

Coatings; Optical Research & Development; Optics Infrared; Optics Visual; Optomechanical Precision Assemblies; Photography; Remote Sensing; Sights.

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EXPRO CHEMICAL PRODUCTS Inc

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HISTORY: Expro Chemical Products Inc (formerly Valleyfield Chemical Products Corp) was started in 1940 and has been operating continuously ever since. The complex has undergone two multi-million dollar modernization programs - the first in 1950-1952 and the second in 1977-1978. It was incorporated under the former name in 1977. The company changed ownership on 15 March 1982. Because of the new minority share interest held by CIL Inc, the company will have access to Nobel's Explosive Company, Ardeer, Scotland. The latter company has extensive capability for primary research.

CAPABILITY: Expro is a fully integrated commercial and military propellant and explosives complex. It has its own capability to produce nitric acid, nitroglycerine, nitrocellulose, propellants, and RDX. Nitrocellulose is produced by the batch process, utilizing wood pulp of high alpha cellulose content and nitric acid. It also has the capability to produce nitrocellulose from cotton linters. Present plant capacity for nitrocellulose production is 15 million pounds per year, with the capability to expand to 40 million pounds annually should the need arise.

Expro uses the in-house produced nitrocellulose in the manufacture of single-base, double-base and triple-base propellants. The former are primarily used in small arms munitions, military or sporting, in medium caliber military ammunition, and large caliber weapons in multi-perforated form. The double-base product is used mainly for small caliber guns. The plant produces its own nitroglycerine, using the Biuzzi Process, for the manufacture of the double and triple base propellants. Nitroguanidine for triple-base propellant manufacture is purchased.

Expro produces RDX by the Bachmann Process. It is manufactured to military specifications in various granulations as required. The RDX is mixed with TNT to produce cyclotol. Other products include Composition B, Compositions A-3 & A-4, and Compositions C-4 & A-5. Demolition Block M5-A1 and M112 is also manufactured at the company's facilities.

AVERAGE WORK FORCE: Total - 950

GROSS SALES: No Data

PLANT SIZE: 1,100 acre site

EXPERIENCE: Though its prime client continues to be the Canadian Department of National Defense, Expro is one of the two accredited suppliers of propellant for the US Air Force GAU-8/A weapon system and the US Army 25mm Bushmaster. With respect to the GAU-8 system, they supply Honeywell with both propellant and high explosive (Comp A-4) and Aerojet with Comp A-4. For the Bushmaster, they supply both Honeywell and Ford. Other major clients in the US include Olin Corp (Nitrocellulose for ball propellant), and IMR Powder Inc (propellant). HE distribution in US is by direct sales. Expro has received orders for its propellants and explosives from the Netherlands, Belgium, Portugal, Italy, France, Greece, Turkey, Brazil and Venezuela.

KEYWORDS: A-3; A-4; A-5; Armament; C-4; Chemistry; Composition B; Demolition Block; Double Base; Explosives; High Explosives; Nitrocellulose; Propellants; RDX; Single Base; Triple Base.

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FAG BEARINGS Ltd

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HISTORY: FAG Bearing Ltd has been in business since 1883 (Germany). The company is incorporated under the laws of the Dominion of Canada. Branch offices are located in Vancouver, Edmonton, Winnipeg, Sudbury, Toronto, Hamilton, Montreal, and Truro. A US affiliate, FAG Bearings Corp, is located in Stamford, Conn.

CAPABILITY: FAG Bearings Ltd is involved in the manufacture of precision ground anti-friction bearings including instrument & miniature bearings, water pump shaft assemblies, and separate aircraft bearing assemblies.

AVERAGE WORK FORCE: Engineering - 22
Production - 568
Admin & others (Stratford) - 195

GROSS SALES: No Data

PLANT SIZE: Manufacturing - 220,000 Sq Ft
Warehouse - 75,000 Sq Ft
Engineering - 4,000 Sq Ft
Laboratory - 2,500 Sq Ft

EQUIPMENT: FAG Bearings has complete facilities to manufacture precision ground anti-friction bearings from raw materials (bar stock or tubing). Tolerances to ABEC 9. Aircraft bearing production started in 1981 (heat treating, grinding, assembly, etc). They have well equipped heat treating facilities, a metallurgical laboratory, bearing testing facilities (life, noise, torque, etc.), complete Clean Room (Class IV), assembly for instrument bearings, and separate aircraft assembly. FAG Bearings also has:

- Materials Control Laboratory - Leitz Stereo Microscope and Microscope (mag 1250x); Vickers and Knoop Micro Hardness Tester; Rockwell Hardness Tester; and Eddy Current and Ultrasonic Devices; Temperature Cycling Chamber.
- Heat Treating Furnaces - Vacuum (computer controlled), Batch with Endo Thermic Generators, continuous type (Nitrogen/Methane), Induction, Salt, and Carburizers (pack & gas).
- Sub-Zero Production Chilling Chamber.
- Acid (etching) Room - Etching, Passivating and Black-oxidizing facilities.
- Mass Spectrometer - Leak Detector.

EXPERIENCE: FAG Bearing has experience with many US and Canadian companies - Garrett (Airesearch) in Phoenix, AR; Bendix Corp at various locations; GE in Wilmington, MA; Litton Industries at various locations; McDonnell Douglas in Grand Rapids, MI; Sperry at various locations; Varian Assoc in Beverly, MA; Canadian Marconi in Montreal, Que; Spar Aerospace in Toronto, Ont; DISC Defense Ind Supply Center in Philadelphia, PA; Dept of National Defense in Downsview, Ont; and US Army Aviation in Texarkana, TX. Final destinations of some contracts include numerous US Air Force Bases.

KEYWORDS: Anti-Friction Bearings; Bearings; Instrument Bearings; Miniature Bearings; Precision Bearings; Waterpump Shaft Assemblies.

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