

The complex of resources and services formerly known as the National Science Library (a main collection and nine divisional branches) continues to serve as the library system supporting both the NRC laboratories and the various CISTI services; simultaneously it reinforces and supplements the libraries of other institutions and continues as the focus of the Canadian interlibrary loan network in science and technology. In brief, it is a CISTI information service which provides alerting, searching and delivery systems for published information primarily for scientists, engineers and related professions. It is a national resource, reinforcing and supplementing the collections of other institutions and serving as an information centre for the development and operation of innovative national STI services.

The other founding component of CISTI, NRC's Technical Information Service (TIS), is an information delivery service designed to assist in the technical development of small- and medium-sized Canadian manufacturing enterprises. Its services are intended for firms that have little or no technical library facilities, engineering or research staff. Such companies, generally employing fewer than 200 people, represent about 90% of Canada's manufacturing enterprises and account for nearly half the industrial production and employment in this country. Large enterprises are also assisted to solve those problems beyond the expertise of their own personnel.

The chief characteristic of TIS is its field service through which it maintains direct personal contact with companies. Field officers (all of whom have themselves worked in industry) are located at 16 offices across the country, thus ensuring that approximately 80% of potential users are within 50 miles of a field office. The newest office was opened in St. John's, Newfoundland in 1974. Six of the field offices are operated by provincial research councils and foundations. Working toward the general objective of bringing manufacturing operations to a level in keeping with the current level of technology in a given industry, TIS engineers and scientists visit plants in their area, make clients aware of the availability and value of technical information and assist them in identifying and resolving technical problems. The direct, in-plant, person-to-person contact between the user and TIS Field Technical Advisors is the essential element of successful technology transfer to small industry.

The field services are supported by a group of specialists in the Technical Information Service sector of CISTI. It is organized into three main sections: the Technical Inquiries Section which answers specific questions related to industrial processes and engineering sent in directly by companies or through the field offices; the Industrial Engineering Section which provides information on production operations to small companies which are not aware of the industrial engineering techniques that can be applied in these areas to improve productivity, or which cannot, for various reasons, employ consultants; and the Technological Developments Section which operates from Ottawa, keeping companies aware of the new advances in technology and research applicable to Canadian industry.

The results of research become a contribution to knowledge only when they are published and made available to the scientific community to examine, assess and use. As a service to Canadian science and as a Canadian contribution to the world's scientific literature, NRC publishes the Canadian Journals of Research covering the fields of biochemistry, botany, chemistry, earth sciences, forest research, geotechnology, microbiology, physics, physiology and pharmacology, and zoology.

In 1972 the publications committee of the newly-formed Canadian Society of Civil Engineering asked NRC to undertake publication of a new journal to serve their field. The first issue of the quarterly *Canadian Journal of Civil Engineering* appeared in September 1974. The 11 Journals publish approximately 2,500 papers a year, and about two thirds of these originate with Canadian scientists.

### 9.2.2 Atomic Energy of Canada Limited

An appreciable proportion of the world's fossil-fuel resources has already been consumed by a comparatively small segment of the world's population. This rate of consumption is increasing, the increase reflecting not only population growth but also increasing per capita energy demands. Nuclear fission provides the only known, practicable means of reconciling the world's energy demand with available resources.

It is now clear that the western world is fully launched on the transition from primarily fossil-fuel electricity generating plants to nuclear-electric generating plants. Whether or not