

Industry

New light on dials

Development in the field of instrumentation is integral lighting. Applicable to all types of instruments it has been pioneered by Sperry Gyroscope Canada Ltd. The company has produced prototypes which are being evaluated by the RCAF and has completed a sizeable production order for a repeater unit to be used in a ground navigation system.

The system uses a series of minute bulbs embedded in the instrument. These are said to have a life expectancy which exceeds that of the instrument. They are placed to give even, over-all illumination although any area can be made more brilliant than others if required.

Test facilities maintain the brightness to the requirements of the National Bureau of Standards, and filters enable correct brightness values for various colors to be measured. Panels with lighting levels to within one percent of specifications can be produced.

Panels with integral lighting are said to have good definition, even illumination and are easy to read at all kinds of external light levels. The system can be applied to any size or shape of instrument.

Typical of the type of work being undertaken was the recent production run of units having two-inch dials with six bulbs embedded. The staff is used to handling miniature and sub-miniature units, and so this project presented no serious problem. However, techniques developed for this work had previously only been available in the U.S. All parts of this repeater dial and the silk-screen printing work were made in Sperry's Ottawa plant.

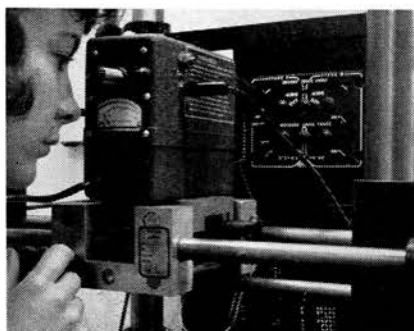
Floats made in Canada

Following the introduction of a line of Canadian-built floats in the 2000 gross weight range, the Department of Customs and Excise has introduced a tariff on this type of float being imported. Such floats, including the Edo Model 2000, have been subject to 15% duty, effective October, 1963. The Canadian float is being built in Vancouver, by Aviation Sheet Metal Ltd.

Dowty pump passes test

The first Chandler Evans single element fuel pump made under license by Dowty Equipment of Canada Ltd., Ajax, Ont., for Orenda Engines Ltd., has passed its full specification tests. The pumps are to be used in the GE J85-GE-5 jet engines for the Canadair Tutor trainer for the RCAF. The engine-driven, by-pass equipped pump is used to supply fuel at predetermined pressures and quantities to the main fuel control of the engine.

Fuel entering the pump is boosted to



Sperry integral lighting

30 psig minimum with flow of 14.3 gpm at 6,069 rpm to a maximum of 55 psig with no flow at 6,069 rpm by a gear drive centrifugal impeller. It then passes through a 200 mesh stainless steel filter prior to entering a single, positive displacement gear-type pumping element, and from there to the main fuel control. Fuel not required is returned to the pump through a by-pass port. Dry weight of the unit is less than 6 lb.

Defence contracts

Major contracts awarded to aviation companies during a recent four week period included one of \$1,330,446 to **Litton Systems (Canada) Ltd.**, Rexdale, Ont., for inertial navigation platforms for the LN-3 system being produced for the Starfighter program.

Other large contracts included the following: **Aircraft Welding & Sheet Metals Co. Ltd.**, Ville St. Michel, Que., (aircraft tow bars) \$10,851; **Alpha Arcon Radio Electronics Ltd.**, Downsview, Ont., (communication equipment maintenance spares) \$29,194 and \$13,914; **Aviation Electric Ltd.**, Montreal, (navigation equipment spares) \$162,186; **Canadair Ltd.**, Montreal, (transparencies) \$103,672, (airframe spares) \$40,000, (research contract) \$12,061; **Canadian Arsenal Ltd.**, Ottawa, (research contract) \$247,000; **Canadian Aviation Electronics Ltd.**, Montreal, (technical representatives) \$332,325; **Canadian Liquid Air Ltd.**, Halifax, N.S., (aviators' breathing liquid oxygen) \$14,043; **Computing Devices of Canada Ltd.**, Ottawa, (technical representatives) \$125,206; **Dowty Equipment of Canada Ltd.**, Ajax, Ont., (air-

