C-Ta (Carbon-Tantalum)

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Figure 1 shows the Ta-C phase diagram calculated by [96Fri] by optimization of phase boundary and thermodynamic data available in the literature. In addition to these features, [Massalski2] (adopted from [86Bar]) showed a polymorphic transformation of Ta_2C at 2020 °C and the existence of ζ phase at 40 at. % C. The Ta-C phase diagram assessed by [96Gar] is similar to [Massalski2], but some minor differences, particularly those with regard to the phase relationships of polymorphic Ta_2C, remain to be resolved.

Cited References

86Bar: O.M. Barabash and Yu.N. Koval, *Crystal Structures of Metals and Alloys*, Naukova Dumka, Kiev, 211-212 (1986).

96Fri: K. Frisk and A. Fernandez Guillermet, *J. Alloy. Compd., 238*, 167-179 (1996).

96Gar: S.P. Garg, M. Venkatraman, and N. Krishnamurthy, *Phase Diagrams of Binary Tantalum Alloys*, Indian Institute of Metals, Calcutta, India, 27-32 (1996).

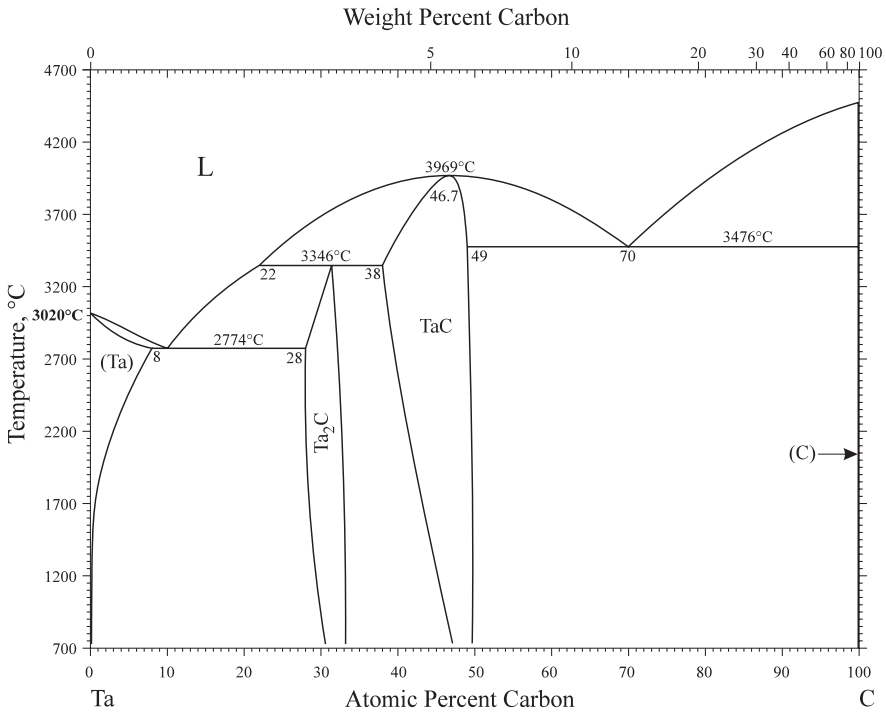

Fig. 1 The Ta-C phase diagram.