

*Supply—Defence Production*

developments are involved, since the electronics program relates to a growing range of equipment needs.

Throughout this fiscal year the mid-Canada line will continue to be the largest single item in the program. Construction work on the line, as well as the manufacture and installation of equipment, are proceeding on schedule, which incidentally is a very tight one. This has involved very close co-operation between Canadian contractors and suppliers and the government agencies responsible for the project, and I would like at this time to pay tribute to the way in which industry is tackling the problem in order to ensure that the job will be completed on time.

The construction of the distant early warning line, as you know, is being undertaken and financed by the United States. However, Canadian industry has shared very substantially in this work. There has been close liaison with responsible authorities in the United States and with regard to the construction phase and the provision of electronic equipment Defence Construction Limited and the Department of Defence Production have worked with the United States to ensure that Canadian industry was given a chance to bid wherever it was possible to so arrange.

As you know, the two very large construction contracts were placed in this country, as were important transportation contracts, and a very large proportion of the materials and supplies required under these contracts has come from Canadian suppliers. In addition, the installation of communications equipment required during the construction phase is being carried out by a Canadian company. Wherever delivery schedules and technical factors permitted and where costs were competitive, contracts for electronic and related equipment have been placed in this country.

Among other major electronic projects, the current year will see development work started on an integrated electronic system for the CF-105, combining navigation, flight control and fire control equipment. As the house may realize, electronic systems of immense complexity are needed for navigation and flight control at supersonic speeds and for the extremely precise fire control required to engage targets which may themselves be travelling above the speed of sound. Work is continuing on the CF-100 flight simulator, which is one of the most complex undertaken by a Canadian company. New types of aircraft are creating requirements for new types of simulators but, as the field of flight simulation is such a highly technical one and our requirements are so limited, many factors

have to be taken into account in determining where this work should be done. The contract for one of these new simulators, the CS2F Grumman, has been placed and the equipment is being produced in the United Kingdom. As a second project, there is a requirement for simulation of the CL28 maritime reconnaissance aircraft, to be undertaken this year. Large new projects are also in prospect in the area of air defence communications.

From the foregoing it will be appreciated that the over-all impact of this year's defence production program on the Canadian electronics industry will be roughly comparable with that of 1955-56. It is likely that there will be some differences in the distribution of defence work among the numerous firms in the industry. However, it should be recognized that, unlike certain other sectors of our industrial base, of which the aircraft industry is a good example, the electronics industry has a large civilian market for its products and is consequently less dependent, as a whole, on defence orders. On the other hand, it is recognized that certain segments of the industry have developed special facilities and engineering skills that are essential to the continuing defence electronics program and that have little or no civilian application. We are all aware, in this electronic age, that new developments in aircraft and weapons call for new and increasingly complicated electronic control systems, but just what this will mean to Canadian industry in the future is impossible to predict at this time.

The longer manufacturing cycles required for the production of ships mean that ship-building programs undertaken in previous years will be continuing throughout the current fiscal year. Work on the 13 destroyer-escorts remaining to be delivered will continue, and it is now expected that final trials will be completed on four of these ships during the year. Progress is being made on all six of the MCB class coastal minesweepers and the lead vessel is scheduled for completion this fall. The second frigate conversion program, involving five ships, is also well under way, and the first two should be completed by next spring. The aircraft carrier *Bonaventure* is nearing final completion in the United Kingdom, and delivery is expected for the late fall.

In the gun and ammunition programs, some further reduction in activity is now likely. The small arms program will be sustained throughout the coming year by the service needs arising out of the adoption of the FN rifle. The production of heavier calibre weapons and ammunition to meet current requirements may be substantially completed during the current fiscal year, and we have to consider ways of maintaining, as far as possible,