

Introduction

Recent advances in gypsum chemistry, analytical techniques, and manufacturing technologies have raised a number of issues of concern to producers and users of gypsum products alike. For example, the analysis of gypsum and gypsum products as covered by ASTM standards is based almost entirely on wet chemical methods. However, modern instrumental methods are now used routinely in most laboratories and institutions. They are capable of determining constituents and impurities of gypsum and its dehydration products more accurately and reliably than conventional methods.

In addition, by-product gypsums are increasingly considered as raw material in the manufacture of gypsum products as partial or complete replacement of natural gypsum. Present ASTM standards do not deal with these synthetic materials, which provide a number of analytical problems because of the presence of unusual impurities not normally found in natural gypsums. For the same reason, the manufacture and application of building materials containing by-product gypsums is affected by serious difficulties.

In order to address these questions and problems, this symposium was sponsored by ASTM Committee C-11 on Gypsum and Related Building Materials and Systems. The symposium was intended to provide a forum for discussions of theories, test methods and analyses, and basic information on gypsum and its products.

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