Nd-Ni (Neodymium-Nickel)

H. Okamoto

The Nd-Ni phase diagram [Massalski2] was redrawn from [91Pan], which is primarily based on DTA measurements at about 30 compositions by [85Pan].

[89Qi] measured the liquidus at six compositions in the range 64.3 to 72.1 at.% Ni by means of optical microscopy, electron probe microanalysis, and inductively coupled plasma chemical analysis. Figure 1 shows the phase diagram calculated by [96Du] based on the phase diagram data of [85Pan] and [89Qi] plus thermodynamic data. The asymmetric liquidus problem in the Nd-Ni phase diagram pointed by [94Oka] is solved in the calculated phase diagram. However, the invariant temperatures calculated by [96Du] are as much as

20 °C lower than those observed by [85Pan]. This disagreement remains to be resolved.

Cited References

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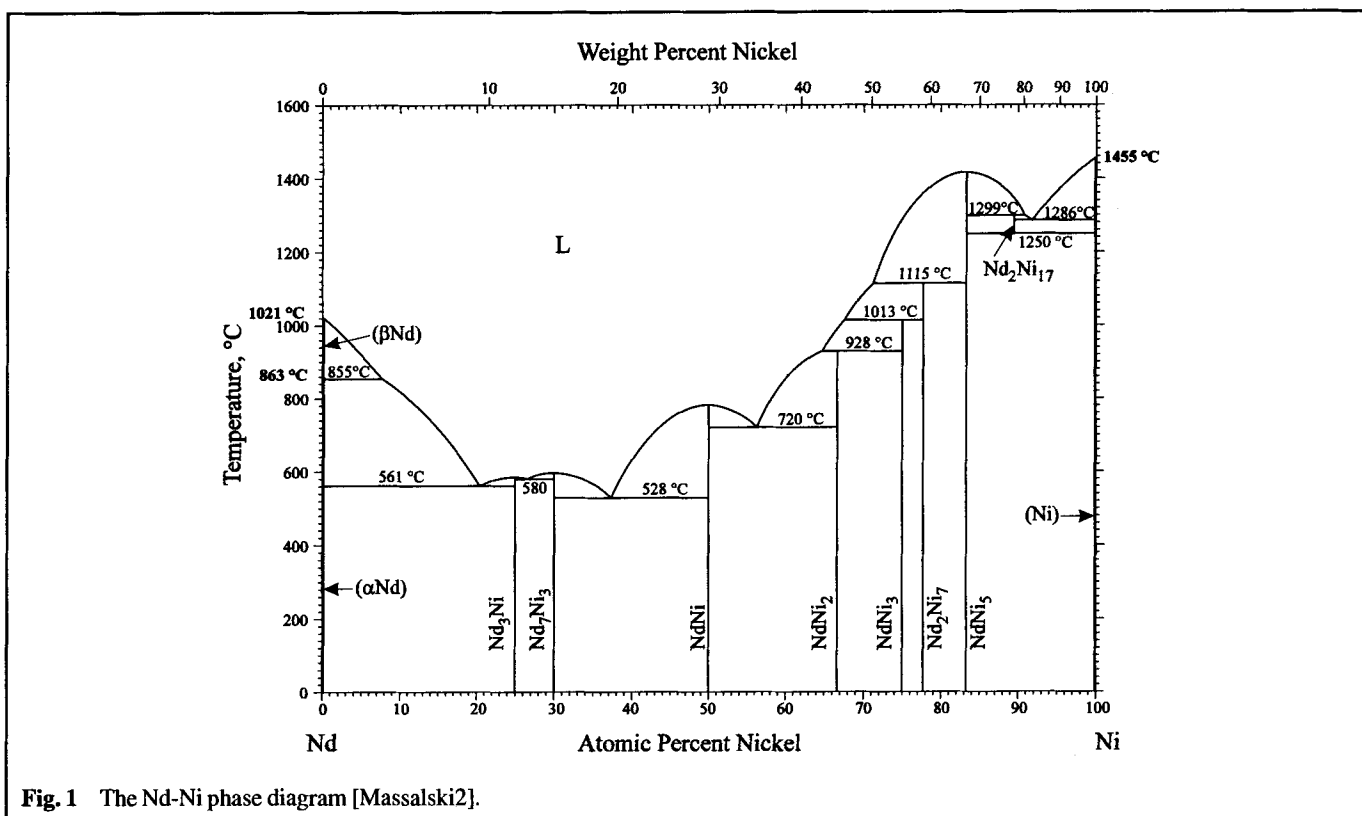**96Du:** Y. Du and N. Clavaguera, *Calphad, 20*(3), 289-296 (1996).

Fig. 1 The Nd-Ni phase diagram [Massalski2].