

## ILZRO (A short history)



The International Lead Zinc Research Organization, or ILZRO, was founded in 1958 by a group of leading miners and producers of lead and zinc who were interested in advancing the applications for their metals through cooperative research and development.

Located in Research Triangle Park, North Carolina, the core activity of ILZRO continues to be the management of R&D programs. These programs are divided roughly into the areas of materials sciences, including metallurgy; chemistry and corrosion; electrochemistry; and environment and health.

As a research management organization, ILZRO has no laboratories of its own. Instead, it contracts out its research programs to the most competent universities, governments and private laboratories throughout the world.

The majority of ILZRO's funding is provided by miners and producers of lead and zinc, although end users of these metals, such as the battery, galvanizing, die casting, steel and automotive industries, as well as government agencies are providing an increasing amount of support to ILZRO's efforts. These members are geographically diverse, underscoring the truly international character of ILZRO's R&D program. This open membership structure offers the key benefit of providing the lead and zinc industries an oppor-

tunity to leverage their research funds with customers and governments, enabling the industry to carry out a much larger research program than otherwise could be afforded.

ILZRO's current research portfolio is roughly \$ 10 million (US), about 60% going into lead research and 40% into zinc research. For lead, the majority of research is directed towards electrochemistry under a program called the Advanced Lead Acid Battery Consortium or ALABC. For zinc, the majority of current research is aimed at the galvanizing sector, focused largely on improved coatings for high-strength steel in automotive applications, and the development of a new creep-resistant zinc diecasting alloy. ILZRO also has a strong environment and health research program for both lead and zinc.

The success of these cooperative research efforts over the past four decades is well chronicled with some of the more notable achievements being:

- Development of new galvanizing alloy (Galfan), galvanizing bath characterization and modeling, coating control and characterization, forming, welding and joining of galvanized parts, and control surveys, leading to major growth of the use of zinc coatings in the automotive industry and continued market growth in other sectors.

- Design and management of environment and health research programs aimed at preserving existing markets and ensuring industry access to new markets. Information generated by these programs serves as a resource to the industry in addressing regulatory concerns over environmental and occupation impacts of lead and zinc.
- Significant contributions to the development of the VRLA battery, and the further improvement and promotion of its use for remote area supplies, telecom, electric, hybrid-electric vehicles and the new 36 V batteries for conventional automobiles employing a 42 V power-net through the advanced lead acid battery consortium.

Of course, ILZRO and its partners were not alone in their efforts to develop Pb and Zn markets, but the benefit of the ILZRO approach is that it brings together all interested parties to work together to a common goal, thereby making it possible to achieve things that would be difficult or impossible for an individual company to accomplish alone.

The above most successful research, organizational and managerial activities have been realized under the wise leadership of Dr. Jerome Cole, a knowledgeable person of fine character and superb managerial skills. A vital role in stimulating the development of lead–acid battery science and technology is played by the ALABC, created and managed successfully by Dr. Robert Nelson, Dr. David Rand (temporarily) and Dr. Pat Moseley. Thanks to the valuable financial support provided by this consortium, a number of problems related to VRLAB have been solved to the benefit of interested battery companies in USA, Europe and Asia.

The Gaston Planté Medal Committee congratulates Dr. Cole in his capacity of President of ILZRO and Dr. Nelson, Dr. Moseley and Dr. Rand as managers of the ALABC program, as well as the whole hard-working staff of ILZRO on receipt of the prestigious Gaston Planté Medal. We wish them continuous creative and organizational success.