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INDIAN STANDARDS INSTITUTION (ISI)

FIFTEENTH
ANNUAL REPORT

APRIL 1961—MARCH 1962



MANAK BHAVAN, 9 MATHURA ROAD
NEW DELHI 1

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ANNUAL REPORT

APRIL 1961—MARCH 1962



THIS REPORT WILL BE PRESENTED BY THE EXECUTIVE COMMITTEE
TO THE GENERAL COUNCIL OF ISI AT ITS NEXT ANNUAL MEETING

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SHRI K. C. REDDY, UNION MINISTER FOR COMMERCE & INDUSTRY AND PRESIDENT ISI
ADDRESSING THE MEETING OF THE ISI GENERAL COUNCIL (MARCH 1962)

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ACKNOWLEDGEMENT

The Indian Standards Institution takes the opportunity of expressing its deep appreciation for the specialized technical assistance and financial support received during the year under review from the ever-growing circle of its members, and other individuals and organizations associated with its work, whose valuable contributions have made ISI what it is today.

The pattern of this growing co-operative activity is an index of the all-round realization that through standardization lies the road to industrial progress and trade efficiency, ultimately leading to economic advancement of the country.

Encouraged by the faith reposed in, and conscious of the expectations from it, the Institution looks forward, with confidence, to the future of its working in progressive partnership with interests representing trade, industry, science, technology and Government.

FIFTEENTH ANNUAL REPORT

OF THE
INDIAN STANDARDS INSTITUTION
(APRIL 1961 — MARCH 1962)

PART I GENERAL REVIEW

The Indian Standards Institution has completed 15 years of its service to industry, trade and commerce. The year 1961-62 marked the successful completion of its two Five-Year Plans and the launching of the Third.

As a result of concerted efforts, there was a greater all-round awareness of the role of standardization and quality-control, and of the part played by ISI in national development.

The demand for national standards for the guidance, development and expansion of industry and trade continued to grow. During the year under review, 259 new Indian Standards were adopted and sent to press and 67 were revised. This achievement of producing 326 new and revised Indian Standards represents a substantial advance on last year's corresponding figure of 264.

Implementation of Indian Standards achieved a new mark of 1 604, representing 86 percent of the total standards in force on 31 March 1962. Many industrial undertakings and purchase organizations, both in the public and private sectors, implemented Indian Standards resulting in the production of goods and services conforming to national standards. Conferences for implementation of Indian Standards on state level were held in Maharashtra, Mysore, Gujarat and Uttar Pradesh in which the respective State Governments passed recommendations for:

- a) implementation of Indian Standards,
- b) recognition of ISI Certification Marks Scheme, and
- c) extending the scope of standardization.

The Indian Standards Convention 1961 — sixth in the series, five having already been held at Calcutta, Bombay, Madras, Delhi and Hyderabad — was held at Kanpur, the leading industrial centre of Northern India at which important subjects of topical interest were discussed.

The General Council of the Institution held its annual session on 19 March 1962 under the chairmanship of its President Shri K. C. Reddy, Union Minister for Commerce & Industry. The Executive Committee and the Finance Committee held six meetings each during the year.

Published Standards — At the end of the year under report, the total number of Indian Standards published and under print reached the figure of 1 926. During the year, 259 new standards as against 246 in the last year were sent to the press, and 67 standards were revised and six standards withdrawn. Lists of new and revised standards, and of standards withdrawn are given in Appendix A (*see* p. 136).

Membership — The subscribing membership of the Institution rose from 2 065 to 2 310 in the year under report, showing an increase of 245. The revenue realized through this source was Rs 6·51 lakhs as against Rs 6·03 lakhs in the previous year. The growth of ISI membership for the last six years is shown in the following table:

<i>On 31 March</i>	<i>Number of Subscribing Members</i>	<i>Subscription Received (in lakhs of rupees)</i>
1957	1 347	3·36
1958	1 510	3·69
1959	1 770	3·99
1960	1 946	4·31
1961	2 065	6·03
1962	2 310	6·51

The Committee membership went up to 12 397 from 11 287 consequent to the increase in the total number of committees, subcommittees and panels from 972 to 1 049.

Third Five-Year Plan of ISI — Guided by the generally accepted principle of planned economy, ISI has phased its work according to its own five-year plans, the periodicity of which corresponds to the National Plans of the country. The Third Five-Year Plan of the Institution was put into operation from 1 April 1961, and so the year under review records the activities for the first year of the Third Plan.

The Plan envisages a two-fold increase in the activities of the Institution, having a total outlay (including capital expenditure of Rs 32·5 lakhs) of Rs 275·9 lakhs out of which Rs 159·0 lakhs will be contributed by the Government of India and the balance of Rs 116·9 lakhs would be collected from different sources of direct income.

The rate of formulation of Indian Standards will be gradually increased so as to reach the figure of 500 in the last year of the Plan, the total estimated number of published standards by the end of the Plan being 3 500.

The Plan includes the creation of the two additional divisions, namely, Consumers Products Division and Laboratory Division, setting up of three more branch offices and the construction of an additional building to house laboratory and other departments. It is noted with satisfaction that one branch office was set up at Kanpur during this year (*see* p. 13).

Metric System—During the period under review, further steps were taken by the Central and State Governments for the adoption of the metric system in the country. Metric capacity measures were introduced in certain specified areas from 1 April 1961; metric length measures were brought into force all over the country from 1 October 1961 with a transition period of one year; and metric weights were made compulsory throughout the country from 1 April 1962.

With the adoption of the metric system by all sectors of organized industries and by government departments in their commercial transactions, demands for advice from the Institution on multifarious problems of changeover increased rapidly. The Institution is giving every possible assistance in resolving these problems. Basic standards required by the industries for the changeover continued to receive prior attention and the majority of such standards has been published. The number of non-metric standards which was 538 on 1 March 1961 came down to 357 on 31 March 1962.

ISI Certification Marks Scheme—The ISI Mark continued to gain in popularity with the producers, traders and consumers and the momentum gathered by the ISI Certification Marks Scheme during last year led to steadier progress during this year that is its Seventh Year of operation. The number of licences for the use of Standard Mark rose from 184 as at the end of the year 1959-60 to 289 in 1960-61 and to 401 as at the end of the year under report. The number of applications went up from 417 in 1959-60 to 609 in 1960-61 and to 780 by the end of the year under report.

In order to eliminate complaints from overseas buyers about the quality of goods exported from India and their packing, to maintain enduring trade connections and also to popularize Indian goods in foreign markets, the Government of India set up an *Ad hoc* Committee to examine the question of imposing quality control on various goods exported from India. Dr. Lal C. Verman, Director, ISI was appointed its Chairman, and Shri C. N. Modawal, Head of the Certification Marks Division, ISI was co-opted as a member.

The Committee submitted its final Report on 30 May 1961 which *inter alia* recommended that it would be advantageous if the Government of India in the Ministry of Commerce & Industry, would take positive steps to encourage the popularization of ISI Mark, the Agmark, and other Certification Marks such as quality marks of the State Governments, Itex Mark and the Handloom Board Mark. The Government have, by and large, accepted the recommendations of this Committee.

Another Committee to consider possibilities of extending the use of Certification Mark in the country was appointed under the chairmanship of Shri D. S. Joshi, Additional Secretary, Ministry of Commerce & Industry. According to its latest decision, the Government would have to consider the advisability of proposing a small voluntary development cess on certain products to cover the cost of certification

and other research and developmental activity which could be organized for the benefit of these industries. There was already a well-established precedent in this regard in the plywood industry and there could be little objection to extending it to other industries. Another proposal made by the Joshi Committee and agreed to by the DGS & D was the relaxation of inspection in the purchase of some items, where it was found that ISI certified goods conformed to Indian Standards and there were no complaints.

One of the important industries in which the ISI Certification Marks Scheme was introduced during the year was steel and the first ten licences were issued to the Hindustan Steel Limited for their Steel Plants at Bhilai and Durgapur.

Another development of importance was the advice of the Government of Madras to the manufacturers of domestic aluminium utensils not to use aluminium scraps for the manufacture of cooking utensils. If, however, such articles were manufactured out of aluminium scraps, they might be brought under the ISI Certification Marks Scheme so as to enable the public to distinguish the utensils made of good aluminium. The Madras Government also advised the public about the desirability of purchasing aluminium utensils bearing the ISI Mark. The Government of Kerala also accepted the suggestions that the new units that were being set up in the State for the manufacture of aluminium utensils might be insisted on to utilize only ISI marked sheets.

The financial working of the Scheme was heartening. It resulted in an income of Rs 3.10 lakhs. The expenditure also was of the same order. To test the quality of various products, a sum of Rs 37,170.00 was spent during the year. The Institution's own laboratory is being set up and it should be a great asset to the working of the Scheme.

The increasing demand for ISI Mark was in no small measure due to the co-operation of Governments of India and States. During the year under report, Governments of Mysore, Rajasthan and Kerala and Delhi Administration issued instructions for preference being given to certified goods by their purchasing departments.

The value of products under the Scheme which covered 131 Indian Standards was estimated roughly, to give an annual value of Rs 48.50 crores as against the products of an annual value of Rs 40 crores covered by 93 Indian Standards during the last year of report.

Indian Standards Convention 1961—The Sixth Indian Standards Convention was held in the G.S.V.M. Medical College, Kanpur, from 25 to 30 December 1961. The Convention was inaugurated by Shri C. B. Gupta, Chief Minister of Uttar Pradesh and presided over by Shri K. C. Reddy, Union Minister of Commerce & Industry and President of ISI. At this Convention, Shri K. C. Reddy also gave away the K. L. Moudgill Prize for the year 1961 to Shri T. V. Ramamurti of the National Physical Laboratory, New Delhi for his outstanding contribution to standardization work in India. It may be mentioned

that with effect from the year reviewed, the value of the Prize has been enhanced from Rs 500·00 to Rs 1 000·00.

A local Reception Committee consisting of leading citizens was formed under the chairmanship of Shri Padampat Singhania, the well-known industrialist, with Shri Bhagwat Dayal, Secretary Upper India Chamber of Commerce, as the Secretary of the Committee. The Reception Committee made necessary arrangements for accommodation, transport and local visits to places of technical and general interest.

The Convention was attended by 452 delegates (with forty accompanying ladies) from all over the country. The following nine technical sessions dealing with subjects of topical interest were held at which 120 papers were discussed:

- S - 1 Productivity in Building Design and Construction
- S - 2 Review of Indian Experience with Certification Marking
- S - 3 Packaging
- S - 4 Company Standardization Practices
- S - 5 Introduction of Metric System in Engineering Industries
- S - 6 Adoption of Universal Count System in Textiles
- S - 7 Housing and Preservation of Documents
- S - 8 Safe Use of Electricity in the Home
- S - 9 Non-destructive Testing of Metals

The Convention was also attended by Dr. M. M. Salama, Director of the Egyptian Organization for Standardization (EOS). Speaking at the inaugural function, Dr. Salama said 'EOS still quite young in the field of standardization hardly 5 years old — seeks the friendship of its elder brothers to gain skill and experience. In ISI, it has found one of the most sincere co-operative friends, and we hope that our mutual co-operation in this major scientific and technical field will lead to more prosperity and progress for our great old countries'.

The Indian delegates represented, among others, the Union and State Government departments, manufacturing firms, business houses, chambers of commerce, associations of industry, technical institutions and research laboratories.

Inaugurating the Standards Convention, Shri C. B. Gupta laid stress on implementation of Indian Standards and said, 'The optional aspect of standardization should be reconsidered and the same should be made compulsory at least with respect to food and medical products, as their quality directly affects the general health of the people'.

Two post-convention excursions, one to Khajuraho and the other to Lucknow, were also arranged.

The proceedings of the Convention evoked keen interest among the people; editorials and other comments appeared in the press throughout the country. A detailed report of the inaugural function and

proceedings of technical sessions was published in the March-April and May-June 1962 issues of ISI Bulletin.

Finances — A certified statement of accounts for the year under review appears in Appendix B (*see* p. 150). Total income of ISI from various sources, such as contribution of the Government of India, membership subscription, sale of standards and certification marks fee amounts to Rs 3 412 894·13 as against an expenditure of Rs 3 483 846·81. In addition to this, we have to take into account the indirect contribution made by way of expenses incurred by members of the committees from Government and private organizations to attend meetings of ISI within India and abroad. Such invisible contribution for the year under report is estimated at Rs 771 000·00.

Publicity Activities — The Publicity Section of the Institution continued its efforts towards increasing widespread standards-consciousness among the public and popularizing the ISI Certification Marks Scheme through various media. Press notes on standards, draft standards, licences issued for applying certification marks and important meetings were released. A number of articles, write-ups, resumé, reviews, etc, about standardization in general and activities of ISI in different fields in particular were published in various newspapers, periodicals, directories, technical journals and reference books. At the time of the Sixth Indian Standards Convention, special supplements and features dealing with standardization and the activities of ISI were brought out and editorials were written by several leading newspapers commenting on the utility of standards conventions in the economic life of the country.

With the object of enlightening the public about the activities of ISI, particularly the ISI Certification Marks Scheme, advertisements were released in selected newspapers and technical journals throughout the country. For reaching the common man, such advertisements were also issued in Hindi and language press. In addition, with the active co-operation of ISI members, who gave donations of advertising space and money, co-operative advertisements on philosophy of standardization were issued in a number of papers.

A number of pamphlets and brochures, including one in Hindi, relating to the activities of ISI with particular reference to ISI Certification Marks Scheme, were distributed on important occasions, including the Sixth Indian Standards Convention; Indian Industries Fair, 1961 and State Conferences on Implementation of Indian Standards.

An intensive publicity campaign was carried out in Uttar Pradesh on the occasion of the Sixth Indian Standards Convention held at Kanpur, through press, radio broadcasts, newsreels, cinema slides and bus panels.

Press conferences on important occasions, such as the opening of the Branch Office at Kanpur, State Conferences on Implementation of Indian Standards and Indian Standards Convention were addressed by

Director and Joint Director, when the press was apprised of the activities of the Institution.

Some broadcast talks by staff members and outside experts from different stations of the All India Radio on subjects of interest in the field of standardization were arranged during the year.

The Institution participated in the Indian Industries Fair, 1961, in a built-in stall covering an area of 186 m² (about 2 000 ft²) in the Export Promotion Pavilion, which has been allotted, free of cost on permanent basis, by the Exhibition Directorate of the Ministry of Commerce & Industry. In ISI Stall, aims and objects of the Institution, functions of standards and advantages of standardization have been suitably brought out through paintings, cartoons, posters, charts, etc. Some of the products bearing ISI Certification Mark have also been displayed. ISI Stall was visited by distinguished guests and important persons from India and abroad, including the President of USSR; the Prime Minister of Burma; the Industries Minister of UAR; the Federal Minister for Commerce & Industry, Nigeria; Shri Morarji Desai, Finance Minister of India; and Shri T. N. Singh, Member of the Planning Commission.

With the co-operation of licensees under the ISI Certification Marks Scheme and of the Reception Committee of the Sixth Indian Standards Convention, an Exhibition of ISI certified products was organized in Kanpur, the venue of the Convention, in December 1961. The Exhibition was opened by Shri C. B. Gupta, Chief Minister, Uttar Pradesh and was visited by the delegates to the Convention and a number of other people.

Standards Museum — With a view to explaining the concept, object and scope of standardization and the manner in which this concept has been brought to reality by the Indian Standards Institution, a Standards Museum has been set up on Floor 1 of Manak Bhavan. Located in a hall 8.5 m × 17.5 m, the museum explains how the services of ISI are available to all for the benefit of the nation. It is essentially the common man to whom the museum is addressed and it is to him that the story is told — rather a number of stories are told which finally go to make a single main story. The dynamism of the exposition brings out the dynamic quality of standards and the exposition as a whole attempts to convert the disinterested into the interested, the ignorant into the informed, the non-believer into the believer and the believer into the knowledgeable.

The museum is broadly divided into the following three sections:

Basic Section — which is relatively permanent, gives a brief but complete picture of the principles, concept and philosophy of standardization and its benefits, and the organization and activities of the Indian Standards Institution including the ISI Certification Marks Scheme.

Topical Section — which is meant to be changed periodically under the title 'INDIA PRODUCES', describes the achievements of a selected industry in the country. The section also shows how standards have aided the progress of industry and such other aspects.

Certified Products Section — which is a continuously growing section bearing the title 'ISI CERTIFIES', displays samples of ISI certified products.

Library and Information Services — The Libraries of the Institution at the Headquarters and in Branch Offices at Bombay, Calcutta, and Madras continued to render useful services to ISI members and others disseminating information about standards and specifications. The collection of standards and other technical publications in the ISI Library at Headquarters now exceeds 100 000. During the year ending 31 March 1961, 11 948 publications were accessioned in the library. The number of technical, trade and scientific journals received in the library reached the figure of 315. During the year under review, 15 new journals were added in the library. A small reference library is being set up at the new ISI Branch Office at Kanpur.

For the information of members and subscribers all new accessions (standards and specifications) to the library are being regularly published in the ISI Bulletin.

The resources of the library were freely utilized by the various committees and subcommittees, and other members of the Institution as well as by the various government departments. More than 30 000 publications were either consulted or loaned out from the library at Headquarters; and 104 bibliographies were prepared for the use of technical personnel and committee members.

Arrangements were also made, according to need, for translation of standards literature in foreign languages. The library has now 9 persons on its panel of translators knowing Czech, French, German, Japanese, Russian and Spanish languages.

The library also collected and supplied information on standards and other relevant literature on various subjects in India and abroad. The number of such queries averaged about 20 per day.

Branch Offices — During the year under report the existing Branch Offices located at Bombay, Calcutta and Madras continued the work of dissemination of information of technical character, with special reference to national, foreign and international standards, to the industry in their respective regions. The libraries attached to the Branch Offices have been augmented and equipped with more up-to-date literature. With effect from 1 March 1962 the Branch Offices also took over the additional services of direct sales of British Standards. The response to this service has been very encouraging. Another important activity entrusted to the Branch Offices was the inspection work of the

Certification Marks Scheme of ISI. The preliminary as well as the half-yearly inspections of applicants' and licensees' factories were now being mostly carried out by the staff of the Branch Offices.

Kanpur Branch Office — In keeping with the policy of ISI to open branch offices at important industrial centres in the country with a view to establishing closer relations with the local industries, a new branch office was opened at Kanpur to serve the industry and trade of Uttar Pradesh and adjoining areas. The Kanpur Branch Office, which started functioning from 9 August 1961, was formally inaugurated by Shri Padampat Singhania on 26 September 1961. The inaugural function, which was attended by leading citizens, industrialists, manufacturers and government officials, was presided over by Shri M. Samiuddin, Director of Industries, Uttar Pradesh and addressed by Dr. A. N. Ghosh, Joint Director, ISI.

Women's Advisory Committee — The Women's Advisory Committee of the Institution set up during the year 1959-60 to (a) advise ISI on formulation and implementation of standards for goods of everyday use in the home; (b) create awareness among womenfolk in general and housewives in particular about the utility of goods conforming to Indian Standards; (c) propagate certification marks scheme; and (d) publicize standardization movement among women of India; held its second meeting in March 1962 under the chairmanship of Smt. Raksha Saran. The meeting was attended, among others, by the Chairmen of the Social Welfare Advisory Boards of various States. The Committee considered the ways and means to achieve its objects through different media including the various women organizations.

International Activities — As in the past, ISI continued to play its part in the work of standardization at international level. The Institution continued to serve as an elected member of the Committee of Action of IEC and was elected again after a lapse of only one year to the ISO Governing Council since January 1962. ISI has been a member of the ISO Council since the formation of ISI except for 1961.

The Institution participates actively in the work of 71 of the 101 Technical Committees of ISO and all the 54 Technical Committees of IEC. It also holds Secretariats of the following Technical Committees and Subcommittees of ISO and IEC:

- a) ISO/TC 50 Lac
- b) ISO/TC 56 Mica
- c) ISO/TC 88 Pictorial Marking of Handling Instructions for Goods
- d) IEC/TC 43 Fans
- e) ISO/TC 30 SC 1 Measurement of Liquid Flow in Open Channels
- f) ISO/TC 34 SC 7 Spices and Condiments

The triennial session of the ISO General Assembly held at Helsinki on 15 June 1961 was attended on behalf of India by Dr. Lal C. Verman, Director, ISI and Shri M.M. Khorana, *Charge-d'affairs*, Indian Embassy, Finland.

The Director of ISI continued to serve as the Chairman of the Planning Committee (PLACO) of ISO, member of ISO Standing Committee for the Study of Scientific Principles of Standardization (STACO) and ISO Liaison Officer for ECAFE.

In his last mentioned capacity, the Director, ISI attended the Second Inter-Regional Hydrologic Seminar organized co-operatively by ECAFE and World Meteorological Organization (WMO) held from 27 November to 11 December 1961 at Bangkok (Thailand). The Seminar noted with satisfaction the report on the work of the Subcommittee on Liquid Flow Measurement in Open Channels of ISO of which India holds the Secretariat, and expressed the hope that all ECAFE countries should actively participate in the formulation of the recommendations.

The twenty-sixth Annual Group Meetings of the International Electrotechnical Commission (IEC), held at Interlaken (Switzerland) from 18 to 30 June 1961 were attended by a strong Indian delegation of nine persons including Shri M. Hayath, Chairman, Electrotechnical Divisional Council of ISI who delivered the Seventh Charles le Maistre Memorial Lecture.

In his masterly exposition of the subject, 'What the IEC Means to Developing Countries?', Shri Hayath drew pointed attention of the IEC to certain special considerations relating to the developing countries. One such consideration, Shri Hayath mentioned was that the pace of development in developing countries is comparatively bigger. This necessitates a great deal of technological effort, which, in turn, requires the taking of fullest advantage by the developing countries of the knowledge and experience available in IEC. A second consideration is that the developing countries require technological collaboration. And since this collaboration may be coming forth from more than one source, it is necessary from the viewpoint of developing countries that international standards should be fully accepted and implemented as national standards of the developed countries.

PART II DIVISIONAL REPORTS

0. INTRODUCTION

0.1 In this part of the report are recorded brief summaries of the technical work done by different divisions and sections of the Institution during the year 1961-62.

0.2 During the year under review, 446 new proposals for formulation of Indian Standards were received, 473 proposals (this figure includes a few proposals made during the previous year) were accepted and referred to various committees for further action.

0.3 The rapid increase in the activities of the Institution is graphically shown in Fig. 1, 2 and 3.

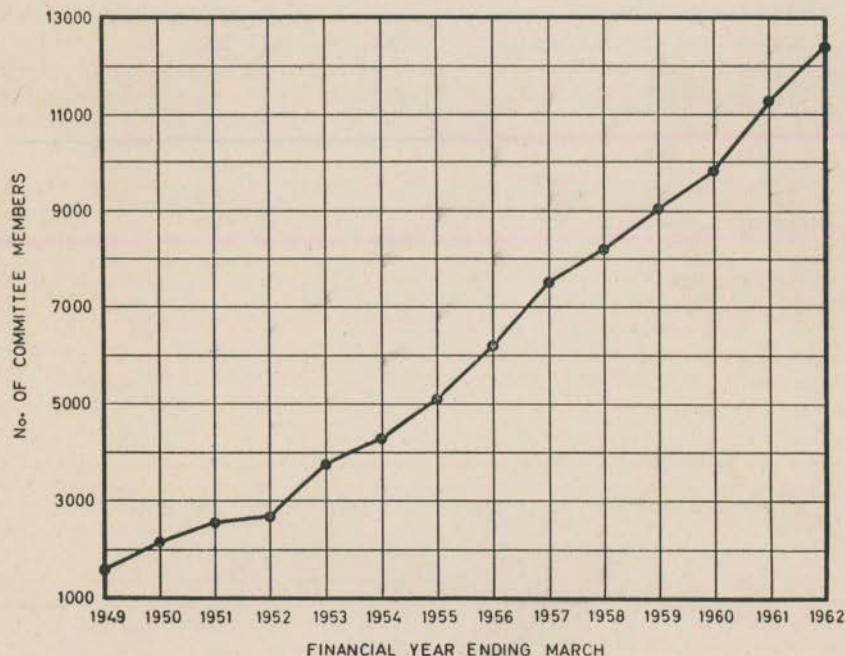


FIG. 1 GROWTH OF COMMITTEE MEMBERSHIP

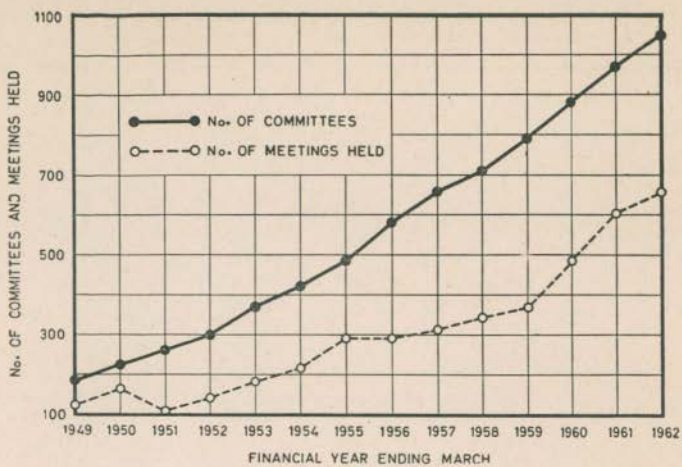


FIG. 2 GROWTH OF COMMITTEES AND THEIR ACTIVITIES

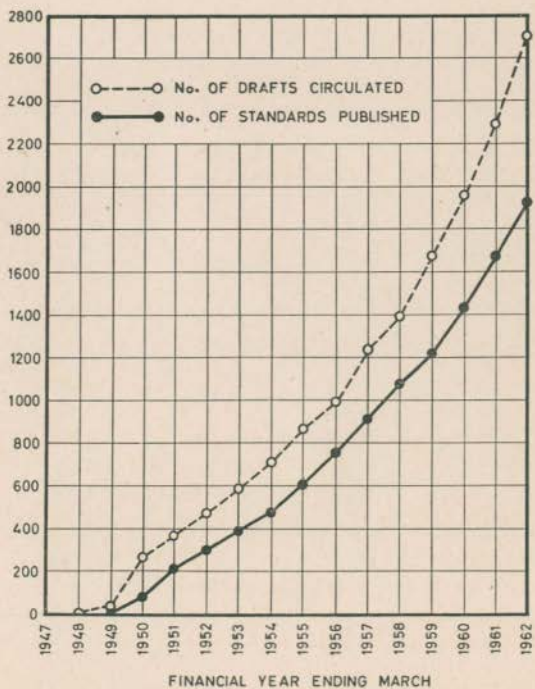


FIG. 3 GROWTH OF INDIAN STANDARDS

0.4 The cumulative information about the work pertaining to different divisions and sections of the Institution is given in Table I.

TABLE I RECORD OF ISI TECHNICAL DIVISIONS
(FOR THE YEAR 1961-62)

(For details of standards published and under print during 1961-62, see Appendix A)

DIVISION OR SECTION	NO. OF COMMITTEES	NO. OF MEETINGS	NEW STANDARDS AND REVISED STANDARDS PUBLISHED AND UNDER PRINT	AMENDMENTS TO STANDARDS	DRAFT STANDARDS CIRCULATED
Agricultural & Food Products	107	73	39	16	48
Building	149	84	55	5	44
Chemical	232	138	53	219	78
Electrotechnical Engineering	91	74	33	25	54
Structural & Metals	160	91	48	4	55
Textile	158	61	52	9	66
Miscellaneous	130	98	45	51	59
	22	35	1	—	8
TOTAL	1 049	654	326	329	412

1. AGRICULTURAL AND FOOD PRODUCTS DIVISION

1.1 The Division successfully accomplished its task planned for the year. In all 39 standards (including seven revisions) were either published or sent for printing (*see* Appendix A). Important subjects covered by the printed standards include spices and condiments; animal casings for sausages which have assumed importance owing to India's growing interest in their export; pest control products and equipment; animal feeds; agricultural implements, such as paddy weeder and sugarcane crushers; all of which are of basic importance to the agricultural industry.

1.2 Keeping in view the large number of dairy projects envisaged in the Third Five-Year Plan and also the policy of the Government of India to get as many items of dairy equipment manufactured within the country as possible, an intensified effort was made to further the progress of the work already undertaken in respect of formulation of standards for dairy equipment.

1.3 As new lines of activity, work was initiated on carbonated beverages; code of practice for carriage of monkeys by air, rail and road; fruits and vegetables; and cereals and pulses.

1.4 In view of the growing importance of the fish industry in the national economy, the Division Council which held its annual meeting

on 23 March 1962, set up a separate Fish and Fisheries Products Sectional Committee, AFDC 27. The work on the subject was hitherto looked after by a subcommittee of the Meat and Meat Products Sectional Committee, AFDC 18. During the year, 108 new subjects were included in the programme of work.

1.5 A brief account of the work of the Division is given below:

Pest Control Products, AFCDC 6 — Six draft standards covering parathion, technical; phenyl mercury salicylate, technical; parathion emulsifiable concentrates; phenyl mercury acetate, technical; stabilized methoxy-ethyl-mercury chloride; and hand compression sprayer for agricultural use, were put into wide circulation. In addition, draft revisions of three published Indian Standard (Specifications, namely — IS : 1052-1957 Dieldrin, Technical; IS : 1053-1957 Dieldrin Water Dispersible Powder Concentrates and IS : 1054-1957 Dieldrin Emulsifiable Concentrates were also put into wide circulation.

STANDARDS PUBLISHED

- IS : 560-1961 BHC, Technical (*Revised*)
- IS : 561-1962 BHC, Dusting Powders (*Second Revision*)
- IS : 562-1962 BHC, Water Dispersible Powder Concentrates (*Second Revision*)
- IS : 563-1961 DDT, Technical (*Revised*)
- IS : 564-1961 DDT, Dusting Powders (*Revised*)
- IS : 565-1961 DDT, Water Dispersible Powder Concentrates (*Revised*)
- IS : 1824-1961 Household Insecticidal Spray
- IS : 1827-1961 Liquid Amine Salts of 2, 4-D
- IS : 1832-1961 Malathion, Technical
- IS : 1833-1961 Diazinon, Technical
- IS : 1970-1961 Hand Compression Sprayer for Public Health
- IS : 1971-1961 Single Barrel Stirrup Pump for Public Health

WORK IN HAND

- | | |
|--|---|
| Battery Sprayer — (without a pump with a separate charge pump) | d) Phenyl Mercury Chloride, Technical |
| Central Charge Pump | e) Phenyl Mercury Salicylate, Technical |
| Diazinon Emulsifiable Concentrates | f) Stabilized Methoxy-Ethyl-Mercury Chloride |
| Diazinon Water Dispersible Powder Concentrates | |
| Endrin Dusting Powders | Hand Rotary Dusters |
| Endrin Water Dispersible Powder Concentrates | Hydraulic Spray Nozzles |
| Ethoxy-Ethyl-Mercury Chloride, Technical | Knapsack Sprayer |
| Ethyl Mercury Chloride, Technical | Malathion Dusting Powders |
| Foot Sprayer | Malathion Emulsifiable Concentrates |
| Formulations based on: | Phenyl Mercury Chloride, Technical |
| a) Ethoxy-Ethyl-Mercury Chloride | Rocker Sprayer |
| b) Ethyl Mercury Chloride, Technical | Single Barrel Stirrup Pump for Agricultural Use |
| c) Phenyl Mercury Acetate, Technical | Sulphur Dust |
| | Toxaphene |
| | Wettable Sulphur |

Spices and Condiments, AFDC 21—Two draft standards for chillies and mustard powder were put into wide circulation.

STANDARDS PUBLISHED

IS : 1797-1961 Methods of Sampling and Test for Spices and Condiments
IS : 1798-1961 Black Pepper, Whole and Ground
IS : 1877-1961 Terminology for Spices and Condiments
IS : 1907-1961 Cardamom
IS : 1908-1961 Ginger, Whole and Ground
IS : 1909-1961 Curry Powder

WORK IN HAND

Celery Seed	Cumin Seed
Chilly Powder	Fennel Seed
Cloves	Turmeric
Coriander	Turmeric Powder

Dairy Industry, AFDC 12—The draft standard for cylindrical pipettes for dairy bacteriological work was finalized. The following draft standards were put into wide circulation:

Batch Pasteurizer (Aluminium)
Batch Pasteurizer (Stainless Steel)
Bottle Filler, Hand
Bottle Washer, Hand Operated
Cap Sealer for Milk Bottles, Hand Operated
Cheese Vats
Methods of Test for Dairy Industry—Part IV : Freezing Point Depression of Milk by Hortvet Method
Methods of Test for Dairy Industry—Part V : Methods of Dairy Plant Control
Milk Coolers (Open-Surface)

Four Draft Indian Standards, namely, Stainless Steel Milk Cans, Insulated Stainless Steel Milk Storage Tank, Fat Extraction Apparatus and Density Hydrometers for Use in Milk (Revision of IS : 1183-1957) were approved for wide circulation.

STANDARDS PUBLISHED

IS : 1479 (Part II)-1961 Methods of Test for Dairy Industry: Part II Chemical Analysis of Milk
IS : 1792-1961 Aluminium Milking Pails (Hooded Type)
IS : 1806-1961 Malted Milk Food
IS : 1825-1961 Aluminium Milk Cans
IS : 2003-1962 Malted Milk Food Containing Cocoa Powder

WORK IN HAND

Aluminium Foil Caps	Breed Pipettes
Aluminium Foil for Packaging of Dairy Products	Butter Churn, Wooden, Hand Operated

Butter Moulding Machine, Hand Operated	Curd Mills
Butter Moulds, Hand Operated	Dispensing Cans
Butter Scotch, Hand Operated	Ice Cream and Methods of Test for Ice Cream
Butter Scoops	Ice Cream Cans
Butter Trolley	Ice Cream Freezer
Butter Worker	Ice Cylinder Chambers for 40- and 50-Litre Milk Cans
Can Washer, Manually Operated	Insulated Aluminium Storage Tanks
Can Washing Trough	Layout Plan for Dairy Laboratory for Routine Testing of Milk
Capillary Pipettes for Dairy Bacteriological Work	Milk Cans (One Piece)
Casein Drier	Milking Pails, Stainless Steel
Casein Grader	Milk Strainers, Stainless Steel
Casein Grinder	Milk Vans
Casein Mincer	Milk Vats, Aluminium
Casein Precipitation Tank	Milk Vats, Stainless Steel
Casein Press	Road Milk Tankers
Cheese, Cheddar and Processed, and Its Methods of Test	Sanitary Conditions for Food Processing Units
Cheese Hoops	Steaming Blocks
Cheese Knives	Steam Jacketted Ghee Pans
Cheese Press	

Animal Feeds, AFDC 15 — The draft Indian Standard Specification for Balanced Feed Mixture for Cattle was finalized and five draft standards for maize screenings, maize-germ oilcake, maize gluten feed, maize bran and coconut oilcake as livestock feed were issued into wide circulation.

STANDARDS PUBLISHED

- IS : 1932-1961 Mustard and Rape Oilcake as Livestock Feed
- IS : 1934-1961 Sesamum (*TH*) Oilcake as Livestock Feed
- IS : 1935-1961 Linseed Oilcake as Livestock Feed
- IS : 1942-1961 Bone Meal as Livestock Feed

WORK IN HAND

Decorticated Safflower Oilcake	Meat Meal
Fish Guano	Oyster Shell Meal
Fish Meal	Rice Bran
Gram Chuni	Rice Polish
Gram Husk	Shark Liver Oil for Feeding Animals
Green Feeds	Tur Chuni
Guwar Meal	Wheat Bran

Meat and Meat Products, AFDC 18

STANDARDS PUBLISHED

- IS : 1981-1962 Animal Casings for Sausages
- IS : 1982-1962 Code of Practice for Ante-Mortem and Post-Mortem Examination of Meat Animals

WORK IN HAND

Bacon	Beef and Buffalo Flesh, Frozen
Beef and Buffalo Flesh, Canned	Ham
Beef and Buffalo Flesh, Fresh	Meat, Dehydrated

Mutton and Goat Meat, Canned
Mutton and Goat Meat, Fresh
Mutton and Goat Meat, Frozen
Mutton and Goat Meat, in Curry
Pork Pickles

Pork Products, Canned
Poultry Products
Sausages
Sausages, Canned
Slaughter Houses

Fish and Fisheries Products, AFDC 27

WORK IN HAND

Bombay Duck (Bombil), Dried
Mackerel, Canned in Oil
Mackerel, Dried, Salted
Pomfret, Canned in Oil

Prawns, Canned
Prawns, Dried
Prawns, Frozen
Sardines, Canned in Oil

Tobacco Products, AFDC 13 — The draft standard for snuff tobacco was put into wide circulation.

STANDARD PUBLISHED

IS : 1925-1961 *Bidis*

WORK IN HAND

Bidi Cigarettes
Chewing Tobacco, *Zarda* Type

Code of Practice for Construction of
Flue-Curing Tobacco Barns

Hooka Tobacco

Farm Implements and Machinery, AFDC 20 — Three draft standards for mouldboard plough, turnwrest type; mouldboard plough, fixed type; and transplanting spades and seprangs were issued into wide circulation.

STANDARDS PUBLISHED

IS : 619-1961 Pruning Knives, Hooked and Curved (*Revised*)

IS : 1973-1961 Sugarcane Crusher, Bullock-Driven Type

IS : 1976-1961 Paddy Weeders, Rotary Type

WORK IN HAND

Bill Hook, Single and Double
Bund Former
Chaff Cutters
Clasp Pruning Knife
Cleaning Out Knife
Cultivator
Dhows of all Types (Jungle Cutting
and Transplanting)
Disc Plough
Garden Rakes
Harrow and Parts
Hedge Sheers
Interculturing Implements

Matchet
Persian Wheel (Peg and Gear Drive)
Plough Complete (Including Blades)
Pruning Saws and Secateurs
Ridge Plough
Rubber Draining and Tapping Knife
Seed Drills
Sickles
Skiffing Knife
Thrashers
Wheels and Axles for Bullock Driven
Carts
Winnowing Fans

Food Colours, AFDC 19

WORK IN HAND

Anatto

Ponceau 4R

Acid Magenta II
Blue VRS
Brilliant Black BN
Caramel
Carmoisine
Carotene and Carotenoids
Chlorophyll
Cochineal or Carmine
Curcumin

Fast Red E
Henna (Powder and Leaves)
Lactoflavin
Methods of Sampling and Test for
Coal Tar Food Colours — Part II
Ratanjot
Red FB
Red 6B
Saffron

Edible Starches, Confectionery and Cereal Products, AFDC 10 — The draft Indian Standard for Roasted Chicory Powder was put into wide circulation.

STANDARDS PUBLISHED

IS : 966-1962 Desiccated Coconut
IS : 1960-1961 Wheatmeal Bread

WORK IN HAND

Besan
Idli Mix
Malt Extract

Papad
Soluble Coffee
Wafer Biscuits

Central Region Storage and Marketing Structures, AFDC 3

WORK IN HAND

Hexagonal Concrete Bins for Bulk Storage

Southern Region Storage and Marketing Structures, AFDC 5 — The draft layout for regulated market yards for tobacco was finalized. The Committee also decided to revise IS : 607-1955 Code of Practice for Construction of Food Grain Storage Structures Suitable for Trade and Government Purposes for the Southern Region and at the time of the revision to change the values given in *fps* system into the metric system.

STANDARDS PUBLISHED

IS : 1787-1961 Layout for Regulated Market Yards for Fruits and Vegetables
IS : 1788-1961 Layout for Regulated Market Yards for Cattle

Agricultural and Food Storage Practices, AFDC 7 — In pursuance of the policy to changeover to the metric system, five amendments giving the metric values in place of *fps* values in respect of the published standards were finalized.

STANDARD PUBLISHED

IS : 631-1961 Aluminium Food Grain Storage Bins

WORK IN HAND

Flat Storage Structures
Prefabricated Aluminium Seed Grain Storage Bins

Silos
Thermosampler

Apiary Industry, AFDC 11 — The draft Standard Specification for Comb Foundation Sheets was finalized.

WORK IN HAND

Bees Box, Travelling
Comb Foundation Mill
Honey (*Apis Dorsata*)
Honey Filters

Postal Bee Packages
Primary Pasteurization Units
Solar Pasteurization Unit for Honey

Sugar Industry, AFDC 8 — Indian Standard Grading for Vacuum Pan Sugar (Plantation White), IS : 498-1953 was revised and advantage was taken of this opportunity to specify metric weights and measures in place of *fps* units.

