



Fig. 5—The effect of a fourth alloying element on the solubility of nitrogen in stainless steel (Fe-18-Cr-8-Ni) at 1873 K and $P_{N_2} = 1$ atm; comparison between the predicted values according to Eq. [9] and the experimental data of Small and Pehlke²⁷. The solid lines are the experimental values and the dashed lines are the predicted values.

element is good. In view of the fact that many of the needed data in utilizing Eq. [9] are estimated values, it is surprising to find good agreement between the predicted and measured values. The reason for the large discrepancy for the effect of Nb in the activity coefficient of N may be due to the incorrect values of $\Delta G_{N(Nb)}$ and $h^{U,V}$ parameters used.

It is noteworthy to point out that considerably more reliable data are available in the literature for

$\Delta G_{O(Me)}$ and $h^{U,V}$ in many U-V-O systems.²⁰ But data are rare for the activity coefficient of oxygen in ternary and higher order alloy systems. It is hoped that experimental investigation may be carried out to test the validity of Eq. [9] for the metal-oxygen systems.

1. C. B. Alcock and F. D. Richardson: *Acta Met.*, 1958, vol. 6, p. 385.
2. C. B. Alcock and F. D. Richardson: *Acta Met.*, 1960, vol. 8, p. 882.
3. L. S. Darken: *J. Am. Chem. Soc.*, 1950, vol. 72, p. 2909.
4. N. A. Gokcen: *Scr. Met.*, 1969, vol. 3, p. 157, p. 165.
5. G. R. Belton and E. S. Tankins: *Trans. TMS-AIME*, 1965, vol. 233, p. 1892.
6. U. Block and H.-P. Stüwe: *Z. Metallkd.*, 1969, vol. 60, p. 766.
7. K. T. Jacob and J. H. E. Jeffes: *Trans. Inst. Min. Metall.*, 1971, vol. C80, p. 32.
8. K. T. Jacob and C. B. Alcock: *Acta Met.*, 1972, vol. 20, p. 221.
9. C. Wagner: *Acta Met.*, 1973, vol. 21, pp. 1297-1303.
10. T. Chiang and Y. A. Chang: *Met. Trans. B*, 1976, vol. 7B, pp. 453-67.
11. J. C. Mathieu, F. Durand, and E. Bonnier: *J. Chim. Phys.*, 1965, vol. 62, p. 1289 and p. 1297.
12. B. Brion, J. C. Mathieu, P. Hicter, and P. Desre: *J. Chim. Phys.*, 1970, vol. 66, p. 1238, p. 1745.
13. C. H. P. Lupis and J. F. Elliott: *Acta Met.*, 1967, vol. 15, p. 265.
14. C. H. P. Lupis, H. Gaye, and G. Berard: *Scr. Met.*, 1970, vol. 4, p. 497.
15. E.-Hsin Foo and C. H. P. Lupis: *Acta Met.*, 1973, vol. 21, pp. 1409-30.
16. M. L. Kapoor: *Scr. Met.*, 1976, vol. 10, pp. 323-26.
17. K. Schwerdfeger and W. Pitsch: *Project Meeting CALPHAD V*, pp. II 2-1 to II 2-25, 21-25, June 1976, Max-Planck-Institut für Eisenforschung G.m.b.H. Düsseldorf, W. Germany, 1976.
18. R. Y. Lin and Y. A. Chang: *Met. Trans. B*, 1977, vol. 8B, pp. 293-300.
19. S. Kuo and Y. A. Chang: *Met. Trans. B*, 1978, vol. 9B, pp. 154-56.
20. Y. A. Chang and D. C. Hu: *Met. Trans. B*, 1979, vol. 10B, pp. 43-48.
21. G. K. Sigworth and J. F. Elliott: *Met. Sci.*, 1974, vol. 8, pp. 298-310.
22. G. K. Sigworth and J. F. Elliott: *Can. Met. Quart.*, 1976, vol. 15, pp. 123-127.
23. G. K. Sigworth and J. F. Elliott: *Can. Met. Quart.* 1974, vol. 13, p. 453.
24. G. K. Sigworth, J. F. Elliott, G. Vaughn, and G. H. Gieger: unpublished research, Carnegie-Mellon University 1978.
25. J. C. Humbert and J. F. Elliott: *Trans. TMS-AIME*, 1960, vol. 218, p. 1076.
26. R. G. Blossey and R. D. Pehlke: *Trans. TMS-AIME*, 1968, vol. 242, p. 2457.
27. W. M. Small and R. D. Pehlke: *Trans. TMS-AIME*, 1968, vol. 242, p. 2501.
28. H. Wada and R. D. Pehlke: *Met. Trans. B*, 1977, vol. 8B, p. 675.

Correction to *Met. Trans. A*, 1979, vol. 10A and *Met. Trans. B*, 1979, vol. 10B Indexes

Activation Energy for the Reaction of Nickel-Carbon Melts with Alumina, by Balaji V. Patil

Pages 759 to 761

This paper should be included in both the Author and Subject Indexes