smoothed data was 0.66% in two isolated instances, with the large majority of the data having deviations of less than 0.3%, as is evident from the standard errors of estimate obtained in the smoothing process. Two points for gas number 10 were discarded because they were more than three standard errors of estimate from the smoothed data. The cell current and potential measurements could be made with a reproducibility of better than 0.02%, and therefore did not contribute significantly to the random error.

Sengers (22) specified the accuracy of his measurements as being 1%. The effect of calibration drift on the accuracy is conservatively estimated to be no more than 1.5%. Random error should be minimized by the smoothing procedure, both in calibration and in the determinations, and can be assumed to contribute no more than 0.4%. Therefore, the accuracy of the results should be better than 3%.

Comparison With Prediction Techniques

The Enskog Equations

The Enskog equations have been discussed by numerous authors (2), and were extended to mixtures by H. H. Thorne. His results, which were obtained only to a first approximation, were reported by Chapman and Cowling (2). This relation, which is strictly applicable to hard, monatomic molecules, was used to calculate