

## History of the Materials Division

The following is extracted and edited from MD-Vol.70, "75 Years of the ASME Materials Division," edited by V. K. Stokes, GE Corporate Research and Development, published in 1995 by ASME. (ISBN NO. 0-7918-1760-1)

This is a brief History of the Materials Division of the American Society of Mechanical Engineers. To place this history in proper perspective, one must journey back at least a full century. Names change, but what is now called the Materials Division is as old as ASME itself. No other division can make such a prior claim!

Materials are so central to mechanical engineering that they have been a part of ASME since its inception in 1880. The iron and steel industry, which represented an activity of great economic value to the United States in the 1880's, started it all. This industry also presented a tremendously rich field for technical mechanical engineering investigations. Many problems needed to be solved. These problems required mechanical engineers, and the solutions to these engineering problems would add greatly to the wealth and welfare of our country.

The need for ASME to address the engineering problems of the iron and steel industry was documented in the proceedings of the earliest meetings; the first ten illustrations in the first volume of ASME Transactions (1880) were part of an iron and steel paper. Since then technical papers relating to the iron and steel industry have continued to constitute an important part of the literature. During the early part of this century (1912-1927), the Society was experimenting with what is now known as a division. Although iron and steel engineers were not included in the first set of divisions, the formation of our Division can formally be traced to the Forest Products Division, one of the twelve divisions formed in 1920. The name was changed to the Wood Industries Division in 1925. After proper experience had been gained, an Iron and Steel Division was authorized by Council in 1927. When the importance of nonferrous metals emerged to the appropriate level, the name of the Division was changed to the Metals Engineering Division (1940). Still later, when non-metals as well as metals deserved study by the Division, the present name of Materials Division was authorized by Council in 1972.

For apparent lack of activity, in the mid-1980s there was talk of abolishing the Division. At an MD Executive Committee meeting in 1984, a good part of the meeting was consumed in expressing indignation over a letter received from Headquarters questioning the viability of the Materials Division - the Council on Engineering Committee on Technical Planning had determined from an audit that the Division lacked continuity. At ASME Headquarters in the fall of 1985, it was demonstrated to ASME that the health of the Materials Division was improving and that it should not be dissolved. Demographic information was presented showing that despite its poor

showings at WAMs and low level of Divisional conference development, the Materials Division had a substantial number of primary members and fellows upon whom it could draw for help. Apparently, ASME was convinced that the Materials Division did have a future. A restructuring of the Division was initiated and areas of focus were defined and active recruitment began. During the following year, new interfaces were developed with the Aerospace, Applied Mechanics, and Production Engineering Divisions. The years 1984-1989 were critical for the survival of the Division; the hard work invested by the Division Executive and Technical Committees helped to stabilize the Division and to lay the foundation for its growth in the 1990s.

To deal with problem areas in the functioning of the Division, major changes were instituted during the 1990's. First, an emphasis was placed on balancing the Executive Committee by aggressively recruiting key individuals representing different aspects of materials. Also, a conscious attempt was made to attain a balance of committee members from academia, industry, and national laboratories. Responsibilities of the members were balanced, a two-year planning cycle was initiated for the Winter Annual Meeting technical programs, and considerable attention was focused on developing and giving structure to the Technical Committees. New Technical Committees were created and inactive ones were abolished. Fresh talent was proactively recruited. Ambitious goals were established for improving both the quality and the number of technical papers at the Winter Annual Meetings and the Division Newsletter was revamped and was used as a tool to increase the primary membership of the Division.

Partly as a result of renewed interest in materials materials have been identified as one of the five critical technologies for the nation the Division is now humming with activity. The quality of our symposia has improved while the symposia organized by our seven technical committees now cover a broad range of materials. The breadth of technical issues in materials is now beginning to be reflected in the broad range of papers in our Division Journal, the ASME Journal of Engineering Materials and Technology.

The first materials paper published by ASME appeared in the 1880 issue of Transactions (Vol. 1). Materials papers of highest quality have appeared in the literature of the Society every year since. The Division has always addressed national issues and the far-reaching needs of the entire profession in addition to its outstanding publication record. These issues and needs include:

Early actions of the Metals Engineering Division in converting from peacetime industries to wartime industries in World War II.

Establishing the prestigious Journal of Engineering Materials and Technology.

Establishing the Federation of Materials Societies that enabled the whole materials community to unite to advise the U. S. Congress on matters of national importance.

Continuous creditable activity since 1880! No Division can lay a prior claim. No other Division can boast of a longer period of unbroken service to the profession. And no other Division can point to as many Giants in its ranks. A whole century! A century of Giants!

Over the history of the Materials Division, we must acknowledge the contributions and service of the Past Chairperson of the Executive Committee of the Division.