

## **DEFENCE SCIENCE LIBRARY**

This column presents the activities, services and achievements of DESIDOC. Beginning from January 1990, this is the fifth article in the series. Each issue highlights the achievements in a particular area. The last four issues have covered an overview of DESIDOC, its publication, information processing and dissemination, and translation activities.

DESIDOC functions as a central agency of Defence Research & Development Organization (DRDO) for collecting, processing and disseminating scientific and technical information for the scientists and technologists of the Organization in particular and the Ministry of Defence in general. The Centre aims to meet the current and futuristic information requirements of these personnel. The task of gathering information for high-tech Defence projects requires trained information scientists having sufficient exposure on Defence problems. DESIDOC is proud to have an excellent information resource base in its modern and well-equipped library and also trained information scientists for providing the relevant information. The Library is called the Defence Science Library (DSL).

### **GENESIS**

The DSL had its beginning in April 1948 when a small library, having nearly 400 books and about a dozen scientific periodicals, provided information support to the research and development activities related to Defence problems. The Library functioned from one of the rooms of the secretariat of Scientific Adviser to the

Defence Minister at South Block, New Delhi. Over the years, the Library grew and it acquired a large number of books and technical reports covering diverse aspects of Defence problems. Due to space constraints, the Library was moved to NPL building and then in 1959 to the Metcalfe House, an old and monumental building named after the British Reagent. During the last 30 years of its existence in the present campus, the DSL has seen many upheavals. It had to be shifted many times from one building to another owing to paucity of space and natural calamities. Sometimes the Library had to be fragmented and housed in hutments.

### **INFRASTRUCTURE**

Any library having an excellent collection cannot be called a good library if it lacks modern infrastructure and a reasonably aesthetic environment, the latter being necessary for ensuring concentration and necessary inspiration. The new 5-storey building, inaugurated by Dr VS Arunachalam, SA to RM, on 2 Aug 1988, has separate stacking arrangement for books, back volumes of periodicals, technical reports, and display of current periodicals on various floors. The Library has single entrance-cum-exit at the second

floor with helical staircase connecting all the floors. The fifth floor will house video and projection facilities, equipped with the latest video and audio equipment. The Library provides all amenities for free flow of information to the readers, coupled with xeroxing, microfilm readers printer and CD-ROM facilities. Reference tables, study carrels, and proper illumination have been provided at all the floors of the Library.

## **COLLECTION DEVELOPMENT**

The DSL has a rich collection of documents in the various fields of science and technology, including aeronautical sciences, rockets and missiles, armaments, explosives and propellants, electronics, computer science, physical and life sciences, materials science, operational research, and management. It is responsible for collection development of books, journals, monographs, technical reports (both classified and unclassified), patents, and standards/specifications on these subject areas. The holding of the DSL is given in Table 1. The Library functions as a central agency for procurement of all technical publications for DESIDOC, DRDO HQrs and some of the DRDO labs/estts. It also arranges foreign exchange from DRDO HQrs and the Director of Military Regulation and Forms (DMR&F) for procuring publications which are not available through normal book trade channels for all the DRDO labs/estts/HQrs. To speed up the procurement, deposit accounts are opened for the US patents and other US Government publications.

## **Special Collection**

The DSL maintains a special collection of old and classic reference books on one hand and up-to-date reference sources on the other. Some of the old collections are : *Handbuch der Physique*, *Beilstein Organische Chemie*, *Progress Reports in Physics (1930s)*, *Progress in Astronautics and Rocketry*, *Advances in Space Science & Technology*, *Advances in Polymer Science*, *Annual Reports of Chemical Society*, and

annual reviews and advances on important topics of science and technology. The DSL is known for its rich collection of reference material on military science.

The rare reports having their origin during the Second World War are also being maintained at DSL. These include : British Intelligence Objectives Sub-committee (BIOS) reports, Combined Intelligence Objectives Sub-committee (CIOS) reports with indexes, Royal Aeronautical Establishment (RAE) reports, Aeronautical Research Council (ARC) technical reports, Materials Research Laboratory (Australian Defence) reports, Defence reports from Commonwealth Countries, and US RAND reports.

## **Other Reference Collection**

Several new titles have been recently added to the reference collection of the Library, which include : *Collier's Encyclopedia (24 vol)*, *Oxford English Dictionary (12 vol+4 supplements)*, *World Book Encyclopedia (22 vol)*, *Encyclopedia Americana (30 vol)*, *McGraw-Hill Encyclopedia of Science and Technology*, *New Knowledge Library (35 vol)*, *Metals Handbook (17 vol)*, *Scientific Papers of CV Raman (6 vol)*, and *Janes' Series of World Book on weapons, aircraft, fighting ships, etc.* A large number of directories, subject and language dictionaries, yearbooks, annuals, handbooks, catalogues, maps, atlases, and conference proceedings on almost all S&T subjects are also available for reference.

