

C-Y (Carbon-Yttrium)

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The Y-C phase diagram in [Massalski2] was redrawn from [86Gsc]. This diagram included several thermodynamically improbable features (strongly asymmetric liquidus and solidus, crossing trend of phase boundaries in the metastable state without introducing unlikely curvature changes, etc.) according to [93Oka]. Figure 1 shows the Y-C phase diagram calculated by [95Gro]. This phase diagram is expected to show the correct trends of this system, although fine adjustments may be needed because some experimental data points are substantially (~10 at.%) displaced from the calculated boundaries. In

addition to phases shown in Fig. 1, Y_2C exists below ~900 °C in the [86Gsc] phase diagram.

Cited References

- 86Gsc:** K.A. Gschneidner, Jr. and F.W. Calderwood, *Bull. Alloy Phase Diagrams*, 7(6), 564-568 (1986).
93Oka: H. Okamoto and T.B. Massalski, *J. Phase Equilibria*, 14(3), 316-335 (1993).
95Gro: J. Gröbner, H.L. Lukas, and F. Aldinger, *J. Alloy. Compd.*, 220, 8-14 (1995).

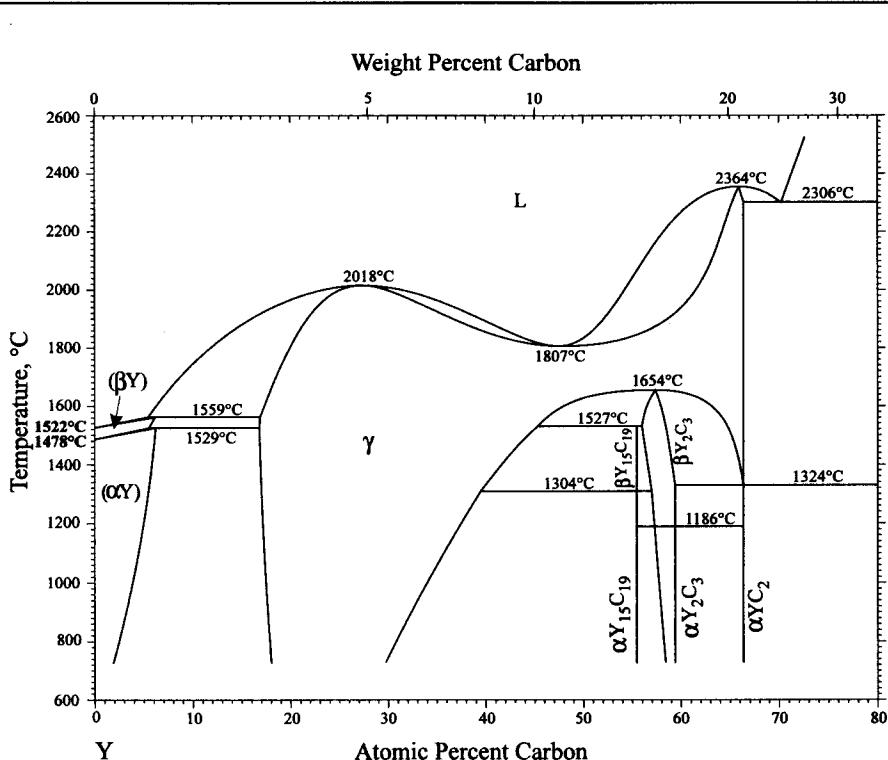


Fig. 1 Y-C phase diagram.