STANDARD PUBLISHED

IS : 498-1961 Grading for Vacuum Pan Sugar (Plantation White) (*Revised*)

WORK IN HAND

Code of Practice for Construction of Sugar Godowns

Fruits and Vegetables, AFDC 23

WORK IN HAND

Terminology for Fresh Fruits:

Apple
Banana
Brinjal
Cabbage
Carrot
Cauliflower
Citrus
Garlic
Guava
Lady's Finger (Okra)
Mango
Onion
Parval

Peas in Pods

Tomato

Mango

Pine-apple

Orange Segments

Karela

Lady's Finger

Mango Chutney

Peas

Packaging, Storage and Transport
of Fruits and Vegetables

Arecanuts

Papain

} Processed

Propagation Materials, AFDC 22

WORK IN HAND

Seeds of Temperate Type Vegetables

Beans	Lady's Finger (Okra)
Beet	Pea
Brinjal	Radish
Cabbage	Tomato
Carrot	Turnip
Cauliflower	

Cereals and Pulses

<i>Arhar</i>	<i>Moong</i>
<i>Bajra</i>	Rice
<i>Chana</i>	<i>Urd</i>
<i>Jowar</i>	Wheat
Maize	

Oil Seeds

Castor
Groundnut

Oil Seeds — Contd

Safflower

Til

Fibre Crop

Cotton

Fodder Crops

Berseem

Lucerne

Seed Potatoes

Sugarcane Setts

Grafts of Fruit Trees (Apple,
Mango, Citrus, etc) and Runners
of Banana

Budded Grafts and Seedlings of
Ornamental Flower Plants
(Rose, Chrysanthemum, etc)

Livestock Housing, AFDC 17— Three Draft Codes of Practice for Sheep and Goats Housing, Poultry Housing, and Equine Housing were approved for wide circulation.

WORK IN HAND

Code of Practice for Pig Housing
Code of Practice for Housing Cows and Buffaloes

Tea, AFDC 16

WORK IN HAND

Tea, Black

Tea, Green

2. BUILDING DIVISION

2.1 In all 55 Indian Standards relating to building industry were either published or sent to press during the year (see Appendix A). Among the important subjects covered by Indian Standards published during the year under report, particular mention may be made of plain hard drawn steel wire for prestressed concrete; cold worked steel bars deformed and twisted for concrete reinforcement, glazed earthenware tiles; pillar taps; ice cans; sealing compounds and preformed fillers for expansion joints in concrete; and timber for use in aircraft construction; in addition to revisions of specifications for concrete pipes, wood poles, tar and bitumen, water meters and codes of practice for manufacture of lime, structural safety of buildings—foundations and masonry walls and glossary of terms relating to building stones.

2.2 The new items included in the programme of work during the year include porous concrete pipes, wooden tent pins, plywood packing cases, solid wood pent top cases, wooden crates and barrels, heaters and distributors for tar and bitumen, asphalt mixers, asbestos cement flat sheets, concrete transmission towers, testing of concrete pipes and poles, septic tanks for institutional purposes, burnt clay aggregates for use in lime concrete, burnt clay tiles, facing bricks, sand for masonry mortars and codes of practice for prefabricated construction and composite constructions, damp-proofing of parapets and window sills, laying of heavy duty floor finish for industrial buildings, acid and alkali resistant floor finish and use of mortars in masonry.

2.3 During the year the work on timber, wood products and timber stores was reorganized and a new Sectional Committee to deal with items of timber stores was set up. Two more new Sectional Committees, one to deal with composite construction and the other to deal with sampling of building materials and components were set up.

2.4 A short account of the work done in different fields is given below:

Cement and Concrete, BDC 2—The revised specification for concrete pipes (IS : 458-1961) was finalized and printed. The revisions

of IS : 455-1953 Portland Blastfurnace Slag Cement and IS : 459-1955 Unreinforced Corrugated Asbestos Cement Sheets were finalized and the printed copies will be available soon. The specification for Portland Pozzolana Cement has been finalized and the Code of Practice for the Design and Construction of Reinforced Concrete and Prestressed Concrete Structures for Storage of Liquids is being issued for wide circulation. Work on the revision of IS : 383-1952 Coarse and Fine Aggregates from Natural Sources for Concrete and IS : 456-1957 Code of Practice for Plain and Reinforced Concrete for General Building Construction (*Revised*) has also progressed well and the revised drafts will be put into wide circulation shortly.

STANDARD PUBLISHED

IS : 458-1961 Concrete Pipes (With and Without Reinforcement) (*Revised*)

WORK IN HAND

Code of Practice for the Design and Construction of Reinforced Concrete and Prestressed Concrete Structures for Storage of Liquids
Integral Cement Waterproofing Compounds
Load Bearing Hollow Concrete Blocks
Portland Pozzolana Cement
Prestressed Concrete Street Lighting Columns
RCC Dust Bins
Steel Pipes Lined and Outcoated with Cement Concrete or Mortar

Revision of:

IS : 383-1952 Coarse and Fine Aggregates from Natural Sources for Concrete
IS : 455-1953 Portland Blastfurnace Slag Cement
IS : 456-1957 Code of Practice for Plain and Reinforced Concrete for General Building Construction (*Revised*)
IS : 459-1955 Unreinforced Corrugated Asbestos Cement Sheets

Concrete Reinforcement, BSMDC 8 — The draft specification for high tensile steel bars used in prestressed concrete was finalized and the draft Code of Practice for Bending and Fixing of Bars for Concrete Reinforcement was approved for wide circulation.

STANDARDS PUBLISHED

IS : 1785-1961 Plain Hard-Drawn Steel Wire for Prestressed Concrete
IS : 1786-1961 Cold Twisted Steel Bars for Concrete Reinforcement

WORK IN HAND

Code of Practice for Bending and Fixing of Bars for Concrete Reinforcement
High Tensile Steel Bars Used in Prestressed Concrete

Indented and Crimped Wires for Prestressed Concrete

Clay Products for Building, BDC 30 — Noting the advances being made in the field of clay products for building industry, the Sectional Committee realized the need for more concentrated attention to this field and started its work in full swing.

The draft specifications covering perforated bricks and heavy duty bricks would be issued shortly for wide circulation. The draft revision of

specification for Mangalore Tiles incorporating metric dimensions was issued for comments. Among the new subjects taken up for standardization, special mention may be made of burnt-clay tiles for lining irrigation and drainage works, which is important in view of a very large number of such tiles being used in irrigation projects.

WORK IN HAND

Burnt-Clay Facing Bricks
Burnt-Clay Heavy Duty Building Bricks (Engineering Bricks)
Burnt-Clay Perforated Building Bricks
Burnt-Clay Terracing Tiles

Burnt-Clay Tiles for Lining Irrigation and Drainage Works
Code of Practice for Manufacture of Hand-Made Common Burnt Clay Building Bricks

Building Stones, BDC 6

STANDARD PUBLISHED

IS: 1805-1961 Glossary of Terms Relating to Building Stones: Occurrence, Quarrying and Dressing

WORK IN HAND

Characteristics and Distribution of Indian Building Stones
Method for Acid Test on Natural Building Stones

Sandstone Slab for Use in Flooring and Lining

Building Limes, BDC 4 — The Code of Practice for Manufacture of Lime in Vertical Mixed-Feed Type Kilns was published. It is hoped that the standard would give the necessary guidance to manufacturers for achieving satisfactory burning of lime.

STANDARD PUBLISHED

IS: 1861-1961 Code of Practice for Manufacture of Lime in Vertical Mixed-Feed Type Kilns

WORK IN HAND

Code of Practice for Preparation and Use of Lime Mortar

Gypsum, BDC 21

WORK IN HAND

Gypsum Building Boards

Pozzolana, BDC 16

WORK IN HAND

Fly Ash for Use in Cement Concrete

Timber, BDC 9 — Keeping in view the shortage of long poles, jointed poles have been allowed and a suitable method of jointing has been specified in the revised version of Wood Poles for Overhead Power and Telecommunication Lines.

STANDARDS PUBLISHED

- IS : 401-1961 Code of Practice for Preservation of Timber (*Revised*)
IS : 876-1961 Wood Poles for Overhead Power and Tele-communication Lines (*Revised*)
IS : 1898-1961 Timber for Use in Aircraft Construction
IS : 1900-1961 Method of Testing Wood Poles
IS : 1902-1961 Code of Practice for Preservation of Bamboo and Cane for Non-Structural Purposes

WORK IN HAND

- | | |
|--|---|
| Code of Practice for Quantitative Estimation of Preservative in Treated Timber | Methods of Testing Structural Sizes of Timber |
| Code of Practice for Sawing of Timber (Hand Sawing) | Sampling and Presentation of Data for Timber Testing |
| Code of Practice for Sawing of Timber (Mill Sawing) | Tables for Calculating Volume of Timber |
| Grading Rules for Sawn Teak Timber | Timber for Cooling Towers |
| Grading Rules for Teak Logs | Timber for Lorry Bodies |
| Grading of Willow | Timber for Use in Aircraft Propeller Construction |
| Guide for Seasoning Kiln and Treatment Plants | Wooden Cross Arms |
| Key for Identification of Commercial Timbers | Wooden Sleepers |
| Marine Timber for Further Conversion | Wooden Tent Pins |
| Methods of Identification and Measurement of Defects in Timber | Revision of: |
| Methods of Test for Efficacy of Preservatives | IS : 399-1952 Classification of Commercial Timbers and Their Zonal Distribution |
| | IS : 620-1954 General Requirements of Tool Handles |

Wood Products, BDC 20 — The specification for rectangular plywood packing cases and the methods of test for wood particle boards would be issued in wide circulation shortly.

WORK IN HAND

- | | |
|---|--|
| Code of Practice for Use of Different Types of Plywood | Methods of Test for Wood Particle Boards |
| Crates | Pencil Slats |
| Flat Platen Pressed Medium Density Wood Particle Boards | Plywood Packing Cases, Rectangular Solid Wood Pent Top Cases |
| Insulation Boards | Revision of: |
| Method of Test for Fibre Boards | IS : 10-1953 Plywood Tea-Chests |

Tar and Bitumen, BCDC 2

STANDARDS PUBLISHED

- IS : 73-1961 Paving Bitumen (*Revised*)
IS : 212-1961 Crude Coal Tar for General Use (*Revised*)
IS : 215-1961 Road Tar (*Revised*)
IS : 216-1961 Coal Tar Pitch (*Revised*)
IS : 217-1961 Cutback Bitumen (*Revised*)
IS : 218-1961 Creosote and Anthracene Oil for Use as Wood Preservatives (*Revised*)
IS : 454-1961 Digboi Type Cutback Bitumen (*Revised*)
IS : 702-1961 Industrial Bitumen (*Revised*)

WORK IN HAND

- Bitumen Emulsion for Roads
- Fuel Oil Suitable as Diluents with Creosote

Non-Cement Floors and Roof Coverings, BDC 5 — The revised draft Specification for Sheet Linoleum (IS:653-1955) and draft Code of Practice for the Use of Metallic Sheets in Expansion Joints in RCC Roofs and Floors were put into wide circulation.

STANDARDS PUBLISHED

- IS:1834-1961 Hot Applied Sealing Compounds for Joints in Concrete
- IS:1838-1961 Preformed Fillers for Expansion Joints in Concrete Non-Extruding and Resilient Type (Bitumen-Impregnated Fibre)

WORK IN HAND

- Code of Practice for Damp Proofing of Canopies, Window Sills and Parapets
- Code of Practice for the Use of Metallic Sheets in Expansion Joints in RCC Roofs and Floors
- Revision of:
 - IS:657-1956 Materials for Use in the Manufacture of Magnesium Oxychloride Flooring Compositions
 - IS:658-1956 Code of Practice for Magnesium Oxychloride Composition Floors

Sanitary Appliances and Water Fittings, BDC 3

STANDARDS PUBLISHED

- IS:777-1961 Glazed Earthenware Tiles
- IS:779-1961 Water Meters (Domestic Type) (*Revised*)
- IS:1795-1961 Pillar Taps

WORK IN HAND

- Ball Valves (Horizontal Plunger Type) Including Floats for Water Supply Purposes
- Flushing Cisterns, Automatic
- Low Density Polythene Pipes Suitable for Cold Water Services — Part I
- Sanitary Appliances (Vitreous China)
- Sluice Valves (350 mm to 1200 mm Size)
- Water Meter Boxes
- Water Meters (Bulk Type)
- Water Meters, Selection, Installation and Maintenance
- Revision of:
 - IS:651-1955 Salt-Glazed Stone-ware Pipes and Fittings
 - IS:772-1956 General Requirements of Enamelled Cast Iron Sanitary Appliances
 - IS:773-1956 Enamelled Cast Iron Water Closets Railway Coaching Stock Type
 - IS:775-1956 Brackets and Supports for Lavatory Basins and Sinks
 - IS:776-1957 Water Closet Seats and Covers

Builder's Hardware, BDC 15 — With a view to enabling the hardware industry to changeover to the metric system, revised Indian Standards on a number of items of builder's hardware incorporating metric dimensions were published while revision of a number of other standards in the field registered good progress. Work on a number of new items of builder's hardware covering mortised latches, back flap hinges, commercial buckets, etc, was also started.

STANDARDS PUBLISHED

- IS : 204-1961 Tower Bolts (*Revised*)
- IS : 206-1962 Tee and Strap Hinges (*Revised*)
- IS : 275-1961 Padlocks (*Second Revision*)
- IS : 363-1961 Hasps and Staples (*Revised*)
- IS : 451-1961 Wood Screws (*Revised*)
- IS : 723-1961 Mild Steel Wire Nails (*Revised*)
- IS : 725-1961 Copper Wire Nails (*Revised*)
- IS : 1018-1961 M Type Brass Padlocks (*Revised*)
- IS : 1823-1961 Floor Door Stoppers
- IS : 1837-1961 Fanlight Pivot

WORK IN HAND

- Mortice Locks
- Wire Netting for General Purposes
- Revision of:
 - IS : 205-1950 Butt Hinges (Covering Revision of IS : 1341-1959 Cold Rolled Mild Steel Butt Hinges)
 - IS : 207-1950 Gate and Shutter Hooks and Eyes
 - IS : 208-1950 Door Handles
 - IS : 281-1951 Sliding Door Bolts for Use with Padlocks
 - IS : 362-1951 Parliament Hinges
 - IS : 364-1956 Fanlight Catch
 - IS : 452-1953 Door Springs, Rat Tail Type

- Revision of:
 - IS : 453-1953 Double-Acting Spring Hinges
 - IS : 724-1956 Mild Steel and Brass Cup, Ruler and Square Hooks and Screw Eyes
 - IS : 726-1956 Mild Steel Buckets for General Use and for Fire Fighting Purposes
 - IS : 729-1956 Brass Drawer Locks, Cup Board Locks and Box Locks
 - IS : 730-1956 Fixing Accessories for Corrugated Sheet Roofing

Doors, Windows and Building Furniture, BDC 11 — The standard for flush door shutters was finalized for printing and work on formulation of a number of draft standards covering several items of steel furniture was initiated.

STANDARDS PUBLISHED

- IS : 1826-1961 Venetian Blinds for Windows
- IS : 1883-1961 Steel Shelving Racks (Adjustable Type)
- IS : 1948-1961 Aluminium Doors, Windows and Ventilators
- IS : 1949-1961 Aluminium Windows for Industrial Buildings

WORK IN HAND

- Code of Practice for Fixing of Timber Doors and Windows
- Materials for Furniture Constructed Mainly of Wood
- Timber Flush Door Shutters
- Wooden Tables and Desks for General Office Purposes

Terminology, Notations and Drawings, BDC 1

STANDARD PUBLISHED

- IS : 1011 1961 Schedule of Unit Weights of Building Materials

WORK IN HAND

- Building Terminology
- Drawing Filing Equipment

Modular Co-ordination, BDC 10

WORK IN HAND

Recommendation for Modular Co-ordination Applied to RCC Framed Structures

Recommendations for Modular Co-ordination Applied to Masonry Structures

Building Bye-laws, BDC 25 — A preliminary draft on nomenclature of storeys has been prepared which is an effort to remove misunderstandings due to various systems of designation of floors and storeys in use today and it is likely to be issued in wide circulation shortly.

WORK IN HAND

Nomenclature of Storeys

Zoning Regulations

Functional Requirements of Buildings, BDC 12 — Considerable work was done on the formulation of a series of codes of practice relating to fire safety of buildings. Three standards were published while others were at different stages of processing.

STANDARDS PUBLISHED

IS: 1646-1961 Code of Practice for Fire Safety of Buildings (General): Electrical Installations

IS: 1648-1961 Code of Practice for Fire Safety of Buildings (General): Fire Fighting Equipment and Its Maintenance Including Construction and Installation of Fire Proof Doors

IS: 1904-1961 Code of Practice for Structural Safety of Buildings: Foundations

IS: 1905-1961 Code of Practice for Structural Safety of Buildings: Masonry Walls

WORK IN HAND

Code of Practice for:

Daylighting of Buildings

Fire Safety of Industrial Buildings

Fire Safety of Non-Industrial Buildings

Heat Insulation of Dwellings (Schools, Hospitals and Other Buildings)

Orientation of Buildings

Sound Insulation of Non-Industrial Buildings

Code of Practice for:

Ventilation of Dwellings

Recommendations for:

Earthquake Resistant Construction of Structures

Earthquake Resistant Design of Structures

Revision of IS: 875-1957 Code of Practice for Structural Safety of Buildings: Loading Standards

Construction Plant and Machinery, BDC 28 — An Indian Standard covering batch type concrete mixers of different sizes from 100 litres to 800 litres was published and two draft standards covering heaters for tar and bitumen and distributors for hot tar and bitumen were sent into wide circulation. A draft standard on concrete vibrators of immersion type was approved for wide circulation and a number of preliminary drafts covering items, such as metal scaffolding, roller pan mixers and hand drum asphalt mixers, were processed further. Work on screed vibrators, shutter vibrators and pan vibrators was initiated.

STANDARD PUBLISHED

IS: 1791-1961 Batch Type Concrete Mixers

WORK IN HAND

Asphalt Mixers, Hand Drum Type
Concrete Vibrators (Immersion
Type)

Metal Scaffolding
Roller Pan Mixers

Composite Construction, BDC 32

WORK IN HAND

Code of Practice for Prefabricated
Construction
Precast Concrete Structural Units
for Use in Other than Composite
Construction

Recommendations for:
Design and Construction of
Composite Structures

Recommendations for:
Joints in Prefabricated Construc-
tion
Precast Concrete Structural Units
Used in Composite Construc-
tion

Building Construction Practices, BDC 13—A number of drafts covering a wide range of subjects, such as foundation, masonry, concrete construction, timber construction, soil construction, built-up floor construction, fixing coverings, roof finish and roof drainage, have been prepared. A draft has also been prepared on nail jointed timber construction. As a result of the comments received in the course of the use of Indian Standard Method for Measurement of Building Works (IS:1200-1958), a few amendments to the standard were finalized.

STANDARDS PUBLISHED

IS: 883-1961 Code of Practice for Use of Structural Timber in Building
(Material, Grading Design) (*Revised*)

IS: 1946-1961 Code of Practice for Use of Fixing Devices in Walls, Ceilings
and Floors of Solid Construction

WORK IN HAND

Code of Practice for:
Construction of Brick-cum-Con-
crete Flat Floor or Roof
(Madras Terrace)
Construction of Brick-cum-
Concrete Jack-Arch Floor or
Roof
Construction of Brick Work
Construction of Concrete Block
Masonry
Construction of Flues and
Chimneys for Domestic Heating
Appliances
Construction of Glass Block and
Other Miscellaneous Types of
Partitions
Construction of Gypsum Block
Partitions
Construction of Hollow Tile Floor
or Roof
Construction of Masonry Arches
Construction of Reinforced Con-
crete Shell Roofs

Code of Practice for:
Construction of Stabilized Soil
Block Masonry
Construction of Stone Masonry
Construction of Stone Slab and
Beam Floor or Roof
Construction of Timber Balconies
Construction of Timber Walls and
Partitions
Design and Construction of Simple
Type Spread Foundations for
Buildings
Fixing Ceiling Coverings
Fixing Gutters and Other Fittings
for Roof Drainage
Fixing of Roof Lights and Roof
Windows
Fixing of Roofing Slates
Fixing Sheet Roof Coverings
Fixing Tile Roof Coverings
Fixing Timber Roof Coverings
Fixing Wall Coverings
Flat Roof Finish: Lime Concrete

Code of Practice for:
Flat Roof Finish : Mud *Phuska*
Heavy Foundations (Other than
Pile Foundations)
In-Situ Construction of Walls in
Buildings with Soil-Cement or
Rammed Earth

Code of Practice for:
Nail Jointed Timber Construction
Pile Foundations
Use of Fixing Device for Walls and
Ceilings of Cavity Construction
Use of Masonry Mortars

Building Finishes, BDC 8 — The draft Code for In-Situ Terrazo, which is a popular floor finish in residential and public buildings, was issued in wide circulation. In the field of paint finishes, draft standards for the second part of the code for finishing iron and steel dealing with schedules and equipment and the code for wood finish will be issued in wide circulation shortly.

WORK IN HAND

Code of Practice for:
Application of Acoustic Plaster
Finish
External Rendered Finishes for
Concrete
Finishing of Ferrous Metals in
Buildings: (Schedule and Equip-
ment)
Finishing of Wood and Wood
Based Materials in Buildings
Gypsum Plaster Finish
In-Situ Terrazo Floor Finish
Laying of Acid Resistant Floor
Finish

Code of Practice for:
Laying of Alkali Resistant Floor
Finish
Laying of Heavy-Duty Floor
Finish for Industrial Buildings
Lime Plaster Finish
Mud Plaster Finish
Painting of Asbestos Cement
Sheets
Painting of Masonry and Similar
Surfaces
Painting of Non-Ferrous Metals

Library Buildings, BDC 27

STANDARD PUBLISHED

IS : 1829 (Part I)-1961 Library Furniture and Fittings, Part I : Timber

WORK IN HAND

Requirements for Basic Elements in
the Design of Archival Buildings

Requirements for Libraschine
(Mobile Library)

Water Supply and Sanitation, BDC 24 — The draft Code of Practice for Water Supply and Plumbing in Buildings was issued in wide circulation. Considerable progress was made in regard to the code of practice for septic tanks, which attempts to unify different practices of design, construction, installation and maintenance of septic tanks followed in the country.

WORK IN HAND

Code of Practice for:
Design and Construction of Septic
Tanks for Domestic Purposes
Selection, Installation and Main-
tenance of Sanitary Appliances

Code of Practice for:
Water Supply and Plumbing in
Buildings

Soil Engineering, BDC 23 — Codes of practice for site investigation for foundations and method of load tests on soils were issued in wide circulation.

WORK IN HAND

Glossary of Terms and Symbols
Relating to Soil Mechanics and
Soil Dynamics

Methods for Field Testing of Soils
Methods for Laboratory Testing of
Soils

Fluid Flow Measurement, BDC 17

WORK IN HAND

Code of Practice for Use of Current
Meter (Cup Type) for Liquid
Flow Measurement

Current Meters (Cup Type) for
Liquid Flow Measurement

Recommendation for Estimation of
Liquid Flow in Closed Conduits:

Part I — Frictional Resistance in
Straight Pipes

Part II — Frictional Resistance of
Valves and Fittings

Measurement of Flow of Water in
Open Channels, Slope Area Method

Method of Measurement of Fluid
Flow by Means of Orifice Plates
and Nozzles

Methods of Measurement of Fluid
Flow by Means of Venturi

Bridges, BDC 14

STANDARD PUBLISHED

IS : 1915-1961 Code of Practice for Steel Bridges

WORK IN HAND

Code of Practice for Concrete and
Masonry Bridges

Glossary of Terms Relating to
Bridges

Method of Measurement for Concrete
and Masonry Bridges

Method of Measurement for Steel
Bridges

Refrigeration and Air-Conditioning, BDC 18

STANDARD PUBLISHED

IS : 1869-1961 Ice Cans

WORK IN HAND

Bottle Coolers

Design Conditions for Air-Condition-
ing in Various Parts of India

Guide for Use of Different Types of
Thermal Insulating Materials in
Cold Storages

Ice Cream and Ice Candy Machines

Ice Tanks

Packaged Air-Conditioners

Fire Fighting Equipment and Appliances, BDC 22

STANDARDS PUBLISHED

IS : 940-1961 Portable Chemical Fire Extinguisher, Water Type
(Gas Pressure)

IS : 1910-1961 Self-Contained Breathing Apparatus for Fire Brigade Use

IS : 1924-1961 Portable Fire Extinguisher, Water Type (Bucket Pump)

IS : 1933-1961 Portable Chemical Fire Extinguishers, Chlorobromomethane
Type

IS : 1941-1961 Electric Motor Sirens

WORK IN HAND

Carbon Dioxide Crash Tender
Control Post Van for Fire Brigade Use
Dry Powder, Crash Tender
Fire Extinguisher, Dry Powder, Chemical
Fireman's Helmet
Heat Sensitive Fire Detectors
Hose Laying Tender for Fire Brigade Use
Midget Fire Engine for Fire Brigade Use

Oxy-Acetylene Cutting Set Used in Fire Services
Rescue Tender for Air-field Purposes
Rescue Tender for General Purposes
Screw Jacks, 5 Ton
Stirrup Pump
Code of Practice for:
Automatic Fire Alarm System
Selection, Installation and Maintenance of Portable First-Aid Fire Appliances.

Sieves, BDC 19— With the changeover to the metric system, revision of IS : 460-1953 Test Sieves was undertaken and the revised draft incorporating metric dimensions and a number of technical modifications was put into wide circulation. With a view to resolving the problem of non-availability of test sieves from indigenous sources, the Sectional Committee made certain recommendations for allowing import of cut pieces of sieve cloth and also for promotion of the indigenous industry to produce wire cloth of such precision which could be used for making test sieves.

WORK IN HAND

Industrial Screens of Woven Wire Cloth

Standard Materials for Testing of Test Sieves

Electrical Installation and Illumination, BDC 26

STANDARDS PUBLISHED

IS : 1860-1961 Code of Practice for Installation, Operation and Maintenance of Electric Passenger and Goods Lifts
IS : 1944-1961 Code of Practice for Design of Electrical Street Lighting Installations

WORK IN HAND

Approximate Dimensions of Lifts, Lift Pits, etc

Code of Practice for Interior Illumination

3. CHEMICAL DIVISION

3.1 Introduction of metric system of units in standards, already published, and formulating of new Indian Standards to serve the growing needs of the chemical and chemical products industries provided at an enhanced rate in the Chemical Division of the Institution during the year under review.

In all, 54 Indian Standards, including revisions, were published or sent to press (*see* Appendix A) and 36 new subjects were taken up for formulation of Indian Standards.

3.2 Among the highlights of the work accomplished by the Division was the publication of Indian Standards on methods of temperature measurement of petroleum and its products, part I; petroleum hydrocarbon

solvents; bleaching earths of Indian origin used for decolourizing vegetable oils; butter tins; urea, technical and pure; glossary of terms relating to glass industry; colours for signal glass for use in railways; ionones; common salt for butter and cheese industry; paper for permanent records; bristles; methods of test for ready mixed paints and enamels (revision of IS : 101-1950); rubber hot water bottles; crown corks; and liquid gold, bright.

As regards the subjects under study, alcohol, perfumery grades; tables for alcoholometry; methods of test for *Kattha*; bicycle tyres and tubes; gloves for electrical purposes; rubber protective sheath (condom); glass beer bottles; oils of patchouli, dillseed and celeryseed; glossary of footwear terms; free flowing table salt; tooth brushes; and requirements for industrial wastes discharged into inland surface waters; were given priority.

3.3 The Standing Working Committee and the Chemical Division Council held their meetings on 27 August 1961 and 26 December 1961, respectively. Besides setting up of a new Sectional Committee on Safety Matches, CDC 34, the Sectional Committees for Classification and Labelling of Dangerous Substances, CDC 18 and Oils, Fats and Soaps Sectional Committee, CAFDC 5 were reorganized. As the work of the last mentioned committee was fast expanding with the growth of the oils and fats industry on the one hand and soaps and detergents on the other, the Council decided to split up the work of the Committee and assign the same to two independent Sectional Committees as follows:

- a) Oils and Fats Sectional Committee, CAFDC 5, to deal with:
Oleaginous Seeds and Fruits,
Vegetable Oils and Fats,
Fatty Acids,
Animal Tallow,
Marine Oils, and
Bleaching Earths.
- b) Soaps and Other Surface Active Agents Sectional Committee, CDC 35, to deal with:
Soaps,
Other Surface Active Agents, and
Glycerine.

3.5 A brief account of the Division's work is as follows:

Petroleum Products, CDC 22 — A proposal was under consideration for revision of or amendment to IS : 1585-1960 Motor Gasoline, 79 Octane with a view to including another grade of 83 octane in the standard. The question of altering certain requirements prescribed in Indian Standards for kerosine, diesel fuel and fuel oils was under consideration with a view to meeting the existing imbalance between production and demand in the country of these products.

STANDARD PUBLISHED

IS : 1745-1961 Petroleum Hydrocarbon Solvents

WORK IN HAND

Liquefied Petroleum Gases
Amendment No. 1 to:
IS : 1460-1959 Diesel Fuels

Amendment No. 1 to:
IS : 1604-1960 Aviation Gasoline

Methods of Test for Petroleum, Petroleum Products and Lubricants, CDC 29 — IS : 1448 (Part II) Methods of Test for Petroleum and Its Products consisting of seven methods of test was finalized for publication. Revision of IS : 310 (Part II)-1954 Methods of Sampling and Test for Lubricants, Part II was initiated.

WORK IN HAND

Acceptability of Test Results, Interpretation and Recommended Usage of Indian Standard Precision Data

Manual on Engine Rating of Fuels
Methods of Sampling of Petroleum and Its Products

Petroleum Measurements, CDC 32 — Draft Indian Standard Methods for (a) Calibration of Vertical Oil Storage Tanks and Horizontal and Tilted Oil Storage Tanks, and (b) Computation of Capacity Tables for Vertical Oil Storage Tanks were finalized for printing. A short method for the calculation of quantities of diesel fuels and furnace oils in tanks, lorries, wagons, etc, has been included in an appendix to the finalized draft Indian Standard on Methods of Calculation of Bulk Quantities of Petroleum and Liquid Petroleum Products. The Committee also collected data with a view to studying the problem concerning the period to be fixed for the re-calibration of oil storage tanks.

STANDARDS PUBLISHED/UNDER PRINT

IS : 1519 (Part I)-1961 Method for Temperature Measurement of Petroleum and Its Products, Part I
IS : 2007-1961 Method for Calibration of Vertical Oil Storage Tanks
IS : 2008-1961 Method for Computation of Capacity Tables for Vertical Oil Storage Tanks
IS : 2009-1961 Method for Calibration of Horizontal and Tilted Oil Storage Tanks

WORK IN HAND

Method for Computation of Capacity Tables for Horizontal and Tilted Tanks

Lubricants, CEDC 1 — Data was being collected to review the draft standards on cutting oil, sulphurized; quenching oil and the published Indian Standard, IS : 588-1954 Mosquito Larvicidal Oil.

WORK IN HAND

Axle Oil, Premium Grade
Code of Practice for Temporary Prevention of Corrosion on Metal Surfaces (During Transportation and Storage)
Grease Graphited for Leaf Springs

Heavy Duty Hydraulic Brake Fluid
Oil Hydraulic, Mineral Oil Type
Open Gear and Wire Rope Lubricants
Rust Removing Solution

Steam Cylinder Oil for Engines Using Superheated Steam at Temperature between 345° to 373°C

Amendment No. 1 to:

IS : 317-1959 General Service Automotive Hydraulic Break Fluid (*Revised*)

IS : 409-1952 Grease, No. 3

IS : 435-1954 Castor Oil

IS : 495-1954 Graphite, Flake for Lubricants

IS : 719-1955 Grease S/L No. 1

IS : 720-1955 Grease, S. Hard, Loco

IS : 721-1955 Grease, S. Soft, Loco

IS : 1002-1956 Multipurpose Grease No. 1, No. 2 and No. 3

Amendment No. 1 to:

IS : 1012-1958 Steam Turbine Lubricating Oils

IS : 1083-1957 White Oil, Light, Technical

IS : 1276-1958 Grease, S. No. 2

Amendment No. 2 to:

IS : 493-1958 Machinery and Spindle Oil (*Amended*)

IS : 496-1955 Internal Combustion Engine Lubricating Oils

IS : 595-1959 Blown Rape (or Mustard) Oil for Use in Lubricants

Acids and Fertilizers, CDC 24

STANDARDS PUBLISHED

IS : 266-1961 Sulphuric Acid (*Revised*)

IS : 1781-1961 Urea, Technical and Pure

WORK IN HAND

Ammonium Sulphate Nitrate

Ammonium Sulphate Phosphate

Calcium Ammonium Nitrate

Castorseed Cake and Groundnut

Cake for Fertilizer Purposes

Amendment No. 1 to IS : 1304-1957

Glossary of Terms Used in

Fertilizer Trade and Industry

Revision of :

IS : 263-1950 Boric Acid, Technical

IS : 265-1950 Hydrochloric Acid

IS : 294-1951 Superphosphate

Essential Oils, CDC 11 — Work on a new series of Indian standards on perfumery chemicals was initiated with the publication of Indian standards on citral, geraniol, citronellol and ionones; the latter being a pioneer document of its kind as the important question relating to the determination of isomer content in ionones has been effectively resolved by adopting the ultra-violet absorption spectroscopy. The Committee also continued the collection of further data in terms of tintometrical values of the oil of sandalwood as well as for the determination of carbonyl compounds in the oil of lemongrass as required by the Technical Committee ISO/TC 54 Essential Oils of the International Organization for Standardization (ISO).

An important project of a collaborative investigation was organized for the qualitative detection of the oil of gingergrass admixed with the oil of palmarosa in accordance with the method of test worked out by the Regional Research Laboratory, Hyderabad.

Another collaborative study undertaken related to the collection of data for the methods of test as applied to various characteristics of natural oleoresins and resinoids.

STANDARDS PUBLISHED

IS : 327-1961 Oil of Lemongrass (East Indian Oil of Lemongrass) (*Revised*)

IS : 329-1961 Oil of Sandalwood (*Revised*)

IS : 512-1961 Oil of Citronella (*Revised*)
IS : 1799-1961 Citral
IS : 1800-1961 Geraniol
IS : 1801-1961 Citronellol
IS : 1802-1961 Ionones

WORK IN HAND

Amyl Cinnamic Aldehyde	Oil of Dillseed
Camphor	Oil of Linaloe
Hydroxycitronellal	Oil of Patchouli
Menthol	Oil of Pine
Method of Test for Olfactory	Oil of Rosemary
Assessment of Essential Oils and	Terpeniol
Allied Products	Thymol
Oil of Bergamot	Revision of IS : 326-1952 Methods of
Oil of Bois-de-Rose	Test for Essential Oils
Oil of Celeryseed	

Brushware, CDC 31 — An Indian standard on bristles was finalized for publication. Work was initiated for preparing standards on various types of miscellaneous brushes, like brush, carriage — washing; brush, commode and lavatory; and brush, banister (hand sweeping).

STANDARD PUBLISHED

IS : 384-1961 Brushes, Paints and Varnishes, Flat (*Revised*)

WORK IN HAND

Bristles	Revision of IS : 486-1954 Brushes,
Brush, Tooth	Paints and Varnishes, Sash Tool
Nylon Monofilaments (Synthetic	
Bristles)	

Glassware, CDC 10 — Indian standard on glass liquor bottles, already published, was reviewed and was taken up for revision in order to include more sizes. The draft standard on beer bottles was also finalized.

STANDARDS PUBLISHED/UNDER PRINT

IS : 489-1961 Glass Ampoules (*Revised*)
IS : 1382-1961 Glossary of Terms Relating to Glass Industry
IS : 1922-1961 Liquid Gold, Bright
IS : 1961-1961 Glass Tableware
IS : 1975-1961 Colours for Signal Glasses for Use in Railways
IS : 1984-1961 Penicillin Vials

WORK IN HAND

Glass Beer Bottles	Amendment No. 1 to:
Glass Containers for Transfusion	IS : 1112-1957 Glass Shells for General
Fluids	Lighting Service Lamps
Method of Test for Quality of Glass	IS : 1662-1960 Glass Liquor Bottles
Safety Glass	Revision of:
Vacuum Flasks	IS : 488-1953 Glass Making Sands
Amendment No. 1 to:	IS : 1108-1957 Tincture Glass
IS : 490-1954 Vaccine Phials	Bottles

Laboratory Glassware and Related Apparatus, CDC 33 — Work was undertaken to prepare draft standards for thermometers and

hydrometers. Investigations for working out the details of procedure for thermal shock test for laboratory glassware were in progress.

STANDARD UNDER PRINT

IS: 1997-1961 Burettes

WORK IN HAND

Distilling Flasks
General Purpose Thermometers
Glass Beakers
Glass Hydrometers for Density and Specific Gravity
Glass Stopcocks
Glossary of Terms Relating to Liquid-in-Glass Thermometers

Laboratory Thermometer
Petri Dishes
Tables for Calibration of Volumetric Glassware
Test Tubes

Metal Containers, CDC 28

STANDARDS PUBLISHED/UNDER PRINT

IS: 1783-1961 Drums, Large, Fixed Ends
IS: 1784-1961 Screwed Closures for Drums
IS: 1994-1961 Crown Corks
IS: 2034-1961 Butter Tins

WORK IN HAND

Aluminium Containers, Seamless Closures for Drums and Kegs
Collapsible Tubes
Methods of Test for Metal Containers
Pre-screwed Closures
Printing Ink Containers, Round
Tins for General Purposes, Round
Tins for General Purposes, Square

Vial (Goldie) Seals
Amendment No. 1 to:
IS: 1406-1959 Rectangular Tins
IS: 1783-1961 Drums, Large, Fixed Ends
Revision of IS: 1549-1960 Steel Drums and Kegs (Galvanized and Ungalvanized)

Alkalis and Chlorine, CDC 25— A draft standard amalgamating and revising the two printed specifications for Sodium Bicarbonate Pure and Analytical Reagent Grade (IS: 491-1954) and Sodium Bicarbonate, Refined (IS: 492-1954) was finalized for publication.

STANDARDS PUBLISHED

IS: 1808-1961 Hydrated Lime for Grease Manufacture
IS: 1845-1961 Common Salt for Butter and Cheese Industry

WORK IN HAND

Ammonium Bromide
Bromine, Technical
Free Flowing Table Salt
Potassium Bromide
Sodium Bromide
Amendment No. 1 to IS: 1514-1959
Methods of Sampling and Test for Quick Lime and Hydrated Lime
Revision of:
IS: 251-1950 Soda Ash, Technical
IS: 252-1950 Caustic Soda, Technical

Revision of:
IS: 253-1950 Edible Common Salt
IS: 254-1950 Magnesium Chloride, Technical
IS: 296-1951 Anhydrous Sodium Carbonate, Pure and Analytical Reagent
IS: 593-1954 Common Salt for Hide Curing
IS: 594-1954 Common Salt for Fish Curing
IS: 1021-1956 Caustic Soda, Pure

Paints, CDC 8— Out of the 53 Indian standards on paints and allied materials, study of which had been completed by the Panel for Revision of Indian Standards on Paints and Allied Material, five were printed, while 28 others were under different stages of processing prior to finalization. Apart from this, 120 amendment slips for non-controversial metric changes to various paint standards were processed for printing.

