

Two major search and attack sonar programs continued in production during the year. Work on the Canadian-designed variable depth sonar also continued, with additional production being required to meet the needs of the Royal Navy. A variety of naval navigation equipment, such as gyro compasses, logging equipment and plotting tables, was produced. Sonobuoy development and production continued for the Royal Canadian Air Force and the United States Navy.

Production and installation continued on air defence communication (ADCOM) for the Royal Canadian Air Force. Planning continued for semi-automatic ground environment (SAGE) communications in Canada, and initial contracts were placed for the lease of long-line and on-base systems. Rearward communications for the Ballistic Missile Early Warning System (BMEWS) were completed during the year. Production for Canadian Army vehicle communications continued in the United Kingdom. Procurement began for the radio transmitting and receiving equipment for new naval ships.

The production of the NASARR system of fire control and terrain avoidance for the *CF-104* aircraft was a major project in the field of aircraft electronics in 1960. Communication, navigation and identification equipment for several major new and retrofit programs continued in production. Considerable development work took place on air-borne anti-submarine electronics, including a sonobuoy receiver retrofit program.

Development of an *Argus* tactical crew procedure trainer (flight simulator) neared completion and programs were completed in connection with the *Argus* operational flight trainer and general purpose flight and instrument trainers. A major program for the supply of *CF-104* operational flight and tactics trainers was undertaken, including requirements for the Federal Republic of Germany, the Netherlands and Belgium. A requirement for a tactical trainer for the Royal Canadian Navy was met and work began on a models control trainer for that Service.

Considerable activity was devoted to the operation and maintenance of the Mid-Canada early warning line. Installation of new radar, data-processing, communication, navigation and identification equipment, largely for the United States military services, required substantial effort during the year.

Shipbuilding.—Construction of the six vessels of the third group of destroyer escorts, known as the repeat-Restigouche class, continued during the year. The last two vessels of this class will be improved to include, among other things, a helicopter flight deck and variable depth sonar equipment. The central procurement agency located at the lead yard maintained its operations under the Department's supervision. This procurement agency is responsible for the bulk purchase, distribution and accounting connected with the supply of equipment to be worked into the vessels of the repeat-Restigouche class.

A contract was placed on a normal commercial basis for the construction of a naval tanker-supply vessel. This is the first time that a contract of this nature has been negotiated for a large Canadian naval vessel. Contracts for a standard diving tender and a tank cleaning barge for the Royal Canadian Navy were accelerated as part of the Federal Government's winter works program. A contract was issued, as a result of competitive tenders, for the construction of a hydrographic and oceanographic survey vessel for the Department of Mines and Technical Surveys. Programs of small boats were completed in 1960.

Armament.—Production of anti-submarine mortars, 2.75" rockets and 3"/50 calibre illuminating cartridges was completed during 1960. Among the major items under production were anti-submarine torpedoes for the Royal Navy; 7.62mm rifles and 9mm submachine guns and ammunition; 20 pdr., 105mm howitzer, and 81mm mortar smoke ammunition for the Army; 3"/50 calibre, 3"/70 calibre and 4" naval gun ammunition; practice depth charges and bombs; high altitude rockets; and many types of pyrotechnic devices for the Armed Services.