

Under the Safety of Life at Sea Convention and the Canada Shipping Act, most passenger ships and larger cargo ships must be fitted with radiotelegraph or radiotelephone equipment, primarily for distress use. Approval is given for each make and model of equipment that comes up to the required standard and, in addition, the ship station as a whole is inspected after the licence is issued and periodically thereafter. Foreign ships are subject to inspection before sailing from Canadian ports to ensure that they conform to the requirements of the Safety of Life at Sea Convention. Also, certain passenger, cargo and other ships plying the Great Lakes are inspected to ensure compliance with the requirements of the agreement between Canada and the United States for the promotion of safety on the Great Lakes by means of radio.

Standards have been developed for the installation of aircraft radio stations specifying the techniques and materials that may be used, to ensure that such stations will satisfactorily perform the function for which they are intended. Inspections of radio stations aboard civil aircraft of all operational categories are carried out at prescribed periods. In-flight inspections of the radio communications and navigational aspects of proposed new air carrier operations, encompassing both land and oceanic routes, are also made as required.

Marine and aeronautical radio operator standards and related regulations are covered by international agreement. The International Telecommunication Convention prescribes the qualifications for radio operators on mobile stations and the Radio Act provides that all operators, both commercial and amateur, must pass examinations to prove their ability to operate the respective classes of stations on which they are engaged. Competent operators are required on all classes of stations to ensure that the requirements prescribed under international agreement are adhered to closely; they are particularly essential on ship and aircraft stations in the interest of safety of life.

Investigation and Suppression of Inductive Interference.—The Radio Act provides penalties for selling or using apparatus liable to cause interference to radio reception. Standards are developed and type approvals issued for certain classes of such equipment. The Telecommunications and Electronics Branch of the Department of Transport provides also a country-wide interference service using special investigation equipment for the purpose of tracing sources of interference and recommending cures for interference to broadcast, television and other radio reception.

Cars equipped for measuring and locating sources of interference operate from offices located in 30 cities throughout Canada; 20,491 cases were dealt with during the year 1960. Sources include power lines, auto ignitions, heavy electrical equipment, domestic appliances, electro-medical apparatus, industrial radio frequency generators and TV receivers. Negotiation with public utilities and industrial firms is required to decide corrective measures.

Regulations specifying the limits to be met by particular types of apparatus are contained in the Radio Noise Limits Order. Certain low-powered radio transmitting and receiving equipment is exempt from the operation of the Radio Act, e.g., garage door radio controls for a number of models have been exempted and consequently may be operated without the radio station licence otherwise required.

Radio Aids to Marine and Aeronautical Navigation.—Services of the Telecommunications and Electronics Branch of the Department of Transport in aid of marine and aeronautical navigation are described in the following paragraphs. Details may be obtained on request from the Department of Transport, Ottawa.

Marine Navigation.—Radio aids to marine navigation are provided for about 4,000 radio-equipped Canadian vessels and almost as many foreign ships using Canadian waters. A safety and communications service for shipping is provided covering the East and West Coasts, the Great Lakes, the St. Lawrence River and Gulf, Hudson Bay and Hudson Strait.