STANDARDS PUBLISHED/UNDER PRINT

- IS : 5-1961 Colours for Ready Mixed Paints (*Second Revision*)
- IS : 101-1961 Methods of Test for Ready Mixed Paints and Enamels (*Revised*)
- IS : 290-1961 Coal Tar Black Paint (*Revised*)
- IS : 423-1961 Plastic Wood for Joiners Filler (*Revised*)
- IS : 426-1961 Paste Filler for Colour Coats (*Revised*)
- IS : 1872-1961 Thinner for Synthetic Paints and Varnishes for Aircrafts
- IS : 1873-1961 Thinner, Antichill for Cellulose Nitrate Based Paints; Dopes and Lacquers for Aircrafts

WORK IN HAND

- Letterpress, Ink, Black, for General Purposes
- Ready Mixed Paint, Aluminium-Zinc Oxide Composite Primer
- Ready Mixed Paint, Zinc Chrome, Priming (Synthetic) for Light Alloy for Aircraft

Whiting for Putty Making

Amendment No. 1 to:

- IS : 870-1956 Ready Mixed Paint, Brushing, Finishing, Egg Shell Gloss, for Interior Use, to Indian Standard Colours
- IS : 1303-1958 Glossary of Terms Relating to Paints
- IS : 1404-1959 Anti-Corrosive Paint, Brushing, for Ships Bottoms and Hulls Red, Chocolate or Black, as Required
- IS : 1419-1959 Anti-Fouling Paint, Brushing for Ships, Bottoms and Hulls Red, Chocolate or Black, as Required

Amendment No. 2 to:

- IS : 1232-1957 Ready Mixed Paint, Brushing, Yellow Ochre, Oil Gloss, for General Purposes

Revision of:

- IS : 33-1950 Methods of Test for Dry Pigments and Extenders for Paints
- IS : 50-1950 Lead Chrome and Lead Molybdate for Paints
- IS : 51-1950 Zinc Chrome for Paints
- IS : 57-1950 Red Lead for Paints and Jointing Purposes
- IS : 63-1950 Whiting for Paints
- IS : 102-1950 Ready Mixed Paint, Brushing, Red Lead, Non-setting Priming
- IS : 103-1950 Ready Mixed Paint, Brushing, White Lead, for Priming and General Purposes
- IS : 104-1950 Ready Mixed Paint, Brushing, Zinc Chrome, Priming, for Use on Aluminium and Light Alloys
- IS : 105-1950 Ready Mixed Paint, Brushing, Priming, for Enamels, for Use on Metals
- IS : 106-1952 Ready Mixed Paint, Brushing, Priming, for Enamels, for Use on Wood
- IS : 107-1952 Ready Mixed Paint, Brushing, Red Oxide-Zinc Chrome Priming
- IS : 108-1952 Ready Mixed Paint, Spraying, Red Oxide-Zinc Chrome Priming
- IS : 117-1950 Ready Mixed Paint, Brushing, Finishing, Exterior, Oil Gloss for General Purposes, to Indian Standard Colours

Revision of:

- IS : 118-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, to Indian Standard Colours
- IS : 119-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, to Indian Standard Colours
- IS : 120-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, to Indian Standard Colours
- IS : 121-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, to Indian Standard Colour No. 414, Golden Brown
- IS : 122-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, to Indian Standard Colours
- IS : 123-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, to Indian Standard Colours
- IS : 124-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, to Indian Standard Colour No. 105, Oxford Blue
- IS : 125-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, to Indian Standard Colour No. 106, Royal Blue
- IS : 126-1950 Ready Mixed Paint, Brushing, Finishing, Exterior, Oil Gloss, for General Purposes, to Indian Standard Colour No. 671, Middle Graphite
- IS : 127-1950 Ready Mixed Paint, Brushing, Finishing, Exterior, Oil Gloss, for General Purposes, White
- IS : 128-1950 Ready Mixed Paint, Brushing, Finishing, Oil Gloss, for General Purposes, Black
- IS : 129-1950 Ready Mixed Paint, Brushing, Finishing, Interior, Oil Gloss, for General Purposes, to Indian Standard Colours
- IS : 130-1950 Ready Mixed Paint, Spraying, Finishing, for Railway Wagon Stock, to Indian Standard Colour No. 446, Red Oxide, and Red Oxide (Colour Unspecified)
- IS : 131-1950 Ready Mixed Paint, Spraying, Finishing, for Railway Under-Frames, Black
- IS : 133-1950 Enamel, Brushing, Interior (1) Undercoating (2) Finishing, Colour as Required
- IS : 135-1952 Ready Mixed Paint, Spraying, Stoving, Red Oxide-Zinc Chrome, Priming
- IS : 136-1952 Ready Mixed Paint, Brushing, Stoving, Red Oxide-Zinc Chrome, Priming
- IS : 137-1950 Ready Mixed Paint, Brushing, Matt Finish, Interior, to Indian Standard Colours
- IS : 158-1950 Ready Mixed Paint, Brushing, Bituminous, Black, Lead-Free, Acid, Alkali, Water and Heat Resisting, for General Purposes
- IS : 165-1950 Aluminium Paint, Brushing, for General Purposes, in Dual Containers
- IS : 166-1950 Aluminium Paint, Spraying, for General Purposes, in Dual Containers
- IS : 168-1950 Ready Mixed Paint, Brushing, Quick-Drying, Matt, Lead-Free, for General Purposes, to Indian Standard Colours
- IS : 169-1950 Ready Mixed Paint, Spraying, Quick-Drying, Matt, Lead-Free, for General Purposes, to Indian Standard Colours
- IS : 289-1952 Aluminium Paste for Paints
- IS : 385-1953 Liquid Driers for Paints
- IS : 386-1953 Liquid Driers Concentrated, for Paints
- IS : 424-1953 Plastic Asphalt
- IS : 427-1953 Distemper, Dry, Colour as Required
- IS : 520-1954 Enamel, Brushing, Exterior, Type 1 (Synthetic) (1) Undercoating (2) Finishing, Colour as Required
- IS : 641-1955 Ready Mixed Paint, Brushing, Finishing, Interior, Oil Gloss, for General Purposes, White
- IS : 642-1955 Varnish Medium for Aluminium Paint
- IS : 872-1956 Ready Mixed Paint, Brushing, Finishing, Egg Shell Gloss, for Interior Use, to Indian Standard Colours

Leather and Leather Goods, CDC 16— In addition to an important draft standard on gents' leather shoes, the Committee finalized for publication a standard on miners' boots and shoes, based on the tentative specification drawn up by the Miners' Boots Committee set up under the Coal Award of the All India Industrial Tribunal (Collieries Dispute) 1956, Ministry of Labour and Employment, Government of India. A draft on snakeskins was issued into wide circulation. Snake-skins earn a foreign exchange to the tune of about Rs. 7 lakhs annually.

STANDARD PUBLISHED

IS : 581-1961 Vegetable Tanned Hydraulic Leather (*Revised*)

WORK IN HAND

Bookbinding Leather
Clothing and Lining Leather Including Suede Leather
Holdall Straps
Leather for Oil Seal and Washer
Spray Dried Myrobalan Extract
Glossary of Footwear Terms
Vegetable Tanned Lizardskins
Cash Bags for Railways

Methods for Sampling of Leather Footwear

Revision of:

IS : 579-1954 Sole Leather
IS : 580-1954 Harness Leather
IS : 582-1954 Methods of Sampling and Test for Vegetable and Chrome Tanned Leather

Fine Chemicals, CDC 4

STANDARDS PUBLISHED

IS : 1809-1961 Nickel Salts for Electroplating
IS : 1839-1961 Toluene, Reagent Grade
IS : 1840-1961 Benzene, Reagent Grade

WORK IN HAND

Hydrogen Peroxide, Stabilized
Silver Nitrate
Silver Oxide
Sodium Thiosulphate, Anhydrous, Photographic Grade
Zinc Sulphate for Electroplating

Revision of:

IS : 245-1950 Trichloroethylene (Trichlorethylene)

Revision of:

IS : 388-1958 Hydroquinone, Photographic Grade
IS : 500-1953 Potassium Metabisulphite, Pharmaceutical and Photographic
IS : 501-1953 Oxalic Acid, Technical and Analytical Reagent

Oils and Fats, CAFDC 5— The investigations instituted to collect test data on the properties of raw and washed cottonseed oils with the financial assistance from the Indian Central Oilseeds Committee, Ministry of Food and Agriculture, were continued during the year under report.

Along with the revision of IS : 1035-1957 Methods of Sampling and Test for Bleaching Earths Used for Decolorizing Vegetable Oils, necessitated in the light of laboratory experience communicated to the Sectional Committee by various users, another important work taken in hand was the testing of bleaching earths for use in raw and washed cotton seed oil. Detailed scrutiny of the Indian Standards on Vegetable Oils and Fats was continued with a view to issuing

amendments to or revisions of these standards. Active liaison was established with the Khadi and Village Industries Commission with a view to collecting statistical and laboratory data for the non-edible oils and soaps made therefrom by the small-scale and cottage industry sectors.

STANDARD PUBLISHED

IS : 1965-1961 Bleaching Earths of Indian Origin Used for Decolorizing Vegetable Oils

WORK IN HAND

Revision of:

IS : 542-1954 Coconut Oil
IS : 543-1954 Cottonseed Oil
IS : 544-1954 Groundnut Oil
IS : 545-1954 Mahua (Mowrah) Oil
IS : 546-1954 Mustard Oil

Revision of:

IS : 547-1954 Sesame Oil
IS : 548-1954 Methods of Sampling and Test for Vegetable Oils and Fats

Soaps, Other Surface Active Agents and Glycerine, CDC 35 — Consequent upon the re-organization of the work of CAFDC 5, the subjects relating to soaps, other surface active agents and glycerine were entrusted to this newly constituted Sectional Committee. A thorough scrutiny of all Indian standards on soaps and their methods of test and sampling was continued during the year with a view to issuing amendments to or revision of these standards.

STANDARD PUBLISHED

IS : 1796-1961 Crude Glycerine and Refined Glycerine

WORK IN HAND

Revision of:

IS : 284-1951 Toilet Soap
IS : 285-1951 Laundry Soap
IS : 286-1951 Methods of Sampling and Test for Soaps

Revision of IS : 839-1956 Transparent Toilet Soap

Alcohol and Allied Products, CDC 2 — Draft standards for tables for alcoholometry and diacetone alcohol were issued into wide circulation to elicit comments.

WORK IN HAND

Isopropyl Alcohol

Amendment No. 1 to:

IS : 229-1957 Ethyl Acetate
IS : 230-1957 Butyl Acetate
IS : 231-1957 Amyl Acetate
IS : 336-1954 Ether (a) Solvent and (b) Anaesthetic
IS : 387-1954 Wood Naphtha as Denaturing Material
IS : 695-1955 Glacial Acetic Acid, Pure, Pharmaceutical and Technical

Revision of:

IS : 360-1953 Amyl Alcohol, Industrial Solvent Grade
IS : 361-1953 Normal Butyl Alcohol, Technical
IS : 1049-1957 Alcohol, Perfumery Grade

Inks and Allied Products, CDC 13 — Draft standard for school chalks, moulded white, was approved for wide circulation. Revision of IS : 394-1952 Cloth Marking Inks was undertaken with a view to covering quick drying cloth marking inks.

STANDARD PUBLISHED

IS : 1945-1961 Glass Bottles for Fluid Ink

WORK IN HAND

Dye, Ink Blue, for Ink Industry
Dye, Methylene Blue, for Ink Industry
Ferrous Sulphate
Gallic Acid for Ink Industry
Pencil Carbon Papers
Ribbons for Typewriters
Tannic Acid for Ink Industry

Revision of:

IS : 219-1950 Ink Powders and Tablets, Blue-Black and Red
IS : 221-1950 Fluid Ink, for Registration and for Cheques and Records
IS : 222-1950 Blue-Black Superior Fluid Ink, for Writing

Water, CDC 26 — With the rapid industrialization in the country, the problem of regulating trade effluents and cleanliness of rivers has assumed great importance. The Committee, therefore, issued into wide circulation a draft standard on the subject of limits of pollution of river water and also prepared another draft standard setting down the quality of trade effluents.

STANDARDS PUBLISHED

IS : 1620-1961 Methods of Test (Chemical) for Industrial Water
IS : 1813-1961 Code of Practice for Treatment of Water for Marine Boilers

WORK IN HAND

Code of Practice for Treatment of Water for Locomotive Boilers
Methods of Sampling of Industrial Water for Physical and Chemical Tests
Requirements for Industrial Wastes Discharged into Inland Surface Water
Tolerances for Water for Paper and Pulp Industries

Tolerances for Water for Rayon Industry
Tolerances for Water for Swimming Pools
Revision of IS : 201-1950 Methods of Analysis of and Tolerances for Water for Textile Purposes

Paper, CDC 15 — Indian standard on paper sizes was revised to include untrimmed sizes.

STANDARDS PUBLISHED

IS : 1064-1961 Paper Sizes (*Revised*)
IS : 1763-1961 Substances of Paper and Pulp Board
IS : 1848-1961 Writing and Printing Paper

WORK IN HAND

Amendment No. 1 to IS : 1776-1961 Folding Box Board, Uncoated
Method for Fibre Analysis of Paper and Pulp Board
Methods of Test for Paper for Electrical Purposes

Grey Board, Mill Board and Straw Board
Ticket Board

Rubber Products, CDC 6 — Draft standards for (a) braided petrol hose; (b) trailer fire pump hose; (c) water suction rubber hose, light duty; and (d) fire fighting hose (rubber lined woven-jacketted) (revision of IS : 636-1956) were circulated to all interests concerned to elicit comments.

STANDARD PUBLISHED

IS : 1867-1961 Rubber Hot-Water Bottles

WORK IN HAND

Bicycle Rubber Tubes
Bicycle Tyres
Braided Welding and Cutting Hose of Rubber
Double Texture Rubber Proofed Fabrics
Gloves for Electrical Purposes
Gloves for Surgical Use
Penicillin Bottle Caps (Rubber)
Radiator Hose
Rubberized Water Proof Fabric for Rain Coats
Rubber Protective Sheath (Condom)
Semi-Embedded Water Suction Hose, Heavy Duty, Corrugated Outside
Zinc Oxide for Rubber Industry
Revision of:
IS : 443-1953 Methods of Test for Hoses
IS : 444-1953 Water Delivery Hose
IS : 445-1953 Water Hose, High Pressure, for Washing and Spraying

Revision of:
IS : 446-1953 Air Hose for Pneumatic Tools
IS : 447-1953 Welding Hose, Oxy-Acetylene
IS : 635-1955 Oil Resisting Hose
IS : 637-1955 Plain Rubber Tubing
IS : 638-1955 Rubber & Insertion Jointing
IS : 911-1958 Braided Air Hose, Heavy Duty
IS : 912-1958 Braided Air Hose, Light Duty
IS : 913-1958 Braided Water Hose, High Pressure
IS : 914-1958 Braided Water Hose, Low Pressure
IS : 1677-1960 Braided Spray Hose, High Pressure, for Agricultural Purposes

Miscellaneous Chemicals, CDC 3—Draft standards for plaster of paris of various grades, and mineral gypsum, surgical plaster grade, were issued into wide circulation.

STANDARDS PUBLISHED

IS : 438-1961 Aluminium Powder for Explosives and Pyrotechnic Compositions
IS : 574-1961 Glassy Sodium Metaphosphate, Technical (*Revised*)
IS : 1919-1961 Sodium Hydrosulphite, Technical
IS : 2012-1961 Red Phosphorus

WORK IN HAND

Activated Carbon, Granular
Activated Carbon for Respirators
Barytes for Chemical and Petroleum Industry
Calcium Stearate for Cosmetic Industry
Light Magnesium Carbonate for Cosmetic Industry
Liquid Sulphur Dioxide
Magnesium Oxide for Cosmetic Industry
Magnesium Powder for Explosives and Pyrotechnic Compositions
Magnesium Stearate for Cosmetic Industry
Methods of Test for Crude and Refined Sulphur
Methods of Test for *Kattha*
Mineral Gypsum for Pottery Industry

Precipitated Barium Carbonate, Technical
Sodium Tripolyphosphate, Technical
Tetrasodium Pyrophosphate (Anhydrous), Technical
Zinc Stearate for Cosmetic Industry Amendment No. 2 to IS : 260-1950
Aluminium Sulphate, Non-Ferrie
Revision of:
IS : 299-1951 Alumino-Ferrie
IS : 301-1951 Potassium Nitrate, Technical
IS : 307-1956 Carbon Dioxide, Industrial
IS : 308-1953 Dissolved Acetylene (Gas)

Uniformity in Test Methods, Terminology, etc, in Chemical Standards, CDC 1 — The draft standard for methods of preparation of indicator solutions was finalized for publication.

WORK IN HAND

EDTA Method for Determination of Calcium and Magnesium	Method for Colorimetric and Volumetric Determination of Phosphates
Gravimetric Method for Determination of Sulphates	Method of Test for Arsenic
Karl Fischer Method for Water	

Plastics, CDC 17 — Work was initiated to prepare draft standards for polyethylene moulding materials and polyethylene film.

STANDARDS UNDER PRINT

IS: 1998-1962 Methods of Test for Thermosetting Synthetic Resin Bonded Laminated Sheets
IS: 2036-1962 Paper Base Thermosetting Synthetic Resin Bonded Laminated Sheets

WORK IN HAND

Decorative Thermosetting Synthetic Resin Bonded Laminated Sheets	Unsupported Flexible Vinyl Films and Sheeting
Fabric Base Thermosetting Synthetic Resin Bonded Laminated Sheets	Revision of: IS: 867 (Part I)-1956 and (Part II)-1959 Methods of Sampling and Test for Phenolic Moulding Materials
Methods of Test for Aminoplastic Moulding Material	IS: 1300-1959 Phenol Formaldehyde Moulding Powder (For General Purpose Mouldings)
Phenol Formaldehyde Moulding Powder of Improved Variety	
Polystyrene Moulding Material	
Sampling of Thermosetting Moulding Materials	

Adhesives, CDC 30 — The draft standard for paper adhesives, office paste and liquid gum type, was issued into wide circulation.

WORK IN HAND

Rubber Base Adhesives for Tyres and Tubes (Patching and Repair) — Curing Type	Rubber Base Adhesives for Automobile Industry (Multipurpose) Adhesives for Leather Belting
Rubber Base Adhesives (Patching and Repair) — Non-curing Type	

Treated Fabrics, CETDC 3 — Two Indian Standards one on common proofed paulins (tarpaulins) and the other on tracing cloth were finalized for publication and the draft revision of IS : 1259-1958 Vinyl Coated Fabrics (Leathercloth) was issued into wide circulation.

Lac and Lac Products, CDC 9

WORK IN HAND

Refuse Lac	Sealing Wax for Railway Wagons
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Coal and Coke, CDC 14 — An important piece of work under this committee was the preparation of the draft revision of Part I of IS : 436-1953 Methods for Sampling of Coal and Coke, for issuing into wide circulation.

WORK IN HAND

Soft Coke

Ceramicware, CDC 27 — Three draft standards for dinnerware and enamelware were prepared for issuing into wide circulation.

WORK IN HAND

Dinnerware

Glossary of Terms Relating to
Ceramic Whiteware

Laboratory and Hospital Porcelain
Methods of Test for Vitreous Enamel-
ware

Coal Carbonization Products, CDC 23 — Investigations for collection of data were in progress with a view to including better performance tests of the material covered by IS : 1061-1957 Coal Tar Disinfectant Fluids, Black and White. In addition, a Study Group on Dye Intermediates was set up to explore the possibilities of standardization in this field.

4. ELECTROTECHNICAL DIVISION

4.1 Publication of amendments to existing Indian Standards for Insulated Cables, on high priority basis, permitting the use of aluminium conductors was an important achievement of this Division during the year under review.

In addition, standard specifications for important subjects, such as power transformers, PVC insulated (Heavy duty) cables, aluminium conductors in insulated cables, general and safety requirements for electrical lighting fittings, outdoor airbreak isolators and earthing switches, and motor starters, were brought out. Four important codes of practice dealing with installation and maintenance of power transformers, maintenance of insulating oil and installation of indoor amplifying and sound distribution systems and outdoor installation of public address systems respectively were brought out during the year. Notable progress was also made in the field of electronics and telecommunication. Besides, revision of Indian Standard Procedures for Basic Climatic Tests for Electronic Components (IS : 589-1954), and preparation of draft standards for environmental tests for complete electronic equipment were in advanced stages of development. Work was also started in the field of radio transmitters.

4.2 In all, 30 Indian Standards, including revisions, were published or sent to press (*see* Appendix A), and 74 new subjects were taken up for formulation of national standards. Three new Sectional Committees were set up to prepare standard specifications for power capacitors, lightning arresters and power converters and to attend to the work of corresponding committees of the International Electrotechnical Commission (IEC).

4.3 This Division also holds the secretariat of the Indian National Committee of the International Electrotechnical Commission (IEC). Consequently, it continued to take active part in the deliberations of several committees of that organization.

4.4 A brief account of the work done in different fields is given below:

Electrical Conductors and Accessories, ETDC 2

STANDARDS PUBLISHED

- IS : 398-1961 Hard-Drawn Stranded Aluminium and Steel-Cored Aluminium Conductors for Overhead Power Transmission Purposes (*Revised*)
- IS : 1666-1961 Paper-Covered Rectangular Copper Conductors for Transformer Windings
- IS : 1753-1961 Aluminium Conductors in Insulated Cables
- IS : 1778-1961 Reels and Drums for Bare Wire
- IS : 1951-1961 Polyvinyl Chloride Sleeving for Electrical Purposes

Amendments were issued to the following Indian Standards, on high priority basis, to permit the use of aluminium conductors:

- IS : 434-1953 Rubber-Insulated Cables and Flexible Cords for Electric Power and Lighting (for Working Voltages Up to and Including 11 kV) (*Tentative*)
- IS : 692-1957 Paper-Insulated Lead-Sheathed Cables for Electricity Supply
- IS : 693-1955 Varnished Cambric Insulated Cables for Electricity Supply (*Tentative*)
- IS : 694-1960 PVC Cables and Cords for Electric Power and Lighting for Working Voltages Up to and Including 650 Volts to Earth (*Tentative*)
- IS : 1554 (Part I)-1961 PVC Insulated (Heavy Duty) Electric Cables: Part I For Working Voltages Up to and Including 1 100 Volts

WORK IN HAND

- Cables for Vehicles
- Code of Practice for Installation and Maintenance of Power Cables with Aluminium Conductors
- Cotton-Covered Rectangular Copper Conductors
- Drums for Covered Winding Wires and Strips for Electrical Purposes
- Flexible Cables for Use in Quarries and Metalliferous Mines
- Hard-Drawn Cadmium Copper Solid and Stranded Circular Conductors
- Paper-Covered Round Conductors
- Polythene Insulated and PVC Sheathed Cables
- PVC Weather-Proof Cables
- Rubber-Insulated Flexible Trailing Cables for Use in Coal Mines
- Synthetic Enamelled Wires with Polyester Base
- Trolley and Contact Wire for Electric Traction

Revision of:

- IS : 282-1951 Hard-Drawn Copper Solid and Stranded Circular Conductors for Overhead Power Transmission Purposes (*Tentative*)
- IS : 396-1953 Bare Annealed High-Conductivity Copper Wire for Electrical Machinery and Apparatus (*Tentative*)

Revision of:

- IS : 434-1953 Rubber-Insulated Cables and Flexible Cords for Electric Power and Lighting (for Working Voltages Up to and Including 11 kV)
- IS : 449-1953 Enamelled High-Conductivity Annealed Round Copper Wire (Oleo-Resinous Enamel)
- IS : 450-1953 Cotton Covered High-Conductivity Annealed Round Copper Wire
- IS : 482-1953 Reels for Covered, Solid, Round Electrical Winding Wire
- IS : 692-1957 Paper-Insulated Lead-Sheathed Cables for Electricity Supply
- IS : 693-1955 Varnished Cambric Insulated Cables for Electricity Supply
- IS : 694-1960 PVC Cables and Cords for Electric Power and Lighting for Working Voltages Up to and Including 650 Volts to Earth
- Addendum to IS : 1255-1958 Code of Practice for Installation and Maintenance of Paper-Insulated Power Cables (Up to and Including 33 kV)

Rotating Machinery, ETDC 15 — Indian Standard Specification for Three-Phase Induction Motors (IS : 325-1959) was revised so as to include Class 'E' insulation. Draft revision of IS : 1231-1958 Dimensions of Three-Phase Induction Motors, and a draft on dimensions of flange mounted AC induction motors were issued in wide circulation. Three more drafts covering loom motors, card motors and types of construction and mounting of motors were approved for wide circulation.

WORK IN HAND

Brush Holders for Slip-ring Motors
Carbon Brushes for Electrical Purposes
Dimensions of Vertical, Hollow Shaft Induction Motors with Mounting Flanges
Electric Mains-Operated Synchronous Clocks
Flame-Proof Electric Motors
Motors for Domestic Appliances

Ring Frame Motors
Textile Motors, Part I Loom Motors
Part II Card Motors
Type of Construction and Mounting of Motors
Revision of:
IS : 996-1959 Small AC and Universal Electric Motors with Class 'A' Insulation

Transformers, ETDC 16 — Specification for power transformers was finalized for publication.

WORK IN HAND

Earthing Transformers
Loading Guide for Transformers
Mining Transformers
Reactors

Revision of:
IS : 1180-1958 Outdoor Type Three-Phase Distribution Transformers Up to and Including 100 kVA 11kV

Switchgear and Controlgear, ETDC 17 — Draft standard for HRC cartridge fuse-links was finalized. Draft revision of IS : 375-1951 Specification for Marking and Arrangement for Switchgear Bus-Bars, Main Connections and Auxiliary Wiring, and two draft standards covering (a) Classification of Protective Enclosures for Low-Voltage Switchgear and Controlgear, and (b) High Voltage Alternating Current Circuit Breakers from 1 000 Volts to 11 000 Volts — Part I Requirements, were issued in wide circulation.

STANDARDS PUBLISHED

IS : 1818-1961 Outdoor Air-Break Isolators and Earthing Switches for Voltages Up to 220 kV
IS : 1822-1961 Motor Starters of Voltage Up to 650 V

WORK IN HAND

Aerial Overhead Line Fuses
Application Guide for Equipment Located in Exposed Situations
Contactors
Dimensions of Terminals
Low Voltage Alternating Current Circuit Breakers

Low Voltage Fuse Gear (Heavy Duty)
Out-door Drop-out Fuse Assemblies
Up to 33 kV

Electrical Appliances and Accessories, ETDC 7 — Draft Specifications for Storage Type Automatic Electric Water Heaters and Call Bells and buzzers were finalized while those for the following were approved for

wide circulation:

Link Clips for Electrical Wiring Purposes

Reversible Two-pin Connectors and Appliance-Inlets for Portable Electrical Appliances

Rigid Non-Metallic Conduits for Electrical Installations

WORK IN HAND

Autoclaves
Bell Pushes
Conduit Fittings and Accessories for Wiring
Cut-Outs (Fuses)
Electrical Heating Pads
Fuse Wire
Heating Elements
Incubators
Rewirable Type Electric Fuses
Thermostats
Water Boilers
Water Still
Revision of:
IS : 365-1952 Electric Hot Plates

Revision of:

IS : 366-1955 Electric Irons
IS : 367-1955 Electric Kettles for Domestic Use
IS : 368-1952 Electric Portable Immersion Heaters for Domestic Use
IS : 369-1952 Electric Radiators for Domestic Use
IS : 370-1954 Reversible Type Two-Pin Plugs and Socket Outlets Without Earthing Connections
IS : 371-1954 Two- and Three-Terminal Ceiling Roses

Flame-Proof Electrical Equipment, ETDC 22 — Draft specification for flameproof enclosures for electrical equipment was issued in wide circulation.

WORK IN HAND

Code of Practice for Installation and Maintenance of Flameproof and Intrinsically Safe Electrical Equipment

Intrinsically Safe Electrical Apparatus and Circuits

Electric Lamps and Accessories, ETDC 23

STANDARD PUBLISHED

IS : 1901-1961 Visual Indicator Lamps

WORK IN HAND

Ballasts for Instant Start Fluorescent Lamps
Bi-Pin Lampholders and Sockets for Starters
Capacitors for Electric Discharge Lamps
Electrical and Dimensional Characteristics of High Pressure Mercury Vapour Lamps
Fluorescent Lamps
Glow Starters for Pre-Heat Type Fluorescent Discharge Lamps
Lamps for Flash-Lights
Miscellaneous Lamps

Neon Lamps
Radio Dial Lamps
Screw Lamp Caps and Lampholders (Edison Type)
Transformers for High Voltage Luminous Discharge Tubes
Revision of:
IS : 418-1957 Tungsten Filament General Service Electric Lamps (Revised)
Amendment to:
IS : 1258-1958 Bayonet Lamp-holders

Mica, ETDC 9

WORK IN HAND

- Grading and Classification of Muscovite Mica Splittings
- Further Processing of the ISO Subjects
 - a) Visual Classification of Muscovite Mica
 - b) Grading of Phlogopite Mica and Muscovite Mica Splittings

- c) Thermal Classification of Phlogopite Mica Splittings
- d) Master Standard Samples
- e) Effect of Metric System on Size Grading of Mica

Insulating Materials, ETDC 18—Four draft standards covering the following subjects were circulated for inviting comments:

Recommendations for the Conditioning and Testing of Electrical Insulating Materials

Methods of Test for Determination of Insulation Resistance of Solid Insulating Materials

Methods of Test for Electric Strength of Insulating Materials at Power Frequencies

Built-Up Mica for Electrical Purposes

WORK IN HAND

Adhesive Insulating Tapes for Electrical Purposes

Revision of IS : 335-1953 Insulating Oil for Transformers and Switchgear (Low Viscosity Type)

Electronic Equipment, ETDC 24

WORK IN HAND

- Communication Receivers
- Dry Battery-Operated Community Radio Receivers Utilizing Transistors
- General Requirements for Electronic Voltmeters (Pointer Indicator)
- General Requirements for Radio Transmitters
- Information and Rating Sheets on Transmitters
- Methods of Measurements for Amplitude Modulated Radio Frequency Signal Generators (30 kc/s to 30 mc/s)
- Methods of Measurements for Audio Frequency Signal Generators
- Methods of Measurements for Cathode-Ray Oscilloscopes: General Purpose
- Methods of Measurements on Transmitters
- Output Power Meters

Requirements for General Purpose Amplitude Modulated Radio Frequency Signal Generators (30 kc/s to 30 mc/s)

Requirements for General Purpose Audio Frequency Signal Generators (20 c/s to 20 kc/s)

Safety Requirements of Transmitters Television Receivers

Revision of:

IS : 614-1954 Methods of Measurement on Receivers for Amplitude Modulation Broadcast Transmissions (*Tentative*)

IS : 615-1954 Recommendations for Minimum Electrical Performance Requirements of Domestic Radio Receivers (*Tentative*)

IS : 616-1957 Code of Safety Requirements for Mains-Operated Radio Receivers

Electronic Components, ETDC 25 — Draft Specifications for Ceramic Dielectric Capacitors, Type I and Fixed Silvered Mica Capacitors were approved for publication.

WORK IN HAND

Aerial Wires, Insulated and Bare
Copper
Capacitors for Interference Suppression Devices
Ceramic Dielectric Capacitors, Type II
Code of Practice on the Use of Electronic Valves
Electrolytic Condensers
Ferromagnetic Materials for Transformers and Coils
Fixed Carbon Resistors, Type I
Fixed Carbon Resistors, Type II
Gang Condensers
General Requirements for Electronic Components
Hook-Up Wires
Interference Suppression Devices

Interstage Transformers
Knob and Shafts for Radio Receivers
Mechanical Parts of Receivers
Methods of Testing Valves
Microphone Transformers
Plugs for Receivers
Potentiometers (Volume Control)
Quartz Crystals
Rotary Wafer Switches
Sampling Procedures for Electronic Components
Semi-Conductor Devices (Transistors)
Shielded Wires
Wire Wound Resistors
Revision of IS: 590-1954 Fixed Paper Dielectric Capacitors

Environmental Testing Procedures, ETDC 26

STANDARD PUBLISHED

IS: 589-1961 Procedures for Basic Climatic Tests for Electronic Components
(Revised)

WORK IN HAND

Procedures for Environmental Testing of Electronic Equipment:
Part I General

Part II Damp Heat (Cycling)
Part III Cold Test
Part IV Dry Heat Test

Acoustics, ETDC 27

STANDARDS PUBLISHED

IS: 1819-1961 Recommendations for General Requirements of Public Address Amplifiers
IS: 1881-1961 Code of Practice for Installation of Indoor Amplifying and Sound Distribution Systems
IS: 1882-1961 Code of Practice for Outdoor Installation of Public Address Systems

WORK IN HAND

Acoustical Terminology:
Part I General
Part II Sound Generating, Amplifying, Receiving and Reproducing Devices
Free Field Secondary Calibration of Microphones
General Requirements and Methods of Measurements of Pick-up Heads

Preferred Frequencies for Acoustical Measurements
Rated Impedance and Dimensions of Loudspeakers
Tape Recorders
Transistorized Amplifiers
Revision of IS: 1031-1957 Methods of Measurement on Loudspeakers and Loudspeaker Systems

Insulators and Accessories, ETDC 3—Draft standards for high voltage bushings and insulator hardware for overhead lines with a nominal voltage of 3.3 kV and above were finalized.

WORK IN HAND

Code of Practice for Selection of Insulator Hardware High Voltage Post Insulators	Revision of IS:731-1956 General Requirements and Methods of Test for Porcelain Insulators for Overhead Lines with a Nominal Voltage of 1 000 V and Above
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Electric Fans, ETDC 5—Indian Standard Specifications for Ceiling Fans and Regulators (*Revised*) (IS: 374-1960), Electric Table Type Fans (*Revised*) (IS: 555-1960) and Pedestal Type Electric Fans (IS: 1169-1957) were amended.

WORK IN HAND

Air Circulator Type Fans Blowers	Fans for the Navy Propeller Type Ventilating Fans
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Electrical Instruments and Meters, ETDC 6

STANDARDS PUBLISHED

IS: 722 (Part IV)-1961 AC Electricity Meters, Three-phase Kilowatt-Hour Meters with Maximum Demand Indicator
IS: 1765-1961 DC Potentiometers for Laboratory and Industrial Use
IS: 1766-1961 Time Switches

DRAFTS FINALIZED

Thermocouple Pyrometers
Revision of IS: 722 (Parts I and II)-1955 AC Electricity Meters:
Part I General Requirements;
Part II Single Phase 2-Wire Whole Current Credit Type Meters

WORK IN HAND

Ammeters for Automobiles Calorimeter (Photo Electric) Code for Resistance Temperature Measurement Current Transformers — Part I : General Requirements Part II: Measuring Current Transformers Part III: Protective Current Transformers Dimensions of Indicating Instruments Fuel Gauges Galvanometers High Precision Watt Hour Meters	Insulation Resistance Tester (Hand Operated) Multi-Test Meters Polycrystalline Semi-Conductor Rectifiers Radiation Pyrometers Recording (Graphic) Instruments Relays for Industrial and Power Distribution Purposes Resistance Thermometer Element Testing and General Requirements of Rectifier Equipment Var-Hour Meters Vibration Galvanometer
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Primary Cells and Batteries, ETDC 10—The following standards on primary cells and batteries were amended to raise the minimum levels of performance specified in them:

IS: 203-1958 Leclanché Type Dry Batteries for Flashlights (*Revised*)

- IS : 267-1958 Leclanché Type Inert Cells (*Revised*)
 IS : 268-1959 Leclanché Type Sack Cells (*Revised*)
 IS : 556-1960 Leclanché Type Dry Batteries for Radio Receivers
 (*Revised*)

WORK IN HAND

- | | |
|---|--|
| Batteries for Hearing Aids | Terminals for Leclanché Type Primary Batteries |
| Batteries for Photo-Flash Lamps | Revision of IS : 586-1959 Leclanché Type Dry Cells for Telecommunication, Signalling and General Purposes (<i>Revised</i>) |
| Carbon Rods for Primary Cells | |
| Flash Lights | |
| Leclanché Type Dry Batteries for Transistorized Radio Receivers | |

Secondary Cells and Batteries, ETDC 11

STANDARDS PUBLISHED

- IS : 985-1962 Lead-Acid Storage Batteries (Heavy Duty) for Motor Vehicles (*Revised*)
 IS : 1145-1962 Lead-Acid Storage Batteries for Motor Cycles (*Revised*)
 IS : 1846-1961 Lead-Acid Storage Batteries for Aircraft (Aerobatic and Non-Aerobatic)

WORK IN HAND

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|--|--|
| Miner's Cap Lamp Batteries | Amendment finalized to: |
| Amendment finalized to: | IS : 1145-1962 Lead-Acid Storage Batteries for Motor Cycles (<i>Revised</i>) |
| IS : 395-1959 Lead-Acid Storage Batteries (Light Duty) for Motor Vehicles (<i>Revised</i>) | |

Electroplating, ETDC 12—The following seven standards were published before the subject of electroplating was transferred to Structural and Metals Division:

- IS : 1771-1961 Industrial Silver Plating
 IS : 1772-1961 Copper Plating
 IS : 1773-1961 Brass Plating
 IS : 1958-1961 Nickel Anodes for Electroplating
 IS : 1959-1961 Silver Anodes for Electroplating
 IS : 1985-1962 Code of Practice for Pretreatment of Steel, Copper and Copper Base Alloys, Zinc and Zinc Base Alloys for Electroplating
 IS : 1986-1962 Code of Practice for Hard Chromium Plating on Steel

Illumination Engineering, ETDC 13

STANDARDS PUBLISHED

- IS : 1777-1961 Industrial Lighting Fittings with Metal Reflectors
- IS : 1913-1961 General and Safety Requirements for Electric Light Fittings
- IS : 1947-1962 Flood-Lights

WORK IN HAND

- | | |
|-------------------------------|--------------------------------|
| Aerodrome Lighting Fittings | Non-Flameproof Type Well Glass |
| Decorative Lighting Fittings | Lighting Fittings |
| Dust-proof Lighting Fittings | Street Lighting Fittings |
| Flame-proof Lighting Fittings | |

Automobile Electrical Equipment, ETDC 14

STANDARD PUBLISHED

- IS : 1884 (Part I) - 1961 Automobile Electric Horns, Part I : DC Vibrating Type

WORK IN HAND

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|---|--|
| All Automobile Lamp Units (Other than bulbs), such as Head Lamps, Side Lamps, Tail Lamps, etc | Fuses and Fuse Boxes for Automobiles |
| All Types of Switches Used in Automobiles | Generators |
| Armature | Horn Relays |
| Coils | Magnetos |
| Cut-Outs | Screen Wipers |
| Dipper Switches | Starters |
| Distributors | Taper Terminal Cable Connectors for Automobile Batteries |
| Dynamos for Cars and Commercial Vehicles | Voltage Regulator |
| Electric Horns, Part II : Wind Tone Type | Revision of: |
| Flashers | IS : 1062-1957 Methods of Test for Sparking Plugs |
| | IS : 1063-1957 Sparking Plugs |

High Voltage Techniques, ETDC 19

STANDARD PUBLISHED

- IS : 1876-1961 Method for Voltage Measurement by Means of Sphere-Gaps (One Sphere Earthed)

Three draft standards covering the following were circulated for comments:

- a) Guide for Insulation Co-ordination
- b) Impulse Voltage Testing Procedure
- c) Techniques for High Voltage Tests

Power Installation and Maintenance, ETDC 20

STANDARDS PUBLISHED

- IS : 1866-1961 Code of Practice for Maintenance of Insulating Oil
- IS : 1886-1961 Code of Practice for Installation and Maintenance of Transformers

WORK IN HAND

Code of Practice for:
Electrical Installations in Industrial Locations
Protection of Structures Including Buildings Against Lightning Installation and Maintenance of Switchgear
Installation and Maintenance of Motor Controlgear

Code of Practice for:
Earth Leakage Protection in Mines and Similar Other Locations
Revision of IS:732-1958 Code of Practice for Electrical Wiring and Fittings in Buildings
Amendment to IS:900-1956 Code of Practice for Installation and Maintenance of Induction Motors

Electrical Welding Equipment, ETDC 21

STANDARD PUBLISHED

IS: 1851 (Part I)-1961 Arc Welding Transformers, Part I: Single Operator Type

WORK IN HAND

Arc Welding Transformers, Part II: Multi-Operator Type
Electrical Welding Accessories

Spot Welders
Welding Generators

Electrotechnical Standards, ETDC 1 — Two parts of the standard on electrotechnical vocabulary covering 'fundamental definitions', and definitions of 'machines and transformers' were sent for printing and draft revision of IS: 585-1954 Recommended Voltages and Frequency for AC Transmission and Distribution Systems was finalized for publication.

WORK IN HAND

Graphical Symbols Used in Electrotechnology:
Part I : Classification and Definitions of Diagrams and Charts
Part II : Kind of Current Distribution System and Methods of Connections

Graphical Symbols Used in Electrotechnology:
Part III: Machines and Transformers
Letter Symbols Used in Electrotechnology

5. ENGINEERING DIVISION

5.1 During the period under review, 58 Indian Standards, including 10 revisions, were either published or sent to press for publication.

