

The First Transactions

In the celebration of the Fiftieth Anniversary of the American Institute of Chemical Engineers, a salute to the remarkable foresight of our founders is distinctly in order. This foresight is nowhere more evident than in Volume I of the *Transactions*, a study of which is very rewarding, particularly at this time. The papers which were presented at the first annual meeting of the Institute, held in Pittsburgh on December 28 and 29, 1908, exhibit a remarkably broad conception of what the field of chemical engineering was to become. These papers dealt with topics which were to grow through research and scholarship into the principal subdivisions of our field. Some of these topics have been so fruitful that an entire issue of the *Journal* or of *Chemical Engineering Progress* could easily be devoted to current work in any one of them.

That part of our work which we now call *unit operations* is represented by "Calculations for Dryer Design" by W. M. Grosvenor. It is strange, in a way, that drying should be the one unit operation found in this first volume, because in the intervening years the others have commanded more attention. Drying, however, is so important and rewarding that probably it will still be a subject of great interest when later anniversaries are celebrated.

Stoichiometry is the subject of "The Examination of Flue Gases in Boiler Tests" by A. Hunicke. While this field has not led to so much publishable material as other branches of our work, it is still about the best introduction for beginning students to the quantitative treatment of chemical processes.

The necessary concern of the chemical engineer with economics and costs is presaged by "Steam Power Plant Economics" by W. M. Booth.

Kinetics is the subject of "The Ferric Iron Contact Process of Making Sulfuric Acid from Smelter Smoke" by Thorn Smith. He was concerned primarily with integral conversions, whereas we today turn our attention to instantaneous rates. Even for the relatively

simple reaction which Smith was studying, however, the past half-century has brought only improved, and not complete, understanding.

The treatment of industrial wastes is the concern of "The Sanitary Condition of the Southern End of Lake Michigan" by J. H. Brewster. In his problem he demonstrated that the proper beginning for a waste-disposal-treatment system is the detailed study of the nature of the pollution, a lesson that is too often forgotten.

That which is now called the unit process *combustion* is the subject of "The Use of Pulverized Fuel for Heating Metallurgical Furnaces" by R. K. Meade. There is evidence in this article of the classification of operations which may have played a part in the ultimate evolution of the unit-operations concept.

Instrumentation and testing are dealt with in four papers: "Modern Electrical Resistance Pyrometry" by E. F. Northrup, "Purity of Commercial Liquefied Ammonia Gas and Apparatus for Testing It" by F. W. Frerichs, "Testing and Performance of Steam Generating Apparatus" by A. Bement, and "Chemical Specifications for Sulphite Pulp" by J. A. De Cew. Our proper concern with this important field has grown throughout the years, during which the conception of control has been added to that of measurement.

The absence of any studies of thermodynamics, which has offered an exciting prospect to many chemical engineers, is a little surprising. However, it was only a little more than fifty years ago that the great work of Gibbs was finally recognized, thus permitting the application of the powerful methods of this branch of science to chemical systems.

Much honor is due to the founders of the Institute and to the first Meetings and Publication committees. It is difficult to imagine an alternate list of papers which could have so accurately predicted the whole development of chemical engineering.

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