

CLOSING REMARKS

BY J. W. FREEMAN

The Test Methods Panel appreciates the contributions to the Session by those participating. The large size of the audience is evidence of the interest in the subject.

Some of the points presented in the papers and discussion were previously brought to the attention of the subgroup which wrote Recommended Practice E 85 - 50 T. There seems to be ample evidence that, from the viewpoint of true metal temperatures, it would be difficult to meet the requirements of ± 3 F up to and including 1200 F and ± 5 F up to 1600 F for both variation along the gage length and variation from nominal test temperature during the tests. This observation is based in part on the presumption that those reporting experience thoroughly understand pyrometry practice. It was also evident that there was disagreement in some cases over what could or could not be done and how to do it.

It should be recognized that in many cases the variations discussed were over

and above those which would be evident in "indicated temperatures." There seems to be little doubt that the limits of ± 3 F to 1200 F and ± 5 F from 1200 to 1600 F should be easily met insofar as the instruments indicate temperature. The major points omitted in such measurements are calibration uncertainties, maintenance of calibration, how well the thermocouple reflects the temperature of the specimen, and instrument errors. In view of the apparent practical possibility and desirability of keeping indicated temperature limits within closer limits than those of Recommended Practice E 85, it might be well for the Test Methods Panel to consider alterations of the recommended practices to include indicated temperature limits.

It seems also that the discussions provide ample evidence of the need for the development of an authoritative paper covering the application of pyrometry principles to the specific requirements of tension, creep, and rupture tests at elevated temperatures.