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Al-B (Aluminum-Boron)

H. Okamoto

The Al-B phase diagram in [Massalski2] was redrawn from [1990Car]. However, [1991Oka] pointed out that the diagram is unlikely because two segments of AlB_{12} liquiuds, which are separated by the existence of AlB_{10}, cannot be smoothly continuous. [1994Dus] reassessed this system and concluded that AlB_{10} does not exist. This diagram is shown in [2000Oka]. The AlB_{12} liquidus was partially unknown.

[2004Mir] measured the AlB_{12} liquidus and determined the form by thermodynamic assessment. The result is shown in Fig. 1. The Al-rich corner is shown in Fig. 2. [1994Dus] disagrees with [2004Mir] that (βB) has ~3 at.% solubility range.

References

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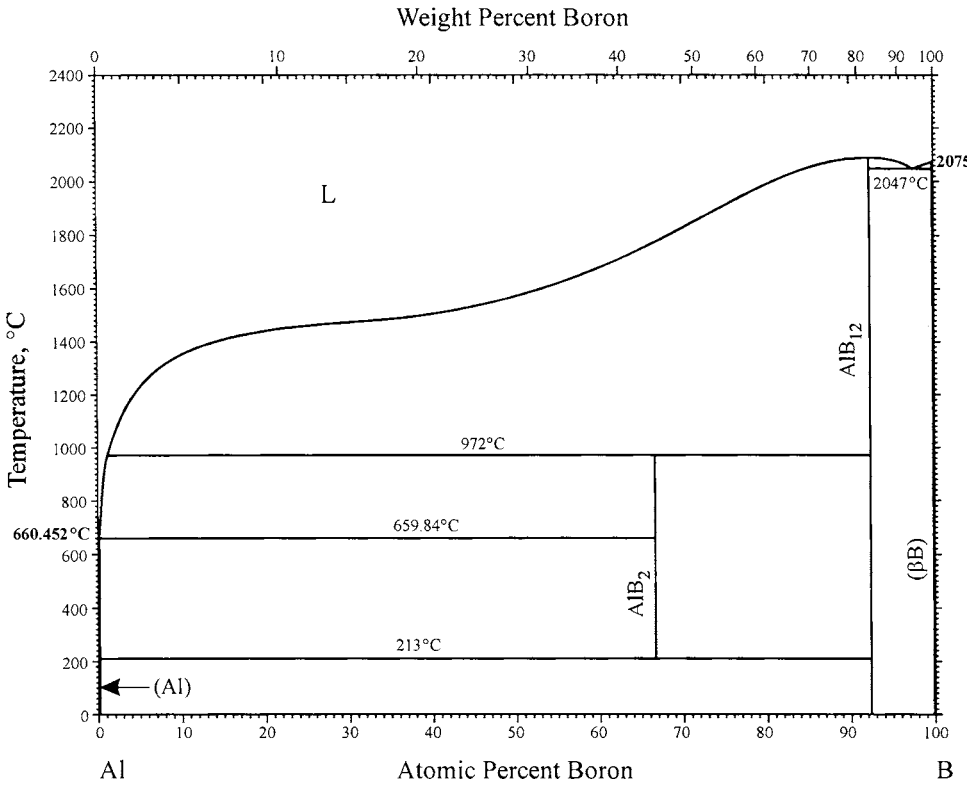

Fig. 1 Al-B phase diagram

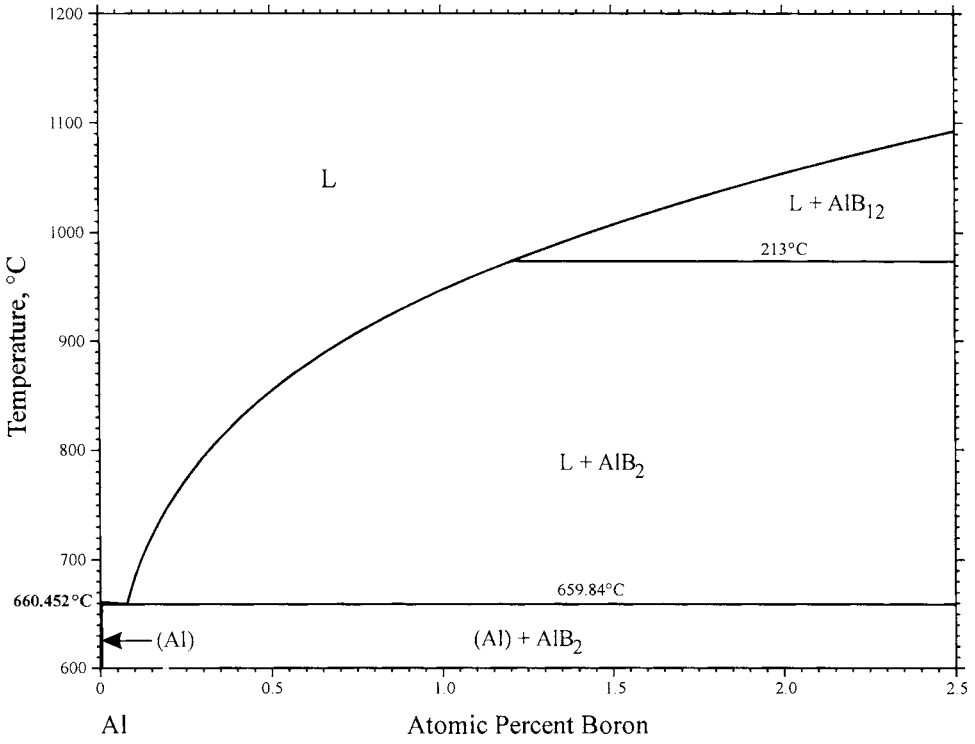

Fig. 2 Al-rich corner of the Al-B phase diagram