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“Comparison of Predicted and Measured Phase Stability of Precipitates in Cr-Mo Steels” by J. M. Vitek, P. J. Masiasz and R. L. Klueh

Calculations of equilibrium phases and their compositions were made for several different Cr-Mo steel alloys that are of interest in high temperature applications. The predicted results were compared with experimental data for extremely long aging times (up to 75,000 h). The experimental data were based on extensive analytical electron microscopy results of extractions made from the aged materials. The comparisons were specifically made with respect to the precipitation behavior. The types of precipitates, their relative amounts, and their compositions were examined. The predictions showed reasonably good agreement with experimental results, including the compositions of the precipitates. However, some discrepancies were noted and these will be described in detail.

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