Introduction

There has been a rapid growth in the use of automated analyzers in the petroleum industry. Their application has been primarily for control of processes such as pipestilling, catalytic cracking, reforming, and various other refinery operations. Many of these processes manufacture only product components which need to be properly blended to meet final product specifications. The concurrent growth of continuous blending of finished products, which is far more efficient than batch blending, also makes automated analyzers a necessary tool for final product quality control.

Until now, little thought has been given to the standardization of automated analyzers as a means of assuring (and at times certifying) the quality of final products. Where such analyzers are being applied, final quality reliance has continued to be placed largely on the existing ASTM methods. These are primarily laboratory techniques for measuring quality. Little has been done by ASTM to provide standard methods based on automated equipment.

Recognition of this deficiency led ASTM Committee D-2 on Petroleum Products and Lubricants to appoint an ad hoc committee to study this problem and to recommend appropriate actions. The ad hoc committee sponsored a symposium to draw out the experience of refiners and pipeliners who are faced with this need. It was presented to D-2 members at a meeting in Houston, Texas, on 1 Dec., 1966. The publication of these papers is intended to stimulate the thinking of engineers, operators, and quality control people in the petroleum industry, in other process industries, and in the pipeline transportation field. It is believed that the exchange of such information will ultimately lead to the proper solution to this problem.

Subsequent to the symposium this committee recommended to the D-2 Committee of ASTM that work be initiated to prepare standard methods for calibration and use of the following continuous instrumental methods: octane (both research and motor), reid vapor pressure, distillation, and gas chromatography for liquid propane. This was assigned to three research committees of D-2 who are responsible for the respective laboratory methods.
Members of the *ad hoc* Committee who organized the symposium are: W. E. Chalfant, *Chairman*; W. V. Cropper; A. B. Kent; V. J. Tkac; J. F. Hickerson; I. T. Fritz; and T. J. Kehoe.

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