5.2 The Division continued its efforts to formulate standards for the basic and general engineering industries. High priority was given to the standards required in connection with the changeover to metric system and a number of standards relating to bolts, screws, nuts, rivets, hand tools, weighing instruments, drills, reamers, milling cutters and screwing tools were made available. Among the standards published during the year, special mention may be made of IS: 1367-1961 Technical Supply Conditions for Threaded Fasteners which specifies the requirements for the inspection of bolts, screws and nuts, and other threaded fasteners. Besides, IS: 696-1955 Code of Practice for

General Engineering Drawings was also revised. Another important standard sent for publication related to equivalent metric units for quantities in mechanical engineering (IS : 1926-1961).

5.3 With the assistance of Mr. Frantisek Danek, an expert on machine tools, whose services have been made available to ISI, for one year in the first instance, by the United Nations Technical Assistance Organization, considerable progress was made in the preparation of Indian Standards on machine tools and small tools. He is presently assisting in preparing standards in metric dimensions for machine tools, small tools and in other related fields, with the specific object of avoiding confusion during the changeover to the metric system.

5.4 Inaugural meetings of the following Sectional Committees were held during the year:

- a) EDC 50 Coal Cutters, Mechanical Loaders and Mine Conveyors;
- b) EDC 51 Mine Tubs, Mine Cars and Tipplers; and
- c) EDC 52 Duty Conditions in Mines.

The Committees discussed their respective scopes of work, and set up suitable subcommittees to deal with the subjects allotted to them.

5.5 Two new Sectional Committees, one for oil expellers and allied oil mill machinery and the other to deal with umbrellas, were set up.

5.6 A brief account of the Division's activities is given below:

Engineering Standards, EDC 1—Indian Standard Equivalent Metric Units for Quantities in Mechanical Engineering (IS : 1926-1961) was sent to press. Besides, five ISO Recommendations published by the ISO Technical Committee No. 12 Quantities, Units, Symbols, Conversion Factors and Conversion Tables were endorsed as Indian Standards as follows:

- IS : 1890 (Part I)-1961 Recommendations on Fundamental Quantities and Units of the MKSA System and Quantities and Units of Space and Time
- IS : 1890 (Part II)-1961 Recommendations on Quantities and Units of Periodic and Related Phenomena
- IS : 1890 (Part III)-1961 Recommendations on Quantities and Units of Mechanics
- IS : 1890 (Part IV)-1961 Recommendations on Quantities and Units of Heat
- IS : 1890 (Part XI)-1961 Mathematical Signs and Symbols for Use in the Physical Sciences and Technology

WORK IN HAND

Revision of IS : 196-1950 Atmospheric
Conditions for Testing
Revision of IS : 1105-1957 Method for

Precise Conversion of Inch and
Metric Dimensions to Ensure In-
terchangeability

Drawings, EDC 20

STANDARD PUBLISHED

IS : 696-1960 Code of Practice for General Engineering Drawings (*Revised*)

Engineering Metrology, EDC 43 — Six draft standards relating to dial gauges; steel straightedges; engineer's squares; surface plates (cast iron); recommendations for machining deviations for dimensions without specified tolerances; and recommendations for limits and fits for sizes above 500 mm up to 3 150 mm were finalized for publication. Besides, draft standards for (a) guide to the selection of fits, and (b) cast iron angle plates were approved for wide circulation.

WORK IN HAND

Master Squares
Sine Bars

Slip Gauges (Gauge Blocks)

Weights and Measures, EDC 41 — Draft revision of IS : 1058-1957 Commercial Metric Capacity Measures; and the draft standard code of practice for calibration of vehicle tanks for petroleum products and other liquids were circulated for eliciting comments.

STANDARDS PUBLISHED

IS : 1853-1961 Self-Indicating and Semi-Self-Indicating Counter Type Weighing Machines

IS : 1854-1961 Person Weighing Machines

WORK IN HAND

Automatic Weighing Machines
Methods for Testing the Accuracy
of Commercial Measuring Instru-
ments Used in Petroleum Trade
Metric Tapes for Use in Measure-
ments of Oil Quantities

Metric Dip Rods and Metric Dip
Tapes
Revision of IS : 1433-1960 Beam
Scales

Screw Threads, EDC 27 — Three Indian Standard Specifications, namely, Slotted Round and Cheese Head Machine Screws (1.6 to 20 mm) (IS : 1366-1962); Slotted Countersunk Head Machine Screws (1.6 to 20 mm) (IS : 1365-1962); and Plain Washers (IS : 2016-1962) were sent to press while the draft standard for Rivets for General Purposes (Below 12 mm Dia) was finalized for publication. Besides, draft standards relating to (a) gauging practice for metric screw threads; (b) slotted and castle nuts; and (c) hexagon socket head cap screws were circulated for eliciting comments.

STANDARDS PUBLISHED

IS : 549-1961 Split Cotter Pins (*Revised*)

IS : 1367-1961 Technical Supply Conditions for Threaded Fasteners

IS : 1368-1961 Dimensions of Ends of Bolts and Screws

IS : 1369-1961 Dimensions of Screw Thread Run Outs and Undercuts

IS : 1821-1961 Dimensions for Clearance Holes for Metric Bolts

IS : 1862-1961 Studs

IS : 1928-1961 Boiler Rivets (12 to 48 mm Diameter)

IS : 1929-1961 Rivets for General Purposes (12 to 48 mm Diameter)

IS : 2016-1962 Plain Washers

WORK IN HAND

Coach Bolts
Dimensions of Gauges for Metric
Screw Threads with ISO Profile
(0.25 to 39 mm)
Dimensions of Screw Threads (0.25
to 300 mm)

Grub Screws
Revision of IS : 1362-1959 Dimensions
for Screw Threads for General
Purposes (Diameter Range 0.25
to 39 mm)

Machine Tools, EDC 11 — Three standards, relating to T-slots, T-bolts, and T-nuts were sent to press whereas two draft standards, one for coolant pumps, and the other regarding safety code for testing machine tools were finalized for publication. Besides, eleven draft standards relating to drill chucks; drilling jig bushes (revision of IS : 666-1955); 60° and 90° dead centres for lathes; 3-jaw self centering lathe chucks; sizes for general purpose lathes; recommendations for symbols to be given on indication plates of machine tools; and test charts for radial drilling machines, vertical milling machines, horizontal and universal milling machines, and turret and capstan lathes up to 300 mm centre height (arranged for cylindrical tool shanks in the turret heads) were circulated for eliciting comments.

STANDARDS PUBLISHED

IS : 1878-1961 Test Chart for Lathes (Up to 800 mm Swing Over Bed)
IS : 1995-1962 Overall Internal Heights for Lathe Tool Posts

WORK IN HAND

4-Jaw Independent Lathe Chucks
Test Charts for:
Bench Drilling Machines
Pillar Type Drilling Machines
Shaping Machines

Test Charts for:
Single and Double Column Planing
Machines
Slotting Machines
Upright Drilling Machines

Small Tools, EDC 45 — Indian Standard Specification for Screwing Taps (IS : 1988-1962) was sent to press whereas seven draft standards on the following items were circulated for eliciting comments:

Carbide Tipped Single Point Turning Tools
Collars and Spacers for Milling Arbors
Dimensions of Carbide Tips for Single Point Turning Tools
Hacksaw Blades
Milling Arbors
Plug and Ring Gauges for Self-Holding Tapers
Shank Sections for Single Point Turning Tools

STANDARDS PUBLISHED

IS : 599-1960 Twist Drills (Revised)
IS : 1830-1961 General Requirements for Milling Cutters
IS : 1831-1961 Dimensions for Milling Cutters
IS : 1836-1961 Reamers
IS : 1850-1961 Dimensions for Shank Diameters and Driving Squares for Rotating Tools
IS : 1859-1961 Thread Cutting Dies

WORK IN HAND

High Speed Steel and Carbon Tool
Steel Single Point Turning Tools
Classification and Colour Code for
Carbide Tips

Dimensions for Self Release (7/24)
Tapers

Transmission Devices, EDC 44— Indian Standard concerning dimensions for shaft height for driving and driven machines was sent to press while the draft standard on parallel keys and keyways was finalized for publication. The draft standards for woodruff keys and key slots; and taper keys and keyways were circulated for eliciting comments.

WORK IN HAND

Cast Iron Flexible Couplings
Gib-Head Keys and Keyways
Glossary of Terms and Notation for
Tooth Gearing
Parallel Keys and Keyways for
Machine Tools
Spur and Helical Gears

Straight Sided Splines for General
Engineering Use
Straight Sided Splines for Machine
Tools
Tangential Keys and Keyways
Transmission Steel Roller Chains and
Chain Wheels

Pulleys and Belts, EDC 42

STANDARD PUBLISHED

IS: 1891-1961 Rubber and Canvas Conveyor and Elevator Belting

WORK IN HAND

Conveyor Belting for Underground
Use

V-Belts

Hand Tools, EDC 12— Five draft standards for (a) screw drivers, (b) widths across flats for spanners, (c) open jaw spanners, (d) ring spanners, and (e) box spanners were finalized for publication. Besides, draft revisions of IS: 402-1952 Chisels, and IS: 510-1953 Blacksmith's Anvils (Cast Steel), as also three draft standards on vices, namely, bench vices (machinists vices); blacksmiths vices; and pipe vices were approved for circulation.

STANDARDS PUBLISHED

IS: 273-1961 Picks and Beaters (*Revised*)
IS: 274-1961 Shovels (*Revised*)
IS: 845-1961 Swage Blocks and Stands
IS: 1759-1961 *Powrahs*
IS: 1930-1961 Wood Working Chisels and Gouges

WORK IN HAND

Burner Pliers
Cutting and Gripping Pliers
Cutting Pliers
Engineers' Files

Eyelet Pliers
Gripping Pliers
Tube Pliers
Universal Pliers

Ball and Roller Bearings, EDC 39— The draft standard relating to boundary dimensions of bearings (including tolerances) was approved for circulation.

WORK IN HAND

Code of Practice for Installation and Maintenance of Ball and Roller Bearings
Glossary of Terms Relating to Ball and Roller Bearings

Identification Code for Ball and Roller Bearings
Methods of Tests for Complete Bearings

Optical and Mathematical Instruments, EDC 36—Two Indian Standard Specifications one for metric diagonal scales (cartographers, surveyors and engineers); and the other for protractors for use of drawing offices were sent to press. Three draft standards for (a) drafting machines, (b) pantagraphs, and (c) plane tables, stands and sight rules were circulated for eliciting comments while five others relating to ranging rods; glass circle theodolite; vernier theodolite; general requirements for optical instruments; and basic climatic and durability tests for optical instruments were approved for circulation.

STANDARDS PUBLISHED

IS: 1481-1961 Metric Steel Scales for Engineers
IS: 1561-1962 Set Squares for Use of Drawing Offices
IS: 1764-1961 Trough Compass
IS: 1779-1961 4-Metre Levelling Staff, Folding Type
IS: 1842-1961 Surveying Chain Pins (Arrows)
IS: 1955-1961 Prismatic Compass, Liquid
IS: 1957-1961 Prismatic Compasses, Non-Liquid

WORK IN HAND

Beam Compass
Drawing Instruments for Drawing Offices

Ophthalmic Glass
Pressure and Vacuum Gauges

Abrasives, EDC 13—Revision of IS: 715-1957 Specification for Coated Abrasives, Glue Bond was sent to press whereas Indian Standard Safety Code for Grinding Wheels was finalized for publication.

WORK IN HAND

Emery Fillets
Preferred Shapes and Sizes of Grinding Wheels

Selection and Use of Coated Abrasives
Water Proof Abrasives

Internal Combustion Engines, EDC 14

WORK IN HAND

Aluminium Alloy Pistons
Cast Iron Pistons
Code of Practice for Installation of Land Engines

Filters for Air, Fuel and Oil
Performance and Testing of Diesel Engines for Rail Traction Purposes
Piston Rings

Automotive Vehicles, EDC 38

WORK IN HAND

Brake Lining
Clutch Facing

Helical Springs for Automobile Suspension

Pumps, EDC 35

STANDARDS PUBLISHED

IS : 1710-1960 Vertical Turbine Pumps for Clear, Cold Fresh Water

WORK IN HAND

Code of Practice for Tubewell Drilling

Coal Cutters, Mechanical Loaders and Mine Conveyors, EDC 50

WORK IN HAND

Belt Conveyors

Bucket Elevators

Coal Cutters, Archwall

Coal Cutters, Longwall

Coal Cutter Picks

Coal Cutters, Shortwall

Chain Conveyors

Gathering Arm Coal Loaders

Loaders, Bucket Type

Scraper Conveyors

Mine Tubs, Mine Cars and Tipplers, EDC 51

WORK IN HAND

D-Couplings for Tubs and Shackles

Mine Cars

Mining Tracks

Mine Tubs

Solid Bottom Mine Cars 2.3 to 2.8 m³
Tipplers

Tub Wheels and Axles (Fixed
Running Self Oiling)

Duty Conditions in Mines, EDC 52 — The inaugural meeting of the Sectional Committee was held on 6 October 1961 when it was decided to issue a questionnaire to find out the variations in the following conditions in various mines:

- a) Temperature (dry and wet bulb) at (1) surface under shade and in the open, (2) pit bottom, and (3) working face;
- b) Air flow at (1) intake road, (2) working face, and (3) return air ways;
- c) Gas content;
- d) Dust content; and
- e) Analysis of mine water at the point of face pump discharge and at main sump pump discharge.

Wire Ropes and Wire Products, EDC 32 — Draft revision of IS : 278-1951 Galvanized Steel Barbed Wire for Fencing, and three draft standards, relating to galvanized stay strand for telegraph and telephone purposes, signal posts and suspension strand; galvanized steel wire strand for signalling purposes; and stranded galvanized steel wire for fencing; were finalized for publication. Besides, two draft standards relating to steel wire ropes for (a) general engineering purposes, and (b) shipping purposes, were approved for wide circulation.

STANDARDS PUBLISHED

IS : 1804-1961 Fibre Cores for Steel Wire Ropes

IS : 1835-1961 Steel Wire for Ropes

IS : 1855-1961 Steel Wire Ropes for Winding Purposes in Mines

IS : 1856-1961 Steel Wire Ropes for Haulage Purposes in Mines

WORK IN HAND

Bull Dog Grips
Code of Practice for Selection and
Maintenance of Wire Ropes
Locked Coil Ropes
Safety Factors for Aerial Ropeways

Sockets for Wire Ropes
Steel Wire Ropes for Lifts
Steel Wire Towlines
Thimbles for Wire Ropes

Oil Burning Domestic Appliances (Pressure Type), EDC 46 — Draft Indian Standard Specification for Gas Mantles was circulated for eliciting comments.

STANDARD PUBLISHED

IS : 1899-1961 Blow Lamps

WORK IN HAND

Revision of IS : 1342-1959 Oil Pressure Stoves

Revision of IS : 1384-1959 Oil Pressure Lanterns

Bicycles, EDC 26 — Revision of IS : 624-1955 Bicycle Rims was sent for publication. Draft standard specification for bicycle front forks was finalized. Five draft revisions of printed standards, namely, (a) IS : 623-1955 Bicycle Frames; (b) IS : 625-1955 Bicycle Handle Bars; (c) IS : 626-1955 Bicycle Seat Pillars; (d) IS : 628-1955 Bicycle Pedal Assembly; and (e) IS : 629-1955 Bicycle Hub Assemblies; and the draft standard for valve tubing for bicycles, were issued in wide circulation for eliciting comments.

STANDARDS PUBLISHED

IS : 627-1961 Bicycle Chains (*Revised*)

IS : 630-1961 Bicycle Spokes (Plain) and Nipples for Spokes (*Revised*)

Sports Goods, EDC 28 — Draft standard specifications for tennis balls and football bladders were finalized for publication.

Cutlery, EDC 30 — Draft revision of IS : 990-1957 Spoons, Stainless Steel was circulated for eliciting comments.

WORK IN HAND

Revision of:

IS : 888-1956 Hollow Ground Razors, Open Type
IS : 921-1959 Butcher's Knives
IS : 922-1958 Cook's Knives
IS : 923-1958 Carving Knives
IS : 924-1959 Bread Knives
IS : 925-1958 Pocket Knives
IS : 989-1956 Scissors
IS : 991-1957 Spoons, Brass and Nickel Silver

Revision of:

IS : 992-1957 Forks (Table, Fish and Serving), Stainless Steel
IS : 993-1957 Forks (Table, Fish and Serving), Brass and Nickel Silver
IS : 994-1957 Fish Knives and Butter Knives
IS : 995-1957 Table Knives, Dessert Knives and Fruit Knives

Utensils, EDC 47 — Draft specification for domestic pressure cookers was approved for wide circulation.

WORK IN HAND

Stainless Steel Utensils

Pencils (Lead), EDC 33—Draft specification for graphite for pencil slips was finalized for publication.

Sewing Machines, EDC 34—The draft standard specification for sewing machine needles was circulated for eliciting comments.

6. STRUCTURAL AND METALS DIVISION

6.1 During the period under review, the Structural and Metals Division formulated 40 new Indian Standards and revised 10 existing Indian Standards (*see* Appendix A).

6.2 Considerable progress was made during the period under review both in the field of ferrous and non-ferrous metals. One of the important standards published during the year related to schedules for wrought steels for general engineering purposes. Out of the other Indian Standards sent for printing, mention may be made of the glossary of terms for iron and steel; standards for mechanical testing of cast iron; light metals; methods of sampling foundry sands and ferrous metals; specification for cold-formed lightgauge steel structural sections and sizes for steel plate, sheet and strip; flats, round and square bars for general engineering purposes; iron castings with spheroidal or nodular graphite and methods of sampling and physical tests for refractory materials. Another important standard which has been sent for printing concerns rolling and cutting tolerances for hot rolled steel products.

6.3 Out of the draft standards finalized for publication, mention may be made of Code of Practice for Use of Structural Steel in General Building Construction (Revision of IS : 800-1956), code of practice for cranes and hoists, chemical analysis of limestone, dolomite and allied materials and of high silica sands. In the field of wrought steel products, draft revision of four printed Indian Standards and four new draft standards were finalized for publication. Other important draft standards which were finalized relate to coding and classification of non-ferrous scrap metals and residues and revision of IS : 210-1950 Grey Iron Castings and IS : 227-1954 Malleable Iron Castings.

6.4 Draft standards issued for wide circulation for comments included among others (a) glossary of terms for industrial radiology and ultrasonic testing; (b) methods of sampling ores and raw materials; (c) specification for steel sheet piling sections; (d) handbook for structural engineers relating to application of plastic theory in design of steel structures; (e) specifications for fine gold and silver bar, sheet, wire, etc; and (f) methods of assaying gold and silver.

6.5 A number of new subjects were taken up for standardization and these relate to dimensional standards for aluminium and aluminium alloys, standard sand for testing foundry binding materials, and coding and classification of processed ferrous scrap.

6.6 The specific work done by the different sectional committees under the Structural and Metals Division Council is briefly summarized as below:

Structurals, SMDC 6 — Three draft standards relating to (a) angle sections with legs of unequal width and thickness, (b) steel sheet piling sections, and (c) tubular steel poles for overhead power lines were issued in wide circulation for eliciting comments.

In order to cater for the special requirements of the railway wagon building industry, a draft amendment No. 1 to IS : 808-1957 Rolled Steel Beam, Channel and Angle Sections was issued for wide circulation for comments in which provision was made for additional channel sections with increased web thickness. These additional channel sections can be produced in the existing steel mills by raising the rolls.

STANDARDS PUBLISHED

- IS : 811-1961 Cold Formed Light Gauge Structural Steel Sections
- IS : 1730-1961 Dimensions for Steel Plate, Sheet and Strip for Structural and General Engineering Purposes
- IS : 1731-1961 Dimensions for Steel Flats for Structural and General Engineering Purposes
- IS : 1732-1961 Dimensions for Round and Square Steel Bars for Structural and General Engineering Purposes
- IS : 1852-1962 Rolling and Cutting Tolerances for Hot Rolled Steel Products
- IS : 1863-1961 Dimensions for Rolled Steel Bulb Plates

WORK IN HAND

- | | |
|--|--|
| Handbook (giving standard connections from beam to beam and beam to column, etc, along with other details, such as permissible stresses in rivet and bolt groups, strength of materials and other general information) | Structural Sections in Aluminium and Aluminium Alloys, Tubular Steel Poles for Traction and Telecommunication Purposes |
|--|--|

Structural Engineering, SMBDC 7 — Draft revision of IS : 800-1956 Code of Practice for Use of Structural Steel in General Building Construction and a draft code of practice for design of cranes and hoists (structural portion) were finalized for printing. As the permissible stresses had been considerably increased in the former draft, the desirability of formulating a separate code for use of structural steel in temporary construction was ruled out.

Draft code of practice for design of vertical mild steel cylindrical welded oil storage tanks which was finalized last year but was kept pending for inclusion of additional data is expected to be sent for printing early next year.

Draft Indian Standard Handbook for Structural Engineers No. 4 relating to application of plastic theory in design of steel structures was circulated to all interests concerned for eliciting comments. Draft amendment No. 1 to IS : 804-1958 Specification for Rectangular Pressed Steel Tanks was also issued in wide circulation.

Amendments No. 1 and 2 to IS : 806-1957 Code of Practice for Use of Steel Tubes in General Building Construction were published. A draft amendment No. 3 to IS : 806-1957 was approved for wide circulation.

A preliminary draft code relating to use of steel in overhead transmission line towers was prepared for consideration of the committee.

WORK IN HAND

Code of Practice relating to:

Design and Construction of Floating Roofs of Open Top Tanks

Design of Cranes and Hoists, Parts II and III

Guide for Application of Plastic Theory in Design of Steel Structures

Use of Aluminium Sections in Structures

Use of High Strength Bolts in Steel Structures

Use of Steel in Gas Storage Tanks
Use of Steel in Gravity Water Tanks

Use of Steel in Overhead Transmission Line Towers

Use of Steel in Radio Masts

Handbooks for Structural Engineers, Typical Designs and Drawings

Design of Rigid Frame Structures in Steel

Handbooks for Structural Engineers, Typical Designs and Drawings: Economy of Steel Through Choice of Fabrication Method

Function of Good Design in Steel Economy

High Strength Bolting in Steel Structures

Large Span Shed Type Buildings in Steel

Light Weight Open Web Steel Joist Construction

Multistorey Steel Framed Structures for Offices and Residences
Roof Trusses in Steel

Single Storey Industrial and Mill Type Buildings in Steel

Steel Transmission Towers

Steel Work in Cranes and Hoists

Structural Use of Lightgauge Steel Sections

Structural Use of Tubular Sections

Structural Welding, SMDC 15— A draft code of practice for welding of structures subject to dynamic loading was issued for wide circulation for eliciting comments.

Taking into consideration the increased permissible stresses provided for in the draft revision of IS : 800-1956 Code of Practice for Use of Structural Steel in General Building Construction, a proposed draft amendment to IS : 816-1956 Code of Practice for Use of Metal Arc Welding for General Construction in Mild Steel was prepared.

WORK IN HAND

Code of Practice for Use of Welding in Pipelines

Code of Practice for Use of Welding in Tubular Construction

Code of Practice for Welding of Mild Steel Bars Used in Reinforced Concrete Work

Handbook for Gas Welders

Handbook for Manual Metal Arc Welding for Welders

Handbook for Welding Engineers:

- a) Designing and Detailing Welded Joints and Connections

Handbook for Welding Engineers:

- b) Essential Characteristics of Design for Structural Welding

- c) Estimating Costs for Welded Structures and Choosing Most Economical Design for Structural Welding

- d) Weldments to Replace Castings

Qualifying Tests for Welders Engaged in Welding Boilers

Qualifying Tests for Welders Engaged in Welding of Steam Pipes

Welding General, SMDC 14 — Amendments No. 1 to IS : 813-1956 Scheme of Symbols for Welding and IS : 814-1957 Covered Electrodes for Metal Arc Welding of Mild Steel were printed. Draft amendments to IS : 1395-1959 $\frac{1}{2}$ Percent Molybdenum Steel Covered Electrodes for the Metal Arc Welding and IS : 1442-1959 Covered Electrodes for the Metal Arc Welding of High Tensile Structural Steel were prepared. Preliminary draft standards were also compiled relating to (a) code of practice for welding of pressure vessels, and (b) manual inert gas and tungsten arc welding of aluminium and its alloys and stainless steel.

STANDARD AND AMENDMENTS PUBLISHED

IS : 1393-1961 Code of Practice for Training and Testing of Oxy-Acetylene Welders
Amendment No. 1 to IS : 813-1956 Scheme of Symbols for Welding
Amendment No. 1 to IS : 814-1957 Covered Electrodes for Metal Arc Welding of Mild Steel

WORK IN HAND

Assessment of Welds by Radiographic Examination	Handbook for Hardfacing Rods
Code of Practice for Inspection of Welds	Handbook for Welding Supervisors
Code of Practice for Metal Spraying	Hose Fittings for Welding and Cutting Appliances
Code of Practice for Training and Testing of Metal Arc and Gas Welders for Specialized Jobs	Spot Welding Electrodes
Code of Procedure for Metal Arc Welding of Mild Steel	Revision of:
Filler Rods and Wires for Inert Gas Arc Welding	IS : 192-1956 Silver Solder
	IS : 814-1957 Covered Electrodes for Metal Arc Welding of Mild Steel

Wrought Steel Products, SMDC 5 — Draft revisions of two Indian Standards, namely, IS : 597-1955 Blackplate for Tinning and Tinsplate, and IS : 648-1955 Electrical Steel Sheets and four draft standards on (a) steel bars for production of machined parts for general engineering purposes, (b) steel bars for stays, (c) steel plates for pressure vessels, and (d) cold reduced tinsplate and cold reduced blackplate, were finalized for printing.

Draft revisions of four Indian Standards, namely, IS : 226-1958 Structural Steel (*Second Revision*), IS : 277-1951 Galvanized Steel Sheets (Plain and Corrugated), IS : 280-1951 Mild Steel Wire, and IS : 961-1957 High Tensile Structural Steel, and two draft standards on (a) mild steel wire rods for manufacture of machine screws, and (b) structural steel (ordinary), were issued for wide circulation for eliciting comments.

STANDARDS PUBLISHED

IS : 279-1961 Galvanized Iron and Steel Wire for Telegraph and Telephone Purposes (*Revised*)
IS : 412-1962 Expanded Metal (Steel) Sheets for General Purposes (*Revised*)
IS : 1812-1961 Mild Steel Wire for Manufacture of Wood Screws

WORK IN HAND

Cold Rolled Sheet and Strip
Hot Rolled Strip for Cold Reduced
Tinplate
Notch Ductile Steel for Bridges and
for General Building Construc-
tion
Rivet Bars for Ship's Structure
Round and Flat Polished Wire for
Use in Reeds
Stainless Steel for Use in the
Manufacture of Utensils
Steel Billets, Bars and Sections for
Boilers
Steel for Marine Boilers, Marine
Pressure Vessels and Welded
Marine Machine Screws
Steel for Mild Steel Metal Arc
Welding Electrode Core Wire

Steel Plates for Boilers
Steel Rivets and Stay Bars for
Boilers
Steel Sheets for Magnetic Circuits of
Power Electrical Apparatus
(Oriented Steel)
Steel Wire for Office Staples
Structural Steel for Ship-Building
Revision of:
IS: 513-1954 Special Qualities of
Steel Sheets
IS: 727-1955 Hard Drawn Steel
Wire for Springs
IS: 1079-1958 Light Gauge Struc-
tural Quality Hot Rolled
Carbon Steel Sheet and Strip
IS: 1149-1957 High Tensile Rivet
Bars for Structural Purposes

Alloy Steels and Special Steels, SMDC 19 — A comparison of Indian and overseas standards for wrought steels for general engineering purposes was compiled and a preliminary draft relating to commentary on Indian Standard schedules for wrought steels for general engineering purposes was prepared.

The draft standards relating to ferrous materials meant for the automobile industry were examined and reviewed.

STANDARD PUBLISHED

IS: 1570-1961 Schedules for Wrought Steels for General Engineering Purposes

Steel Castings, SMDC 20

STANDARD PUBLISHED

IS: 1030-1962 Steel Castings for General Engineering Purposes (*Revised*)

WORK IN HAND

Revision of IS: 276-1951 Plain Aus-
tenitic Manganese Steel Castings

Revision of IS: 503-1953 Alloy Aus-
tenitic Manganese Steel Castings

Steel Forgings, SMDC 21 — One draft standard on carbon molybdenum steel forgings was finalized for printing.

STANDARDS PUBLISHED

IS: 1875-1961 Carbon Steel Bars, Billets, Blooms and Slabs for Forgings
IS: 2004-1962 Carbon Steel Forgings for General Engineering Purposes

Steel Tubes, Pipes and Fittings, SMDC 22 — Draft revision of two Indian Standards, namely, (a) IS: 1161-1958 Steel Tubes for Structural Purposes, and (b) IS: 1239-1958 Mild Steel Tubes and Tubulars, were issued in wide circulation for eliciting comments.

Three preliminary draft standards concerning steel tubes for automobile purposes, steel tubes for cycle and motor cycle purposes, and

carbon steel boiler and superheater tubes for marine purposes were prepared.

STANDARDS PUBLISHED

IS: 1914-1961 Carbon Steel Boiler Tubes and Superheater Tubes

IS: 1978-1961 Line Pipe

IS: 1979-1961 High-Test Line Pipe

WORK IN HAND

Steel Spigot, and Socket Pipes and
Specials for Water, Gas and
Sewage

Steel Tubes for General Engineering
Purposes

Steel Tubes for Hydraulic Purposes
Steel Tubes for Water Well Casing
(Shaft Enclosing Tubes and
Column Pipes)

Metal Standards, SMDC 1 — Three draft standards, one relating to coding and classification of non-ferrous scrap metals and residues and the other two for designation of (a) pig iron and (b) ferro alloys were finalized for printing.

Eight preliminary draft standards were approved for wide circulation. Two of these relate to (a) coding and classification of processed ferrous scrap, and (b) glossary of terms relating to foundry technology; four deal with colour code for the identification of (a) steel and steel products, (b) copper and copper alloys, (c) aluminium and aluminium alloys, and (d) pipe lines; and the other two deal with the code for designation of (a) copper and copper alloys, and (b) aluminium and aluminium alloys.

STANDARDS PUBLISHED

IS: 1762-1961 Code for Designation of Steel

IS: 1956-1962 Glossary of Terms Relating to Iron and Steel

WORK IN HAND

Corrosion Protection of Steel Trans-
mission Towers and Steel Work
in Foundations

Glossary of Terms Relating to Copper
and Copper Alloys

Methods of Protection Against
Corrosion of Light Gauge Steel
Used in Buildings

Performance Tests for Protective
Schemes Used in Corrosion Pro-
tection of Light Gauge Steel

Phosphate Treatment of Iron and

Methods of Chemical Analysis, SMDC 2 — Three draft standards relating to methods of chemical analysis of (a) limestone, dolomite and allied materials; (b) quartzite and high silica sands; and (c) silver anodes were finalized for printing.

Four draft standards relating to methods of chemical analysis of (a) aluminium and its alloys (revision of IS: 504-1954); (b) lead and antimonial lead (revision of IS: 403-1952); (c) fluorspar (fluorite); and (d) nickel anodes and foundry nickel, were issued for wide circulation for eliciting comments.

Three preliminary draft Indian Standards relating to (a) polarographic and spectrographic analysis of high purity, zinc and zinc base alloys for die castings; (b) methods of chemical analysis of slab zinc and zinc base alloys (revision of IS : 406-1953); and (c) methods of chemical analysis of antimony (revision of IS : 1047-1956) were approved for wide circulation.

STANDARDS PUBLISHED

- IS : 1559-1962 Methods of Chemical Analysis of Ferro-Alloys
- IS : 1940-1961 Methods of Chemical Analysis of Tin Ingot
- IS : 2000-1962 Methods of Chemical Analysis of Bauxite

WORK IN HAND

- Chemical Analysis of:
 - Aluminium Fluoride
 - Calcium Silicon
 - Chromite
 - Copper-nickel-zinc-alloys
 - Cryolite
 - Ilmenite and Rutile
 - Metallic Chromium
 - Metallic Manganese
 - Metallic Silicon
 - Refined Nickel
 - Silico Chromium

Revision of:

- IS : 429-1954 Methods for Testing Weight and Uniformity of Coating on Galvanized Iron and Steel Wires and Steel Sheets

Revision of:

- IS : 440-1955 Methods of Chemical Analysis of Copper
- IS : 441-1955 Methods of Chemical Analysis of Brasses and Bronzes
- IS : 728-1956 Methods for Determination of Weight, Thickness and Uniformity of Coating on Galvanized Articles Other Than Wires and Sheets

Methods of Physical Tests, SMDC 3—Three draft standards relating to tensile testing of (a) grey cast iron, (b) steel tubes, and (c) steel sheet and strip of thickness above 3 mm (Part II of IS : 1663-1960), and two draft standards on glossary of terms relating to (a) industrial radiology, and (b) ultrasonic testing were issued for wide circulation for eliciting comments.

A preliminary draft standard relating to glossary of terms used in radiographic inspection of castings was issued for limited circulation.

STANDARDS PUBLISHED

- IS : 1789-1961 Method for Brinell Hardness Test for Grey Cast Iron
- IS : 1790-1961 Method for Brinell Hardness Test for Light Metals and Their Alloys
- IS : 1810-1961 Method for Vickers Hardness Test for Light Metals and Their Alloys
- IS : 1816-1961 Method for Tensile Test for Light Metals and Their Alloys
- IS : 1828-1961 Method for Load Calibration of Testing Machines for Tensile Testing of Steel

WORK IN HAND

- Bend Test on Steel Tubes
- Calibration of Brinell Hardness Testing Machines

- Drift Expanding Test on Steel Tubes
- Flanging Test on Steel Tubes

Flattening Test on Steel Tubes
Glossary of Terms Used in Radio-
graphic Inspection of Weldments
Mercurous Nitrate Test for Copper
and Copper Alloys
Recommended Practice for Radio-
graphic Testing
Reference Blocks for Routine
Checking of Ultrasonic Testing
Equipment

Simple Bend Testing of Aluminium
and Aluminium Alloys, Sheet and
Strip
Simple Bend Testing of Aluminium
and Aluminium Alloys, Tube
Test for Expansion of Copper and
Copper Alloy Tubes
Revision of IS : 649-1955 Methods of
Testing Electrical Steel Sheets

Pig Iron and Ferro Alloys, SMDC 8 — One draft standard relating to foundry nickel and two draft amendments relating to (a) IS : 1468-1960 Ferro Titanium, and (b) IS : 1469-1960 Ferro Molybdenum, were issued in wide circulation for eliciting comments.

It was decided to take up revision of IS : 224-1958 Specification for Pig Iron (Coke) on the basis of the recommendations made by the Indian Foundry Productivity Team which visited Sweden, USA and Japan during 1960

The question of formulating a suitable Indian Standard Specification for refined pig iron coke smelted solely from pure low phosphorus iron ore was taken up for investigation. This material is required for the manufacture of critical ordnance forgings.

STANDARDS AND AMENDMENT PUBLISHED

IS : 2021-1962 Metallic Manganese
IS : 2022-1962 Calcium Silicon
IS : 2023-1962 Metallic Chromium
IS : 2024-1962 Silico Chromium
Amendment No. 1 to IS : 1170-1957 Ferro Chromium

WORK IN HAND

Metallic Silicon
Ferro Nickel

Refined Nickel

Cast Iron and Malleable Cast Iron, SMDC 9 — Four draft standards relating to (a) cast iron spigot and socket soil waste and ventilating pipes, fittings and accessories; (b) whiteheart malleable iron castings; (c) blackheart malleable iron castings; and (d) grey iron castings (revision of IS : 210-1950), and draft amendment relating to IS : 1536-1960 Centrifugally Cast (Spun) Iron Pressure Pipes for Water, Gas and Sewage, IS : 1537-1960 Vertically Cast Iron Pressure Pipes for Water, Gas and Sewage, and IS : 1538-1960 Cast Iron Fittings for Pressure Pipes for Water, Gas and Sewage were finalized for printing.

Preliminary draft standards on (a) cast iron pipe flanges and flanged fittings for the petroleum industry, and (b) grey iron castings for use at elevated temperatures, were approved for wide circulation.

STANDARDS PUBLISHED

IS : 1865-1961 Iron Castings with Spheroidal or Nodular Graphite
IS : 1879-1961 Malleable Cast Iron Pipe Fittings

WORK IN HAND

Austenitic Cast Iron (Corrosion and Erosion Resistant Irons)
Cast Iron Trap
Centrifugally Cast Iron Soil and Ventilating Pipes with Wall Thickness of 3, 3.5 and 5 mm

Drain Pipes
Pearlitic Malleable Iron Castings

Foundry, SMDC 17— A draft standard on sodium-base bentonite for use in foundry (*tentative*) and three draft amendments relating to (a) IS: 1305-1958 Graphite for Use as Foundry Facing Material, (b) IS: 1752-1961 Coal Dust for Use in Cast Iron Foundry, and (c) IS: 1280-1958 Foundry Moulding Boxes, were issued in wide circulation for eliciting comments.

Three preliminary draft standards on (a) methods of physical tests for foundry sands, (b) linseed oil for use as a core binder, and (c) methods of test for core oils, were prepared.

STANDARD PUBLISHED

IS: 1987-1962 High Silica Sand for Use in Foundries

WORK IN HAND

Calcium-Base Bentonite for Use in Foundry
Natural Moulding Sands
Recommended Methods of Testing of Binding Materials:
a) Testing of Clays

Recommended Methods of Testing of Binding Materials:
b) Testing of Synthetic Binders
Silica Flour for Foundry Purposes
Standard Sand for Testing Foundry Binding Materials

Light Metals and Their Alloys, SMDC 10— Two draft standards relating to wrought aluminium for electrical purposes—wire (other than that used for overhead conductors) and aluminium alloy hardeners (master alloys) were finalized for printing.

One draft standard for shapes and sizes of aluminium notched bars and ingots for remelting purposes and four draft standards pertaining to dimensions for wrought aluminium alloys, namely, (a) sheet and strip, (b) plate, (c) drawn tube, and (d) wire, were issued for wide circulation for eliciting comments.

STANDARDS AND AMENDMENTS PUBLISHED

IS: 1841-1961 Rolled Aluminium Rods (Electrical Conductor Grade) for Electrical Purposes

IS: 1847-1961 99.7 Percent Primary Aluminium Notched Bars and Ingots for Remelting for Aircraft Purposes

IS: 1868-1961 Anodized Aluminium

Amendment No. 1 to IS: 20-1959 Cast Aluminium and Aluminium Alloy for Utensils (*Second Revision*)

Amendment No. 2 to IS: 21-1959 Wrought Aluminium and Aluminium Alloy for Utensils (*Second Revision*)

WORK IN HAND

Aluminium Properzie Rods (EC Grade) for Electrical Purposes

Code of Practice for Die Casting Aluminium Alloys

Extruded Aluminium Rods (EC Grade) for Electrical Purposes
 Inspection and Testing Procedure for Aluminium and Aluminium Alloys for Aircraft
 Recommendations for Selection of Structural Aluminium Alloys
 Revision of:

- IS: 733-1956 Wrought Aluminium and Aluminium Alloys, Bars, Rods and Sections
- IS: 734-1956 Wrought Aluminium and Aluminium Alloys, Forgings
- IS: 735-1956 Wrought Aluminium and Aluminium Alloys, Forging Stock

Revision of:

- IS: 736-1956 Wrought Aluminium and Aluminium Alloys, Plate
- IS: 737-1955 Wrought Aluminium and Aluminium Alloys, Sheet and Strip
- IS: 738-1956 Wrought Aluminium and Aluminium Alloys, Tube
- IS: 739-1956 Wrought Aluminium and Aluminium Alloys, Wire
- IS: 740-1956 Wrought Aluminium and Aluminium Alloys, Rivet Stock

Copper and Copper Alloys, SMDC 11 — Four draft standards covering (a) nickel silver sheet and strip for general purposes; (b) copper strip for electrical purposes (below 150 mm width); (c) free cutting brass rods and sections (revision of IS: 319-1951); and (d) high tensile brass rods, bars and sections (revision of IS: 320-1951); were finalized for publication.