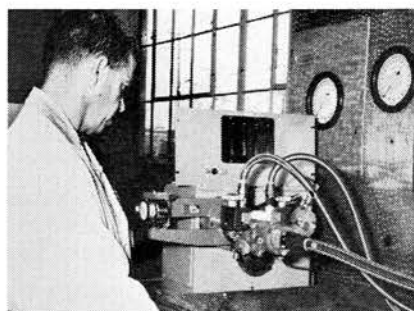
frame spares) \$16,314; **Electric Storage Battery Co. (Canada) Ltd.**, Toronto, (batteries) \$30,451 and \$18,281; **Enamel & Heating Products Ltd.**, Amherst, N.S., (engine spares) \$10,135; **Garrett Manufacturing Ltd.**, Rexdale, Ont., (temperature control test sets) \$18,666; **Hawker Siddeley Canada Ltd.**, (Orenda Engines Division), Toronto, (engine spares) \$24,630; **Irvin Air Chute Ltd.**, Fort Erie, Ont., (parachute spares) \$22,671; **Litton Systems (Canada) Ltd.**, Ottawa, (technical publications) \$22,409; **Litton Systems (Canada) Ltd.**, Ottawa, (revisions to engineering orders) \$17,590; **Okanagan Helicopters Ltd.**, Vancouver, (operation and maintenance of helicopters) \$371,595; **Pioneer Parachute Co. of Canada Ltd.**, Smiths Falls, Ont., (parachutes) \$34,866; **Railway & Power Engineering Corp. Ltd.**, Montreal, (aircraft instruments) \$204,314, (attitude testers and analyzers) \$114,919; **Rediffusion Inc.**, (Redifon Canada Division), Ottawa, (radio navigation aids attachment) \$265,920.

Aviation Electric Ltd., Montreal, (spare parts and modification kits) \$20,529, (tank spares) \$17,314; **Burdny Canada Ltd.**, Scarborough, Ont., (aircraft electrical spares) \$35,702; **Canadair Ltd.**, Montreal, (bomb racks and adapters) \$698,075, (airframe spares) \$222,590; **Canadian Cuttriss-Wright Ltd.**, Toronto, (spare parts and modification kits) \$16,217; **Canadian Marconi Co.**, Montreal, (radar mobility kits) \$120,924; **Collins Radio Co. of Canada Ltd.**, Toronto, (engineering orders) \$32,269; **Computing Devices of Canada Ltd.**, Ottawa, (helicopter spares) \$230,792, (station storage units) \$44,310, (rental of office machine) \$12,852; **ITT Canada Ltd.**, Montreal, (technical representative) \$17,237, (transmitter spares) \$14,147; **Imperial Oil Ltd.**, Ottawa, (aviation turbine fuel) \$242,375; **Irvin Air Chute Ltd.**, Fort Erie, Ont., (parachutes) \$17,164, (parachute spares) \$13,439; **Jarry Hydraulics Ltd.**, Montreal, (aircraft hydraulic pumps) \$43,660; **Litton Systems (Canada) Ltd.**, Rexdale, Ont., (engineering assistance covering inertial navigation system) \$150,000; **Muirhead Instruments Ltd.**, Stratford, Ont., (transmitter and spares) \$19,053; **S. Smith & Sons (Canada) Ltd.**, Don Mills, Ont., (spark plugs) \$12,230; **Sperry Gyroscope Co. of Canada Ltd.**, Montreal, (modification of radar trainers) \$13,991; **Texaco Canada Ltd.**, Montreal, (aviation turbine fuel) \$247,800; **United Aircraft of Canada Ltd.**, Montreal, (aircraft engine starters) \$22,209.

Space work described

A model of Canada's year-old satellite, the Alouette, was displayed at the Canadian Electronics Conference in Toronto last month. Displayed by the Defense Research Board it was exhibited with fully extended antennae, measuring 175 ft.

RCA Victor Co. showed a model of



Dowty pump on test