Shipments of hydraulic products in 1964 amounted to $51,300,000, an 11 per cent increase over the previous year. Most of this sales gain occurred in industrial hydraulic equipment.

The new piston pump plant at Marysville, Ohio, which was opened in late 1963, operated at near capacity for the full year, permitting the Denison Division to meet an increased demand for its products in the United States. In Europe, plants producing industrial hydraulic equipment also operated at higher levels and continued to gain greater penetration in that market.

A number of new or improved Denison products are contributing to this growth in industrial hydraulic sales. A new line of vane pumps which are smaller, lighter and more durable was introduced in 1964.

An electronics department, established in 1963, now enables the company to design and manufacture complete hydraulic systems with accompanying electronic controls. This capability opens new market areas which have not been available in the past.

A substantial volume of orders was received for hydraulic and electronic equipment from the marine field. These products are used to provide power and controls for steering, materials transfer, winches and other shipboard equipment. This is a promising market for hydraulic equipment.

In airborne hydraulics, the Aerospace Division increased sales and made important technical advances. This division's products include hydraulic pumps, motors, servovalves and actuators which are used as parts of the total hydraulic systems of aircraft and missiles.

Jarry Hydraulics Limited, the Canadian aerospace division, produces landing gear, pumps and motors, servovalves and actuators, flight control systems and structural components. Sales of this division were slightly below 1963 because of cutbacks or stretch-outs in some military programs.

A single sales force serves the Aerospace and Jarry Divisions in the United States. These two divisions, in conjunction with Aerohydraul, the German airborne hydraulics division, participate in a large number of military aircraft and missile programs on a world-wide basis. Sales of equipment for commercial and private aircraft are also becoming increasingly important.

One of the programs the company participates in is the McDonnell Phantom II, a supersonic fighter used by both the U.S. Navy and Air Force, and for which we supply hydraulic pumps and servovalves. The plane is presently in volume production.

The revolutionary new F-111 plane has several company products on the initial group of ships. First flown in December 1964, the aircraft is built with wings which change their sweep to give a wide range of performance at subsonic and supersonic speeds. Jarry was awarded the contract for design and construction of the wing-sweep actuators and other parts. The F-111 is designed as a multi-purpose aircraft for use by several branches of the military and could become a high volume program.

Participation in many defense programs as well as in commercial and private aircraft markets provides stability. No single program represents a large enough portion of the total to jeopardize our position.

Brake Shoe entered the hydraulic equipment business about ten years ago. Since then the product line has been greatly broadened and sales have grown to a substantial part of the total volume of the company. The market for hydraulic equipment continues to grow and we expect to continue successful participation in this field.

Hydraulic pumps are rigidly inspected and tested during manufacture at a Denison Division plant.

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