Five drafts relating to (a) copper tubes for general purposes; (b) phosphor copper ingot; (c) brass strip for the manufacture of pen nibs; (d) copper alloy tubes for condensers in sea-going vessels; and (e) nickel silver, castings for cutlery and hollow-ware; were issued in wide circulation for eliciting comments.

Draft revisions of IS: 613-1954 Copper Bars and Rods for Electrical Purposes, and IS: 24-1956 Brazing Solder, and one draft relating to aluminium bronze ingots and castings for overhead fittings in electrical traction, were approved for wide circulation.

STANDARDS AND AMENDMENTS PUBLISHED

- IS: 291-1961 Naval Brass Rods and Sections (Suitable for Machining and Forgings) (*Revised*)
- IS: 292-1961 Brass Ingots and Castings (*Revised*)
- IS: 305-1961 Aluminium Bronze Ingots and Castings (*Revised*)
- IS: 318-1962 Leaded Tin Bronze Ingots and Castings (*Revised*)
- IS: 407-1961 Brass Tubes for General Purposes (*Revised*)
- IS: 1972-1961 Copper Plate, Sheet and Strip for Industrial Purposes
 Amendment No. 1 to:
 IS: 191-1958 Copper (*Revised*)
 IS: 410-1959 Rolled Brass Plate, Sheet, Strip and Foil (*Revised*)
 IS: 422-1959 Brass Sheet and Strip for the Manufacture of Utensils

WORK IN HAND

- Brass Wire for Cold Heading and Free-Cutting Purposes
- Cadmium Copper for Electrical Purposes
- Cast Copper and Copper Alloy Pipe Fittings for Water, Gas and Sewage

- Code of Practice for Tinning of Brassware
- Copper and Brass Strips and Foils for Radiator Cores
- Copper Plates for Photo Engraving
- Copper Sheet for Electrical Purposes (Above 150 mm Width)

Guiding Metal
Nickel Silver Sheets and Strips for
Telecommunication Purposes

Rationalization of Copper and
Copper Base Alloys

Lead, Zinc, Tin, Antimony and Their Alloys, SMDC 12 — A draft standard relating to zinc plate, sheet and strip was finalized for publication.

Draft amendments in respect of IS : 26-1956 Specification for Tin Ingots and IS : 405-1961 Specification for Lead Sheet were issued in wide circulation.

STANDARDS AND AMENDMENT PUBLISHED

IS : 25-1961 Antifriction Bearing Alloys (*Revised*)

IS : 404-1962 Lead Pipes (*Revised*)

IS : 1921-1961 Rosin-Cored Solder Wire, Activated and Non-Activated (Non-Corrosive)

Amendment No. 1 to IS : 742-1955 Specification for Zinc Base Alloy Die Castings

WORK IN HAND

Code of Practice for Hot Dip Galvanizing of Iron and Steel

Revision of IS : 211-1958 Specification for Antimony

Code of Practice for Sherardizing

Code of Practice for Zinc Impregnation of Iron and Steel

Precious Metals, SMDC 13 — Five draft Indian Standards relating to (a) fine gold bar, sheet, wire, grain and mohar; (b) fine silver bar, sheet, wire, grain and mohar; (c) grades of silver and silver alloys; (d) methods of assaying gold and gold alloys; and (e) methods of assaying silver and silver alloys, were issued for wide circulation for eliciting comments.

The question of formulating Indian Standard Specification for gold and silver leaves used for decorating foodstuffs was taken up for investigation.

WORK IN HAND

Grades of Platinum

Methods of Assaying Platinum

Pure Gold Thread (Silver Base)

Solders for Use with Goldwares

Refractories, SMDC 18 — Three draft standards pertaining to (a) sillimanite refractories for glass melting tank furnaces; (b) natural sillimanite blocks for use in glass melting tank furnaces; and (c) glossary of terms relating to refractory material, were finalized for publication while three drafts relating to (a) insulating refractories; (b) moderate heat duty fireclay refractories group, 'C'; and (c) fireclay mortar for laying fireclay refractory bricks (revision of IS : 195-1955) were issued for wide circulation.

STANDARDS PUBLISHED

IS : 1528-1962 Methods of Sampling and Physical Tests for Refractory Materials

IS : 1529-1961 Blast Furnace Refractories for Steel Plants

WORK IN HAND

Graphite Crucibles
Preferred Sizes for Fire Bricks for
12 in. and Higher Series
Stoppers and Nozzles for Steel
Plants

Revision of:

IS: 194-1950 Recommendations for
Refractories for Railways
(*Tentative*)

Revision of:

IS: 483-1953 Fireclay Refractories
for Oil-Fired Boiler Furnaces
of Naval Ships

Metallic Finishes, SMDC 23 — A new sectional committee expected to commence its work shortly, was set up for formulating standard specifications, codes of practice and test methods on subjects relating to metallic finishes (other than organic) for ferrous and non-ferrous metals and their products. It was decided to transfer the work of Electroplating Sectional Committee, ETDC 12 and part of the work being done by other committees of SMDC to the new Sectional Committee.

Ores and Raw Materials, SMDC 16 — With the publication of IS: 1473-1960 Methods of Chemical Analysis of Manganese Ores, and IS: 1449-1961 Methods of Sampling Manganese Ores, it was decided to withdraw IS: 372-1952 Specification for Manganese Ore — Battery Grade and IS: 373-1952 Specification for Manganese Ore — Metallurgical Grade, as these two standards did not cover the requirements of the material specifications and dealt mainly with methods of sampling and chemical analysis.

After a detailed investigation of the possibility of formulating Indian Standard Specifications for ores and raw materials for metallurgical industry it was felt that in view of the varied nature of ore deposits in different parts of the country, it would not be practicable to formulate standards for these raw materials till an intermediate processing industry develops for the benefit of low grade ores.

7. TEXTILE DIVISION

7.1 The Textile Division continued to serve the textile industry, and, during the year under review, as many as 45 Indian Standards (see Appendix A) for various sectors of the textile industry were either published or were under print. Besides metricizing 36 Indian Standards, already published, a number of important items of textile machinery components received active consideration of committees concerned with the work.

7.2 The published standards cover, among others, important items, such as guide for marking textile materials made of wool which aims to establish a generally recognised usage of such terms as 'WOOL', 'ALL WOOL', 'WORSTED', 'BLENDED WOOL', 'PART WOOL', etc. A-twill Jute bags for packing sugar; shuttles for plain calico looms; suction-threading type; cotton sewing thread; cotton lining cloth; cotton embroidery thread; cotton tape newar; cotton spindle tapes for cotton

and jute industries; handloom cotton mootus; handloom cotton bleeding Madras; and coir door mats. Amongst the standards on textile stores and machinery components, mention may be made of small and large size spring buffers; raw hide pickers for cotton and jute looms; flat driving chains for carding engines; cotton cambs for use in jute looms, etc. The chemical test methods included publication of a method for determination of colour fastness of textile materials to formaldehyde and methods for estimation of residual starch in cotton fabrics after desizing.

7.3 The Textile Division Council held its meeting on 11 August 1961 and its Standing Working Committee held two meetings on 2 May 1961 and 13 February 1962 respectively. Ninety new subjects were added to the programme of work of various committees during the year.

7.4 A brief account of the work accomplished and in hand in the various fields of the textile industry is given below:

Physical Methods of Tests, TDC 1 — The draft methods for determination of (a) nep count in cotton; and (b) breaking load, elongation at break and tenacity of single thread by constant-rate-of-load testing machine; and draft Amendment No. 1 to IS : 1349-1959 Method for Determination of Clean Wool Yield of Raw Wool were issued in wide circulation.

STANDARDS PUBLISHED

- IS : 1793-1961 Guide for Marking Textile Materials Made of Wool
- IS : 1954-1961 Method for Determination of Dimensions of Fabrics
- IS : 1963-1961 Method for Determination of Ends and Picks per Unit Length in Woven Fabrics
- IS : 1964-1961 Methods for Determination of Weight per Square Metre and Weight per Linear Metre of Fabrics
- IS : 1966-1961 Methods for Determination of Bursting Strength of Woven and Knitted Fabrics
- IS : 1969-1961 Method for Determination of Breaking Load and Elongation at Break of Woven Fabric (by Constant-Rate-of-Traverse Machine)

WORK IN HAND

Determination of:

- Correct Invoice Weight and Moisture Content of Woollen and Worsted Yarns
- Crimp in Wool Fibre
- Crimp of Yarn in Cloth
- Fineness of Cotton Fibres by Air-Flow Instruments
- Glossary of Terms for Describing Fibre Content of Fabrics Containing Silk
- Glossary of Textile Terms — Fabrics Made from Natural Fibres
- Lustre in Cotton Materials
- Micronaire Value of Cotton Fibres
- Strength of Cotton Fibres : Flat Bundle Method

Determination of:

- Thermal Insulating Value of Textile Fabrics : Hot Plate Method
- Twist in Yarn
- Universal Count of Silk Yarn
- Universal Count of Woollen and Worsted Yarn
- Universal Count of Yarn Removed from Cotton Fabric Free from Added Matter
- Upper Half Mean Length of Cotton Fibres by Fibrograph and by Uster Stapling Apparatus
- Weight per Square Metre and Linear Metre of Indian Hessian

Determination of:

Weight of Warp and Weft Free from Added Matter per Unit Area of Cloth
Whiteness of Cotton Materials
Yarn Appearance Using Photographic Standards

Metricization of:

- IS : 233-1954 Method for Determination of Mean Fibre-Length of Cotton and the Proportion by Weight of Fibres of Different Length-Grades in Cotton
- IS : 234-1952 Method for Determination of Mean Fibre Weight per Unit Length (Cotton)
- IS : 235-1954 Method for Determination of Mean Single Fibre-Strength and Intrinsic Strength (Cotton)
- IS : 236-1954 Method for Determination of Cotton Fibre Maturity Count
- IS : 569-1954 Method for Determination of Breaking Load (Strength) of Jute Yarn
- IS : 570-1954 Method for Determination of Grist (or Yarn Melidity in tex) of Single Jute Yarn

Revision of:

- IS : 232-1958 Glossary of Textile Terms — Natural Fibres
- IS : 461-1953 Method of Grading Raw Silk
- IS : 462-1953 Method for Visual and Tactual Examination of Category I Raw Silk
- IS : 463-1953 Method for Determining Conditioned Weight of Category I Raw Silk
- IS : 464-1953 Method for Conducting Winding Test for Category I Raw Silk
- IS : 465-1953 Method for Conducting Size (Denier) Deviation and Maximum Deviation Tests for Category I Raw Silk
- IS : 466-1953 Method for Conducting Average Conditioned Size (Denier) Test for Category I Raw Silk

Revision of:

- IS : 467-1953 Method for Conducting Evenness and Low Evenness Tests for Category I Raw Silk
- IS : 468-1953 Method for Conducting Cleanness Test for Category I Raw Silk
- IS : 469-1953 Method for Conducting Neatness Test for Category I Raw Silk
- IS : 470-1953 Method for Conducting Serigraph Test for Determining the Tenacity and Elongation of Category I Raw Silk
- IS : 471-1953 Method for Conducting Cohesion Test for Category I Raw Silk
- IS : 472-1953 Method for Visual and Tactual Examination of Category II Raw Silk
- IS : 473-1953 Method for Determining Conditioned Weight of Category II Raw Silk
- IS : 474-1953 Method for Conducting Winding Test for Category II Raw Silk
- IS : 475-1953 Method for Conducting Size (Denier) Deviation and Maximum Deviation Tests for Category II Raw Silk
- IS : 476-1953 Method for Conducting Average Conditioned Size (Denier) Test for Category II Raw Silk
- IS : 477-1953 Method for Conducting Evenness and Low Evenness Tests for Category II Raw Silk
- IS : 478-1953 Method for Conducting Cleanness Test for Category II Raw Silk
- IS : 479-1953 Method for Conducting Neatness Test for Category II Raw Silk
- IS : 480-1953 Method for Conducting Serigraph Test for Determining the Tenacity and Elongation of Category II Raw Silk
- IS : 481-1953 Method for Conducting Cohesion Test for Category II Raw Silk

Chemical Methods of Tests, TDC 5 — Draft Indian Standard methods for (a) quantitative chemical analysis of binary mixtures of

secondary cellulose acetate and certain other fibres, and (b) quantitative chemical analysis of mixtures of cellulose triacetate and secondary cellulose acetate fibres; and draft revisions of (a) IS : 1299-1958 Method for Determination of Dimensional Changes on Washing of Fabrics Woven from Rayon and Synthetic Fibres, (b) IS : 9-1949 Method for Determination of Dimensional Changes of Cotton and Linen Woven Fabrics on Washing Near the Boiling Point, and (c) IS : 647-1954 Method for Determining the Desizing Efficiency and Relative Efficiency of Amyolytic Enzymes, were issued in wide circulation.

STANDARDS AND AMENDMENT PUBLISHED

- IS : 984-1962 Method for Determination of Colour Fastness of Textile Materials to Washing in the Presence of Sodium Hypochlorite
- IS : 1390-1961 Method for Determination of pH Value of Aqueous Extract of Textile Materials
- IS : 1560-1962 Method for Estimation of Carboxylic Acid Groups in Cellulosic Textile Materials
- IS : 1564-1962 Method for Quantitative Chemical Analysis of Binary Mixtures of Cellulose Triacetate and Certain Other Fibres
- IS : 1807-1961 Method for Determination of Colour Fastness of Textile Materials to Formaldehyde
- IS : 1815-1961 Methods for Detection and Estimation of Damage in Cotton Yarn and Cordages Due to Micro-Organisms
- IS : 1889-1962 Method for Quantitative Chemical Analysis of Binary Mixtures of Regenerated Cellulose Fibres and Cotton
- IS : 1962-1961 Method for Determination of Fastness of Dyestuffs to Metals in the Dyebath: Chromium Salts
- IS : 1967-1961 Methods for Estimation of Residual Starch in Cotton Fabrics After Desizing
- IS : 1968-1961 Method for Determination of Fastness of Dyestuffs to Metals in the Dyebath: Iron and Copper
- IS : 2005-1962 Method for Quantitative Chemical Analysis of Binary Mixtures of Polyamide Fibres and Certain Other Fibres
- IS : 2006-1962 Method for Quantitative Chemical Analysis of Binary Mixtures of Protein Fibres and Certain Other Fibres
- IS : 2010-1962 Methods for Detection and Estimation of Damage in Jute Fabrics Due to Micro-Organisms
- IS : 2011-1962 Methods for Detection and Estimation of Damage in Jute Yarn and Cordages Due to Micro-Organisms
- Amendment No. 1 to IS : 970-1956 Method for Determination of Colour Fastness of Textile Materials to Degumming

WORK IN HAND

- | | |
|---|--|
| Estimation of Residual Nitrogenous Matter | Method for Determination of Shrinkage of Woven Silk Fabrics on Washing |
| Method for Detection and Estimation of Common Antiseptics in Cotton Textiles | Method for Determining Shrinkage on Washing of Cotton Hosiery Goods |
| Method for Detection and Estimation of Damage in Cotton (Fibres) Due to Micro-Organisms | Method for Estimation of Residual Chlorine in Cotton Textile Materials |
| Method for Detection and Estimation of Damage in Manila Cordages | Method for Quantitative Analysis of Binary Mixtures of Manila and Sisal Fibres |
| Method for Determination of Absorbancy of Cotton Textile Materials | Methods for Determination of Detergency of Wetting Agents |

Methods for Determination of Dispersing Power of Wetting Agents
Methods for Determination of Emulsifying Power of Wetting Agents
Resistance of Fabrics and Yarns to Insect Pests
Scouring Loss in Silk Fabric
Strength of Anthraquinone Vat Blue RSN, Anthraquinone Vat Blue BC, Anthraquinone Vat Green B and Caledon Jade Green 2 G
Revision of IS: 667-1955 Simple Methods for Identification of Common Commercial Textile Materials

Metricization of:

IS: 390-1952 Method for Spray Test for Estimating the Water Repellency of Water-Resistant Fabrics (Permeable to Air)

Metricization of:

IS: 391-1952 Method for Measuring Resistance to Penetration by Water of Water-Resistant Fabrics (Permeable to Air)
IS: 392-1952 Method for Measuring the Water Absorption and Penetration in Water-Resistant Fabrics (Permeable to Air) By a Bundesmann Type Apparatus
IS: 665-1954 Method for Determination of Relaxation Shrinkage of Woven Fabric Containing Wool
IS: 1313-1958 Methods for Determining Shrinkage of Knitted Goods Containing Wool

Cotton Yarn and Fabrics, TDC 2

STANDARDS PUBLISHED

IS: 1782-1961 Specification for Cotton Lining Cloth (Warp Faced Satin), Dyed
IS: 1803-1961 Specification for Cotton Embroidery Thread, Bleached or Dyed
IS: 1895-1961 Specification for Cotton Tape Newar, Grey or Dyed

WORK IN HAND

Cotton Fabric, Dyed, Water Resistant

Cotton Umbrella Cloth

Metricization of:

IS: 171-1951 Cotton Yarn, Grey
IS: 172-1951 Plain Voiles (Mock)
IS: 173-1951 Cotton Crepes
IS: 174-1951 Flannelettes (Plain)
IS: 175-1951 Cotton Bed Sheets
IS: 176-1951 Bedtickings
IS: 177-1951 Cotton Drills
IS: 178-1951 Cotton Twills

Metricization of:

IS: 179-1951 Dosuti
IS: 180-1951 Cotton Sheetings
IS: 181-1951 Leopard Cloth, Grey
IS: 182-1951 Mazri
IS: 183-1951 Susies
IS: 184-1951 Cotton Dhoties
IS: 185-1951 Cotton Saries
IS: 186-1951 Cotton Mulls and Nainsook
IS: 187-1951 Longcloth
IS: 188-1951 Cotton Poptins

Handloom Fabric (Cotton, Silk and Wool), TDC 13 — Draft Indian Standard Specifications for (a) handloom melton (shoddy) cloth; (b) handloom shoddy woollen blankets (double faced); (c) handloom rayon sari, bleached, dyed, striped, checked or printed; (d) handloom staple fibre lungies, striped or checked; (e) handloom staple fibre coating, bleached, dyed, striped or checked; (f) handloom staple fibre shirting, bleached, dyed, striped or checked; and Amendment No. 1 to (a) IS: 1450-1959 Handloom Cotton Floor Durries; (b) IS: 1557-1960 Handloom Cotton Bed Durries; and (c) IS: 1584-1960 Handloom Silk Shirting, Loomstate; were issued in wide circulation.

STANDARDS/AMENDMENTS PUBLISHED

IS: 1814-1961 Handloom Cotton Mootus, Striped or Checked
IS: 1937-1961 Handloom Cotton Bleeding Madras, Loomstate
IS: 1939-1961 Handloom Cotton Handkerchiefs, Bleached, Striped or Checked

Amendment No. 1 to:

- IS : 745-1955 Handloom Cotton Bed Sheets, Grey, Bleached, Dyed or Striped
- IS : 746-1955 Handloom Cotton Blankets, Grey or Coloured
- IS : 747-1955 Handloom Cotton Bunting Cloth, Dyed
- IS : 748-1955 Handloom Cotton Dhoties, Grey
- IS : 749-1955 Handloom Cotton Dungri Cloth, Grey
- IS : 751-1955 Handloom Cotton Mazri Cloth (Loomstate)
- IS : 752-1955 Handloom Cotton Muslin, Bleached
- IS : 753-1955 Handloom Cotton Pugri Cloth, Bleached or Dyed
- IS : 754-1955 Handloom Cotton Saries, Bleached, Dyed, Striped, Checked or Printed
- IS : 755-1955 Handloom Cotton Malmal, Bleached
- IS : 756-1955 Handloom Cotton Dosuti, Grey, Scoured, Bleached or Dyed
- IS : 861-1956 Handloom Cotton Jaconet Cloth, Grey, Dressed
- IS : 863-1956 Handloom Cotton Bandage Cloth, Bleached
- IS : 864-1956 Handloom Cotton Light Sheeting, Grey
- IS : 889-1957 Handloom Worsted Bunting Cloth, Heavy
- IS : 890-1957 Handloom Worsted Bunting Cloth, Light
- IS : 891-1957 Handloom Worsted Shirting
- IS : 892-1957 Handloom Woollen Blankets, Natural Grey
- IS : 893-1957 Handloom Woollen Blankets, Ordinary, Plain or Check
- IS : 894-1957 Handloom Woollen Blankets, Superior, Scarlet (Red)
- IS : 895-1957 Handloom Woollen Blanketing Cloth
- IS : 896-1957 Handloom Woollen Kamblies, Loomstate

Amendment No. 2 to:

- IS : 750-1955 Handloom Cotton Lungies, Striped or Checked
- IS : 854-1956 Handloom Cotton Turkish Towels, Bleached, Striped, Checked or Dyed
- IS : 855-1956 Handloom Cotton Honeycomb Towels, Bleached, Striped, Checked or Dyed
- IS : 856-1956 Handloom Cotton Huckaback Towels, Bleached, Striped, Checked or Dyed
- IS : 857-1956 Handloom Cotton Napkins, Bleached, Striped, Checked or Dyed
- IS : 858-1956 Handloom Cotton Table Cloth, Bleached, Striped, Checked or Dyed
- IS : 859-1956 Handloom Cotton Dusters, Grey, Striped and Checked
- IS : 860-1956 Handloom Cotton Sponge Cloth, Grey, Striped and Checked
- IS : 862-1956 Handloom Cotton Ticking Cloth, Grey, Striped

Amendment No. 3 to:

- IS : 757-1955 Handloom Cotton Lint, Absorbent, Bleached
- IS : 758-1955 Handloom Cotton Gauze, Absorbent, Bleached

WORK IN HAND

- Handloom Silk Sari Cloth, Undyed, Metricization of IS : 1539-1960 Cotton
Dyed or Printed Yarn, Grey, for Handloom
- Method for Grading Cotton Yarn,
Grey, for Handloom

Woollen and Worsted Fabrics, TDC 4 — Three drafts covering (a) code for packing raw wool for export; (b) code for inland packaging of wool cloth and yarn; and (c) method of grading handmade wool carpets were issued in wide circulation.

Draft Amendment No. 1 to (a) IS : 679-1955 Great Coat Cloth, Woollen and (b) IS : 680-1955 Cloth, Barathea were finalized for publication.

AMENDMENTS PUBLISHED

Amendment No. 1 to:

- IS : 668-1955 Serge, Ordinary
- IS : 669-1955 Serge, Drab Mixture
- IS : 670-1955 Serge, Worsted, Dyed (Superior)
- IS : 671-1955 Serge, Service Dress (Drab Mixture)
- IS : 673-1955 Cloth, Woollen, Twill, Dyed
- IS : 674-1955 Flannel, Silver Grey, Hospital
- IS : 675-1955 Cloth, Bunting, Worsted
- IS : 676-1955 Bunting, Worsted

Amendment No. 2 to IS : 672-1955 Serge, White, Lining

WORK IN HAND

Blazer Cloth	Metricization of:
Grading Raw Wool for Internal Consumption	IS : 670-1955 Serge, Worsted, Dyed (Superior)
Summer Suiting	IS : 671-1955 Serge, Service Dress (Drab Mixture)
Super Shawls	IS : 672-1955 Serge, White, Lining
Tweed	IS : 673-1955 Cloth, Woollen, Twill, Dyed
Union Suiting	IS : 674-1955 Flannel, Silver Grey, Hospital
Woollen Blankets	IS : 675-1955 Cloth, Bunting, Worsted
Woollen Coating	IS : 676-1955 Bunting, Worsted
Woollen Flannel for Trousering	IS : 677-1955 Cloth, Drab Mixture, Woollen (Water Resistant), No. 1
Woollen Rugs	IS : 678-1955 Cloth, Drab Mixture, Woollen (Water Resistant), No. 2
Worsted Lohis	IS : 679-1955 Great Coat Cloth, Woollen
Worsted Shirting	IS : 680-1955 Cloth, Baratheia
Worsted Suitings (Piece Dyed)	IS : 697-1955 Woollen Druggets for Export
Worsted Suitings (Special)	
Worsted Suitings (Top Dyed)	
Revision of IS : 11-1949 Grading of Wool for Export	
Metricization of:	
IS : 32-1950 Code for Seaworthy Packaging of Woollen Textiles	
IS : 668-1955 Serge, Ordinary	
IS : 669-1955 Serge, Drab Mixture	

Jute Fabrics, TDC 3

WORK IN HAND

- Indian Hessians
- Packing Jute Manufactures in Bales, Trusses and Bundles

Man-Made Fibre and Fabrics, TDC 10 — Draft specifications for (a) rayon shioze khaka; (b) rayon lining cloth; (c) rayon palace crepe; (d) rayon bush-shirt cloth; (e) rayon satin lurex; and (f) rayon striped shirting cloth were issued in wide circulation.

WORK IN HAND

Hundred Percent Cuprammonium Rayon Crinkle Georgette or Crinkle Chiffon	Nylon Crepe
Method for Grading of Rayon Yarn and Acetate Yarn	Nylon Doria
Methods for Determination of such Characteristics as Sulphur Content, Appearance, Milkiness, etc, in Rayon Yarn and Acetate Yarn	Nylon Dress Material
Nylon Brosso	Nylon Georgette
	Nylon Plain
	Nylon Satin
	Nylon Shirting
	Nylon Tafetta
	Rayon Mix Lining Cloth

Textile Materials for Aeronautical Purposes, TDC 27 — Draft specifications for (a) flax webbing for aircraft purposes; (b) cotton webbing, dyed, for aircraft safety belts and harnesses; (c) linen sewing thread for aeronautical purposes; and (d) braided (plaited) linen cord for aeronautical purposes; draft revisions of (a) IS : 514-1954 Mercerized Cotton Fabric, Grade 1, for Aircraft; (b) IS : 596-1954 Mercerized Cotton Fabric, for Gliders; (c) IS : 598-1955 Mercerized Cotton Fabric, Grade 2, for Aircraft; and (d) IS : 714-1955 Cotton Reinforcing Tape for Aircraft; and draft amendment No. 1 to (a) IS : 1045-1957 Cotton Fabric for Covering Plywood in Aircraft; (b) IS : 1376-1959 Cotton Sewing Thread, Bleached, for Aeronautical Purposes; and (c) IS : 1402-1959 Braided Cotton Cord for Aeronautical Purposes were approved for wide circulation.

WORK IN HAND

Breaking Cord Cotton for Parachutes
 Breaking Cord Nylon for Parachutes
 Canvas for Parachute Packs
 Cotton Fabric for Cargo Parachutes
 Cotton Fabric for Target Sleeves
 Cotton Tapes for Parachutes
 Cotton Threads for Parachute Purposes
 Cotton Webbing Various for Parachute Purposes
 D Panel Silk Fabric for Man-dropping Parachutes
 Flax Webbing for Parachute Harnesses
 Hemp Cord for Balloons
 Hessian Fabric for Parachutes
 Linen Thread for Parachute Harnesses
 Nylon Cordage for Parachute Purposes

Nylon Fabric for Cargo Parachutes
 Nylon Fabric for Man-dropping Parachutes
 Nylon Ropes for Mountaineering Purposes
 Nylon Sewing Thread Light, Heavy and Extra Heavy for Parachute Purposes
 Nylon Tapes for Parachutes
 Nylon Webbing Various for Parachute Purposes
 Rayon Fabric for Cargo Parachutes
 Silk Cordage for Parachute Purposes
 Silk Fabric for Man-dropping Parachutes
 Silk Sewing Thread Light, Heavy and Extra Heavy for Parachute Purposes
 Silk Tapes for Parachutes
 Wire-woven Fabric for Radar Sleeves

National Flag of India, TDC 8

WORK IN HAND

Metricization of:

IS : 1-1951 The National Flag of India (Cotton Khadi)
 IS : 300-1955 The National Flag of India (Silk Khadi)

Metricization of:

IS : 400-1955 The National Flag of India (Wool Khadi)

Cotton Hosiery and Knitted Garments, TDC 15 — Draft Indian Standard Specification for Plain Knitted Men's Cotton Vests was approved for wide circulation.

WORK IN HAND

Anklets
 Foot-Wear
 Head-Wear
 Hosiery Yarn
 Jerseys (Cotton) for Foot-ball Team
 Jerseys (Cotton) for Hockey Team

Knee Caps
 Knickers
 Neck-Wear
 Outer-Wear
 Stockings
 Under-Wear
 Wrist Caps, Tennis

Woollen Hosiery and Knitted Garments, TDC 16

WORK IN HAND

Cardigans	Jerseys, Pullovers
Comforters	Mufflers
Drawers	Pullovers
Gents and Ladies Garments	Scarves
Gloves, Knitted	Slip-Overs
Hose Tops	Socks, Worsted
Hosiery Yarn	Stockings
Jersey, Natural Grey	Vests, Woollen

Ropes and Cordages, TDC 14

STANDARDS/AMENDMENTS PUBLISHED

- IS : 1084-1961 Hawser-Laid Manila Rope (*Revised*)
- IS : 1085-1961 Shroud-Laid Manila Rope (*Revised*)
- IS : 1086-1961 Cable-Laid Manila Rope (*Revised*)
- IS : 1857-1961 Tarred Hemp Marline Two-Ply
- IS : 1887-1961 Spun Jute Yarn, 18-Ply
- IS : 1912-1961 Country Jute Twine Three-Ply
- IS : 1920-1961 White Indian Hemp Line

Amendment No. 1 to:

- IS : 1321-1958 Hawser-Laid Sisal Rope
- IS : 1371-1958 Shroud-Laid Sisal Rope
- IS : 1372-1958 Cable-Laid Sisal Rope
- IS : 1410-1959 Hawser-Laid Coir Rope
- IS : 1411-1959 Shroud-Laid Coir Rope
- IS : 1412-1959 Cable-Laid Coir Rope

WORK IN HAND

Cable-Laid Cotton Rope	Jute Ropes and Cordages
Cotton Twine Three-Ply	Pilot Lead Line
Hawser-Laid Cotton Rope	Whip Cord

Cotton Mill Wooden Articles, TDC 19

STANDARD PUBLISHED

- IS : 1896-1961 Picking Arms (or Sticks) for Overpick Cotton Looms

WORK IN HAND

Blanks for Box Looms	Boards for Lay Races for Cotton Looms
Blanks for Lay Bottoms for Cotton Looms	Weft Pirns for Shuttles for Pirn Changing Automatic Looms
Blanks for Slay Caps for Cotton Looms	Weft Pirns for Shuttles for Plain Calico Looms

Cotton Mill Shuttle, TDC 20 — Draft Indian Standard Specification for shuttles for pirn changing automatic cotton looms was finalized for publication.

STANDARD PUBLISHED

- IS : 1794-1961 Shuttles for Plain Calico Looms ; Suction-Threading Type

WORK IN HAND

Shuttles for Plain Calico Looms:
Self-Threading Type

Amendment No. 1 to IS:1794-1961
Shuttles for Plain Calico Looms:
Suction-Threading Type

Cotton Healds and Reeds, TDC 22

STANDARD PUBLISHED

IS: 1938-1961 Cotton Cambs for Use in Jute Looms

WORK IN HAND

All Metal Reeds

Cotton Spindle Tape, TDC 25 — Draft Indian Standard Specification for Cotton Spindle Tape (for Wool Textile Mills) was finalized for publication.

STANDARD PUBLISHED

IS: 1974-1961 Cotton Spindle Tape (for Jute Textile Mills)

Wire Healds, TDC 23

STANDARD PUBLISHED

IS: 1936-1961 Inset Mail Wire Healds for Use in Cotton and Silk Weaving
(Excluding Jacquard and Fancy Weaving)

WORK IN HAND

Flat Steel Wire Healds

Mill Metal Articles, TDC 24

WORK IN HAND

Bottom Fluted Rollers: Straight 'V'
Shaped Equally Spaced Flutes
Card Cans
Knurled Rollers
Methods of Specifying and Testing
Bottom Fluted Rollers: Straight
'V' Shaped Equally Spaced
Flutes

Roller Bearing Spindles for Warp
Ring Spinning Frame
Sawtooth Rollers
Spindle Inserts

Leather Mill Articles, TDC 21 — Draft Amendment No. 1 to IS: 1225-1958 Leather Picking Bands for Looms (*Tentative*) circulated earlier was withdrawn and a revised version of the draft amendment was issued in wide circulation.

STANDARDS PUBLISHED

IS: 1903-1961 Raw Hide Pickers for Jute Looms

IS: 1906-1961 Raw Hide Round Foot Pattern 4B Pickers for Cotton Overpick Looms

WORK IN HAND

Roller Skin

Cotton Spinning Machinery, TDC 30—Draft Indian Standard Specifications for (a) lappets for cotton ring spinning frame, (b) tin roller for cotton ring spinning frame, and (c) doffer and flat stripping camb blades were approved for wide circulation.

STANDARD PUBLISHED

IS : 1927-1961 Flat Driving Chains for Carding Engines

WORK IN HAND

Flat and Flat Screws
Jockey Pulleys
Lickerin Wire
Spinning Rings

Top Rollers
Travellers
Undercasings

Cotton Weaving Machinery, TDC 29—Draft specifications for (a) crank shaft for plain calico cotton looms and (b) bottom shaft for plain calico cotton looms were approved for wide circulation.

WORK IN HAND

Bushes for Tappet Shaft, Crank Shaft, Rocking Shaft and Stop Rod
Major Critical Dimensions of Plain Calico Cotton Looms
Materials for Manufacturing Picking Nose, Boss and Shell; Picking Cone and Bolt, Gear Wheels or Crank Shaft and Bottom Shaft; Picking Shaft; and Shedding Tappets

Drop Wires
Fly Spindles
Springs for Spring Type Let-off Motion
Weavers' Beams
Weft Fork

Jute Mill Wooden Articles (Other than Shuttles), TDC 17

WORK IN HAND

Card and Gill Pins for Jute Industry
Conical Spools for Jute Pre-beamers
High Speed Jute Bobbins
Staves for Jute Cards
Tagending Jute Bobbins
Metricization of:
IS : 502-1953 Solid Bobbins for Dry Jute Spinning Frames
IS : 698-1955 Picking Arms (or Sticks) for Jute Looms

Metricization of:
IS : 699-1955 Spool Centres for Jute Spool Winding Machines
IS : 700-1955 Solid Flange Bobbins for Jute Roving Frames
IS : 759-1956 Blanks for Swells of Jute Looms
IS : 760-1956 Blanks for Jute Spinning Roller Discs

Jute Mill Shuttles, TDC 18

WORK IN HAND

Shuttles for Automatic Jute Looms

Jute Bags for Packing Sugar, TDC 28

STANDARD PUBLISHED

IS : 1943-1961 A-Twill Jute Bags for Packing Sugar

Jute Bags for Packing Cement, TDC 34

WORK IN HAND

Jute Bags for Packing Cement

Knitting Machines, TDC 31

WORK IN HAND

Knitting Needles for Use in Knitting
Machines

Outerwear Knitting Machines,
Power Driven

Socks Knitting Machines, Hand
Driven

Underwear Knitting Machines
Power Driven

Textile Sizing and Finishing Materials, TDC 12 — Amendment No. 1 to IS : 1184-1957 Maize Starch for Use in the Cotton Textile Industry was finalized for publication.

STANDARD PUBLISHED

IS : 2033-1962 Tapioca Flour for Use in the Cotton Textile Industry

Coir and Coir Products, TDC 9 — Draft Indian Standard Specification for coir matting, mourzouks and carpets was issued in wide circulation.

STANDARD PUBLISHED

IS : 1858-1961 Door Mats, Creel, Bit and Fibre

WORK IN HAND

Superior Anjengo Yarn
Amendment No. 1 to:

IS : 1693-1960 Door Mats — Rod
IS : 1858-1961 Door Mats, Creel,
Bit and Fibre

Amendment No. 2 to IS : 898-1957
Coir Fibre

Tapes for Electrical Purposes, TDC 35

STANDARD PUBLISHED

IS : 1923-1961 Cotton Selvage Tape for Electrical Purposes

Wicks for Oil Burning Domestic Appliances, TDC 32

WORK IN HAND

Circular Wicks

Round Wicks

8. SECTIONAL COMMITTEES UNDER THE EXECUTIVE COMMITTEE

8.1 Documentation Sectional Committee, EC 2

8.1.1 During the year, the following four draft standards were issued into wide circulation of which the first two were later finalized for

adoption as Indian Standards:

- a) Recommendations for Bibliographical Reference;
- b) Principles for Designing a Scheme of Library Classification;
- c) Specification for Reinforced Library Binding; and
- d) Glossary of Classification Terms

Two more draft standards finalized in the year were the revised versions of the standards published earlier, namely:

- a) Guide for Layout for Periodicals;
(Revision of IS : 4-1949), and
- b) Specification for Title-Page and Back of Title-Page of a Book
(Combined Revision of IS : 792-1956 and IS : 793-1956).

The revision of IS : 382-1952 Practice for Alphabetical Arrangement was taken in hand. The old standard recommended the practice of all-through alphabetization. It was, however, felt that the rules for alphabetical arrangement vary depending on the nature of publications, such as telephone directories, indexes, library catalogues, etc. The scope of the revised draft has been restricted to cover directories and similar lists, and it is based on the principles of 'nothing before something' or 'word by word' alphabetization.

In view of the rapid expansion of the research facilities in the country, the number of persons writing research papers has increased tremendously. But most of the authors, especially the younger ones, need guidance in the preparation of manuscripts and illustrations. With a view to assisting such authors, conserving labour of editors, reducing the cost of printing and minimizing the delay in publication, work on the preparation of a standard guide for the preparation of articles for a learned periodical was taken up and a preliminary draft prepared.

9. METRIC CELL

9.1 Progress of Revision of Indian Standards— The progress of metricization of non-metric Indian standards was constantly kept under review to ensure that it did not lag behind the programme. From 1 March 1961 to 31 March 1962, as many as 181 standards were revised or amended to conform to the metric system. The number of non-metric standards which was 538 or 34 percent of published standards on 1 March 1961 was thus reduced to 357 or 19 percent of those published up to 31 March 1962.

9.2 Introduction of Metric System in Indian Standards— All draft standards issued into wide circulation for eliciting comments were scrutinized to ensure that they were based on the metric system and recommendations were made in about 130 cases. In many cases, these recommendations were accepted by the concerned Sectional Committees. The cell also assisted other Divisions by preparing metricized versions of

standards for further processing by the Divisions and in resolving technical problems arising out of the changeover.

9.3 Introduction of Metric System in Industry

9.3.1 With the introduction of the metric system in industry and trade, demands for advice from the Institution on multifarious problems arising out of the changeover greatly increased. The Cell gave every possible assistance in all such cases. It also kept close contacts with government and other agencies in matters relating to the changeover. Basic standards required by the industries for changeover were given prior attention and a number of such standards were published during the period the details of which would be found in the reports of the various Divisions. Necessary metric standards, to be used as basis for further engineering practices have by and large been made available.

9.3.2 A note titled 'Planning for Changeover to Metric System in Design and Manufacture in Engineering Industry' prepared by the Cell, suggesting a course of action for the changeover in engineering industries, was approved by the Engineering Subcommittee of the Standing Metric Committee and was widely circulated by both the ISI Directorate and the Standing Metric Committee. Extensive contribution was also made by the Cell for the preparation of a document to serve as a source of information for training in metric system for personnel engaged in engineering drawing and design offices and tool rooms.

9.3.3 A statement on the 'Position of Indian Standards for Building Industry with Particular Reference to the Adoption of Metric System' was prepared and distributed to all Public Works Departments of the Central and State Governments and other interested parties. The statement was very much in demand and was greatly appreciated as a helpful source of information.

9.4 Conversion Slide Rule—For ready conversion of fps values for length, area, volume, capacity, stress, pressure, and mass to metric units, a circular conversion slide rule was designed. The slide also gives conversion from °F to °C, Indian standard thicknesses of sheets and diameters of wires in millimetres and precise values of conversion factors. Negotiations are now proceeding for the manufacture of the slide.

