase boundary data of [69Sav], which were not available to [93Oka1].

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