

ship of foreign controlled companies. This poses some problems for United States companies with wholly-owned subsidiaries in Canada.

INTERNATIONAL OPERATIONS

Sales of the international divisions, which include European and Mexican companies, amounted to \$14,900,000 or seven per cent of total company sales. Sales in Europe increased significantly in 1963 and for the first time these operations made a contribution to net earnings.

The plan to set up manufacturing operations in Europe for certain of our product lines has been substantially completed. All of the company's facilities there have been acquired or built in the last five years with the exception of one small brake lining plant in France, and the tasks of developing markets, training people and organizing efficient manufacturing units are progressing satisfactorily. The backlog of orders at the end of the year was substantial and it is expected that 1964 will show further gains.

Our brake lining plant in Mexico City recorded considerably higher sales with a corresponding improvement in operating results.

RESEARCH AND DEVELOPMENT

Expenditures for research and development continued at approximately the same level as in 1962, amounting to \$3,000,000. Approximately 40 per cent of this amount was spent on research in hydraulics and related electronic equipment and the balance went for research in metallurgy, friction materials and railroad products.

The direction of metallurgical research has been toward developing proprietary and special alloys to suit particular applications in markets which have been determined desirable by divisional sales departments. Versalloy, for example, is a new alloy with characteristics common to both flake and nodular irons and is currently being used in castings for hydraulic pumps, tire molds and other equipment. Supertherm, another example, is a heat-resistant alloy finding many applications for high temperature operations.

This close co-ordination of research effort with market opportunities has greatly assisted the foundry divisions in upgrading their products and specializing in areas where greater technology and skills provide advantages over competition.

Research in friction materials has led to products which have placed the company in the forefront in a number of market areas.