10. STATISTICAL SECTION

10.1 General—An important activity of the Section during the year under review was to conduct statistically designed investigations and/or statistical analysis of data with a view to drawing appropriate and reliable conclusions which were greatly helpful in the standardization work (*see 10.5*). Mention may be made here of the work done with regard to the rationalization of the overall dimensions of motor vehicle batteries; deciding on an alternative, quick and efficient method for the determination of twist in cotton yarn; and study of the time taken in

the formulation of Indian Standards. Further progress was also made in the formulation of Indian Standards on methods of sampling, introduction of statistical quality control concepts in Indian Standards, and suggestion of sampling schemes for routine inspection of the products covered under the ISI Certification Marks Scheme.

10.2 Methods of Sampling and Numerical Values

STANDARDS PUBLISHED

- IS : 1405-1960 Methods of Sampling Iron Ore
- IS : 1449-1961 Methods of Sampling Manganese Ore
- IS : 1811-1961 Methods of Sampling Foundry Sands
- IS : 1817-1961 Methods of Sampling Non-Ferrous Metals for Chemical Analysis

WORK IN HAND

- | | |
|--|---|
| Methods of Sampling Bauxite | Methods of Sampling Quartzite |
| Methods of Sampling Dolomite, Limestone and Other Allied Materials | Sampling Inspection Tables, Parts I & II |
| Methods of Sampling Ferro-alloys, Part II | Revision of IS : 436-1953 Sampling of Coal, Part I |
| Methods of Sampling Footwear | Revision of IS : 1020-1957 Conversion Tables for Ordinary Use |
| Methods of Sampling of Thermo-setting Moulding Materials | |

10.3 Introduction of SQC Concepts in Indian Standards — During the year under review, the Section scrutinized 273 draft Indian Standards sent out for wide circulation with the object of introducing, wherever possible, statistical quality control concepts in them. In 123 cases of these, statistically sound sampling inspection plans were recommended. In almost all the cases, these recommendations were accepted by the Sectional Committees concerned. In this connection, mention may be made of Indian Standard Specifications for Penicillin Vials (IS : 1984-1961), Rubber Hot Water Bottles (IS : 1867-1961), DDT Dusting Powders (*Revised*) (IS : 564-1961), Diazinon, Technical (IS : 1833-1961), Lead Plating (IS : 1992-1962), High Tensile Brass Ingots and Castings (*Revised*) (IS : 304-1961), Aluminium Bronze Ingots and Castings (*Revised*) (IS : 305-1961), Tower Bolts (*Revised*) (IS : 204-1961), Water Meters (Domestic Type) (*Revised*) (IS : 779-1961), and Industrial Lighting Fittings with Metal Reflectors (IS : 1771-1961).

10.4 Certification Marking — The Section suggested 42 routine sampling inspection schemes for the issue of licences to the various manufacturers under the ISI Certification Marks Scheme. Also, the routine inspection data collected from the licensees in accordance with the recommended schemes were statistically analysed to find out whether or not the certified products conformed to the relevant Indian Standards.

10.5 Investigations and Analysis of Data — Investigations and statistical analysis of the data helped in the evaluation of the specification requirements, laying down of sampling plans, judging the efficiency of test methods and limitation of variety. For example, in case of the overall dimensions of motor vehicle batteries, IS : 395-1959 Specification

for Lead-Acid Storage Batteries (Light Duty) for Motor Vehicles had specified only the maximum dimensions, whereas, IS : 985-1958 Specification for Lead-Acid Storage Batteries (Heavy Duty) for Motor Vehicles did not specify any dimensions which resulted in the manufacture of a large variety of batteries. Consequently, there was need for rationalizing the overall dimensions (namely the length, width and the height of the battery) and for reducing the number of varieties also. Relevant data were collected and statistically analysed, as a result of which the concerned committee decided to bring down the number of different sizes from 232 to 9 for all types of batteries. Again, for the determination of twist in yarn, a new simpler method was compared with the one already adopted in the Indian Standard Method for Determination of Twist in Cotton Yarn (IS : 238-1952). Statistical analysis of the data revealed that the precision of the two methods was comparable and hence it was decided to include the new method also as an alternative method in the standard. Similarly, the problems connected with the sampling of pesticides, determination of tintometric value of the oil sandalwood, estimation of citral content in the oil of lemongrass, method of determining impurities (matter soluble in hot alcohol) in lac, etc, were investigated and suitable recommendations made.

10.6 Comments on ISO Draft Proposals — Comments and suggestions for improvement were sent on 10 ISO draft proposals pertaining to spices and condiments, coal, cereal and pulses, steel products and asbestos cement products, etc.

11. IMPLEMENTATION OF INDIAN STANDARDS

11.1 Advisory Committee on Implementation of Indian Standards — The Executive Committee at its 72nd meeting held on 14 September 1961 decided to set up an Advisory Committee on Implementation of Indian Standards, under the chairmanship of Director General of Supplies and Disposals, to assist the Institution in promoting adoption of Indian Standards by organized consumers, manufacturers and others in the country and propagating company standardization activity amongst manufacturers.

11.2 State Conferences — During the period under review, State Conferences on Implementation of Indian Standards were convened by the following State Governments on the date and place indicated against each:

<i>State Government</i>	<i>Date</i>	<i>Place</i>
1) Maharashtra	28 April 1961	Bombay
2) Mysore	2-3 May 1961	Bangalore
3) Gujarat	24 October 1961	Ahmedabad
4) Uttar Pradesh	2 January 1962	Lucknow

These conferences were inaugurated by the Chief Minister and presided over by the Minister for Industries of the respective State Governments. Delegates representing various government departments, municipal committees, district boards, industries, etc, in the respective States, attended these conferences. Recommendations concerning (a) implementation of Indian Standards, (b) recognition of ISI Certification Marks Scheme, and (c) extending the scope of standardization, with certain amendments and modifications suiting to each State, were passed at these conferences, which pointed out the necessity of:

- a) adoption of Indian Standards by all State Government departments, municipal committees, local self-government bodies, etc, for the purpose of state purchases and guiding design and construction work in the public sector;
- b) according due recognition to the ISI Certification Mark by preferring to purchase such goods as carry this mark and whenever such goods are not available by demanding goods that could be similarly certified; and
- c) local bodies and industrial undertakings supporting ISI by becoming its Sustaining Members and by actively participating in its deliberations for establishment of standards.

Full text of the recommendations as passed by these State Governments have been published in the ISI Bulletin from time to time.

These conferences also recommended setting up of Standards Cells at their Industries Departments to maintain close liaison between ISI and State Government Departments for effective implementation of Indian Standards. In addition, the Government of UP decided to set up a State Implementation Advisory Committee to guide the work of their cell. Following the decision of the Bihar State Conference on Implementation of Indian Standards held last year, the Government of Bihar has set up a Standards Cell at Patna.

Besides Governments of Punjab, Himachal Pradesh, Madras, Orissa, West Bengal, UP and Andaman and Nicobar Islands, the following Governments have also issued directives to Heads of Departments within their respective State to give preference to goods bearing ISI Certification Mark over those which do not carry the mark while making purchases for the State Government:

(a) Rajasthan, (b) Delhi Administration, (c) Mysore, (d) Kerala, and (e) Maharashtra.

11.3 Other Conferences — The Purchasing and Inventory Control Group of the Delhi Management Association sponsored a seminar in collaboration with ISI at Manak Bhavan on 3 April 1961 on Standardization, Simplification and Value Analysis for the Development of Indigenous Supplies. Shri K. C. Reddy, the then Minister of WH&S,

Government of India, inaugurated the conference which was attended by 50 purchase officers from all over the country, representing both the public and private sectors of the industry. Adoption of Indian Standards by the purchasing organizations was emphasized at the meeting and it was generally agreed that it will help encourage the manufacture of standard goods in the country.

11.4 Adoption of Indian Standards

11.4.1 Central Purchase Departments—During the period under review, the number of Indian Standards adopted by the Departments of Government of India is as given below:

DEPARTMENT	NUMBER OF INDIAN STANDARDS ADOPTED		
	Up to 31-3-1961	From 1-4-61 to 31-3-62	As on 31-3-62
Directorate General of Supplies and Disposals	1 293	241	1 534
Controller General of Defence Production, Ministry of Defence	676	107	783
Research, Designs and Standards Organiza- tion, Ministry of Railways	548	82	630
Directorate General of Ordnance Factories, Ministry of Defence	211	8	219
Indian Posts and Tele- graphs Department, Ministry of Transport and Communications	154	1	155

As on 31 March 1962, the total number of Indian Standards adopted numbered 1 604 as against 1 389 of the previous year, registering an increase of 215 in the year under report.

11.4.2 Other Public Undertakings—In addition to those referred to in 11.4.1, numerous State Electricity Boards, State Public Works Departments, Municipal Corporations, Production Units, etc, have intimated to ISI of their decision to adopt all Indian Standards for the purpose of store purchase and guiding design and construction work.

11.4.3 The following table gives the action taken by various organizations to implement certain specific standards indicated:

Sl. No.	ORGANIZATION	INDIAN STANDARD	ACTION
1.	Engineer - in - Chief, Army Headquarters	All Indian Standards	Corps of Engineers to adopt and use them in designs, tenders for and supply of stores; and to dispense with inspection for quality where goods bear ISI Mark
2.	Permanent Subcommittee of analysts, Central Committee of Food Standards	Test Methods in Indian Standards	To adopt them with such modifications, if any, as may be deemed necessary, for inclusion in the Prevention of Food Adulteration Rules
3.	Mysore State Regulated Markets Conference, 1961	Layout for Regulated Market Yards for Agricultural Commodities (IS : 1497-1959)	Master Plans to be prepared conforming to Indian Standard as far as possible
4.	Director, Military Farms, Army Headquarters	Glass Milk Bottles (IS : 1392-1959)	Decided to purchase Milk Bottles conforming to Indian Standard and instructed Military Farms located in the country to act accordingly
5.	National Seminar on Storage of Foodgrains, 1961	Foodgrain Storage Structures	Recommended that the Government should give its sanction to the findings and conclusions regarding storage practice and standards arrived at by ISI
6.	Ministry of Community Development and Co-operation	— do —	Recommended to the State Governments to adopt the Indian Standards for construction of Storage Structures
7.	Madras Library Association, Madras	Library Buildings, Fittings and Furniture (IS : 1553-1960 and IS : 1829-1961)	Recommended adoption of the Indian Standards in construction of new Library Buildings and improving existing library facilities
8.	Second Conference of Municipal Corporations, 1961	Code of Building Byelaws (IS : 1256-1958)	Municipal Corporations advised to adopt the Code
9.	Indian Historical Records Commission, 1961	Paper, Ink and Allied Products	All records creating agencies advised to adopt the Indian Standards
10.	Iron and Steel Controller	Iron and Steel Products	Consumers of iron and steel advised to adopt Indian Standards and indent accordingly
11.	All Indian Graphite Manufacturers' Association	Sizes of Graphite Crucibles (IS : 1748-1961)	Members advised to adopt for manufacture

11.5 Popularization of Indian Standards and ISI Certification Mark in Countries Abroad — During the year under review, the following Indian Trade Missions took steps to popularize Indian Standards and ISI Certification Mark through publication of articles, etc, in Trade Journals in those countries:

Aden, Australia, Czechoslovakia, East and Central Africa, Ethiopia, Indonesia, Poland, Singapore, Southern Rhodesia, USA and Yugoslavia.

On the advice of the Ministry of Commerce & Industry, Indian Standards on coir and coir products have been brought to the notice of importers of Coir goods in Belgium, Australia, UK, USA and Lebanon by the respective Indian Trade Missions. For encouraging export of coir products conforming to Indian Standards, the Coir Board has also advised the manufacturers in the country to adopt the standards.

11.6 Review of Tender Enquiries — A large number of tender enquiries for purchase of material issued by government departments, etc, were scrutinized and where Indian Standards were not used to cover the requirements, the organizations sponsoring these enquiries were requested to fall in line with the Government policy regarding adoption of Indian Standards. Such requests generally resulted in the departments agreeing to base their future requirements according to Indian Standard Specifications and to give preference to goods carrying ISI Mark.

11.7 Adoption by Industries — To enable ISI to provide information about manufacturers producing goods conforming to Indian Standards, 51 enquiries were issued covering 386 Indian Standards on articles, such as automobile leaf springs, graphite crucibles, insulators, radio equipment, textile mill stores, sports goods, essential oils and others.

Lists of manufacturers producing goods to Indian Standards are being maintained in ISI Directorate.

12. CERTIFICATION MARKS DIVISION

12.1 Progress of the Scheme — The ISI Certification Marks Scheme continued to make steady progress during its seventh year of operation. The number of licences granted during the year was 112 as against 105 in the year 1960-61 and 64 in the year 1959-60. The names of new licensees, the products covered and the rates of marking fee are given in Appendix C (see p. 156). The number of applications rose to 780.

12.2 Important New Items Covered Under the Scheme — An important landmark in the history of the ISI Certification Marks Scheme was the introduction of the Scheme in the steel industry. Ten licences were granted to the Hindustan Steel Limited, Ranchi for their steel plants at Bhilai and Durgapur. This was the first step in the implementation of the decision of the Government of India taken last year that the steel produced by six major Steel Plants at Tatanagar, Burnpore,

Bhadravati, Rourkela, Durgapur and Bhilai should carry the ISI Certification Mark.

Other important items covered under the Scheme during the year included fire-fighting equipment, corrugated asbestos sheets, metal clad switches, stearic acid, oleic acid and footballs.

12.3 ISI Certification Marks Scheme for Small Scale Industries — Efforts were made to resolve one of the major difficulties of the small scale producers in joining the ISI Certification Marks Scheme, namely, lack of adequate testing facilities. Three small scale manufacturers of bicycle frames who had made their independent testing arrangements within their works were issued licences. With a view to up-grade the quality of products in the small scale sector, it had been decided by the Development Commissioner for Small Scale Industries that any assistance including existing facilities of laboratories and workshops for testing raw materials, components, machines, etc, required for participation in the ISI Certification Marks Scheme might be extended to the small scale units. A Seminar-cum-Training course in Standardization, Testing and Inspection for officers of the Small Industries Service Institutes was organized at Manak Bhavan from 19 to 22 February 1962. The programme included talks on Standardization, Working of ISI, ISI Certification Marks Scheme, Metricization and Implementation of Indian Standards.

In some sections of the industry, namely, pesticide formulations, where so far manufacture had been confined to the large scale sector, efforts were being made by the Government of India to sponsor about 15 to 20 small scale units in different States for manufacture of formulations of plant protection agents, such as insecticides, fungicides, etc. In order to ensure that their quality of products was of a high standard, it had been decided that they would join the ISI Certification Marks Scheme.

12.4 Standard Marks Gazetted — Standard Marks in respect of articles covered by 38 additional Indian Standards as listed in Appendix D (see p. 175) were specified and published in the Gazette of India, Part II, Section 3, Sub-section (ii). Standard Mark for water-proof packing paper covered by IS : 293-1951 was rescinded. Appendix D also includes Standard Mark in respect of one Indian Standard which was revised during the year 1961-62, bringing the total number of Indian Standards for which Standard Marks were Gazetted by the end of the year to 131.

12.5 Recognition of ISI Certification Marks Scheme — During the year under report, Conferences on Implementation of Indian Standards and Recognition of ISI Certification Mark were held by the Governments of Maharashtra, Mysore and Gujarat. These Conferences *inter alia* recommended that State Governments should give a lead by according due recognition to the ISI Certification Mark by preferring to purchase

only such goods as carried that mark and wherever such goods were not available by demanding goods that could be similarly certified. The Conferences recognized that certified goods, being produced under an organized inspection system, did not require the same degree of inspection and testing prior to purchase as other goods did. These Conferences also recommended that the States may direct the industrial undertakings under their control to cover their products under the ISI Mark and request the industries in the private sector to take similar action.

The Governments of UP, Madras, Orissa, West Bengal, Punjab and Maharashtra, and Andaman and Nicobar and Himachal Pradesh Administrations, had in the earlier years issued instructions to various departments to show preference to the marked goods. Similar instructions were issued by the Governments of Mysore, Rajasthan and Kerala and Delhi Administration during the year under report.

The Government of Madras had advised the manufacturers of aluminium domestic utensils not to use aluminium scraps for the manufacture of cooking utensils. If, however, such articles were manufactured out of aluminium scraps they might be brought under the ISI Certification Marks Scheme so as to enable the public to distinguish the utensils made of good aluminium. The Government also advised the public about the desirability of purchasing aluminium utensils bearing the ISI Mark. The Government of Kerala also accepted the suggestion that the new units that were being set up in the State for the manufacture of aluminium utensils might be insisted on to utilise only ISI Marked sheets.

Needless to state that such a decision was as much a measure of the efficient working of the Scheme and its popularity as the demonstration of the overwhelming advantages that accrued from it both to the producers and consumers of Certified Goods.

12.6 Avoiding Duplication of Inspection of ISI Certified Goods — During the year under report, one of the proposals made by the Joshi Committee and agreed to by the DGS&D was the relaxation of inspection in the purchase of some items where it was found that the ISI Certified goods conformed to the Indian Standards and there were no complaints. The Central Water and Power Commission also requested Chief Engineers for Electricity in various States that the Indian manufacturers of Bare Copper Conductors, Steel Cored Aluminium Conductors and All Aluminium Conductors, be saved the inconvenience and expenses of duplicate inspection of their products by the indentors in case the supplies bore ISI Mark. Most of the Electricity Boards had confirmed that they would take action accordingly.

12.7 Competent Authorities — One of the economical methods of propagating the Certification Mark was, of course, through the creation of a number of competent authorities. During the year under report, the Government of India appointed the Deputy Director General of

Inspection and Director of Inspection (Met) as Competent Authority in respect of Steel manufactured in India.

12.8 Certification Marks Advisory Committee — During the year under report, the Certification Marks Advisory Committee held their Sixth Meeting on 3 August 1961 at New Delhi and Seventh Meeting on 25 December 1961 at Kanpur. At its latter meeting, Shri Prabhu V. Mehta, Chairman expressed his satisfaction on the progress made during the last few months in the implementation of Indian Standards. He stated that various State Electricity Boards had agreed to buy ISI Marked Copper and Aluminium Conductors. The Government of Mysore had agreed to implement the ISI Certification Marks Scheme and had issued directives to its various purchasing departments.

The Committee desired that when some licences were issued for certain bicycle parts, the Development Commissioner, Small Scale Industries should request manufacturers and assemblers of bicycles to give preference to components bearing ISI Mark.

12.9 Amendments to the ISI (Certification Marks) Act, 1952 — A development of considerable interest and importance during the year under report was the passing of the ISI (Certification Marks) Amendment Act, 1961 by the Parliament. The salient features of the amendment are (a) extension of the application of the Act to the State of Jammu & Kashmir; (b) the widening of the definition of Indian Standard so as to include any standard recognized by the Indian Standards Institution in relation to any article or process; (c) the recognition of every Inspector appointed by the ISI as a public servant within the meaning of Section 21 of the Indian Penal Code; and (d) bestowing powers on the Central Government to make rules to provide for the procedure and manner in which any Standard established by an Institution other than the Indian Standards Institution in India or elsewhere, in relation to any article or process, may be recognized. Provision has also been made for every rule made under the Act being laid before Parliament for a period of thirty days, during which period both Houses of Parliament may modify or annul any of the rules but without prejudice to the validity of anything previously done under that rule.

12.10 Amendment to the ISI (Certification Mark) Regulations, 1955 — In exercise of the powers conferred under Section 21 of the ISI (Certification Marks) Act, 1952, and Rule 3 (1) (b) of ISI Certification Marks Rules, 1955, the Indian Standards Institution, with effect from 9 June 1961, had added the following as sub-clause (4) to regulation (3) of the ISI Certification Marks Regulations, 1955:

‘ Director may, however, tentatively modify such of the provisions of an Indian Standard as in his view would help to expedite the use of the Standard Mark, without in any way effecting the quality of goods covered by the Standard.

Provided that within six months of such action, concurrence of the Sectional Committee concerned with the preparation of the Standard is duly obtained.'

12.11 Enquiries about Certification Marks — During the year, 198 written enquiries were received about the ISI Certification Marks Scheme and the procedure for obtaining licences to use Standard Mark. Many of these enquiries ultimately resulted in the issue of licences. Numerous visitors seeking clarifications about technical problems and procedural matters connected with the grant of licences were attended to by the Marks Division. The following is the break-up of enquiries in the various fields:

Agricultural & Food Products	21
Building	32
Chemicals	37
Electrotechnical	64
Engineering	28
Structural and Metals	9
Textiles	7

12.12 Analysis of Applications for Grant of Licences — As many as 171 new applications for grant of licences to use the ISI Mark were received during the year making a total of 780. Preliminary inspection of most of the factories of the new applicants was carried out and samples drawn for independent tests. Out of the 780 applications, 401 had resulted in the grant of licences. The cases of 113 applications had to be closed because of lack of testing facilities or non-acceptance of the Scheme of Testing and Inspection or repeated failure of samples or lack of the requisite technical personnel. In some cases applications could not be processed for want of acceptance of the marking fee by the applicants. A plea commonly put forward in such cases was the smallness of the unit of production and consequent inability to bear the cost of marking. But it is now well-established that the marking fees are an insignificant proportion compared to the value of the goods. The fees generally were below 0.1 percent of the value of goods and sometimes even a tenth of that amount. Another difficulty put forward by the applicants was in regard to the raw materials of the required specifications. Yet another difficulty which was voiced was the frequency of tests. The cases of 41 applicants had to be deferred on their own requests as they wanted more time for bringing their production techniques and testing facilities up to the requisite standard. The remaining 225 cases were under consideration.

While it was the organized effort to grant as many licences as possible, in no case the principles underlying the Scheme were compromised.

13. RESEARCH AND INVESTIGATIONS

13.0 As in the previous years, the collaboration and assistance received from the different national, state and private laboratories, testing organizations, and research institutions in undertaking investigations and research for the purpose of proper formulation of Indian Standards have been indeed very close and substantial. The Institution records its appreciation and gratitude to these organizations for the assistance received.

13.1 The subjects which required testing and investigation by the Agricultural and Food Products Division related to the colour determination of liquid glucose by photo-electric colorimeter; determination of the limits for the proportion of *maida* to be used in wheatmeal bread; analysis of beeswax obtained from the two species of the honey-bee, namely, *Apis indica* and *Apis dorsata*, in their natural forms (in combs) to determine the various characteristics of beeswax; determination by different methods of solubility index of milk powder and infant foods; methods of microbiological estimation of vitamins in infant foods; analysis of samples of snuffs; determination of the chemical composition of safflower oilcake as livestock feed; determination of crude fibre in black pepper, lead content of curry powder, emulsion stability and heat stability of BHC emulsifiable concentrates; and distillation range and residue on evaporation of ethylene dichloride carbon tetrachloride mixture.

13.2 The Building Division's research problems related to testing of wall tiles, investigations on surkhi-lime mixture for masonry cement, testing of building limes available in different regions to ascertain their chemical composition, investigation on the effect of magnesia content in building lime, testing of natural building stones, thermal efficiency of brick kiln, testing of jointed wood poles, testing of hook ladders for fire fighting purposes, investigations on gypsum and gypsum building products, quantity of water to be used in the compressive strength test for concrete, water cement ratio and strength of mortar and concrete, variation in bulk density of aggregates measured with different sizes of containers, strength of concrete at different temperatures and ages, mortar making properties of Ennore Sand, survey of noise levels and noise comfort conditions, investigation on sterilization of spun yarn for use in water supply main connection, testing and calibration of sieve shaker, investigation on the use of square and circular plates for load test on soils, effect of vibration on bearing capacity of soils, and evaluation of relation between impact strength and thickness of plywood used for the manufacture of rectangular plywood packing cases.

13.3 For the preparation of standard specifications for various materials under the purview of the Chemical Division, investigations were carried out with the assistance of several collaborating laboratories for the

collection of technical data for the requirements of cottonseed oil (raw and washed), oils of lemongrass and sandalwood, hydrogen peroxide, barium carbonate, unsupported vinyl films, rubber base adhesives, millboard and strawboard, etc. Experiments were conducted for evolving a suitable test for distinguishing ivory from plastics and bone. Other experiments taken up for developing standard methods of test related to the testing of samples of light magnesium carbonate, indigenous phenolic moulding powders, laboratory glassware, common proofed paulins and hard block greases. Comparative performance tests for the evaluation of the performance of paint brushes made from nylon monofilaments and hog bristles were conducted.

13.4 The National Council for Applied Economic Research, New Delhi was entrusted with a detailed study to make an objective assessment of the savings in steel because of the work done by ISI under the Steel Economy Project. This work is expected to take about a year.

As the various corrosion research subcommittees set up by the Metals Committee of CSIR have chalked out a long-term programme to carry out the work, the Panel for Corrosion Research on Light Gauge Steel Structures of ISI, decided to formulate a short-term programme to obtain certain results which would be useful in formulating tentative codes of practice for corrosion protection of light gauge steel sections. This work is being carried out by five laboratories in the country.

The work regarding the use of light gauge steel sections in structures being carried out at the National Physical Laboratory made further progress. It is expected that the first part of the scheme relating to short columns would be completed in the coming year and a report on the work done would be available to the relevant technical committee of ISI. Further, on a recommendation made by the Structural Sectional Committee, SMDC 6, the CSIR agreed to set up a permanent cell at the Central Mechanical Engineering Research Institute at Durgapur to undertake extensive work regarding the use of light gauge steel sections in structures.

Several other problems came up for investigation under the Structural and Metals Division Council. These related to preparation of a specification for standard sand for use as foundry binding material, stipulation of improved bend test for steel casting, etc.

The work relating to determining the non-graphitic carbon content of graphite was completed with the collaboration of Government Test House, Alipore; National Metallurgical Laboratory, Jamshedpur and Research, Designs and Standards Organization of Ministry of Railways, Chittaranjan and the results of the investigations have been incorporated in Indian Standard Specification for Graphite for Use as Foundry Facing Material (IS : 1305-1958).

13.5 The research and testing work in the Textile Division included testing of samples of silk sari cloth and jute bags for packing cement for

constructional details and other particulars. Samples of twin wire healds of different gauges were tested for rigidity at the National Physical Laboratory, New Delhi. Testing of similar samples of twin wire healds for rigidity was also in progress at Government Test House, Calcutta. On the recommendation of the Electrochemical Research Institute (ECRI), Karaikudi, samples of twin wire healds were procured and plated with cadmium at ECRI. Arrangements for testing the performance of the cadmium plated twin wire healds are being made. Fresh samples of proofed cotton fabrics were procured and sent to the Government Test House, Calcutta; Ahmedabad Textile Industry's Research Association, Ahmedabad; Shri Ram Institute for Industrial Research, Delhi; the National Rayon Corporation Ltd., Kalyan; the Arvind Mills Laboratories, Ahmedabad; and Defence Research Laboratory (Stores), Kanpur; for determining the quantities of copper, iron, manganese, chromium and zinc present in the proofed cotton fabrics according to the applicable procedure prescribed in IS:1039-1956 Method for Estimation of Small Quantities of Copper, Iron, Manganese, Chromium and Zinc in Proofed Cotton Fabrics.

PART III INTERNATIONAL ACTIVITIES

(For ISO Publications during the year, see Appendix E, p. 178)

1. INTERNATIONAL ORGANIZATION FOR STANDARDIZATION, ISO

1.1 In the last twelve years of its existence, the International Organization for Standardization (ISO) has grown into a body of major international importance to which the national standards bodies of the following 46 countries are affiliated:

Albania	Czechoslovakia	Israel	South Africa
Argentina	Denmark	Italy	Spain
Australia	Egypt	Japan	Sweden
Austria	Finland	Mexico	Switzerland
Belgium	France	Netherlands	Turkey
Brazil	Germany	New Zealand	United Kingdom
Bulgaria	Greece	Norway	USA
Burma	Hungary	Pakistan	USSR
Canada	India	Peru	Venezuela
Chile	Indonesia	Poland	Yugoslavia
Colombia	Iran	Portugal	
Cuba	Ireland	Roumania	

1.1.1 As a member of ISO, the Indian Standards Institution is contributing towards the effective co-ordination of national standards of various countries which promote and facilitate international trade.

1.2 On 31 March 1962, ISO had 101 Technical Committees* working on major problems assisted by 92 Subcommittees. ISI is actively participating in the work of 71 Technical Committees and participating as an observer member in 29 other Technical Committees. India is also responsible for the secretarial work for three Technical Committees and two subcommittees. India is thus kept fully informed about the international standards in all major spheres, there being only one Technical Committee of ISO in which India is not taking interest.

1.3 ISO General Assembly — The triennial session of the ISO General Assembly was held at Helsinki on 15 June 1961 at which Mr. A. Y. Viatkine (USSR) was elected as ISO President for a term of three years with effect from 1 January 1962. The Indian delegation to the Assembly comprised: (a) Dr. Lal C. Verman, Director, ISI, and (b) Shri M. M. Khorana, Charge d'affaires, Indian Embassy, Finland.

1.3.1 In the annual election of five members to the ISO Council for the 3-year period from 1 January 1962 held at the General Assembly India got back her seat in the ISO Council, after an interruption of one year.

*For complete list of the Committees, see p. 153-155 of Handbook of ISI Publications 1962.

1.3.2 One of the important matters considered by the General Assembly was an Indian suggestion about the holding of grouped meetings of a number of ISO technical committees at more frequent intervals than every three years as at present.

The Assembly accepted this suggestion and hoped that if ISO were to receive an invitation from a member country or a group of neighbouring countries for organizing such meetings, the ISO Council would consider such a proposal with favour and if possible hold, in conjunction with some of these meetings, a meeting of the ISO Council also.

1.4 ISO/STACO — The Standing Committee for the Study of Scientific Principles of Standardization, abbreviated as STACO, had a heavy agenda this year including some of the items of particular interest to India.

1.4.1 The Committee adopted the basic document on the aims of standardization which was prepared by the Director, ISI in 1958, which had been under consideration of STACO since then.

1.4.2 Another document which was discussed was about identifying and designating products by means of a code that could be recognized all over the world. The study of this question was entrusted to a working group of five members including Director, ISI.

1.4.3 Under 'Sequence in the Standardization of Products', a revised document was submitted on the subject of standardization of industrial products which contained fundamental considerations regarding standardization of industrial products. At the instance of Director, ISI it was also decided to prepare an annexure to the document to deal with agricultural products.

1.5 ISO Planning Committee (PLACO) — This Committee, of which Director, ISI is the Chairman, and representatives of USA, UK and France are members, held two sittings and adopted ten recommendations which were all accepted by the ISO Council unanimously without modification. The recommendations dealt with the revision of existing scopes of all ISO Technical Committees, setting up of an authority for the co-ordination of colour fastness standards at the international level as well as co-ordination among certain ISO Technical Committees, and setting up of certain new ISO Technical Committees.

1.6 The Special Committee appointed in 1960 to review the Rules of Procedure of ISO of which Director ISI is a member, held its meeting under the chairmanship of General Salmon (France). On the recommendations of this Committee, ISO Council revised Clause I of the ISO Rules of Procedure. The Committee is continuing its work in regard to more contentious clauses of Rules and Regulations.

1.7 Meeting of Commonwealth Representatives — Taking advantage of the presence of representatives of several Commonwealth countries in

Helsinki, informal discussions were held on 12 June 1961 for organizing the next Commonwealth Standards Conference at which were present representatives from Australia, Canada, India, New Zealand and the UK. South Africa and Ireland had also been invited. The whole field of Commonwealth work was surveyed at the meeting and it was tentatively decided that the next Commonwealth Conference be held from 15 October 1962 in Australia.

1.8 ISO/ECAFE Liaison

1.8.1 Second Inter-Regional Hydrologic Seminar (WMO)—In his capacity as Liaison Officer of the ISO to UN Economic Commission for Asia and the Far East (ECAFE), Director, ISI attended the Second Inter-Regional Hydrologic Seminar organized co-operatively by the ECAFE and the World Meteorological Organization (WMO) held from 27 November to 11 December 1961 at Bangkok (Thailand). A paper entitled 'Work of the International Organization for Standardization (ISO) Subcommittee on Liquid Flow Measurement in Open Channels' was presented to draw pointed attention to what ISO/TC 30 SC 1 (Secretariat—India) has already accomplished.

In its final report the Seminar adopted the following recommendations in regard to ISO work:

'The Seminar noted with satisfaction that report on the work of the Subcommittee ISO/TC 30/SC 1 of the International Organization for Standardization on the preparation of International Recommendations for Standardization in the field of liquid flow measurement in open channels, and expressed the hope that all countries actively participate in the formulation of the Recommendations. The Seminar also expressed the wish that ISO, in collaboration with WMO, complete their recommendations for the standardization of instruments and terminology to be used in the field of liquid flow measurement in open channels as quickly as possible.'

1.8.2 Regional Seminar on Energy Resources and Electric Power Development—In pursuance of a recommendation made by the UN Economic and Social Council and with the co-operation of the United Nations Bureau of Technical Assistance Operations and the United Nations Department of Economic and Social Affairs, the ECAFE Secretariat organized a Regional Seminar on Energy Resources and Electric Power Development in Bangkok from 6 to 16 December 1961. Dr. Lal C. Verman attended that Seminar and presented, on behalf of ISI, two papers entitled:

- a) Standardization of Electrical Equipment—Its Effect on the ECAFE Countries, and
- b) Voltage Standardization—The Need and Effect.

Discussions led to further emphasizing the role that ISI was playing in the ECAFE region and pinpointing the need for every ECAFE country to set up its own standards organization.

1.9 ISO/METESCO Co-ordinating Committee on Mechanical Testing of the Metals — India's comments on DOC : ISO/METESCO (GS-1) 33E Guiding Principles Which Should be Followed in Preparing Documents on Mechanical Testing were forwarded to ISO General Secretariat.

1.10 Anniversary of Austrian Standards Organization — The Austrian Standards Organization (ÖNA) had invited all members of ISO Council and office bearers to participate in the 40th anniversary celebrations in Vienna, which, among others, was attended by the Director, ISI. It was a formal occasion and ISI took the opportunity of presenting ÖNA with a Tanjore tray as India's token of esteem on ÖNA's 40th anniversary.

1.11 ISO Committee Meetings — During the year under review, meetings of 44 ISO technical committees, 28 subcommittees and 86 working groups of interest to India were held. A brief report on their work and on other important information is given below:

ISO/TC 1 Screw Threads (Sectt: Sweden) — The sixth meeting of the Technical Committee, held at Helsinki from 12 to 14 June 1961, was attended by Dr. Lal C. Verman.

The Committee briefly reviewed the progress of implementation of ISO screw threads in the various countries. The tolerances for ISO screw threads were discussed and the Secretariat was requested to prepare a document on the basis of these discussions. The Committee set up two new working groups — one to deal with verification principles and gauges for ISO screw threads; and the other for trapezoidal screw threads. The Secretariats of both these working groups were entrusted to Germany. The Committee also examined the nomenclature of screw threads and decided to continue study of this subject.

ISO/TC 3 Limits and Fits — (Sectt: France) — The fourth plenary meeting of the Technical Committee was held from 25 to 29 May 1961 in Turin (Italy) which was attended by Dr. Lal C. Verman on behalf of India.

Among the important results achieved at the meeting were the adoption of two draft ISO Recommendations — one relating to inter-conversion of toleranced linear dimensions in inches and millimetres, and the other to dial gauges. Besides, a Subcommittee was set up to study tapers.

ISO/TC 4 Ball and Roller Bearings — (Sectt: Sweden) — The Technical Committee held its eighth plenary meeting on 16-20 May 1961 at Torino. Shri B. R. Rai of the National Engineering Industries Ltd., Jaipur attended the meeting on behalf of India.

The Committee prepared the revisions and extensions of the published ISO Recommendations concerning the more important features of the rolling bearing types and sizes. Further progress was made on the work relating to air frame bearings, instrument precision bearings and needle roller bearings.

ISO/TC 5 Pipes and Fittings (Sectt: Switzerland) — India's approval to the following draft ISO Recommendations was sent to the ISO General Secretariat:

- a) Non-Screwed Steel Tubes for General Purposes
- b) Pipes of Plastic Materials for the Transport of Fluids (Outside Diameter and Nominal Pressures) Part II: Inch Series

The following draft ISO Recommendations were approved subject to certain comments:

- a) Dimensions of Copper Tubes of Circular Section (In Millimetres), and
- b) Plain End Steel Tubes, Welded or Seamless—General Table of Dimensions and Masses per Unit Length.

ISO/TC 6 Paper (Sectt: France) — The meetings of the following subcommittees were held during the period under review:

ISO/TC 6 SC 1 Nomenclature-Terminology-Substances	10 to 14 April 1961 at Baden-Baden
ISO/TC 6 SC 5 Raw Materials Used in Paper Manufacturing	10 to 14 June 1961 at Helsinki

Four ISO Recommendations dealing with methods of sampling, methods of conditions, dimensions for printing and writing papers, and method of expression of dimensions for paper, were adopted by the ISO Council. Draft ISO Recommendations dealing with terminology (third series), determination of moisture, determination of bulking thickness, formats for postal envelopes and packets, and determination of Kappa number were considered during this year.

ISO/TC 12 Quantities, Units, Symbols, Conversion Factors and Conversion Tables (Sectt: Denmark) — The following draft ISO Recommendations, circulated during the year, were approved by India:

- a) Quantities and Units of Acoustics, and
- b) Quantities and Units of Electricity and Magnetism.

ISO/TC 17 Steel (Sectt: UK) — The seventh plenary meeting of ISO/TC 17 Steel was held in London from 24 to 28 April 1961. India

was represented by a delegation consisting of four members, namely, Shri T. V. N. Kidao (Leader), Shri P. C. Kapur, Shri K. Z. Mathen, and Shri B. S. Krishnamachar (ISI). In this meeting, several recommendations of direct interest to India relating to methods of physical tests for steel and its products, specification for quenched and tempered unalloyed steel, general technical delivery requirements for steel, selection and preparation of samples and test pieces for steel and chemical analysis of steel, came up for consideration.

The following two proposals were put forward by India at this meeting:

- a) Rationalization of Carbon and Alloy Steels, and
- b) Redesign of Hot Rolled Structural Steel Sections.

In respect of proposal mentioned at (a) above, it was decided that Working Group 3 — Structural Steel, and Working Group 4 — Heat-Treated Steels, should be requested to keep this aspect in view in the course of their deliberations.

The proposal at (b), for which a working document was also submitted by India, was unanimously accepted and it was decided to set up a Working Group ISO/TC 17/WG 8 Redesign of Hot Rolled Steel Sections, with India as its Secretariat, to undertake this work. So far eleven countries have agreed to be participating members of this Working Group and six as its observer members.

ISO/TC 19 Preferred Numbers (Sectt: France) — The eighth meeting of the Technical Committee, held on 5-7 June 1961 at Helsinki, was attended by Dr. Lal C. Verma.

The Committee considered the replies received on the draft vocabulary for preferred numbers and decided to continue its study. It appointed two working groups, one to carry on the study of the series with close ranges and fine roundings, and the other to prepare a draft Recommendation concerning nominal linear dimensions for mechanical engineering. Besides, the Committee confirmed its approval, given at a previous meeting, of a draft Recommendation dealing with the more rounded values of preferred numbers.

ISO/TC 22T Agricultural Tractors (Sectt: Switzerland) and **ISO/TC 23 Agricultural Machines** (Sectt: Portugal) — The fifth meeting of ISO/TC 22T and the fourth meeting of ISO/TC 23 were held in Turin (Italy) on 18-22 September 1961 and 11-16 September 1961, respectively. India is an observer member of these committees. It was not possible to send any observers for these meetings.

At the meeting of ISO/TC 23, it was decided to include representatives of Germany, USA, France, Portugal, UK, Czechoslovakia and USSR in the composition of Working Group 1 — Discs. WG 1 was

required to go into the careful study of the metricization of discs, for these were manufactured largely in inch-system countries.

Working Group 2 — Mower Cutter Bars and Their Elements was entrusted to deal with cutter parts of combined harvesters. Also, it was decided to take up the study of belts in liaison with ISO/TC 41 Pulleys and Belts and ISO/TC 45 Rubber.

The future programme would include further studies on questions concerning discs, mower fingers, terminology, sprayers and grease nipples.

ISO/TC 25 Cast Iron (Sectt: UK) — The second meeting of the Working Group ISO/TC 25/GT 1 — Malleable Cast Iron of ISO/TC 25 was held on 19 and 20 October 1961 in London.

Shri Pranlal Patel of the Malleable Iron and Steel Castings Private Ltd., Bombay represented India at this meeting. The Working Group considered amongst others the following subjects:

- a) Blackheart Malleable Iron,
- b) Pearlitic Malleable Iron, and
- c) Whiteheart Malleable Iron.

