OUTLINES the need for ISO 9000 Quality Management System to industries. Explains the role of T.I.C in providing Document Control Service for standards and code used to maintain ISO 9000 system. Methods, tools and techniques to provide efficient Document Control service are being explained. Computerisation of standards collection using CDS/ISIS and its benefits to users is highlighted. Sources of information on standards in Internet are listed. Techniques of retrieving information on standards from various Websites such as IEC, ISO, ANSI etc. are being presented.]

0. INTRODUCTION

One of the common objective of every organisation is to survive and grow in the present day competitive world. In order sustain the growth and development, the industries and business enterprises have to provide quality goods and services to the customers. As the customer satisfaction is getting more focussed in every activity the industries are more concerned in achieving quality from the stage of raw material selection to the timely delivery of goods to customers.
The word QUALITY has several meanings. The two important meanings as defined by Juran are:

- Quality consists of those product features which meet the needs of customers and thereby provide product satisfaction.

- Quality consists of freedom from deficiencies.

Industries planning to implement Quality Management Systems (QMS) in their organisations adopt ISO 9000 series of standards. These are generic standards which can be applied to any type of business organisation. A QMS organizes overall activities of the Company in such a way that the technical, administrative and human factors affecting the quality of products or services are under control.

‘Document Control’ is one of the essential activity in ISO 9000 QMS for achieving perfection. Technical Information Center (TIC) of the Company is ideally suited for providing Document Control service for standards and codes used by industries. The present paper is a case study of providing document control service for standards at authors Organisation.

1. WHY DOCUMENT CONTROL?

In order to meet clause 4.5 of ISO 9001 the supplier has to establish documented procedures to control documents and data pertinent to the quality system. The aim of this clause is to ensure that only authentic documents and data are used and that these are readily available to personnel performing various tasks affecting which will ensure the quality of the products.

TIC has developed detailed procedures for identification, selection and control of national and international standards and codes and documented the same in TIC Department Manual.
2. STEPS IN DOCUMENT CONTROL:

The following are the steps involved in exercising document control of national and international standards held by TIC. They are:

2.1 Selection of Standards and Amendments.
2.2 Acquisition.
2.3 Processing.
2.4 Preparation and maintenance of master lists.
2.5 Circulation.
2.6 Issue of Standards to the Departments/Units.
2.7 Withdrawal/Amendment of Standards.
2.8 Storage and maintenance.

2.1 Selection of Standards and Amendments:

Selection of standards is mainly done by the user community. Some of the factors which influence the selection process are customer specification requirements, current design practices, collaborators’ Data and inspection needs, etc. Emphasis is placed on either Indian standards or International standards such as IEC and ISO in view of wider acceptance of the same by the customers. An individual or Department requiring standards have to submit a requisition for the same to TIC in standard form (No. 1 07 04 001).

The following are the sources required for the selection of standards of Indian and Foreign origin:

*Indian Standards:* Bureau of Indian Standards (BIS);
Catalogue (Annual);
Standards Monthly Additions (Monthly);  
IPSS Catalogue (Annual);  
List of Publications of IEEMA (Annual).

*Foreign Standards:* Catalogues of ANSI, BIS, DIN, JIS, etc.  
Updates/Addenda of Catalogues;  
Standards News Bulletin (SNB)  
(M/s. Book Supply Bureau)

### 2.2 Acquisition of Standards

Requisitions for standards are cumulated and processed once or twice a month. Standards and amendments are procured from approved vendors only.

The standards of Indian origin are procured from M/s. BIS, IPSS, IEEMA, etc. The poor stock position of Indian Standards and Amendments at Regional and Local Sales Offices is a serious problem faced by the customers. Delays in replenishing of stocks by the Head Office of M/s. Bureau of Indian Standards at New Delhi is claimed to be the reason for the same. Though M/s. BIS is an agency to certify Indian Companies for ISO 9000 QMS, they are yet to improve their service to a satisfactory level as demanded by the customers.

On the other hand the supply of foreign standards by M/s. Book Supply Bureau are satisfactory to a great extent as we get 95% of supplies within the delivery period (4/6 weeks). We tried other vendors too to purchase foreign standards but their performance was found to be not satisfactory.

TIC also has purchased certain regulatory documents from local and outstation sources. E.g. Acts and Rules of Government of India, Central Board of Irrigation and Power publications, Central Mining Research Institute Publications etc. Flow charts for the acquisition of Indian and Foreign standards are shown in Appendix- A and B respectively.
2.3 Processing

The new standards and amendments received from the vendors are processed as detailed in flow-charts given in Appendix A and B. Unlike other TIC documents, all latest standards bear a stamp “CONTROLLED COPY” in predefined colour (VIOLET). A well structured database of standards is maintained in CDS/ISIS software package (Ver.3.07). Every time a new standard or amendment is received by TIC, the database is updated immediately.

2.4 Master list of Standards

Maintaining master lists of latest standards is mandatory in ISO 9000 QMS. Hence, separate master lists for each category of standards is prepared from STDS database and maintained in printed form in files. A sample copy of master list page is shown in Appendix-C.

2.5 Circulation

The Rules and Regulations applicable for the circulation of books and journals are applicable to the circulation of standards & codes too. The loss of standards under circulation have to be declared to be lost in a predefined format to TIC. Replacement copies of latest standards will be procured upon receipt of such declarations.

