

known as processes one, two, three, respectively. There was a fourth process, which was the preparation of the catalyst used in large quantities in process one.

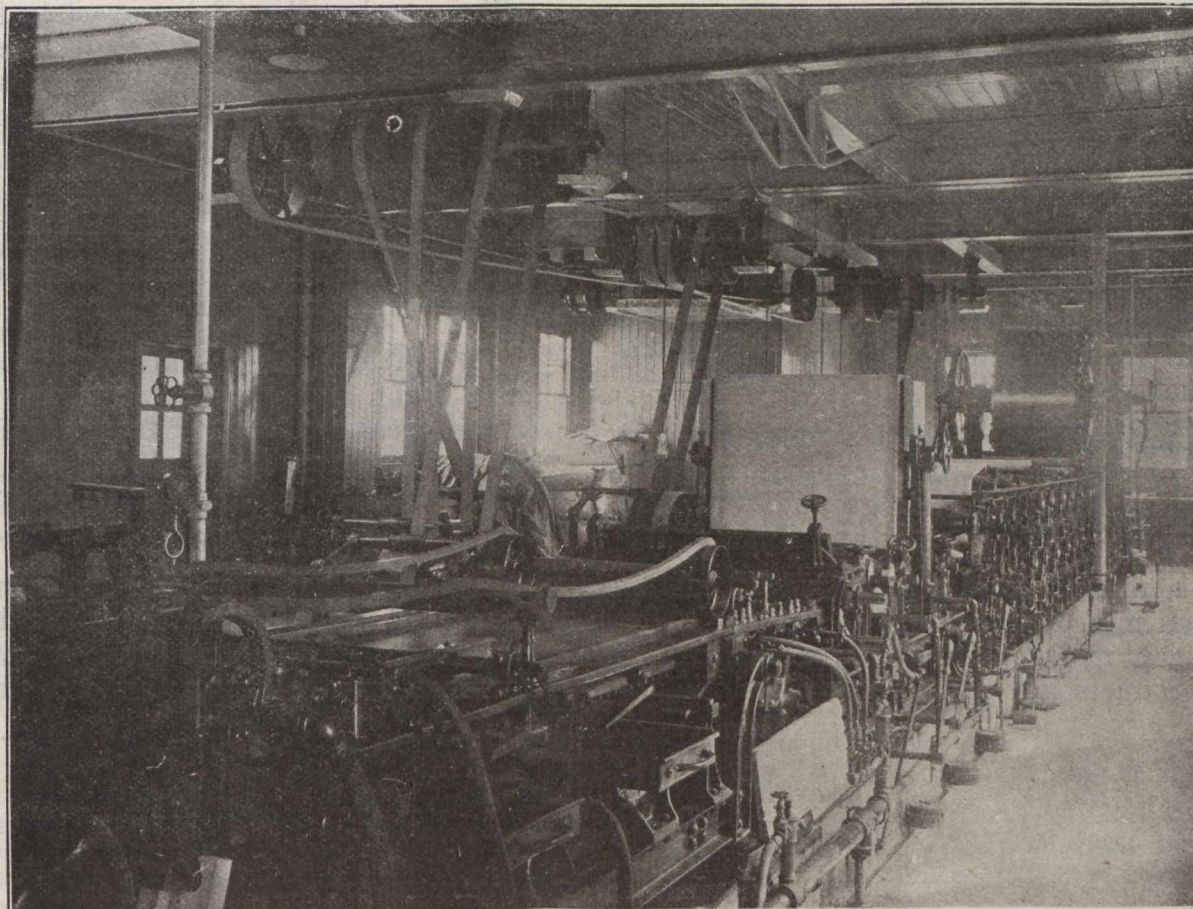
On the first of October process four was operating on a large scale and before the end of the month process one was under way. On November 20, 1916 the first batch of five tons of acetic acid was produced. In January 1917 the first carload of 17 tons of British War Office Specifications C. P. Triple X acetone was shipped.

There were turned out at this plant and shipped overseas two hundred long tons of acetone monthly. In the fall of 1917, the demand for acetic acid for use in the production of cellulose acetate for coating aeroplane wings, became very great, due to

need mordants, and are known as adjective dyes. Acetic acid is also used largely in the making of white lead.

Acetone is indispensable in the making of cordite. It dissolves the nitrocellulose, and thus makes possible an intimate mixture of the nitrocellulose, nitroglycerine, and petroleum jelly which go to make up cordite.

In another line, two of our large steel plants have produced as by-products from the coal they use for smelting, the two important coal-tar products, benzene and toluene. These were absorbed during the war entirely by the explosives' industry, but both of them have large peace uses in the field of synthetic chemistry. Crude benzene makes a good substitute for spirits of turpentine in paint. It has also



*The manufacture of paper and pulp is really Canada's most important chemical industry. The Forest Products Laboratories at Montreal include facilities for the study and investigation of processes and materials used. The picture shows the experimental paper machine, which makes it possible to test the actual product in the form of paper.*

the tremendous aerial developments at this time. The plant was, therefore, used to produce acetic acid only, and until the time of the signing of the armistice, had produced and shipped in the neighborhood of 10,000 long tons of this material. This in a period of less than a year.

This plant is now operating on a commercial basis and producing on almost the same scale as during the war. Shipments are being made to practically every part of the world.

Acetic acid is used in many industries, among others in the dyeing of textiles where acetates or iron and aluminum are used in conjunction with dyes. They act as mordants. A mordant is an agent that helps fix the dyes on the fibre. Some dyes do not

been used with some success as a motor fuel. This use will no doubt increase.

The future of Canada's chemical industry is indicated in her great natural sources of wealth: field, forest, mine and water power. Her agricultural work will call for the following:

Substance: Nitrate. Source: Air. Process: Electric.

Substance: Potash. Source: Feldspar. Process: Special process.

Substance: Superphosphate. Source: patite. (phosphate of lime). Process: Sulphuric Acid.

Substance: Sulphuric Acid. Source: Pyrites. Process: Oxidation.