Amongst the reports literature, some of the important reference publications are : *Government Reports Announcements & Index*, *Government Reports Annual Index*, *Index Fortnightly Journal & Annual Index (6 vol)*, *NASA's Scientific & Technical Aerospace Reports*, *Monthly Catalogue of US Government Publications*, *Defence Research Abstracts (UK)*, *Dissertation Abstracts International (USA)*, *Selected RAND Abstracts*, and *US Patents Gazette and World Patent Abstracts (Derwent)*.

## Periodicals

At present 735 current scientific periodicals are being received in English and other important foreign languages on regular subscription basis. In spite of the inflationary pressure and budgetary crunch, the DSL is subscribing to major secondary periodicals. Some of the indexing and abstracting periodicals are: Chemical Abstracts (1927+), Physics Abstracts (1947+), Electrical & Electronics Abstracts (1947+), Patent Abstracts (1962+), International Aerospace Abstracts (1962+), Solidstate & Superconductivity Abstracts (1980+), World Surface Coating Abstracts (1969+), Engineering Index (1950+), Index Medicus (1962-78), Biological Abstracts (1950-77), Applied Science & Technology Index (1961+), and Indian Science Abstracts (1965+).

All back issues of the Journals and Transactions of IEEE (up to 1980) and Proceedings (up to 1970) have also been acquired in microfilm or microfiche form to conserve space.

## Technical Reports

The technical reports collection is approximately 85,000 publications comprising various types of reports, conference proceedings, theses, standards/specifications, patents, etc. The DSL is the depository of all the classified, restricted and unclassified annual/project/progress reports emanating from most of the DRDO labs/estts. The Library also has in its collection the reports issued by the National Aeronautics & Space Administration (NASA), National Technical Information Services (NTIS), RAND Corporation (USA), Commonwealth Countries, Defence and public sector undertakings in India, IITs, ISRO, BARC, CSIR laboratories, Indian universities and other research organizations. It has a complete set of American Society of Testing Materials (ASTM) standards, Indian standards of

Bureau of Indian Standards (BIS), Defence standards (UK), and Joint Service Specifications (JSS) of Directorate of Standardisation (India). It has a good collection of the US, British, German, and Russian patents.

**Table 1 : Holding of Defence Science Library (1990)**

Books	48,375
Back volumes of journals	28,800
Journal titles (current)	735
Titles of back-sets of journals	1,530
Reprints	17,000
Technical Reports (including classified reports)	53,100
Standards, specifications and patents	20,400
Microdocuments (Microfilm rolls, microfiche)	4,900
Reports reprints	5,994
Microfilm cartridges containing US military & industry standards (35 mm)	1,500
Video cassettes	24
Audio cassettes	52
Magnetic tapes	15
Compact discs	6
Language learning kits along with books & cassettes in Russian, French, German, Japanese, and Chinese (for basic and advanced course)	9 sets

## COMPUTERIZATION OF LIBRARY OPERATIONS

All house-keeping and management functions of the Library, including serial acquisition, budget control, circulation and acquisition are being computerized using the Defence Library Management System (DELMS) software developed by DESIDOC. This will considerably help in improving the efficiency of library services.

## Online Catalogue

A database on bibliographic information of books, reports, monographs, conference proceedings, etc available in the collection of the DSL from 1980 onwards has been created and is being updated. The



*Online Catalogue*

computerization of information regarding documents procured before 1980 is under process for inclusion in the database. This catalogue is available online and helps the users in searching bibliographic details of the literature sought by the reader from the said collection of the DSL through different access points, including author/editor, subject keywords, class number, report number, and accession number. The readers can search the information through a PC and can obtain the printout. This catalogue will be linked to other computers in DRDO labs/estts in Delhi through local area network (LAN) and outside Delhi through telecommunication link.

## Online Search of Foreign Databases

The online facility for searching foreign bibliographic databases through DIALOG Information Service, Inc, US, is available in the Library. Scientists from DRDO labs/estts have been utilizing this facility free of cost for searching information related to their project work from time to time.

## LIBRARY & INFORMATION SERVICES

In addition to normal library functions like technical processing, issue/return of books and periodicals, answering reference queries, and providing inter-library loan facilities, the following specialised services are also offered by the Library :

### Procurement of Books and Periodicals

Apart from procuring books, monographs, technical reports, journals, video cassettes and non-conventional published material for updation of its collection, DSL has been given the responsibility of procuring S&T literature for the Technical Information Centre (TIC) at R&D HQrs, Office of the Fire Adviser, Directorate of Explosive Safety Group, Scientific Advisers to the Chiefs of the Army and Air Staff, and some of the local DRDO labs/estts. The procurement is mainly based on the recommendations of the scientists/project leaders working on various DRDO projects.