2.6 Department Collections of Standards

Certain standards are frequently required at the place of work of Departments/Units. Therefore, based on requests received from Departments/Units additional copies of standards are procured and issued to the Departments/Units with a stamp “PERMANENTLY ISSUED TO ......DEPT/UNIT”. At present, TIC of Unit-I (Bangalore) provides document control service for International standards held by Unit-I, II(Hubli), III(Peenya), IV(Mysore) and V(Bangalore & Peenya). However, the
Document control service for national standards collection is restricted to Departments in Unit I & V only. A bar graph indicating the number of standards held by all the five units, for which Document control service is provided, is shown in Appendix - D.

2.7 Withdrawal/Amendments of Standards

Unlike books and journals, the standards are dynamic documents. They often get revised or amended to keep in step with changes in technology and industrial practices. The revision or amendments of standards are identified by comparing the source documents given in section 2.1 of this paper, with Master Lists maintained in TIC. The withdrawn standards are immediately removed from the shelves/circulation and stamped “WITHDRAWN & SUPERSEDED BY........”. The standards issued permanently to the Departments/Units are also recalled and withdrawn from all the records of TIC.

In the event of amendments of standards, new amendments are purchased as per the acquisition procedure explained in Section 2.2. Sometimes, the amendments are available free of cost. E.g. Indian and British standard amendments. If the company has more than one copy of a standard, TIC takes additional copies of amendments and issues the same to Departments/Units to update their standards collection.

2.8 Storage and Maintenance

The standards are shelved on standard steel stacks either freely or in pamphlet boxes depending on the quantity or the convenience of the usage. Separate sections are maintained for “LATEST” or current standards and “WITHDRAWN” standards. The readers are not allowed to use withdrawn standards unless they specifically need the same for comparing with current practices. The necessity of consulting withdrawn standards arises whenever customers ask for spare parts of the equipment supplied earlier.
3. INFORMATION DISSEMINATION SERVICES

Document control service for standards is supported by two current awareness publications. They are:

- List of standards revised/withdrawn/amended during the Month...... (Monthly).
- New Additions to T.I.C. (Part.2: Standards) (Bi-monthly).

The STDS database is structured to provide below mentioned outputs to the desiring departments:

- List of standards issued permanently to ..........Department(on demand).
- List of standards referred by .......... Department(on demand).

Literature searches can be conducted on STDS database using prefix of the standard, title terms or UDC class numbers, etc., as key terms.

4. QUALITY AUDITS

Quality audits are conducted periodically to verify the compliance of the practices of an organisation with the system requirements. The same are done by qualified internal auditors or external quality certifying agencies such as M/s. BVQI. TIC is also audited, while auditing other departments of the company. Non-Conformances (NC) in practices observed during the audits are recorded in predefined format and given to the Librarian. The Librarian has to initiate corrective action and complete the same within the target date.
5. TIC DEPARTMENT MANUAL

The procedures and practices relating to Document control activities of TIC are documented in TIC Department Manual. The manual is being revised whenever changes of following nature occur:

- Changes in internal procedures of document control.
- Changes in personnel handling Document control activity.
- Changes of Management Representative (MR) or Head of the Department (HOD) of TIC.
- Revision of ISO 9000 series of standards etc.

6. MANAGEMENT FUNCTIONS

6.1 Deming’s Cycle of Continuous Improvement

Any quality system needs continuous improvement in order to achieve perfection and provide improved service to the customers. “THE FOURTEEN POINTS”, “SEVEN DEADLY DISEASES” and “THE PDCA CYCLE” put forward by Edward Deming\(^3\) serve as guidelines in achieving continuous improvement activity. TIC has undertaken following activities as part of continuous improvement programme.

- The functional skills to TIC staff are continuously reviewed and training needs are identified and intimated to HRD once a year.

- Preventive action meetings are held at least once a year to avoid the occurrences of NCs and take necessary steps.

6.2 Statistical Techniques
The operational data of TIC, such as, expenditure statistics, membership data, etc. are presented in the form of statistical charts, to take decisions and gain support from Management (Appendix-D).

6.3 House Keeping

The layout chart of TIC is displayed at a Central place indicating the locations of various collections. Good house-keeping is observed to make the accessibility of standards to a satisfactory level.

7. INTERNET

INTERNET has recently emerged as an important and universal source of information. Several standardizing agencies such as American National Standards Institute (ANSI), British Standards Institution (BSI), IEC, ISO etc., have created Web sites, in which bibliographic information of standards is available for searching and retrieval. Web sites also permit to buy standards through credit cards.

8. CONCLUSION

The ISO 9000 QMS activities should be supported by data/facts documented in various records at every stage. The purpose is to establish transparency and traceability in operations. The quality records are subjected for verification during quality audits and hence are kept up-to-date all the time.

By virtue of their professional skills, the Librarians are better suited to perform the ‘DOCUMENT CONTROL’ service for standards and codes. They have to take over this function wherever the same is performed by the Standards Departments of the Companies. This will also relieve Standards Departments to concentrate on implementation of standards at Company level.
9. ACKNOWLEDGEMENT

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10. REFERENCES


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Appendix- A

ACQUISITION OF INDIAN STANDARDS
Appendix- A

ACQUISITION OF INDIAN STANDARDS
Appendix- B

ACQUISITION OF FOREIGN STANDARDS
Appendix- B

ACQUISITION OF FOREIGN STANDARDS
Appendix- C
Appendix- D

DISTRIBUTION OF STANDARDS AMONG TIC, DEPTS. & UNITS (AS ON 1998-1102)