

for which sensors have been developed. Miniaturization of this technology to small caliber barrels (5.56mm to 40mm) has proved successful.

- Robot Guidance – A major project is currently underway to utilize the vision guidance system of the Canadarm used on the Space Shuttle to guide robots in plants. This project, in conjunction with the Government of Canada and a major automobile manufacturer, is expected to result in improved robots capable of much higher accuracy. A principle goal of the project is dynamic, flexible assembly and material handling.

Diffracto standard products include:

- Standard Laser/Electro-Optical Sensors
 - D Sight – Surface defect inspection
 - Z Sensors – Light sectioning and feature measurement
 - 'LaserProbe' High Resolution Laser Triangulation Sensors
- Standard Machines
 - PACS – Programmable Laser Airfoil Contour Systems
 - 'RoboSorter' Computer Vision Bolt Sorting Machine

AVERAGE WORK FORCE: Total – 125 (5 PhDs)

GROSS SALES: No Data

PLANT SIZE: 69,000 Sq Ft

EXPERIENCE: Diffracto has performed two contracts with the USAF (AFWAL – Materials Laboratory) through the Defense Development Sharing Program. They have worked with the US Army (Picatinny Arsenal) as well as with US industry, e.g., General Electric Co., Boeing Aircraft Co., Union Carbide, Uniroyal, Westinghouse, Bunker-Ramo, Battelle, and others. They also work with the Canadian Department of National Defense and National Research Council of Canada.

KEYWORDS: Automated Precision Measuring; Electro-Optic Inspection; Flaw Detection; Gear Inspection; ICAM; Inspection Equipment; Inspection Systems; Laser Optics; Machine Vision; Manufacturing Technology; Measurement & Control Systems; Optics; Ordnance Inspection Equipment; Precision Measurement; Robot Guidance; Robotics; Sensors; Structural Integrity; Turbine Blade Inspection.

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DIPIX TECHNOLOGIES Inc

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K2C 3P1

CONTACT: Mr Mike Cockburn, US Sales Executive – (613) 596-4942

HISTORY: Dipix Technologies Inc is a Canadian owned company incorporated in Canada in December of 1987 (formally Dipix Systems Ltd – incorporated in September of 1978). They are presently represented on a world-wide basis by various companies.

CAPABILITY: Dipix Technologies Inc has an established capability in the field of digital image processing for remote sensing and digital terrain mapping applications. The company has developed a powerful family of image analysis systems capable of processing imagery from satellite data (e.g., Landsat), digitized imagery (e.g., Photographic), cartographic (Map Digitizer), seismic, and other sources. Dipix engineers, analysts and programmers have designed many unique features into its systems. As a result, the company has been able to establish and maintain a leading market position with export sales around the world.

Central to Dipix's highly regarded position in the image processing field, is its extensive technical and analytical experience in developing applications and utility software to address user operational needs. Dipix has an enviable in-house research and development track record. The company's new ARIES III + image analysis system with

its proprietary iterative pixel processor offers a programmable high speed processor for improved interactive image processing of large images.

AVERAGE WORK FORCE: PhDs – 3
Masters – 5
Bachelors – 25
Others – 36

GROSS SALES: 1986 – \$10.2M
1987 – \$ 6.0M

PLANT SIZE: 6,000 Sq Ft

EQUIPMENT: Dipix has a full range of modern test equipment including DEC VAX and micro VAX computers, as well as a number of Dipix ARIES-II and ARIES III Systems used for program and engineering development.

EXPERIENCE: Dipix personnel have many years of experience in digital image analysis going back to the early 1970s. Dipix has had a close relationship with the Canada Center for Remote Sensing, where they have been contracted for both hardware and software development. At present, Dipix has in excess of 200 turnkey digital image analysis systems installed world-wide. In the last two years, the company has installed ARIES systems at the Defense Mapping Agency, Chevron Petroleum Products and Mars Inc, and has continued to maintain systems at the Jet propulsion Laboratory, US Corps of Engineers and various universities and commercial organizations.

KEYWORDS: Digital Image Analysis; Image Processing; Software Development; Software Services; Storage of Digital Imagery; Transmission of Digital Imagery; Turnkey Image Processing Systems.

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DONLEE PRECISION

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CONTACT: Mr Rodney Innes, Sales Manager – (416) 743-4410

HISTORY: Donlee Precision is a Division of Redpath Industries Ltd. Donlee Precision was founded in 1966.

CAPABILITY: Donlee Precision is a manufacturer specializing in precision tubular and shaft type components for the Aerospace, Military and Nuclear industries. Components manufactured include jet engine shafts, landing gear cylinders and pistons, rotor masts, and propeller shafts. Capabilities include complete engineering, manufacturing and quality assurance departments.

AVERAGE WORK FORCE: Engineers – 3
Manufacturing – 65
Administrative – 15

GROSS SALES: 1986 – \$11.0M
1987 – \$10.0M

PLANT SIZE: 60,000 Sq Ft

EQUIPMENT: Production facility includes CNC turning and milling, gear cutting and grinding, internal honing, deep hole boring, ID grinding, and OD grinding. Quality Assurance includes complete inspection and non-destructive testing facilities.

EXPERIENCE: Present customers include Canadian Government Crown Corporations and major Aerospace and Military contractors in both Canada and the US.

KEYWORDS: Boring; Cylinders; Gears; Grinding; Jet Engine (Components); Landing Gear Components; Machining; Non-Destructive Testing; Shafts.

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