### Bibliographic and Reference Services

List of references and bibliographies with abstracts are prepared on topics of Defence interest both in anticipation and on demand. Adequate number of trained staff helps the users of the Library in the identification and location of books, journals, reports and other relevant material on particular topics.

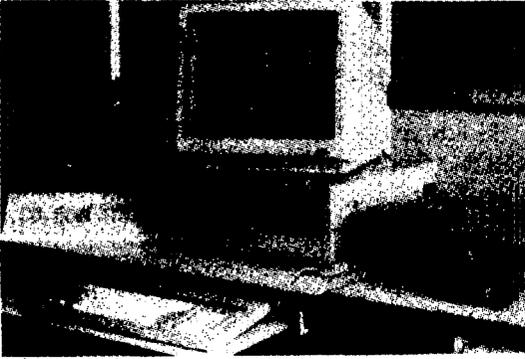
### Information Supply

Information scientists having years of experience in various subject disciplines regularly scan current scientific journals, indexing and abstracting journals, reports, dissertations, patents, etc; identify literature on on-going Defence projects; and process it for dissemination to the users.

### Xerox/Document Copying Service

The Library provides document copying facilities on its different floors for the convenience of the users. Xerox copies of documents are also supplied to the DRDO labs/estts located outside Delhi on request.

## CD-ROM Service



*CD-ROM Workstation*

The DSL is one of the few libraries in the country to offer CD-ROM search facilities to its users. The system installed in the Library includes a disk drive (Philips-110 model), a PC, and a parallel printer. To begin with, the Library is subscribing to four bibliographic databases in CD-ROM format. They are : NTIS Report Index, Library & Information Science Abstracts (LISA), Whitaker's BOOKBANK, and New Groliers' Encyclopedia. These Databases can be searched through author, descriptors, keywords, report numbers, etc. depending upon the database being searched. The search results can also be obtained in print form.

## SRIM Service

The DSL is subscribing to National Technical Information Services (NTIS) reports on subjects of interest to DRDO grouped in nine categories under the Selected Research in Microfiche (SRIM) service of the NTIS. All NTIS reports are automatically received by the Library within few days of their announcement in the Government Reports Announcement & Index (GRA&I) fortnightly journal. All reports received under this arrangement are notified to readers through a monthly bulletin, 'SRIM Service for NTIS Reports.' Titles are arranged under nine categories : optics and lasers; military operations,

strategy and tactics; chemical, biological and radiological warfare; anti-missile defence system; missile technology; detonators, explosion effects and ballistics; anti-aircraft defence system; anti-submarine warfare; and fire control and bombing systems. These microfiche are given on inter-library loan for a short period to those libraries who have microfiche reading/printing facilities.

## MIL Specifications Service

The DSL subscribes (since 1987) to the complete set of 50,000 US MIL specifications/standards in microform with bimonthly updations. Under this service, thousands of hard copies are supplied against the requisitions received from the DRDO labs/estts in the quickest possible time. A list of such hard copies is regularly sent to the users. Each list gives US MIL numbers, title of document, and number of pages.

## Microfilm Reader/Printer Service

The Library has one Minolta RP-505 and one Canon PC-70 microfilm reader and printer with different magnification facilities for reading microfilms/microfiche and microfilm cartridges and preparing hard



*Microfilm Reader/Printer*

copies from these microdocuments. It also has a portable Bell & Howell portable microfilm reader.

## **Current Military Science and Technology Contents**

On specific request from the Eastern Air Command, the contents of selected military periodicals (50 nos) are notified to them and the demand for the supply of reprints from these journals is met on a limited scale.

## **LIBRARY PUBLICATIONS**

### **List of Accessions of Books (Monthly).**

Gives bibliographic details of all documents received during the preceding month for information of users.

### **List of Accessions of Reports Literature (Monthly).**

Gives all bibliographical details, including report number and accession number for easy location of specific reports by the users.

### **List of Current Periodicals (Annual)**

Gives title, frequency, mode of acquisition, place of publication and the year

from which the journals are subscribed or received in the DSL. It also includes a broad subject index.

### **Union Catalogue of Patents in DRDO Labs/Estts (1987)**

Holds data of the patents held in various DRDO labs/estts. The catalogue is available both online and in printed form. The patents included in this publication are arranged according to UDC classification and information can be searched through patent number, patentee, and descriptor.

### **Holding of Periodicals in DSL (1982)**

Gives information on holding of periodicals, including proceedings, transactions, bulletins, arranged alphabetically by titles held by the Library. The entries include title, frequency, sponsor, place of publication, volume, issue and year of publication, holding and missing volumes and numbers. The publication includes classified index and key to classified index.

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*Knowledge is of two kinds—we know a subject ourselves and we know where we can find information on it.*

Samuel Johnson

*No man's knowledge here can go beyond his experience.*

John Locke

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