sustained by a strong demand from the mining and construction industries. Railroad brake shoes and trackwork gained with the rise in revenue ton-miles of the Canadian railroads. The tire mold plant showed substantial gains in shipments and more capacity was added to the plant during the year. Shipments of the Canadian brake lining plant also increased.

About 25 per cent of the products we manufacture in Canada are shipped to the United States and other countries of the world, thereby helping to fill Canada's need to export finished products as well as raw materials.

INTERNATIONAL OPERATIONS

Shipments of the consolidated international divisions, which include the European and Mexican companies, amounted to $18,316,000 or seven per cent of total consolidated sales. These divisions increased shipments approximately 23 per cent and reported higher earnings.

Products manufactured in Europe include hydraulic equipment for industrial and aerospace applications, friction products and tire molds. The outlook for economic progress in Western Europe in 1965 is good, but the rate of expansion is expected to be slower than in 1964. Most of our products are newer and more advanced than similar items of European origin; consequently, our sales are growing faster than the general economy and expectations for 1965 are for further gains in sales and earnings.

The Mexican brake lining company has shown consistent growth since the plant was established in 1957. Further gains were made in 1964 with a corresponding improvement in operating results.

Many of the company's products, including castings, hydraulic equipment, friction products and freight car wheels, are produced by licensees in several countries throughout the free world where Brake Shoe does not have manufacturing facilities. Brake Shoe has partial ownership in a number of these licensed companies. Royalties and technical assistance fees have been increasing in recent years and the company is continually exploring possibilities for additional licensing opportunities.

RESEARCH AND DEVELOPMENT

Research has been in progress for several years on a new family of composite friction products which exhibit highly desirable and novel characteristics. Field tests indicate that these composites may prove suitable for a number of different uses, including railroad, automotive, aircraft and industrial applications.

Supplementing its constant research on vehicle braking of all kinds, the laboratory continues to investigate friction products for the aerospace industry. A recent success was the development of brake materials which qualified for the F-111(TFX), the new multi-service aircraft being built by General Dynamics Corporation.

In the metallurgical field extensive research has been conducted in the area of vacuum melted alloys, and a superior type of mold for the glass industry is now in pilot production.

The company has had a research project for the development of a railway roller bearing under way for some time. This bearing is still in the laboratory test stage.

In hydraulics, extensive research and field testing are progressing on several hydraulic transmission systems for various kinds of mobile equipment. A number of equipment manufacturers have shown interest and some have placed orders for prototype models.

A new type of piston pump has also been developed which is simpler in design, requires fewer parts, and stands up to more rugged service. Production will start early in 1965.

For aircraft application, the laboratory has developed a hydraulic pump which operates at

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