

magnesium and aluminum. The facility is supported by a wide range of equipment and processes. A CADAM graphic installation is used for mechanical design calculations, the preparation of detail drawings, production of NC programs and manufacturing instruction drawings.

Rolls-Royce Canada is the world source for the Industrial Spey and Industrial RB211 gas generators. These aero derivative gas turbines are manufactured to aerospace standards. The company has developed and manufactures the off-engine support systems for both industrial gas turbines.

Average Work Force: Salaried – 270
Hourly – 515
Management – 48

Gross Sales: No Data

Plant Size: 100,000 sq ft (Manufacturing)
15,000 sq ft (Engine Assembly)
150,000 sq ft (Engine Overhaul and Common Support Shops)
170,000 sq ft (Offices & Warehouses)

Equipment: The repair shop contains a wide range of general purpose machine tools to enable turning, milling, jig boring, grinding, and electrical discharge machining to be carried out on a wide range of materials. Welding capabilities include TIG weld, metallic arc resistance, needle arc, torch brazing and vacuum, or inert gas high temperature brazing. Heat treatment includes argon or hydrogen controlled atmosphere, low and high temperature vacuum heat and aluminizing. Metal spray capabilities are thermal spray (powder and wire) including 6P gun and plasma spray; erosion or wear resistant hard coatings; abradable coatings; thermal barrier (ceramic) coatings and anti-corrosion coatings. Processing capabilities are – non-metallic coatings-rubber wear away and PL95, nickel, chrome, silver, cadmium, copper, SerMetal processing, tin, lead-tin and Tribomet wear resistant coatings; soft anodizing, alodine dichromate surface treatment and phosphating; vapor blasting, dry blasting and shot peening; electroless nickel plating; and aerofoil surface superfinish. Balance includes static/vertical and dynamic/horizontal.

Rolls-Royce Canada operates four diverse engine test facilities capable of testing a wide range of equipment encompassing piston engines, turboprops and turbfans. The company designs and engineers all supporting systems (starting, fuel, lubrication, cooling), equipment (cradles, carts, tooling), safety controls (interlocks, alarms, trips) and instrumentation.

The laboratory presently holds DND approval number 020-2/56 to act as a chemical, metallurgical and mechanical test establishment and offers a wide range of services encompassing tensile testing, hardness testing, metallography, electronic and instrumentation testing and, radiographic and ultrasonic testing.

The manufacturing facility machining capability includes OM2A four-axis, OM80 five-axis, 4-axis CNC jig mill, 3-axis NC jig mill, 2-axis NC mill, Horizontal Cintimatic, Vertical Cintimatic, 48-inch x 36-inch x 72-inch Webster and Bennett VTLs with Tracer, Swedturn CNC Chucker, various lathes and drills. Inspection function supported by Brown and Sharpe Validator Co-ordinate measuring machine and 1,000mm Horstman Rotary/Tilting Table.

Experience: Rolls-Royce Canada is highly export-oriented – over 70% of the company's business is with non-Canadian customers. Although 80% of the customer base is within the continental Americas, Rolls-Royce Canada customers now originate in the Middle and Far East, Europe and approvals can be carried out in accordance with D49-001-24/SF-001.

Quality approval conforms with the following specifications – MIL-Q-9858A, MIL-I-45208, MIL-C-45667, DAR 7-103-S; DOT approval no. 1/58, DND 1015/16/17/19; and CAA A1/2423/47.

Experience is offered in the field of fixture design for the manufacture of complex aero engine components, where accuracy and quality are of paramount importance. Some programs include machining and finishing of industrial RB211 and Spey engine casings; production of AGT 1500 nozzle assemblies for Avco Lycoming; and hot section machining work for marine and aero Tyne engine components.

Keywords: 1 = Aircraft; 12 = Machining; 19 = Testing/Test Equipment; 20 = Miscellaneous; Aluminum Components = 1; Augmentor Wing = 1; Calibration = 19; Castings = 12; CNC Machining = 12; Combustion Research = 19; Component Fabrication = 12; Component Parts = 12; Computer Design/Computer Manufacture = 12; Corrosion Control = 19; Engine Components = 1, 12, 19; Engine Research = 1, 19; Heat Treating = 12; Life Cycle Support = 20; Magnesium = 12; Metal Plating = 12; Non-Destructive Testing = 19; Precision Machining = 12; Repair & Overhaul = 1, 20; Research & Development = 20; Titanium = 12; Tooling Fabrication = 12; Turbine Blade Inspection = 1, 19; Welding = 12; Turbine Engines = 1, 12, 20.

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SCI-TEC INSTRUMENTS Inc

Code: STI

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History: Sci-Tec Instruments Inc is a Canadian owned high technology electronics company incorporated in 1981. There are no other Canadian or US facilities.

Capability: Sci-Tec Instruments was established to design, manufacture and market high quality scientific and industrial instrumentation and electronic systems. They can offer a broad range of capabilities in data acquisition, microprocessors, communication, remote sensing, remote control systems, as well as electronic system engineering and instrumentation from the conceptual stage through to delivery of a finished product. Along with the capability of machining components for their products, in-house machining experiences have included a range of intricate, close tolerance machining in satellite low noise amplifier housings, rocket payload extend/retract mechanisms, payload booms and payload prototyping.

The management objectives for the company comprises of continued market penetration for their three main products and diversifying its operations to include US Government solicited contracts in areas of research and development, off-load or subcontract opportunities in the scientific and industrial electronics fields.

Average Work Force: Scientists and Engineers – 4
Others – 11

Gross Sales: 1982 – \$0.6M
1983 – \$0.75M (Projected)
1984 – \$2.0M (Projected)

Plant Size: 7,200 sq ft

Equipment: Sci-Tec Instruments employs the following equipment:

Electronics – Microprocessor development system for development and test of software and hardware. Lab test equipment for the R&D and production testing of