

• **REMOTE MANIPULATORS** – A major project being completed at Spar is the production of the Remote Manipulator Systems (RMS) for the US Space Transportation System. This contract awarded in 1979 calls for the delivery of three systems to the National Aeronautics and Space Administration (NASA) through 1984. Canadarm, the original RMS, was successfully tested for the first time on the Space Shuttle "Columbia" in November 1981 and continues to perform flawlessly on space flights. It was produced in Canada under the agreement between the National Research Council of Canada (NRCC) and NASA. Spar was the prime contractor to NRCC for the design, development and manufacture of this flight system. Plans are in hand for the supply of additional RMS's on an as required basis.

Spar, under a contract from Ontario Hydro, has designed and delivered a remote manipulator and control system to replace and repair fuel tubes in nuclear reactors. In addition, Spar, Ontario Hydro and the Canadian Fusion Fuels Technology Program are engaged in the concept definition stage of a project to apply remote manipulator technology to the Tokamak fusion reactor project in Princeton, NJ. Using similar technology, under an MOU with Inco, Spar has developed a remotely controlled and operated Rock Bolter, to enhance to safety and productivity of Inco's hard rock mining operations.

**AVERAGE WORK FORCE:** Engineers & Technicians – 700  
Others – 1400

**GROSS SALES:** 1986 – \$191M  
1987 – \$230M (Est'd)

**KEYWORDS:** Airframe Components; Antennas; Communications; Computer Produced Maps; Control Systems; Digital Mapping; Electro-Optics; Engine Components; FLIRs; Gear Boxes; Ground Stations; Helicopter Subsystems; Infrared Instrumentation; Mapping; Mechanical Arms; R&O (Aircraft); R&O (Avionics); Remote Manipulator Systems; Remote Sensing; Satellite Subsystems; Satellites; Space Based Radar; Space Systems; Structures; Telerobotic Products; Transmissions.

**REVISED:** January 88

## SPARTON OF CANADA Ltd

**ADDRESS:** 99 Ash Street  
London, Ontario, Canada  
N5Z 4V3

**CONTACT:** Mr Douglas E Johnson, President & General Mgr –  
(519) 455-6320

**HISTORY:** Sparton, incorporated under Federal charter in 1930, is a wholly owned subsidiary of Sparton Corp, Jackson, MI.

**CAPABILITY:** Sparton specializes in the development, engineering, and manufacture of specialized electronic products for the military, industrial, and Original Equipment Manufacture (OEM) markets. Their R&D activities include development of microbuoys, expendable bathy-thermal systems, new improved low noise passive sonobuoys, depth-compensated ring shell acoustic projectors, ice penetration systems, and switch-mode electronic power supplies.

Sparton's Engineering Department staff covers professional disciplines of electrical/electronic engineering, mechanical engineering, physics, hydro-dynamics, and hydroacoustics. They are experienced in the preparation and management of engineering projects from proposal through to implementation (development, specifications, testing, and production).

Sparton of Canada Ltd is a qualified producer meeting the requirements of DND 1015 and US MIL-Q-9858A Quality Assurance Programs. There is a resident military QC detachment on the premises. Sparton is cleared by DSS Industrial Security for projects up to SECRET classification. Current product lines are active and passive sonobuoys for military customers, acoustic projectors and switch mode and linear power supplies for large and small computer systems.

**AVERAGE WORK FORCE:** Production – 150/200  
Engineering Dept:  
MSc – 4  
BSc – 10  
Tech – 24  
Others – 7

**GROSS SALES:** 1986 – \$14.2M  
1987 – \$16.8M

**PLANT SIZE:** 170,000 Sq Ft

**EQUIPMENT:** Sparton's engineering facilities include fully equipped laboratories, hydrodynamic test tank, RF shielded rooms, computer terminal access to a wide range of engineering software including FF2E, SPICE and OSCAR; and two IBM 370 systems and two Perkin Elmer Corporate computers.

**EXPERIENCE:** Sparton is a supplier of passive sonobuoys to the Canadian Government; active sonobuoys (AN/SSQ62B) to the Canadian Government, to the US Navy, and to other overseas users; OEM supplier of various types of regulated power supplies to Canadian manufacturers; responsible for the development of Depth Compensated Ring Shell Projectors and BT systems for the Canadian Government; is now in the development stage of an ice penetration sonobuoy for the Canadian Government; and is also developing variants of Ring Shell Sound Projectors. Applications for the latter device are anti-submarine warfare (ASW) crew training, dipping sonar, towed array active adjunct and scientific investigations of ocean sound propagation characteristics or sound detection systems.

**KEYWORDS:** ASW; Acoustic Sensing; Active Sonobuoys; BT Sonobuoys; Environmental Sensors; Geophysics; Hydrophones; Ice Penetration; Passive Sonobuoys; Power Supplies; Sonobuoys; Underwater Ring Shell Sound Projectors.

**REVISED:** January 88

## SPECIALIZED WELDING & FABRICATION Ltd

**ADDRESS:** 2222 South Sheridan Way, Unit #10  
Mississauga, Ontario, Canada  
L5J 2M4

**CONTACT:** Mr Peter M Draycott, Vice President & General Mgr –  
(416) 823-4080

**HISTORY:** Specialized Welding and Fabrications Ltd is a Canadian-owned company founded in 1964.

**CAPABILITY:** Specialized Welding and Fabrication Ltd provides a special service of welding, custom fabricating, and radiographic and fluorescent penetrant inspection to the aircraft and allied industries. The company was founded by the two major share holders whose life-time experience in aircraft manufacturing, servicing, inspection and tool design, provided the foundation upon which this company was established. Working to quality controls and procedures designed specifically to meet the requirements of the Department of National Defense, and the Department of Transport, Air Services Branch, ensures that product quality is always acceptable. The exceptional skill and versatility demanded of the staff is achieved through in-plant training and the experience of working with a wide variety of aircraft materials. Only fully certified material is used and all shipped material is certified as having been processed and inspected to the appropriate specification.

**AVERAGE WORK FORCE:** Management and Engineers – 2  
Accounting – 1  
Production – 3  
Inspection – 1

**GROSS SALES:** 1986 – \$400K  
1987 – \$400K

**PLANT SIZE:** 3,000 Sq Ft