ISO/TC 26 Copper and Copper Alloys (Sectt: Germany) — The third meeting of the Technical Committee was held in Koln Rhein (Germany) from 20 to 24 June 1961. India was represented at this meeting by Shri F. A. Jasdandwala of the Indian Standard Metal Co. Ltd., Bombay.

Among others, the following fourteen draft ISO proposals were considered and approved as draft ISO Recommendations:

- a) Aluminium Bronzes and Special Aluminium Bronzes
- b) Bend Test for Copper and Copper Alloys
- c) Brasses, Leaded Brasses, Special Brasses, High Tensile Brasses
- d) Brinell Hardness Test for Copper and Copper Alloys
- e) Copper-Nickel Alloys
- f) Copper-Nickel-Zinc Alloys
- g) Electrolytic Copper Wire Bars, Cakes, Billets, Ingot and Ingot Bars
- h) Other Special Copper Alloys
(Copper-Silicon and Copper-Beryllium Alloys)
- j) Tensile Test for Copper and Copper Alloys
- k) Tensile Test for Copper and Copper Alloys, Tubes
- m) Tensile Test for Copper and Copper Alloys, Wire
- n) Tin Bronzes and Special Tin Bronzes

Working Group 4 finalized the proposal on Liquid Flow Measurement in Open Channels — Dilution Methods for Measurement of Steady Flow — Part I — Constant Rate Injection Method, and revised the draft proposal on Liquid Flow Measurement in Open Channels — Dilution Methods for Measurement of Steady Flow — Part II — Sudden Injection Method.

ISO/TC 33 Refractories (Sectt: UK) — India's approval on the following draft ISO Proposals was conveyed to the Secretariat (UK):

- a) Glossary of Terms Relating to the Refractories Industry, and
- b) List of Equivalent Terms for Refractories Industry.

ISO/TC 33/WG 2 Methods of Test for Refractoriness under Load and ISO/TC 33/WG 3 Dimensions (Sectt: UK) — Fourth meeting of the Working Group 2 and first meeting of the Working Group 3 were held in London on 15 and 16 May 1961 respectively. On behalf of India, Shri B. S. Ranganekar of Associated Cement Companies Ltd., Bombay attended both the meetings.

In these meetings, the Working Groups discussed the following subjects:

- a) Method for Determination of PCE of Refractory Products,
- b) Refractoriness Under Load Test, and
- c) Sizes for Rectangular Refractory Blocks.

ISO/TC 34/SC 1 Propagation Materials (Sectt: France) — The first meeting of this Subcommittee was held in Paris from 18 to 21 April 1961. It was not possible to send an Indian delegation to attend this meeting. At this meeting the Subcommittee agreed to take up the following items of work:

- a) Carp Propagation;
- b) Cultivars;
- c) Fish Propagation Materials;
- d) Mould Cultures for Cheese, Bacterio-lactic Materials and Yeast;
- e) Poultry Propagation Materials;
- f) Propagation Materials Intended for Other Agricultural Products than Food Products; and
- g) Unification of Scientific Names of Cultivated Species.

ISO/TC 34/SC 2 Oleaginous Seeds and Fruits (Sectt: Roumania) — The Subcommittee, which held its second meeting from 25 to 27 October 1961 in Bucharest, is attempting to formulate internationally-agreed methods of sampling and testing for oleaginous seeds and fruits.

Proposed methods of determining moisture content of seeds, acidity of the expressed oil, oil content of the seeds, impurities and the proportion of kernel to husk were discussed. It was felt necessary to adopt the simplest means of achieving reproducible results which bear a reasonable relation to the property being determined. Consequently further investigations into moisture determination are to be made. A conclusion is reached on which method ISO should adopt.

As regards determination of acidity, oil content and impurities it was agreed that further draft proposals should be prepared and submitted to the Roumanian secretariat.

The meeting of the subcommittee was preceded by a meeting of the working group on sampling. The problem of representative sampling is specially difficult with natural products like oilseeds and is aggravated by the fact that oilseeds vary greatly in size, shipments range from tens to thousands of tons and practices in off-loading and storage vary from port to port.

ISO/TC 34/SC 5 Milk and Milk Products (Sectt: Netherlands) — The first meeting of the Subcommittee was held on 20 and 21 July 1961 at Berlin and was attended by a two-member Indian delegation consisting of Dr. K. C. Sen, Chairman, the Dairy Industry Sectional Committee, AFDC 12 (leader) and Dr. Sam H. Dalal of Vulcan Trading Co. Private Ltd., Bombay. At this meeting the following Working Groups were set up and India agreed to participate in the work of these Working Groups provided the work was done by correspondence. The Dairy Industry Sectional Committee, AFDC 12 nominated India's representatives on each of these Working Groups and the names of these representatives are mentioned against each:

<i>Sl No.</i>	<i>Working Group</i>	<i>Representative</i>
1.	WG 1 — Determination of Fat Content in Milk	Dr. N. N. Dastur, Principal, Dairy Science College, National Dairy Research Institute, Karnal.
2.	WG 2 — Analysis of Cheese	Dr. C.P. Anantakrishnan, Officer-in-Charge, Southern Regional Station, National Dairy Research Institute, Bangalore.
3.	WG 3 — Sampling	Dr. N. N. Dastur
<i>Sl No.</i>	<i>Ad-hoc Working Groups</i>	<i>Representative</i>
1.	Determination of Moisture Content of Butter	Dr. N. N. Dastur

No.	Ad-hoc Working Groups	Representative
	Determination of the Fat Content of Evaporated and of Sweetened Condensed Milk by the Roesse-Gottlieb Method	Shri S. N. Mitra, Director, Central Food Laboratory, Calcutta
	Determination of Salt Content of Butter	Dr. C. P. Anantakrishnan

It was decided that the next meeting be held in Holland in 1963.

ISO/TC 34/SC 6 Meat and Meat Products (Sectt: Germany) — As mentioned in the last Annual Report, the first plenary meeting of ISO/TC 34/SC 6 Meat and Meat Products was held from 13 to 16 March 1961 at Kulmbach (West Germany). Shri R. N. Goyle, Managing Director, Essex Farms Private Ltd., New Delhi, a member of the Meat and Meat Products Sectional Committee, AFDC 18 attended this meeting on behalf of India. At this meeting, among other business, the following Working Groups were set up:

ISO/TC 34/SC 6/WG 1 Terminology (Secretariat: Germany)

ISO/TC 34/SC 6/WG 2 Sampling and Testing Methods for Meat and Meat Products (Secretariat: Netherlands)

ISO/TC 34/SC 6/WG 3 Sampling and Testing Methods for Animal Fats (Secretariat: Germany)

India has not been nominated on any of the above Working Groups.

ISO/TC 38 Textiles (Sectt: UK) — The following three draft ISO Recommendations received during the year under review were accepted by India:

- a) No. 478 Quantitative Chemical Analysis of Binary Mixtures of Secondary Cellulose Acetate and Certain Other Fibres
- b) No. 479 Quantitative Chemical Analysis of Binary Mixtures of Protein Fibres and Certain Other Fibres.
- c) No. 480 Quantitative Chemical Analysis of Binary Mixtures of Certain Polyamide Fibres and Certain Other Fibres

ISO/TC 38/SC 4 Systematic Restriction of the Number of Yarn Counts (Sectt: Netherlands) — The Subcommittee held its fourth meeting on 6 and 7 September 1961 at the Hague and considered the comments received on draft proposals regarding (a) yarn restrictions — terms and definitions relating to the notation of the yarn structures and the linear density, (b) notation of yarns, and (c) designation of yarns.

Working Groups WG 2 Test Conditions, and WG 3 Elements of Machines of ISO/TC 39 Machine Tools (Sectt: France) — Meetings of the WG 2 and 3 were held on 13, 14 and 16 October 1961 in Turin (Italy).

Shri M. B. Sudhindra Rao of Mysore Kirloskar Ltd., Harihar, represented India at these meetings.

The following subjects were discussed:

- a) Test Conditions for Lathes,
- b) Mounting of Grinding Wheels on Machines,
- c) Spindle Noses and Back Plates for Lathes,
- d) Cotter Slots on Boring Machine Tapers, and
- e) Unit Heads.

ISO/TC 41 Pulleys and Belts (Including V-Belts) (Sectt: France) — The Committee held its sixth meeting at Helsinki (Finland) from 5 to 9 June 1961 at which Shri P. R. Kodangekar of The Dunlop Rubber Co. (India) Ltd., represented India. The following subjects were discussed:

- a) Narrow V-Belts and Their Corresponding Pulleys;
- b) Pitch Lengths for Section Y;
- c) Transmissible Powers of Industrial (Classical) V-Belts — It was agreed that a document giving the transmissible powers for various sections of the V-Belts should be prepared and circulated to the members of the Technical Committee;
- d) Fan Belts for Automobiles;
- e) Safety Features of V-Belts with particular reference to their use in underground coal mines;
- f) Flat Belts; and
- g) Conveyors Belts.

ISO/TC 43 Acoustics (Sectt: UK) — The Committee held its sixth meeting at Helsinki (Finland) along with its Working Groups from 5 to 9 June 1961.

A document on Reference Power Level was approved for circulation to the Member Bodies for authorization to circulate as draft ISO Recommendation while document on Measurement of Reverberation Time in Concert Halls was approved for circulation as a draft ISO Recommendation.

In addition, draft ISO Proposals covering:

- a) Threshold of Hearing;
 - b) Procedure for Calculating the Loudness from Objective Analysis;
 - c) Noise Rating Number with respect to Hearing Conservation, Speech Communication and Annoyance; and
 - d) Rules for Measuring Noise of machinery
- were approved for circulation to Member Bodies.

ISO/TC 44 Welding (Sectt: France) — The fifth meeting of the Committee was held at Helsinki (Finland) from 7 to 9 June 1961. Shri P. S. Visvanath, Chief Chemist, J. B. Advani-Oerlikon Electrodes Private Ltd., Bombay, attended this meeting on behalf of India.

In this meeting, the following subjects came up for discussion:

- a) Rating of Manual Metal Arc Welding Equipment;
- b) Rating of Resistance Welding Equipment;
- c) Dimensions of Spot Welding Electrodes;
- d) Dimensions of Seam Welding Wheel Blanks;
- e) Methods of Test for Determining Whether an Electrode is a Deep Penetration Electrode, Capable of being Supplemented by the Symbol P;
- f) Filler Rods for Braze Welding:
 - 1) Method of Test for Determining the Conventional Bend Strength of Steel, Cast Iron and Other Metals
 - 2) Conventional Method of Test for Determining the Characteristics of the Deposited Metal;
- g) Dimensions and Pitching of the Slots in the Plattens;
- h) Strength Calculation of Welded Joints;
- j) Code for the Symbolization of Electrodes;
- k) Filler Rods for Gas-Welding — Test to Determine the Suitability of a Steel Filler Rod for the Parent Metal in the Welding of Steels;
- m) Standardization of the Dimensions of Reels and Coils of Wire for Automatic and Semi-automatic Welding.

ISO/TC 45 Rubber (Sectt: UK) — The ninth meeting of the Committee was held in Milan from 8 to 13 May 1961. In this meeting, further progress was made in the development of methods of test for natural and synthetic rubbers as well as for latex. Methods of test relating to rate of cure of natural and synthetic rubber compounds, rubber-to-metal bond strength and compression set were finalized for circulation as draft ISO Recommendations. Other methods of test would still require co-operative work between various laboratories before they could be finalized.

Further progress was also made in the preparation of draft specifications for various products and, therefore, separate Working Groups were set up to deal with specific items as footwear, hose and mechanical rubber articles, such as rings and floor coverings. There was also a suggestion that a special Working Group should be set up to deal with synthetic rubbers, in particular SBR. But the Committee could not come to any final decision because of entirely opposite points of view. It was, therefore, decided that the Conveners of Working Groups A and C

would prepare a summary of the position with regard to the testing of synthetic rubbers and submit the same to the Secretariat so that the entire position could be reviewed in the light of these documents.

ISO/TC 46 Documentation (Sectt: Netherlands) — Though no meeting of the Committee was held in the year, yet a considerable amount of work was completed by correspondence. The final texts of the following were prepared and submitted to ISO Council for adoption as ISO Recommendations:

- a) Transliteration of Hebrew,
- b) Terminology of Microcopies and their Basis,
- c) ISO Conventional Typographical Character for Legibility Tests, and
- d) Essential Characteristics of 35 mm Microfilm Readers.

The other items dealt with during the year were:

- a) Conventional Abbreviations for Titles of Periodicals,
- b) Bibliographical References,
- c) Bibliographical Cards,
- d) Index,
- e) Layout of Books,
- f) Title Leaves of a Book,
- g) Transliteration of Greek, and
- h) Romanization of Chinese.

ISO/TC 48 Laboratory Glassware and Related Apparatus (Sectt: UK) — The seventh meeting of the Committee was held in London from 1 to 5 May 1961. In this meeting, agreement was reached for the preparation of draft ISO Recommendations on the following subjects:

- a) Interchangeable Spherical Ground Glass Joints,
- b) One-Mark Volumetric Flasks,
- c) One-Mark Pipettes,
- d) Solid-Stem Calorimeter Thermometers of 6°C Range,
- e) Enclosed-Scale Calorimeter Thermometers of 6°C Range, and
- f) Procedures for Testing Hydrolytic Resistance of Glass.

In addition, considerable progress was made in the preparation of draft ISO Recommendations on various other items of volumetric glassware and thermometers.

ISO/TC 50 Lac (Sectt: India) — Consequent on the decisions of the last meeting of the Committee in February 1961, Draft Amendment to ISO/R 56 - 1957 Specification for Shellac was prepared and circulated

to member bodies for comments. Round Robin Tests on samples of seedlac for bleachability and bleach index were initiated to collect more data.

ISO/TC 54 Essential Oils (Sectt: Portugal) — The Committee held its sixth plenary meeting at The Hague from 24 to 31 May 1961. As India could not depute her delegates, in accordance with the recommendations of the Commonwealth Standards Conference, her views were put forward through British Delegation.

The meeting adopted final draft proposals for methods for the determination of ester value after acetylation of essential oils containing linalool and terpineol and of carbonyl compounds content by the hydroxy-ammonium chloride method.

Specifications for oil of East Indian lemongrass; oil of clove bud; oil of clove leaf; oil of clove stem; oil of sweet orange, expressed; oil of neroli; oil of patchouli; oil of canaga; oil of cinnamon leaf; oil of coriander; oil of peppermint; oil of rosemary; and oil of spike lavender were also adopted as final draft proposals. Although many of these essential oils have different geographical origins and, to some extent, slightly different physical and chemical properties, it was decided to prepare a single document for each oil, tabulating where necessary the characteristics to be expected in oils, from different sources. Subject to a postal vote by the committee members, all these draft proposals are expected to become draft ISO Recommendations.

A working group was set up to consider methods of determining peroxide value. One of its duties will be to recommend whether the peroxide value is of real significance in the practical assessment of essential oils, keeping in mind the fact that the extent of deterioration of an oil can generally be determined more quickly and decisively by its organoleptic properties.

The determination of primary alcohols, including determination of citronellol in the presence of geraniol, was considered and it was decided to form a working group on this subject.

The working group on gas-liquid chromatography met during the course of the meeting and agreed on an experimental programme aimed at assessing the relative performance of available instruments in quantitative determinations on essential oils. The use of standard chromatograms as a means of checking the identity of essential oils was also discussed.

Further progress was made on draft proposals concerned with oils of West Indian Lemongrass, ylang-ylang and vetiver. An Indian proposal that oil of vetiver (*Khus*) should also be considered was accepted. A Working Group was set up to examine the proposal and India was requested to accept the secretariat of the Working Group.

ISO/TC 55 Hewn, Sawn and Planed Timber (Sectt: USSR) — The third meeting of this Technical Committee was held in Helsinki from 5 to 8 June 1961. Dr. Lal C. Verman, Director, ISI attended the meeting on behalf of India on 7 June 1961. The Committee discussed the following seven draft ISO proposals:

- a) Coniferous Sawn Timber Sizes, Terms and Definitions
- b) Coniferous Sawn Timber Sizes, Methods of Measurement
- c) Coniferous Sawn Timber Sizes, Nominal Dimensions
- d) Coniferous Sawn Timber Sizes, Values of Shrinkage and Deviations
- e) Coniferous Sawn Timber, Defects, Terms and Definitions
- f) Coniferous Sawn Timber, Defects, Classification
- g) Coniferous Sawn Timber, Defects, Measurements

ISO/TC 56 Mica (Sectt: India) — No meeting was held during 1961-62.

Editorial comments received on the draft ISO Recommendation for Methods for Grading Phlogopite Mica Blocks, Thins and Splittings were studied by the editorial committee. The final version is under preparation.

ISO/TC 58 Gas Cylinders (Sectt: UK) — The Committee held its fourth plenary meeting on 7-9 June 1961 at Helsinki at which India was represented by Shri T. P. L. Sinha of Indian Oxygen Ltd., Calcutta.

The Committee discussed the identification of content; design of cylinders; valve outlets; periodic inspection; maintenance procedures of cylinders in service before filling; and extra high pressure cylinders.

ISO/TC 59 Building Construction (Sectt: France) — The third meeting of this Technical Committee was held in Helsinki from 12 to 16 June 1961. Dr. Lal C. Verman, Director, ISI attended the meeting on behalf of India. The Committee reviewed the work done by the four subcommittees under it. It also considered the third draft proposal of ISO Recommendation — Direction of Closing and Hand of Doors and Windows and their Hardware, and General Terminology of Building Construction.

ISO/TC 61 Plastics (Sectt: USA) — The eleventh meeting of the Committee was held at Turin (Italy) from 2 to 7 October 1961. At this meeting, the following four draft ISO Recommendations were revised editorially for submission to the ISO Council for approval for adoption for publication:

Second Draft ISO Recommendation No. 217 — Determination of Thermal Stability of Polyvinyl Chloride and Related

Copolymers and Their Compounds by the Discoloration Method.

Draft ISO Recommendation No. 380 — Determination of Vicat Softening Point

Draft ISO Recommendation No. 381 — Determination of Viscosity Number of Polyamide Resins in Dilute Solution

Draft ISO Recommendation No. 382 — Determination of Acetone Soluble Matter of Phenolic Moulding Materials

Four draft proposals on the following subjects were approved as new draft ISO Recommendations for circulation to the ISO Member Bodies for a letter ballot vote:

- a) Determination of change of mechanical properties after contact with chemical substances,
- b) Determination of percentage of monomer and low molecular weight polymer in polyamide resins,
- c) Determination of relative viscosity of polyamide resins in concentrated solution,
- d) Testing of plastics with the torsion pendulum.

Five new draft proposals were completed and were ready for consideration by the members of ISO/TC 61.

ISO/TC 65 Manganese Ores (Sectt: USSR) — Fourth meeting of the Committee was held from 12 to 16 December 1961 at Moscow. It was not possible to send a delegation from India to attend this meeting. Three draft ISO Proposals on Methods of Chemical Analysis of

- a) Manganese Ores : Determination of Chromium,
- b) Manganese Ores : Determination of Zinc, and
- c) Manganese Ores : Determination of Metallic Iron,

were considered at the meeting.

ISO/TC 72 Textile Machinery and Accessories (Sectt: Switzerland)

The second draft ISO Recommendations

- a) No. 334 Flat-Steel Healds for General Use,
- b) No. 338 Pitch Bound Reeds, and
- c) No. 339 Metal Reeds with Plate Baulk,

and draft ISO Recommendations

- a) No. 445 Working Width of Cotton Spinning Machinery
- b) No. 446 Working Width of Worsted and Woollen Cards
- c) No. 447 Cylindrical Sliver Cans
- d) No. 448 Warp Tubes, Tolerances and Gauges. Inch Dimensions of Ring Spinning and Ring Doubling Spindles

- e) No. 449 Warp Tubes, Tolerances and Gauges. Inch Dimensions of Ring Spinning and Ring Doubling Spindles
- f) No. 450 Flyer Bobbins
- g) No. 453 Cones for Cross Winding for Dyeing Purposes. Half Angle of the Cone $4^{\circ}20'$
- h) No. 454 Wood Cones for Cross Winding. Half Angle of the Cone $4^{\circ}20'$
- j) No. 455 Wood Cones for Cross Winding. Half Angle of the Cone $5^{\circ}57'$
- k) No. 456 Wood Cones for Cross Winding. Half Angle of the Cone $3^{\circ}30'$

received during the year under review were accepted by India whereas second draft ISO Recommendations

- a) No. 335 Twin Wire Healds for Frame Weaving, and
 - b) No. 336 Twin Wire Healds for Jacquard Weaving
- were disapproved.

ISO/TC 72/SC 2/WG B Working Group for Winding and Weaving Machinery held its sixth meeting on 17 and 18 October 1961 at Cologne (Germany). The report of the meeting was circulated to the Committee concerned.

ISO/TC 72/SC 3/WG C Working Group for Weaving Machinery held its sixth meeting on 28 and 29 November 1961 at Manchester. The report of the meeting was awaited.

ISO/TC 74 Hydraulic Binders (Sectt: Belgium) — The meetings of the Subcommittees ISO/TC 74/SC 1 Methods of Chemical Analysis of Cement, ISO/TC 74/SC 2 Plasters and ISO/TC 74 were held from 19 to 23 June 1961 at Milan. Shri B. S. Ranganekar of Associated Cement Companies Ltd., Bombay attended the meeting on behalf of India. The Committee reviewed the work of Working Groups 1 and 2 and considered the first draft proposal — Terminology and Definitions of Cement and Rilem-Cembureau concrete test method for determining strengths of cement. The Committee also considered reports of work of Subcommittees ISO/TC 74/SC 1 and ISO/TC 74/SC 2.

ISO/TC 76 Transfusion Equipment for Medical Use (Sectt: UK) — The second draft proposal covering the various items of transfusion equipment was prepared by the Secretariat, in accordance with the decisions of the Committee taken at its Second Plenary Meeting held in September 1959, for circulation to the members.

ISO/TC 77 Products in Asbestos Cement (Sectt: Switzerland) — The sixth plenary meeting of this Technical Committee was held in London from 19 to 23 June 1961. The Committee considered the report and the proposal of Working Group ISO/TC 77/WG 2 on Asbestos Cement — Asymmetrical Section Corrugated Sheets for Roofing and Cladding.

The Committee also considered the report and the proposal of Working Group ISO/TC 77/WG 3 on Asbestos Cement Slates for Roofing and Cladding.

ISO/TC 81 Common Names for Pesticides (Sectt: UK) — The fourth meeting of the Committee held at London from 25 to 28 September 1961, was attended by the following officers from the Indian High Commission in UK on behalf of India:

- a) Lt-Col J. P. Anthony
- b) Mr. W. L. Roberts

At this meeting, the draft ISO Recommendation No. 412 (Fourth List) was approved for submission to the ISO Council. A Draft ISO Recommendation (Fifth List) was prepared containing names for circulation amongst the ISO Member Bodies for their approval. Further a list of those pesticide chemicals, having already sufficiently short and distinctive chemical names, and for which it deemed unnecessary at present to assign common names, was prepared.

The Draft ISO Recommendation No. 412 Common Names for Pesticides (Fourth List) was circulated to the members of the Pest Control Products Sectional Committee, AFCDC 6 and Common Names for Pesticides Subcommittee, AFCDC 6:3. The comments received on the draft ISO Recommendation were sent to ISO General Secretariat in accordance with the usual procedure.

ISO/TC 86/SC 5 Construction and Testing of Household Refrigerators (Sectt: France) — The meeting of this Subcommittee was held in Paris from 25 to 27 October 1961. The Committee considered draft proposal on Refrigerators for Household Use Part I — Performance Requirements.

ISO/TC 86/SC 6 Testing of Factory-Assembled Air-Conditioning Units (Sectt: USA) — The meeting of this Subcommittee was held in London from 26 to 28 February 1962. Commdr. K. H. Patell, Deputy Naval Adviser to the High Commissioner for India in UK attended the meeting on behalf of India. The Subcommittee considered the first draft proposal put up by USA on Method of Testing for Rating Room Air-Conditioners.

ISO/TC 88 Pictorial Markings for Handling of Goods (Sectt: India) — In pursuance of the decision taken at the last meeting, the Secretariat has prepared two separate second draft proposals

incorporating the symbols agreed to in respect of dangerous and non-dangerous goods respectively, with a view to their acceptance as draft ISO Recommendations. These draft proposals are being circulated to Members of the Committee for their comments/approval.

The desirability of evolving markings depicting messages (a) DO NOT DROP, and (b) PERISHABLE, is under investigation.

ISO/TC 90 Apparatus for Testing Milk and Milk Products (Sectt: Germany) — The second plenary meeting of ISO/TC 90 was held in Berlin on 19 July 1961. The meeting was attended by an Indian delegation consisting of the following:

- a) Dr. K. C. Sen (Leader), Chairman, Dairy Industry Sectional Committee, AFDC 12
- b) Dr. Sam H. Dalal, Vulcan Trading Co. (Private) Ltd., Bombay, Member AFDC 12

It was decided that the next meeting of ISO/TC 90 be held in Holland in 1963.

At this meeting, ISO/TC 90 considered the report of its Working Groups 2, 3 and 4, which in their meetings held on 17 and 18 July 1961 had discussed the subjects of apparatus for the sampling of milk and milk products, hydrometers for use with milk and liquid milk products, and the apparatus for the determination of fat in milk. It was agreed to prepare draft proposals, to begin with, for triers for butter and cheese and borers for milk powder; and that spoons, spatulas and knives used for sampling milk products need not be standardized. The preparation of a draft proposal for hydrometers was also agreed to. As for the apparatus for the determination of the percentage of fat in milk, it was agreed to specify six types of butyrometers for the Gerber method whereas no particular type of apparatus for the Roesse-Gottlieb method was specified, leaving the choice to the country concerned.

ISO/TC 91 Surface Active Agents (Sectt: France) — Methods of analysis for soaps, a glossary of terms relating to surface active agents and a classification of surface active agents, were among the subjects discussed at the second meeting of ISO/TC 91 held in London from 24 to 26 October 1961.

Methods for the determination of total crude fatty acids, free caustic alkali and chlorides in soap were agreed and further methods will be considered at the next meeting. Agreement was also reached on a first glossary of ten terms for circulation to the Committee.

Preliminary consideration was also given to two proposals — (a) method of sampling powdered detergents from packages, and (b) scheme for the systematic analysis of detergent products. Both are to be studied and collaborative tests on the methods of analysis are to be arranged.

ISO/TC 92 Fire Tests on Building Materials and Structures (Sectt: UK) — The first meeting of this Technical Committee was held in London from 18 to 21 April 1961. Shri B. S. Krishnamachar, Deputy Director (S & M), ISI attended the meeting on behalf of India.

The Committee considered the proposed scope of its work, proposals for definitions and tests for combustibility and fire resistance of building materials and structures.

ISO/TC 96 Cranes, Derricks and Excavators (Sectt: UK) — First meeting of the Committee was held at London on 10, 11 and 13 October 1961. India could not send a delegation to attend this meeting. However, India's views in respect of certain items included in the Agenda were sent to UK for placing before the Committee. In the meeting, the Committee decided upon its title and scope, and outlined its programme of work. The scope of the Committee as decided at this meeting is given below:

‘ Standardization in the field of cranes and excavators particularly in respect of terminology, load rating, materials, design, stability, testing and safety.’

Further it was decided to set up a Working Group to collate information on the following subjects:

- a) Range of Capacities for Cranes
- b) Classification of Cranes by Duty and Range of Capacities
- c) Stability of Requirements Including Consideration of Wind Loads
- d) Crane Ropes and Associated Pulleys, Drums, etc

ISO/TC 98 Basis for Design of Structures (Sectt: Poland) — The first meeting of the Committee was held from 26 to 29 September 1961 in Warsaw. Dr. H. C. Visvesvaraya, Deputy Director (Building), ISI attended the meeting on behalf of India. The Committee discussed its title and scope of work. The following four Subcommittees were set up:

- a) ISO/TC 98/SC 1 Terminology and Symbols (Sectt: France)
- b) ISO/TC 98/SC 2 Safety of Structures (Sectt: Poland)
- c) ISO/TC 98/SC 3 Loads, Forces and Other Actions (Sectt: USSR)
- d) ISO/TC 98/SC 4 Limitations of Deformation (Sectt: UK)

A document was presented on behalf of India on ‘ Standardization of Factors of Structural Safety ’; this was referred to SC 2.

ISO/TC 102 Iron Ores (Sectt: Japan) — On the basis of the proposal made by the Japanese Industrial Standards Committee to ISO in

April 1960, it was decided to establish a new ISO Technical Committee, ISO/TC 102 Iron Ores, for the purpose of standardization of methods of sampling, reducing, size and moisture determination, and chemical analysis of iron ores. The Secretariat of this Technical Committee has been allocated to Japan. India has become a participating member of the new Technical Committee.

ISO Proposal for Studying New Question — India's approval for the proposal made by the Italian Standards Body for setting up a new ISO Technical Committee for undertaking work on standardization of the most common treatments of metallic surfaces and methods of testing of coatings, was sent to the ISO General Secretariat.

2. INTERNATIONAL ELECTROTECHNICAL COMMISSION, IEC

(For IEC Publications during the year, see Appendix F, p. 180)

2.1 The International Electrotechnical Commission (IEC), which at present forms the Electrotechnical Division of ISO, has been active in the field of International Standardization through co-ordination and unification of national electrotechnical standards for the past 58 years. The following 36 countries are represented in the IEC through their national committees:

Argentina	Germany	Spain
Australia	Greece	Sweden
Austria	Hungary	Switzerland
Belgium	India	Turkey
Brazil	Israel	Union of South Africa
Bulgaria	Italy	Union of Soviet
Canada	Japan	Socialist Republics
People's Republic of China	Netherlands	United Arab Republic
Czechoslovakia	Norway	United Kingdom
Denmark	Pakistan	United States of
Finland	Poland	America
France	Portugal	Venezuela
	Roumania	Yugoslavia

2.2 On 31 March 1962, the number of IEC Technical Committees was 54. India takes active part in all these technical committees. In addition, there were 50 subcommittees, working groups and expert committees.

2.3 During the year, meetings of 71 IEC Committees including Subcommittees, Working Groups and Expert Committees were held. A brief

report on their work and on other important developments of interest to India is given below:

XXVI IEC GENERAL MEETING

The twenty-sixth Annual Group Meetings of the International Electrotechnical Commission (IEC), held at Interlaken (Switzerland) from 18 to 30 June 1961, would always be remembered, particularly in India, for the Seventh Charles le Maistre Memorial Lecture in which a specialist from India pointedly drew IEC's attention to certain special considerations relating to developing countries where the pace of development was comparatively greater. The masterly survey of these problems by Shri M. Hayath, Chairman, Electrotechnical Division Council of ISI, in his lecture on 'What the IEC Means to Developing Countries?' which was very much appreciated, brought out facts and figures pertaining to this region with which IEC had not been well acquainted in the past.

Besides the opening session, at which this Lecture was delivered, the Annual Group Meetings comprised sessions of the Council, the Committee of Action, 22 technical committees and 24 subcommittees and working groups and were attended by about 950 delegates representing 28 countries. The Indian delegation consisted of the following:

- 1) Shri D. U. Hattikudur, Associated Cement Companies Ltd.;
- 2) Shri M. Hayath, Heavy Electricals Ltd.;
- 3) Dr. M. D. Manohar, Parekh and Parbhoo (Pvt.) Ltd.;
- 4) Shri A. N. Nimkar, Jyoti Ltd.;
- 5) Shri M. A. Pandit, Crompton Parkinson (Works) Ltd.;
- 6) Shri P. Suryanarayana, National Ekco Radio & Engineering Co. Ltd.;
- 7) Shri H. C. Verma, Associated Instrument Manufacturers India (Pvt.) Ltd.;
- 8) Dr. Lal C. Verman, ISI; and
- 9) Shri J. S. Zaveri, Bharat Bijlee Ltd.

IEC COUNCIL — The Council meeting was held on 30 June 1961 under the chairmanship of Dr. I. Herlitz. The Council, among others, took the following main decisions:

- a) Elected Professor G. de Zoeton (Netherlands) as its President for a term of three years;
- b) Elected Greece and Venezuela as members, thus bringing the total membership of IEC to 36 countries;
- c) Elected Japan, Roumania and UK on the Committee of Action for seats caused by the retirement, after serving a nine-year

term, of India, Netherlands and Norway who were not eligible for re-election;

- d) Set up a ten-man Working Group for studying and reporting on the revision of the 1949 IEC Statutes and Rules of Procedure; and
- e) Noted that Dr. I. Herlitz had been invited to deliver the eighth Charles le Maistre Memorial Lecture, which would be the last in the series.

COMMITTEE OF ACTION — The Committee decided to set up a new technical committee to deal with winding wires in general and allotted its secretariat to Germany; Mr. L. Van Rooij was appointed as its Chairman. The secretariat for the technical committee on computers and data processing equipment, set up last year, was assigned to the USA which also holds the secretariat of the corresponding technical committee of ISO covering the same general field (but excluding purely electrical aspects). In this connection, the Committee of Action noted with great pleasure that the ISO Council meeting at Helsinki earlier had passed a resolution authorizing any ISO technical committee to set up a Co-ordinating Committee with the corresponding IEC technical committee, whenever necessary.

In addition, the committee appointed the following as Chairmen of Technical Committees indicated against each:

- a) Mr. E. Maggi (Italy) — TC 17 Switchgear and Controlgear;
- b) Dr. G. D. Reynolds (UK) — TC 40 Capacitors and Resistors for Electronic Equipment;
- c) Mr. J. Auzouy (France) — TC 45 Electrical Measuring Instruments Used in Connection with Ionizing Radiation;
- d) Mr. H. Mayr (Italy) — TC 48 Electromechanical Components for Electronic Equipment;
- e) Mr. W. J. Young (UK) — TC 49 Piezo-Electric Crystals and Associated Devices;
- f) Mr. E. F. Seaman (USA) — TC 50 Environmental Testing;
- g) Dr. K. H. Von Klitzing (Germany) — TC 51 Ferro-Magnetic Materials;
- h) Mr. L. Van Rooij (Netherlands) — TC 52 Printed Circuits; and
- j) Dr. A. B. Credle (USA) — TC 53 Computers and Information Processing.

The Committee agreed that the IEC directives for the conduct of the work of the committees should be reviewed by a Working Group composed of secretaries of national committees and officers of the Central Office. The report of this working group would be submitted to the Committee of Action for consideration in 1962.

MEETINGS AT INTERLAKEN

TC 3 Graphical Symbols (Sectt: Switzerland) — At its meeting held at Interlaken, the Committee approved for publication the lists of symbols relating to electronic valves and rectifiers, switchgear, instruments, starters and relays, while those relating to semi-conductors and architectural diagrams were approved for circulation under the Six Months' Rule. A revised draft of the symbols on generating stations and sub-stations was prepared for circulation for final approval of member bodies.

TC 4 Hydraulic Turbines (Sectt: USA) — The discussions at Interlaken meeting were confined to a draft test code for storage pumps. This draft has now been completed to the stage when it could be sent out under the Six Months' Rule after scrutiny by an Editing Committee.

TC 8 Voltages, Current Ratings and Frequencies (Sectt: Italy) — The efforts of the Committee were directed towards revising the IEC List of Standard System Voltages which was last issued in 1954, and good progress was made in this direction at Interlaken.

TC 9 Electric Traction Equipment (Sectt: France) — This Committee works in parallel with the so-called Mixed Committee on Traction (CMT) composed of representatives of the IEC and of the International Union of Railways; meetings of both these Committees took place at Interlaken. The main subject of discussion was that of rules for the testing of electric rolling stock on completion of construction and before entry into service. A substantial measure of agreement was reached, but it was decided that the time was not yet ripe for the publication of an IEC Recommendation. It was, however, agreed that it would be useful to issue a 'Report' recording the agreements so far reached, in the hope that in a few years' time the area of agreement will become sufficiently large to enable a Recommendation to be issued.

TC 10 Insulating Oils (Sectt: Belgium) — For very many years this Committee, working through a group of experts, has been studying the question of artificial ageing of insulating oil, and the stage has now been reached when a draft IEC method of test can be circulated under the Six Months' Rule.

The scope of the Committee was widened to enable it to deal with all the characteristics of insulating oils.

TC 12 Radio Communication (Sectt: Netherlands) — There was a meeting of the Subcommittee on Radio Transmitters. A draft document on Safety Requirements for Radio Transmitters was reviewed and agreement on all outstanding technical points was reached, with the result that an Editing Committee will now be able to prepare a final document for submission to the main Committee for approval for circulation under the Six Months' Rule.

TC 13 Measuring Instruments (Sectt: Hungary) — A draft recommendation relating to AC watt-hour meters of high precision (Class 1·0) was discussed, and it was decided to include both transformer-operated and direct-connected meters. A new draft would now be circulated under the Six Months' Rule. Recommendations for Class 2·0 meters had already been published by IEC. The Secretariat was asked to proceed with the drafting of a specification for Class 0·5 meters, these being intended only for accounting and statistical purposes.

TC 14 Power Transformers (Sectt: United Kingdom) — This important Committee met for a whole week, and good progress was made on the revision of the IEC Recommendations for Transformers (Publication 76).

TC 20 Electric Cables (Sectt: UK) — To deal with its extended scope to cover the entire domain of cables (excluding conductors and wires used for telecommunication purposes), the Committee decided to set up, in the first instance, two subcommittees, one to carry on the work on paper-insulated cables and the other to deal with rubber and pvc-insulated cables.

The two subcommittees met simultaneously at Interlaken, with the result that a draft Specification for the Testing of Fully-Impregnated Paper-Insulated Metal-Sheathed Cables (10 kV-66 kV) was made ready for circulation under the Six Months' Rule. This draft would not cover gas-pressure and oil-filled cables, as these are being dealt with in separate documents. Working Groups were set up to assist the Secretariat in the drafting of recommendations on non-draining cables and on cable selection.

TC 22 Static Power Converters (Sectt: Switzerland) — Draft Recommendations for Mercury-Arc Inverters were completed for circulation under the Six Months' Rule, and good progress was made on a draft on Converters Supplying DC Reversible Motor Drives. New work would be started on converters for single-phase traction vehicles and controlled semi-conductor converters. For the latter, the term 'pylistor' was adopted.

TC 28 Insulation Co-ordination (Sectt: France) — The Committee was engaged in the revision of Publication 71: 1958 Recommendations for Insulation Co-ordination. Several items were discussed at Interlaken, and it was left to the Secretariat to make specific proposals for consideration at the next meeting. To assist in this preparatory work, a group of experts was formed to consider the reduction of impulse test-voltages for well-protected equipment operating below 100 kV, and the Committee on Lightning Arresters was invited to collaborate in this work.

TC 30 Extra-High Voltages (Sectt: Switzerland) — Discussion at Interlaken resulted in an agreement to bring down the system voltages in the upper range to the following values for the 'highest voltage': 300, 362, 420 and 525 kV; the nominal voltages being about 5 percent

below the standard 'highest' values. It was agreed that there would be no nominal voltage intermediate between 500 and 700 kV.

TC 33 Power Capacitors (Sectt: Netherlands) — A draft revision of Publication 70 Specification for Capacitors for Power Systems was approved for circulation under the Six Months' Rule.

TC 34 Lamps and Related Equipment (Sectt: UK) — As the result of the Interlaken meetings, two documents were approved for publication: one regarding the second edition of the Specification for Ballasts for Fluorescent Lamps, and the other on a Set of Standard Sheets for Glassware for Lighting Fittings. In addition, eleven documents were approved for circulation under the Six Months' Rule, covering such subjects as starters for fluorescent lamps, lighting fittings for fluorescent lamps, and standard sheets for various lamp-caps and holders and corresponding gauges.

TC 37 Lightning Arresters (Sectt: USA) — The main items for discussion at Interlaken were appendices to Publication 99-1:1958 Recommendations for Lightning Arresters, Part 1 Non-Linear Resistor-Type Arresters. The appendices in question relate to the application of arresters and graphical methods for determining maximum permissible separation of arresters and protected equipment for single-line effectively shielded stations, and the length of cable up to which no arresters are required at the station.

