CAPABILITY: Unisys Canada Inc Defence Systems has developed capabilities in four facilities across Canada – each supported by an experienced technical and administrative staff.

The manufacturing plant in Winnipeg serves as the company's head office. This facility offers customers a full range of engineering and manufacturing capabilities with precision equipment capable of handling all aspects of MIL-SPEC assembly including quality assurance, environmental stress screening, test engineering, production engineering, production/material/procurement control, configuration/data management, specific assembly capabilities, sub-assembly test, and final test.

The Winnipeg facility is certified for document storage up to secret level and is qualified to the following Canadian NATO and US/DOD requirements: AQAP-1, AQAP-4, AQAP-6, AQAP-13, MIL-Q-9858A, MIL-I-45208A, and MIL-STD-45662. With its advanced production facilities, the Winnipeg plant can put designs and concepts quickly into production. Expertise has been developed in areas such as the manufacture of cabinet assemblies, coil wound devices, cable and harnesses, printed circuit assemblies, core memory stringing, wire wrapping, PROM programming, mechanical assembly, and high density & high reliability MIL-SPEC power supplies.

Unisys maintains a medium sized facility in Ottawa, Ontario, near the Department of National Defence headquarters, ensuring close liaison with our prime customer. This facility is staffed with a group of systems and application engineers experienced in developing advanced systems for command, control, surveillance, fire and control and training programs for DND and other major defence contractors. An extensive base of experience supports this group's ability to evaluate and undertake analysis of complex systems projects to ensure cost effective solutions.

In Halifax, Unisys has a small organization that provides direct on-site support to the East Coast and forces of DND. This is an experienced group of senior application engineers actively involved in the life cycle support of the CP-140 Aurora Aircraft and the Halifax Fleet Operations. This group also provides the required support for systems that are or will be deployed operationally with DND, such as Shipboard Integrated Processing and Display system (SHINPADS), Message Handling System (MHS), and Message Processing System (MPS).

Unisys also has a major facility in Montreal with a complete range of capabilities in operational analysis, systems modeling and simulation, software design, coding, debug, test, integration and documentation, software quality assurance and management of real-time software development projects. Since 1984, this group has been dedicated to the Canadian Patrol Frigate Project.

AVERAGE WORK FORCE: Management – 11
Professional – 20
Administration – 52
Sales – 2
Technical – 63
Clerical – 52
Assembly – 143
Total – 524

GROSS SALES: 1986 – $41.8M
1987 – $45.8M

PLANT SIZE: Winnipeg – 79,430 Sq Ft
Ottawa – 8,299 Sq Ft
Halifax – 150 Sq Ft

EQUIPMENT: Unisys Canada Inc Defense Systems has a wide range of advanced equipment including: Apollo/Mentor CAD system, Logic Analyzers, Processor Emulators, Oscilloscopes, Multimeters, ROM simulators, Digital VAX 11/750, Spectrum Analyzers, Environmental Test Chamber, Automated Card and Final Test Systems, Flow Solder Machines, Component Lead Formers, Semi-Auto Dip Inserters, and Static Controlled Work Stations.

EXPERIENCE: Unisys Canada Inc Defence Systems has developed considerable experience through involvement in a wide range of engineering and manufacturing projects for customers within the company, with outside contractors and with the governments of Canada and the US.

Among the engineering efforts undertaken by CSD Canada include: the AN/UYK-502 Engineering Pre-Production Program, and the AN/UYK-501 Engineering Pre-Production Program. The development of an engineering development model (EDM) of the SHINPADS Serial Data Bus, and they carrying the EDM into production for the CPF and MATCALS, and the improved Memory Development Program in which CSD Canada provided the full scale engineering development model to provide a form-fit function replacement for the AN/AYK-10 mated film memory.

In addition to the major efforts, CSD Canada has been involved in a number of research projects of a smaller scale.

Unisys has acquired considerable experience on major programs for customers in Canada and abroad. Included in this experience is major work performed for the Department of National Defence as a subcontractor on the Canadian Patrol Frigate Project and the Tribal Class Update and Modernization Project. Unisys provided the SHINPADS serial data bus hardware and major software elements on these projects.

Unisys has also recently signed a contract with the Department of Defense to provide the US Navy with a form fit function replacement for the AN/AYK-10 Mated Film Memory on-board the S-3 ASW aircraft.

KEYWORDS: Computers; Computer Parts; Measurement & Control Systems; Distributed Processing; Local Area Networking; Vibration/Acoustic Intensity Measure; Multi-Layered Board Assemblies; Pre-Wired Board Assemblies; PC Board Design & Fabrication; PC Emulators; Power Supplies; Video Display Systems; Core Wound Products; Core Memory Arrays; Magnetic Tape Transports; Maintenance Consoles; Harnesses; Switches; Information Handling Products; Software Services.

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HISTORY: VAC-AERO is a Canadian owned, high technology company offering heat treating, brazing, electron beam welding, and repair and coating services to the aerospace, airline, avionics, electronics and other key industries throughout the US and Canada. In addition, VAC-AERO designs, manufactures and sells specialized heat treating and vacuum furnaces to these industries.

VAC-AERO was originally founded in 1959 in Oakville, Ontario, and a Montreal Division was established in 1967 to meet the growing demand for its services from Quebec area customers.

CAPABILITIES: VAC-AERO holds processing approvals from all major aerospace manufacturers for the following services:

Thermal processing of OEM components:

- Vacuum heat treatment of high strength steels – Landing gear components, structural airframe parts.
- Vacuum heat treatment – Turbine parts, shafts, turbine blades, casings, nuclear components.
- Vacuum Brazing – Turbine nozzles, compressor stators, afterburner casings, combustion cowls, wave guides, aluminum cold wall assemblies and heat exchangers, nuclear parts.
- Electron beam welding – Turbine assemblies, electronic components.
- Plasma spray coating – Combustion liners, fan and stator casings, miscellaneous parts.