

GUEST EDITORIAL

BALANCE IS CRITICAL—MONITORING ESSENTIAL



These are changing times for industry. Trauma and uncertainty are always a part of change, and change is not always for the better. Change is usually forced, most frequently by competition. Our competitive free enterprise system *should* be able to respond to competition because that's its basis. These are critical years. If we do not respond effectively to change and competition, it could be disastrous.

E. J. Campbell, President and CEO of Newport News Shipbuilding, in his Rentschler Memorial Lecture at the Tenth Annual Meeting of the Iron Castings Society, has addressed these same issues. Some of his thoughts are worthy of repeating and commenting on. Mr. Campbell calls for "individual and national resolve" to meet the challenge of competitiveness, which, he says, will be the economic agenda for the next decade. His call to action, while surely essential, is quite broad and leaves most of us with the feeling that the job is so big that it must be someone else's.

This writer feels much more comfortable discussing technology itself rather than the strategies and policies concerning its influence on the well-being of firms and, thus, the nation. However, it's time that technical people in industry take a broader view and enlarge their sphere of influence. Although Campbell's address does not discuss technology, it's quite easy to visualize improved generation and utilization of technology as a part of the "resolve" he says is essential. As a matter of fact, some changes are already in motion. Given our many special interest groups, though, to get agreement on action plans is most difficult.

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On an *a priori* basis, it's easy to see the relationship between technology generation and utilization and progress. The problem comes in establishing priorities and balance, as, for example, in the areas of basic vs applied or "bread and butter research," the kind that sometimes parallels development programs for the purpose of providing answers so that development can continue. My concern at this moment has to do with some of the shifts that are taking place in this balance. Many firms are reducing their technical capabilities drastically. This has been common practice for decades during times of economic distress. Then, when times improve, there is usually a return to an emphasis on technical development. Unfortunately, foreign competition is such that the future doesn't look promising, so comeback in terms of technology utilization and generation in industry is not apt to happen. On the other hand, government laboratories and universities, with the aid of tax dollars, are redirecting their activities to try to help industry, so an effort is being made which may help fill the gap.

It is difficult to be critical and not sound negative, but we do need to continually, objectively monitor these kinds of changes and assess their value. What about the change we have just discussed; i.e., the shrinkage of research by industry and the expansion of it by entities normally engaged in more basic research? Will the new "research" be in synch with industry's needs? Will it be done efficiently and with a sense of urgency? Measuring the quality of research is difficult if its objectives aren't clear. For instance, if the objective is to generate a doctoral thesis or a publication, the research may not serve the needs of an industry operating in a survival mode. On the other hand, a research program which serves that need may not meet the criteria required for educational purposes. Many historians and analysts of technology are in agreement that the advance of technical knowledge depends on a system in which universities, industries, and government make demands on each other and cross-fertilize each other to meet those demands. We expect ASME-GRI to be actively participating in this arena. The management of ASME-GRI is dedicated to the promotion of both basic and applied research and to being sensitive to the necessary balances between them.

Two things are certain. All we technologists need an increased awareness concerning what's going on in both industry and in research and a resolve to participate unselfishly in order to maintain the balance that will aid our domestic industry retain its competitive edge.

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