

GUEST EDITORIAL

AN INVITATION TO BE A CHAMPION

Recent history has taught us that global competition has become tougher and is a major concern of American gear manufacturers and users. The world has become smaller and manufacturers from abroad have invaded American markets with products designed in an environment where management of technology has been practiced effectively. If American companies intend to compete in the changing world market, they must acquire the technologies that will allow them to do so.

During the past several years, anti-trust laws have been liberalized to allow cooperation among competitors. Through a special type of cooperation, which the ASME Gear Research Institute has termed "Cooperative Pre-Competitive Research and Development," a better technology base can be established. Simply stated, Cooperative Pre-Competitive Research and Development is the pooling of resources and working together to create technologies without jeopardizing domestic competitive position.

The success of the concept has been proven throughout the world and, to a limited degree, in the United States. It has much to offer and is a good way to maximize return on dollars allocated to research.

The ASME Gear Research Institute is concerned with the relative lack of organized applied gear research being conducted in the United States when compared with that in Europe and Asia. Research programs in Europe are well organized and directed by members of the gear industry. The collected data is shared only by participants in the program. The work is sometimes made public, but not until several years after it has been completed; thus, offering the program participants adequate time to use the data to their competitive advantage.

Today some U.S. companies are working with European universities in developing gear technology. Apparently, they perceive that the European universities offer a service that no U.S. institution is capable of offering. This attitude is disturbing, since it indicates an apparent deficiency in the gear research conducted in the United States.

Gear manufacturers in the United States probably spend more total dollars for gear research than gear manufacturers of any country in the world, however, the work is done in corporate laboratories. The results are considered proprietary, and the work is usually fragmented, since it is done to satisfy a specific need of the corporation. Sometimes the same technology is being developed in several laboratories, each company spending its hard-earned research dollars to come to the same conclusions. It would be better for these companies to pool their resources and work together in these areas of common technology, developing more complete

Donald L. Borden is Vice President, Industrial Affairs, of ASME Gear Research Institute. He served as Vice President of the Technical Division of AGMA from 1976-1984 and is a member of the Technical Division Executive Committee. Currently, Mr. Borden is the conference chairman of the ASME 5th International Power Transmission and Gearing Conference.



data that could be confidently used as a spring board for the proprietary research that leads to competitive advantage.

Daniel Boorstin, a noted historian and the Librarian of Congress from 1975 to 1987, tells us that every great discovery discloses unimagined realms of ignorance, and that the great obstacle to progress is not ignorance, but rather the illusion of knowledge. The courage to believe that we don't know what we think we know is the first step of discovery, and those who have this courage to believe are the prophets.

From my vantage point, I see several prophets who are becoming champions of gear research.

There is a champion from the worm gear industry who has begged for funds for a cooperative research program to better understand the operation of worm gears. With the help of ten interested companies, not all of whom are worm gear manufacturers, this champion has raised substantial funds for a three-year research project.

There are seven champions from the aerospace industry who have committed time, talent and funds for a five-year period to conduct gear research that they have defined as critical to their industry. They have already reached 70% of their goal, and have held two meetings of the steering committee to finalize their plans, and take the next step toward starting their research programs. There are seven more companies who are champions and have seen the need for cooperative gear research, pledging time, talent and funds for a five-year period to meet the technological needs of the gear industry.

These are the bright spots. However, there are still 120 gear manufacturers and users that must be convinced that to learn a technology, one must be a doer of research. It is good to update oneself by attending conferences, reading books and listening to speakers; however, remember that the information presented in those places was the state of the art three to four years ago.

The gear industry today has an opportunity to reshape U.S. gear research, to make it more meaningful, so that American geared products can again be competitive in the global marketplace. Why not be a part of this important activity by becoming a champion of U.S. gear research?

Donald L. Borden
V.P. Industrial Affairs
ASME-GRI