TC 38 Instrument Transformers (Sectt: UK) — The Committee was engaged on the revision and extension of Publication 44:1931 IEC Recommendations for Instrument Transformers. The new edition would be issued in at least five parts dealing respectively with: (a) general requirements for current transformers, (b) additional requirements for measuring current transformers, (c) additional requirements for protective current transformers, (d) voltage transformers, and (e) capacitor voltage transformers.

The first two of these parts had already been circulated under the Six Months' Rule, and, as a result of the meeting at Interlaken, a document dealing with the requirements for protective current transformers would now be similarly circulated.

TC 39 Electronic Tubes and Valves (Sectt: Netherlands) — This Committee was actively 'processing' a large number of documents, some of which were single sheets amending or supplementing the data given in Publication 67:1954 Dimensions of Electronic Tubes and Valves. As a result of the Interlaken meeting, several of these sheets were approved for publication or for circulation under the Six Months' Rule. Other documents approved for publication deal with recommended practice for the preparation of drawings of tubes and valves (including picture and oscilloscope tubes), and a revision of Publication 100:1958 Recommended Methods for the Measurement of Direct Inter-Electrode Capacitances of Electronic Tubes and Valves.

TC 40 Capacitors and Resistors for Electronic Equipment (Sectt: Netherlands) — The Committee met for a full week and completed nine documents for circulation under the Six Months' Rule, most of them being specifications for various types of capacitors and resistors which are related to the method of carrying out the ' noise ' test on fixed carbon resistors.

TC 41 Protective Relays (Sectt: France) — Discussion centred on a Secretariat draft for a specification for protective relays. For controversial issues, it was decided that a Working Group be set up to prepare a test programme for relay contact performance; another Working Group was set up to draft definitions for such terms as operating range, effective range, reference range and nominal range of use.

TC 44 Electrical Equipment of Machine-Tools (Sectt: Switzerland) — A draft specification prepared by the Secretariat to take account of the discussion that took place at the first meeting of the Committee (in Madrid 1959) was reviewed and agreement was reached on various amendments.

TC 46 Cables, Wires and Wave Guides for Telecommunication Equipment (Sectt: Germany) — This was the first meeting of the Committee since the elevation of its status to that of a main Technical Committee. As a result of the Interlaken meeting, a Specification for Connectors for TV Aerial Feeders would go forward for publication and seven drafts dealing with various kinds of cables and wave guides were approved for circulation under the Six Months' Rule.

A Working Group was set up to prepare proposals for a Specification for High-Tension Cables for TV Receivers, and the Secretariat will collect information from the National Committees on cables for use in TV bands IV and V.

Secretariat proposals on tests for screening efficiency and uniformity of impedance of radio-frequency cables on copper-clad steel wire and on a range of PTFE-insulated cables were approved for circulation to member bodies for comment.

TC 47 Semi-conductor Devices (Sectt: France) — This was also the first meeting of the Committee since the elevation of its status from that of a Subcommittee to a full Technical Committee, and it took over an extensive programme of work already in hand. Six documents dealing with essential ratings and characteristics of semi-conductor diodes and transistors, general principles of methods of measurement, terminology and letter symbols were finalized for publication.

Draft Recommendations for the Preparation of Drawings of Semi-conductor Devices and for Dimensions were approved for circulation under the Six Months' Rule.

TC 51 Ferromagnetic Materials (Sectt: Netherlands) — Several working groups were set up to carry the work forward; in addition,

6 documents were approved for circulation under the Six Months' Rule, as follows: (a) calculation of the effective parameters of magnetic piece parts; (b) cores of broad-band transformers of ferromagnetic oxides; (c) the expression of losses for component parts; (d) definition for tensor permeability; (e) coefficients and symbols relating to dynamic magnetostriction; and (f) dimensions of coil formers for pot cores of ferromagnetic oxides.

MEETINGS AT OTHER PLACES

TC 12 Radio Communication (Sectt: Netherlands) — The Committee met in Paris on 7 September 1961 and accepted the recommendations of IEC/SC 12B to pass on to the Committee of Action the draft Revision of IEC Publication 65 for approval for re-circulation under the Six Months' Rule. It also approved for circulation under the Six Months' Rule a modified document on Safety Requirements of Radio Transmitting Equipment proposed by Subcommittee 12C — Radio Transmitting Equipment.

SC 12A Radio Receiving Equipment (Sectt: Netherlands) — The Subcommittee met in Paris from 31 August to 7 September 1961. The meeting was entirely devoted to detailed discussions on the revision of IEC Publication 69: 1954 Recommended Methods of Measurements on Receivers for Amplitude Modulation Broadcast Transmissions. It was decided to prepare a revised draft covering three parts, namely, Part A: General, Part B: Audio Frequency Measurements, and Part C: Radio Frequency Measurements, for further consideration. As a result of deliberations of this Subcommittee, revision of the corresponding Indian Standard (IS: 614-1954) Methods of Measurements on Receivers for Amplitude Modulation Broadcast Transmissions was undertaken.

SC 12B Safety (Sectt: Netherlands) — The main point on the agenda of the meeting of the Subcommittee held at Hamar (Norway) from 21 to 26 August 1961, was the discussion of draft Revision of IEC Publication 65-Safety Requirements for Mains-Operated Electronic and Related Equipment for Domestic and Similar General Use. An earlier version of this document was discussed by the Subcommittee at New Delhi when, in view of the negative votes and serious objections received from many interested countries, including India, it was decided to reconsider the draft revision. Most of the comments made on the revised document by India were accepted. The decisions taken at this meeting would be taken into consideration while revising the corresponding Indian Standard (IS: 616-1957 Code of Safety Requirements for Mains-Operated Radio Receivers).

The Subcommittee also dealt with the important topic of parallel testing of radio and television receivers from the point of view of safety and received reports from the various Working Groups set up to deal with specific problems.

TC 18 Electrical Installations in Ships (Sectt: Netherlands) — The meeting of the Committee was held in Stockholm (Sweden) from 12 to 16 June 1961 at which India was represented by Com. N. G. Fadnavis, Indian Liaison Officer in UK. Parts I, II, III and IV of the Second Edition of IEC Publication 92:1953 Recommendations for Electrical Installations in Ships, were approved for circulation under the Six Months' Rule. It was also decided at that meeting to set up a permanent Subcommittee on Cables.

TC 29 Electro-Acoustics (Sectt: Netherlands) — The Committee met in Helsinki from 10 to 16 June 1961 and the meeting was attended by Dr. Lal C. Verma, Director ISI.

The following *ad-hoc* Working Groups also met on that occasion:

29-3 Sound Systems	29-8 Sound Level Meters
29-5 Loudspeakers	29-9 Shock and Vibration Pick-Ups
29-6 Hearing Aids	29-10 Characteristics to be Specified
29-7 Ultrasonics	29-11 Artificial Ears, Voices and Mouths

In all, 9 documents were approved for circulation under the Six Months' Rule. Four of these related to amendment of IEC Publication No. 89:1957 Recommendations for the Characteristics of Audio-Apparatus to be specified for application purposes and the remaining 5 covered (a) methods of measurement for loudspeakers, (b) recommendations for pure tone audiometers for general diagnostic purposes, and (c) recommendation for pure tone screening audiometers and specification for precision sound level meters.

SC 29A Sound Recording (Sectt: UK) — The Subcommittee at its meeting held in Helsinki (Finland) from 12 to 16 June 1961, considered a few proposals for amendment/revision of IEC Publication No. 94:1957 Recommendations for Magnetic Tape Recording and Reproducing Systems: Dimensions and Characteristics and No. 98:1958 Recommendations for Lateral-Cut Commercial and Transcription Disk Recordings, and agreed to prepare revised documents for consideration at the next meeting.

TC 43 Electric Fans (Sectt: India) — Third meeting of this Technical Committee was held at Rouen (France) from 2 to 7 October 1961, under the chairmanship of Shri S. N. Mukerji, Director, Government Test House, Calcutta. In all, 15 delegates representing 6 countries, namely, France, Germany, Italy, India, Japan and United Kingdom attended the meeting. Shri Y. S. Venkateswaran, Deputy Director (Electrotechnical), ISI, acted as the Secretary. Indian delegation consisted of Shri M. M. Kaul (Leader), Mr. J. E. Noble, and Shri C. Seshadri.

Three draft IEC Recommendations covering the following were approved for circulation under the Six Months' Rule:

- a) AC Electric Ceiling Fans and Regulators
- b) AC Electric Table-Type Fans and Regulators
- c) AC Electric Pedestal-Type Fans and Regulators

Owing to insufficient time, a German proposal covering recommendations for standard specification for Ventilating (Exhaust) Fans with Single-Phase Motor for Household Use, could not be discussed but it was agreed that this draft should cover only domestic type of exhaust fans. The draft would be discussed at the next meeting of this Technical Committee.

TC 48 Electromechanical Components for Electronic Equipment (Sectt: Netherlands) — This Technical Committee met in London from 21 to 24 November 1961. Shri P. Suryanarayana, National Ekco Radio & Engineering Co. Ltd., Bombay attended that meeting on behalf of ISI. The documents approved for printing covered:

- a) Specification Sheet No. 1 for Rotary Wafer Switches,
- b) Vibration Test for Connectors for Frequency Below 3 Mc/s, and
- c) Test on the Operating Force for Toggle Switches.

In addition, documents covering the following were approved for circulation under the Six Months' Rule:

- a) Specification Sheet for Multi-Pole Connectors, Known as MS Connectors;
- b) Specification Sheet for Battery Connectors;
- c) Operating Force for Toggle Switches;
- d) Specification Sheet No. 3 for Rotary Wafer Switches;
- e) Socket Connectors for Radio Receivers and Associated Sound Equipment; and
- f) Socket Connectors with Switching Device for Loudspeakers.

TC 50 Environmental Testing (Sectt: UK) — The Committee met in London on 13 and 22 November 1961, and accepted the recommendations of SC 50A Components, SC 50B Equipment and Working Groups 1 and 2. The Committee also agreed upon the following structure of new Subcommittees and Working Groups for dealing with detailed aspects of work:

- SC 50A Shock and Vibration Tests
- SC 50B Climatic Tests
- WG 4 Corrosion Tests
- WG 5 Mould Growth Tests
- WG 6 Solar Radiation Tests
- WG 7 Dust and Sand Tests

Col K. K. Mehta, Chief Inspector of Electronics, Ministry of Defence, Bangalore and Shri P. Suryanarayana represented ISI at this meeting. India has been offered corresponding membership on the Working Groups on Corrosion Tests, Mould Growth Tests and Solar Radiation Tests.

SC 50A Shock and Vibration Tests (Sectt: UK) — The meeting of the Subcommittee was held in London on 16 and 17 November 1961 and was attended by Col K. K. Mehta and Shri P. Suryanarayana on behalf of India.

A number of proposals made by the Indian delegation for amendment of documents under discussion was accepted for inclusion in the revised versions. The more important documents discussed at the meeting related to:

- a) Tests for Mould Growth,
- b) Salt Mist Test,
- c) Tests for Change of Temperature (Short Term),
- d) Hermetic Sealing Test,
- e) Torsion Test on Radial-Lead Components,
- f) Additional Severities for Test B. Dry Heat of IEC Publication No. 68-2, and
- g) Additional Sizes of Soldering Irons for Test T : Soldering of IEC Publication 68-2.

SC 50B Climatic Tests (Sectt: Netherlands) — The Subcommittee met in London on 20 and 21 November 1961. Col K. K. Mehta and Shri P. Suryanarayana attended this meeting. Four documents dealing with Damp Heat (Cycling), Cold, Dry Heat and Low Air Pressure were approved for circulation under Six Months' Rule.

WG 1 Bump, Shock and Vibration (Sectt: UK) — Col K. K. Mehta represented India at the meeting of this Working Group held in London on 14-16 November 1961. A draft proposal for Shock and Bump Tests for inclusion in IEC Publication 68 was considered in conjunction with an interim report on a British Sand Penetration Drop Test Machine. It was decided to prepare a revised draft for circulation to National Committees for comments. Other documents discussed at the meeting, related to Test F_a Vibration Resonance Search, Test F_b Vibration Fatigue, and Square Wave Shock Machines. It was also agreed that Sweden, USA, United Kingdom and possibly, Germany, would undertake a series of tests with the object of comparing (a) bump test machines with each other, (b) shock test machines with each other, and (c) bump test machines against shock test machines, the results of which would be considered later on.

PART IV APPENDICES

APPENDIX A

(See page 6)

INDIAN STANDARDS PUBLISHED AND IN PRESS DURING 1961-62

(This list gives the new Indian Standards published during 1961-62 and those which were under print on 31-3-62. It does not include standards which were under print on 31-3-61 and printed during the year under report. The latter were included in a similar list published as Appendix A in last year's Annual Report.)

Sl No.		Rs
AGRICULTURAL AND FOOD PRODUCTS		
Animal Feeds		
1.	IS : 1932-1961 Mustard and Rape Oilcake as Livestock Feed ...	1'50
2.	IS : 1934-1961 Sesamum (<i>Til</i>) Oilcake as Livestock Feed ...	1'00
3.	IS : 1935-1961 Linseed Oilcake as Livestock Feed ...	1'00
4.	IS : 1942-1961 Bone Meal as Livestock Feed ...	4'00
Cereal Products		
5.	IS : 1960-1961 Wheatmeal Bread ...	2'00
Confectionery		
6.	IS : 966-1962 Desiccated Coconut ...	2'00
Dairy Equipment		
7.	IS : 1792-1961 Aluminium Milking Pails (Hooded Type) ...	1'50
8.	IS : 1825-1961 Aluminium Milk Cans ...	2'50
Dairy Industry, Methods of Test		
9.	IS : 1479 (Part II)-1961 Methods of Test for Dairy Industry: Part II Chemical Analysis of Milk ...	8'00
Farm Implements and Machinery		
10.	IS : 619-1961 Pruning Knives, Hooked and Curved (<i>Revised</i>) ...	2'50
11.	IS : 1973-1961 Sugarcane Crusher, Bullock-Driven Type ...	2'00
12.	IS : 1976-1961 Paddy Weeder, Rotary Type ...	2'00
Food Grain Handling and Storage		
13.	IS : 631-1961 Aluminium Food Grain Storage Bins ...	2'50
Infant Foods		
14.	IS : 1806-1961 Malted Milk Food ...	1'50
15.	IS : 2003-1962 Malted Milk Food Containing Cocoa Powder ...	1'50

APPENDIX A — Indian Standards Published and in Press — Contd

Sl No.		Rs
Meat and Meat Products		
16.	IS: 1981-1962 Animal Casings for Sausages	2.50
17.	IS: 1982-1962 Code of Practice for Ante-Mortem and Post-Mortem Examination of Meat Animals	3.00
Pest Control Equipment		
18.	IS: 1970-1961 Hand Compression Sprayer for Public Health ...	4.00
19.	IS: 1971-1961 Single-Barrel Stirrup-Pump for Public Health ...	2.50
Pesticides		
20.	IS: 560-1961 BHC, Technical (Revised)	4.50
21.	IS: 563-1961 DDT, Technical (Revised)	4.50
22.	IS: 1832-1961 Malathion, Technical	3.00
23.	IS: 1833-1961 Diazinon, Technical	3.00
Pesticidal Formulations		
24.	IS: 561-1962 BHC Dusting Powders (Second Revision)	2.50
25.	IS: 562-1962 BHC Water Dispersible Powder Concentrates (Second Revision)	4.50
26.	IS: 564-1961 DDT Dusting Powders (Revised)	3.00
27.	IS: 565-1961 DDT Water Dispersible Powder Concentrates (Revised)	4.00
28.	IS: 1824-1961 Household Insecticidal Spray	2.50
29.	IS: 1827-1961 Liquid Amine Salts of 2, 4-D	2.50
Regulated Market Yards		
30.	IS: 1787-1961 Layout for Regulated Market Yards for Fruits and Vegetables	3.00
31.	IS: 1788-1961 Layout for Regulated Market Yards for Cattle	2.50
Spices and Condiments		
32.	IS: 1797-1961 Methods of Sampling and Test for Spices and Condiments	5.50
33.	IS: 1798-1961 Black Pepper, Whole and Ground	1.50
34.	IS: 1877-1961 Terminology for Spices and Condiments	1.50
35.	IS: 1907-1961 Cardamom	2.50
36.	IS: 1908-1961 Ginger, Whole and Ground	2.00
37.	IS: 1909-1961 Curry Powder	1.50
Sugars and By-products		
38.	IS: 498-1961 Grading for Vacuum Pan Sugar (Plantation White) (Revised)	2.50
Tobacco Products		
39.	IS: 1925-1961 Bidis	4.50
BUILDING		
Builder's Hardware		
40.	IS: 204-1961 Tower Bolts (Revised)	3.00
41.	IS: 206-1962 Tee and Strap Hinges (Revised)	2.00
42.	IS: 275-1961 Padlocks (Second Revision)	3.00
43.	IS: 363-1961 Hasps and Staples (Revised)	2.00
44.	IS: 451-1961 Wood Screws (Revised)	2.50

APPENDIX A — Indian Standards Published and in Press — Contd

Sl No.		Rs
45.	IS : 723-1961 Mild Steel Wire Nails (<i>Revised</i>)	2-00
46.	IS : 725-1961 Copper Wire Nails (<i>Revised</i>)	2-00
47.	IS : 1018-1961 M Type Brass Padlocks (<i>Revised</i>)	2-50
48.	IS : 1823-1961 Floor Door Stoppers	1-50
49.	IS : 1837-1961 Fanlight Pivots	1-50
Codes of Practice		
50.	IS : 401-1961 Code of Practice for Preservation of Timber (<i>Revised</i>) ...	5-50
51.	IS : 883-1961 Code of Practice for Use of Structural Timber in Building (Material, Grading and Design) (<i>Revised</i>)	4-50
52.	IS : 1646-1961 Code of Practice for Fire Safety of Buildings (General): Electrical Installations	7-50
53.	IS : 1648-1961 Code of Practice for Fire Safety of Buildings (General): Fire Fighting Equipment and Its Maintenance Including Construction and Installation of Fire-Proof Doors ...	10-00
54.	IS : 1860-1961 Code of Practice for Installation, Operation and Maintenance of Electric Passenger and Goods Lifts	10-00
55.	IS : 1861-1961 Code of Practice for Manufacture of Lime in Vertical Mixed-Feed Type Kilns	3-50
56.	IS : 1902-1961 Code of Practice for Preservation of Bamboo and Cane for Non-Structural Purposes	2-50
57.	IS : 1904-1961 Code of Practice for Structural Safety of Buildings: Foundations	5-00
58.	IS : 1905-1961 Code of Practice for Structural Safety of Buildings: Masonry Walls	3-50
59.	IS : 1915-1961 Code of Practice for Steel Bridges	10-00
60.	IS : 1944-1961 Code of Practice for Design of Electrical Street-Lighting Installations	6-50
61.	IS : 1946-1961 Code of Practice for Use of Fixing Devices in Walls, Ceilings and Floors of Solid Construction	4-50
Construction		
62.	IS : 1791-1961 Batch Type Concrete Mixers	2-00
Doors and Windows		
63.	IS : 1826-1961 Venetian Blinds for Windows	4-00
64.	IS : 1948-1961 Aluminium Doors, Windows and Ventilators	5-00
65.	IS : 1949-1961 Aluminium Windows for Industrial Buildings	4-00
Fire Fighting		
66.	IS : 940-1961 Portable Chemical Fire Extinguisher, Water Type (Gas Pressure)	2-00
67.	IS : 1910-1961 Self-Contained Breathing Apparatus for Fire Brigade Use	2-00
68.	IS : 1924-1961 Portable Fire Extinguisher, Water Type (Bucket Pump)	2-00
69.	IS : 1933-1961 Portable Chemical Fire Extinguishers, Chlorobromothane Type	2-00
70.	IS : 1941-1961 Electric Motor Sirens	1-50
Furniture		
71.	IS : 1829 (Part I)-1961 Library Furniture and Fittings, Part I: Timber	4-00
72.	IS : 1883-1961 Steel Shelving Racks (Adjustable Type)	3-00

APPENDIX A — Indian Standards Published and in Press — Contd

Sl No.		Rs
General Constructional Design and Construction		
73.	IS : 1911-1961 Schedule of Unit Weights of Building Materials ...	6.00
Glossaries		
74.	IS : 1805-1961 Glossary of Terms Relating to Building Stones: Occurrence, Quarrying and Dressing	4.50
Methods of Test		
75.	IS : 1900-1961 Method of Testing Wood Poles	3.00
Pipes		
76.	IS : 458-1961 Concrete Pipes (With and Without Reinforcement) (Revised)	5.00
77.	IS : 777-1961 Glazed Earthenware Tiles	2.00
Refrigeration		
78.	IS : 1869-1961 Ice Cans	1.50
Reinforcement		
79.	IS : 1785-1961 Plain Hard-Drawn Steel Wire for Prestressed Concrete	2.00
80.	IS : 1786-1961 Cold Twisted Steel Bars for Concrete Reinforcement ...	2.00
Tar and Bitumen		
81.	IS : 73-1961 Paving Bitumen (Revised)	2.00
82.	IS : 212-1961 Crude Coal Tar for General Use (Revised)	1.50
83.	IS : 215-1961 Road Tar (Revised)	1.50
84.	IS : 216-1961 Coal Tar Pitch (Revised)	1.50
85.	IS : 217-1961 Cutback Bitumen (Revised)	2.50
86.	IS : 218-1961 Creosote and Anthracene Oil for Use as Wood Preservatives (Revised)	1.50
87.	IS : 454-1961 Digboi Type Cutback Bitumen (Revised)	1.50
88.	IS : 702-1961 Industrial Bitumen (Revised)	2.00
89.	IS : 1834-1961 Hot Applied Sealing Compounds for Joints in Concrete	3.00
90.	IS : 1838-1961 Preformed Fillers for Expansion Joint in Concrete Non- Extruding and Resilient Type (Bitumen-Impregnated Fibre) ...	2.00
Timber		
91.	IS : 876-1961 Wood Poles for Overhead Power and Telecommunica- tion Lines (Revised)	4.50
92.	IS : 1898-1961 Timber for Use in Aircraft Construction	2.00
Water Supply, Sanitation and Drainage Fittings		
93.	IS : 779-1961 Water Meters (Domestic Type) (Revised)	3.00
94.	IS : 1795-1961 Pillar Taps	2.50
CHEMICALS		
Acids		
95.	IS : 266-1961 Sulphuric Acid (Revised)	5.50
Brushware		
96.	IS : 384-1961 Brushes, Paints and Varnishes, Flat (Revised) ...	3.00

APPENDIX A — Indian Standards Published and in Press — *Contd*

Sl No.		Rs
Chemical Products		
97.	IS: 438-1961 Aluminium Powder for Explosives and Pyrotechnic Compositions	4.50
98.	IS: 574-1961 Glassy Sodium Metaphosphate, Technical (<i>Revised</i>)	2.00
99.	IS: 1289-1960 Methods for Sampling of Mineral Gypsum	3.50
100.	IS: 1796-1960 Crude Glycerine and Refined Glycerine	7.00
101.	IS: 1808-1961 Hydrated Lime for Grease Manufacture	1.00
102.	IS: 1809-1961 Nickel Salts for Electroplating	4.00
103.	IS: 1845-1961 Common Salt for Butter and Cheese Industry	3.50
104.	IS: 1919-1961 Sodium Hydrosulphite, Technical	2.00
105.	IS: 2012-1961 Red Phosphorus	3.50
Coal Carbonization Products		
106.	IS: 1839-1961 Toluene, Reagent Grade	3.00
107.	IS: 1840-1961 Benzene, Reagent Grade	4.00
Essential Oils and Allied Products		
108.	IS: 327-1961 Oil of Lemongrass (East Indian Oil of Lemongrass (<i>Revised</i>))	1.50
109.	IS: 329-1961 Oil of Sandalwood (<i>Revised</i>)	1.00
110.	IS: 512-1961 Oil of Citronella (<i>Revised</i>)	1.50
111.	IS: 1799-1961 Citral	1.00
112.	IS: 1800-1961 Geraniol	1.00
113.	IS: 1801-1961 Citronellol	1.00
114.	IS: 1802-1961 Ionones	1.50
Fertilizers		
115.	IS: 1781-1961 Urea, Technical and Pure	3.50
Fillers, Stoppers and Putties		
116.	IS: 423-1961 Plastic Wood for Joiners Filler (<i>Revised</i>)	1.00
117.	IS: 426-1961 Paste Filler, for Colour Coats (<i>Revised</i>)	1.00
Glass and Glassware		
118.	IS: 489-1961 Glass Ampoules (<i>Revised</i>)	4.50
119.	IS: 1382-1961 Glossary of Terms Relating to Glass Industry	7.00
120.	IS: 1922-1961 Liquid Gold, Bright	1.00
121.	IS: 1945-1961 Glass Bottles for Fluid Ink	1.50
122.	IS: 1961-1961 Glass Tableware	1.50
123.	IS: 1975-1961 Colours for Signal Glasses for Use in Railways	2.50
124.	IS: 1984-1961 Penicillin Vials	2.00
125.	IS: 1997-1961 Burettes	3.50
Leather and Leather Products		
126.	IS: 581-1962 Vegetable Tanned Hydraulic Leather (<i>Revised</i>)	1.50
Metal Containers		
127.	IS: 1783-1961 Drums, Large, Fixed Ends	1.50
128.	IS: 1784-1961 Screwed Closures for Drums	2.50
129.	IS: 1994-1961 Crown Corks	1.50
130.	IS: 2034-1961 Butter Tins	1.50

APPENDIX A — Indian Standards Published and in Press — Contd

SL No.		Rs
Paper and Allied Products		
131.	IS : 1064-1961 Paper Sizes (<i>Revised</i>) ... <i>Corresponds and partially agrees with ISO/R 101-1959</i>	2·00
132.	IS : 1763-1961 Substances of Paper and Pulp Board <i>Corresponds and agrees with ISO/R 58-1958</i>	1·00
133.	IS : 1848-1961 Writing and Printing Papers ...	1·00
Petroleum, Petroleum Products and Lubricants		
134.	IS : 1745-1961 Petroleum Hydrocarbon Solvents ...	1·50
135.	IS : 2007-1961 Method for Calibration of Vertical Oil Storage Tanks ...	5·00
136.	IS : 2008-1961 Method for Computation of Capacity Tables for Vertical Oil Storage Tanks ...	3·50
137.	IS : 2009-1961 Method for Calibration of Horizontal and Tilted Oil Storage Tanks ...	4·00
Plastics		
138.	IS : 1998-1962 Methods of Test for Thermosetting Synthetic Resin Bonded Laminated Sheets ...	6·00
Ready Mixed Paints		
139.	IS : 5-1961 Colours for Ready Mixed Paints (<i>Second Revision</i>) ...	8·00
140.	IS : 101-1961 Methods of Test for Ready Mixed Paints and Enamels (<i>Revised</i>) ...	7·00
141.	IS : 290-1961 Coal Tar Black Paint (<i>Revised</i>) ...	2·00
Rubber Products		
142.	IS : 1867-1961 Rubber Hot-Water Bottles ...	2·50
Thinners and Solvents		
143.	IS : 1872-1961 Thinner for Synthetic Paints and Varnishes for Aircrafts ...	1·00
144.	IS : 1873-1961 Thinner, Antichill for Cellulose Nitrate Based Paints, Dopes and Lacquers for Aircrafts ...	1·50
Vegetable Oil		
145.	IS : 1965-1961 Bleaching Earths of Indian Origin Used for Decolorizing Vegetable Oils ...	1·00
Water and Water Treatment		
146.	IS : 1620-1961 Methods of Test (Chemical) for Industrial Water ...	10·00
147.	IS : 1813-1961 Code of Practice for Treatment of Water for Marine Boilers ...	3·00
ELECTROTECHNICAL		
Acoustics		
148.	IS : 1819-1961 Recommendations for General Requirements of Public Address Amplifiers ...	1·50
149.	IS : 1881-1961 Code of Practice for Installation of Indoor Amplifying and Sound Distribution Systems ...	5·00
150.	IS : 1882-1961 Code of Practice for Outdoor Installation of Public Address Systems ...	5·00

APPENDIX A — Indian Standards Published and in Press — Contd

Sl No.		Rs
Automobile Electrical Equipment		
151.	IS:1884 (Part I)-1961 Automobile Electric Horns, Part I:DC Vibrating Type	1:50
Batteries		
152.	IS:985-1962 Lead-Acid Storage Batteries (Heavy Duty) for Motor Vehicles (<i>Revised</i>)	4:50
153.	IS:1145-1962 Lead-Acid Storage Batteries for Motor Cycles (<i>Revised</i>)	3:00
154.	IS:1846-1961 Lead-Acid Storage Batteries for Aircraft (Aerobatic and Non-Aerobatic)	4:50
Cables and Conductors		
155.	IS:398-1961 Hard-Drawn Stranded Aluminium and Steel-Cored Aluminium Conductors for Overhead Power Transmission Purposes (<i>Revised</i>)	5:50
156.	IS:1666-1961 Paper-Covered Rectangular Copper Conductors for Transformer Windings	5:00
157.	IS:1753-1961 Aluminium Conductors in Insulated Cables	3:00
Electronic Components		
158.	IS:1980-1961 Ceramic Dielectric Capacitors, Type I <i>Corresponds and substantially agrees with IEC/Pub 108 (1959)</i>	5:00
Electroplating		
159.	IS:1773-1961 Brass Plating	1:50
160.	IS:1958-1961 Nickel Anodes for Electroplating	1:00
161.	IS:1959-1961 Silver Anodes for Electroplating	1:00
162.	IS:1985-1962 Code of Practice for Pretreatment of Steel, Copper and Copper Base Alloys, Zinc and Zinc Base Alloys for Electroplating	3:00
163.	IS:1986-1962 Code of Practice for Hard Chromium Plating on Steel	2:00
164.	IS:1992-1962 Lead Plating	2:50
Insulating Materials		
165.	IS:1866-1961 Code of Practice for Maintenance of Insulating Oil	4:50
Lamps and Luminaires		
166.	IS:1901-1961 Visual Indicator-Lamps	2:50
167.	IS:1913-1961 General and Safety Requirements for Electric Light Fittings	2:50
168.	IS:1947-1961 Flood-lights	5:50
Motors and Generators		
169.	IS:325-1961 Three-phase Induction Motors (<i>Second Revision</i>) <i>Corresponds and agrees with IEC Pub 34-1: 1953</i>	5:50
Transformers and Switchgears		
170.	IS:1818-1961 Out-Door Air-Break Isolators and Earthing Switches for Voltages Up to 220 kV	5:00
171.	IS:1822-1961 Motor Starters of Voltages Up to 650 Volts	5:50
172.	IS:1851 (Part I)-1961 Arc Welding Transformers, Part I: Single Operator Type	3:00
173.	IS:1886-1961 Code of Practice for Installation and Maintenance of Transformers	6:00
174.	IS:2026-1962 Power Transformers	10:00

APPENDIX A — Indian Standards Published and in Press — *Contd*

SL No.		Rs
Unclassified		
175.	IS: 589-1961 Basic Climatic and Mechanical Durability Tests for Electronic Components (<i>Revised</i>) <i>Corresponds and substantially agrees with Part I and Part II of IECI Pub 68-1960</i>	7-50
176.	IS: 1876-1961 Method for Voltage Measurement by Means of Sphere-Gaps (One Sphere Earthed) <i>Corresponds and agrees with IEC/Pub 52 (1960)</i>	4-00
177.	IS: 1885 (Part I)-1961 Electrotechnical Vocabulary Part I: Fundamental Definitions <i>Corresponds and agrees with IEC/Pub 50 (05) (1954)</i>	7-00
178.	IS: 1885 (Part II)-1961 Electrotechnical Vocabulary Part II: Machines and Transformers <i>Corresponds and agrees with IEC/Pub 50 (10) (1954)</i>	7-00
179.	IS: 1951-1961 Polyvinyl Chloride Sleeving for Electrical Purposes ...	3-00
180.	IS: 2032 (Part I)-1962 Graphical Symbols Used in Electrotechnology Part I: Classification and Definitions of Diagrams and Charts ...	1-00
ENGINEERING		
Abrasives		
181.	IS: 715-1962 Coated Abrasives, Glue Bond (<i>Revised</i>)	3-00
Basic Engineering Standards		
182.	IS: 1890 (Part I)-1961 Recommendations on Fundamental Quantities of Units of the MKSA System and Quantities and Units of Space and Time	5-40
183.	IS: 1890 (Part II)-1961 Recommendations on Quantities and Units of Periodic and Related Phenomena	3-60
184.	IS: 1890 (Part III)-1961 Recommendations on Quantities and Units of Mechanics	9-00
185.	IS: 1890 (Part IV)-1961 Recommendations on Quantities and Units of Heat	4-50
186.	IS: 1890 (Part XI)-1961 Mathematical Signs and Symbols for Use in the Physical Sciences and Technology Parts I, II, III, IV and XI of IS: 1890 are endorsements respectively of ISO/R 31/Part I-1956, ISO/R 31/Part II-1958, ISO/R 31/Part III-1960, ISO/R 31/Part IV-1960 and ISO/R 31/Part XI-1961	5-40
187.	IS: 1926-1961 Equivalent Metric Units for Quantities in Mechanical Engineering	4-00
Bicycle Components		
188.	IS: 624-1961 Bicycle Rims (<i>Revised</i>)	2-00
189.	IS: 627-1961 Bicycle Chains (<i>Revised</i>)	1-50
190.	IS: 630-1961 Bicycle Spokes (Plain) and Nipples for Spokes (<i>Revised</i>)	2-00
Hand Tools		
191.	IS: 845-1961 Swage Blocks and Stands	2-00
192.	IS: 1930-1961 Wood Working Chisels and Gauges	3-00
193.	IS: 1931-1961 Engineers' Files <i>Corresponds and agrees with ISO/R 234-1961</i>	7-00

APPENDIX A — Indian Standards Published and in Press — Contd

Sl No.		Rs
Instruments (Drawing, Optical and Surveying)		
194.	IS : 1561-1962 Set Squares for Use of Drawing Offices	1'00
195.	IS : 1562-1962 Metric Diagonal Scales (Cartographers, Surveyors and Engineers)	3'00
196.	IS : 1563-1962 Protractors for Use of Drawing Offices	2'50
197.	IS : 1842-1961 Surveying Chain Pins (Arrows)	1'00
198.	IS : 1955-1961 Prismatic Compass, Liquid	2'00
199.	IS : 1957-1961 Prismatic Compasses, Non-Liquid	1'00
Machine Tools and Small Tools		
200.	IS : 1830-1961 General Requirements for Milling Cutters	2'00
201.	IS : 1831-1961 Dimensions for Milling Cutters	6'50
	<i>Corresponds and agrees with ISO/R 240-1961</i>	
202.	IS : 1836-1961 Reamers	5'00
	<i>Corresponds and agrees with ISO/R 236-1961</i>	
203.	IS : 1850-1961 Dimensions for Shank Diameters and Driving Squares for Rotating Tools	1'50
	<i>Corresponds and agrees with ISO/R 237-1961</i>	
204.	IS : 1859-1961 Thread Cutting Dies	2'00
205.	IS : 1878-1961 Test Chart for Lathes (Up to 800 mm Swing Over Bed)	3'00
206.	IS : 1988-1962 Screwing Taps	6'00
207.	IS : 1995-1962 Overall Internal Heights for Lathe Tool Posts	1'00
	<i>Corresponds and agrees with ISO/R 213-1961</i>	
208.	IS : 2013-1962 Dimensions for T-Slots	1'00
209.	IS : 2015-1962 T-Nuts	1'00
Oil Burning Appliances		
210.	IS : 1899-1961 Blow Lamps	2'00
Threaded Fasteners, and Rivets		
211.	IS : 549-1961 Split Cotter Pins (Revised)	1'50
212.	IS : 1365-1962 Slotted Countersunk Head Machine Screws (1·6 to 20 mm)	2'00
213.	IS : 1366-1962 Slotted Round and Cheese Head Machine Screws (1·6 to 20 mm)	2'00
214.	IS : 1367-1961 Technical Supply Conditions for Threaded Fasteners	5'00
215.	IS : 1369-1961 Dimensions of Screw Thread Run Outs and Undercuts	2'00
216.	IS : 1821-1961 Dimensions for Clearance Holes for Metric Bolts	1'50
	<i>It is based on the draft ISO Recommendation No. 384 Clearance Holes for Metric Bolts</i>	
217.	IS : 1862-1961 Studs	2'50
218.	IS : 1928-1961 Boiler Rivets (12 to 48 mm Diameter)	2'50
219.	IS : 1929-1961 Rivets for General Purposes (12 to 48 mm Diameter)	2'00
220.	IS : 2016-1962 Plain Washers	2'00
Transmission Devices, Pulleys and Belts		
221.	IS : 1891-1961 Rubber and Canvas Conveyor and Elevator Belting	4'50
222.	IS : 2031-1962 Dimensions for Shaft-Height for Driving and Driven Machines	1'00

APPENDIX A — Indian Standards Published and in Press — Contd

Sl No.	Rs
Weights and Measures	
223. IS: 1853-1961 Self-Indicating and Semi-Self-Indicating Counter Type Weighing Machines	1.50
224. IS: 1854-1961 Person Weighing Machines	1.50
Wire Ropes and Wire Products	
225. IS: 1804-1961 Fibre Cores for Steel Wire Ropes	2.00
226. IS: 1835-1961 Steel Wire for Ropes	3.50
227. IS: 1855-1961 Steel Wire Ropes for Winding Purposes in Mines	6.00
228. IS: 1856-1961 Steel Wire Ropes for Haulage Purposes in Mines	5.00
 STRUCTURAL AND METALS	
Alloy Steels & Special Steels	
229. IS: 1570-1961 Schedules for Wrought Steels for General Engineering Purposes	8.00
Cast Iron and Malleable Cast Iron	
230. IS: 1865-1961 Iron Castings with Spheroidal or Nodular Graphite	2.00
231. IS: 1879-1961 Malleable Cast Iron Pipe Fittings	5.00
<i>Corresponds and substantially agrees with ISO/R 49-1957</i>	
Chemical Analysis	
232. IS: 1559-1962 Methods of Chemical Analysis of Ferro-Alloys	10.00
233. IS: 1940-1961 Methods of Chemical Analysis of Tin Ingot	3.50
234. IS: 2000-1962 Methods of Chemical Analysis of Bauxite	4.50
Copper and Copper Alloys	
235. IS: 291-1961 Naval Brass Rods and Sections (Suitable for Machining and Forgings) (Revised)	3.00
236. IS: 292-1961 Brass Ingots and Castings (Revised)	2.00
237. IS: 305-1961 Aluminium Bronze Ingots and Castings (Revised)	2.50
238. IS: 318-1962 Leaded Tin Bronze Ingots and Castings (Revised)	2.50
239. IS: 407-1961 Brass Tubes for General Purposes (Revised)	2.50
240. IS: 1972-1961 Copper Plate, Sheet and Strip for Industrial Purposes	2.50
Ferro Alloys	
241. IS: 2021-1962 Metallic Manganese	1.00
242. IS: 2022-1962 Calcium Silicon	1.00
243. IS: 2023-1962 Metallic Chromium	1.00
244. IS: 2024-1962 Silico-Chromium	1.00
Foundry	
245. IS: 1987-1962 High Silica Sand for Use in Foundries	1.00
Lead, Zinc, Tin, Antimony and Their Alloys	
246. IS: 25-1961 Antifriction Bearing Alloys (Revised)	2.00
247. IS: 404-1962 Lead Pipes (Revised)	3.50
248. IS: 1921-1961 Rosin-Cored Solder, Wire, Activated and Non-Activated (Non-Corrosive)	3.00

APPENDIX A — Indian Standards Published and in Press — Contd

Sl No.		Rs
Light Metals and Their Alloys		
249.	IS: 1841-1961 Rolled Aluminium Rods (Electrical Conductor Grade) for Electrical Purposes	1:50
250.	IS: 1847-1961 99.7 Percent Primary Aluminium Notched Bars and Ingots for Remelting for Aircraft Purposes	1:50
251.	IS: 1868-1961 Anodized Aluminium	2:50
Metal Standards		
252.	IS: 1762-1961 Code for Designation of Steel	2:00
253.	IS: 1956-1962 Glossary of Terms Relating to Iron and Steel	12:00
Methods of Physical Tests		
254.	IS: 1789-1961 Method for Brinell Hardness Test for Grey Cast Iron <i>Corresponds and substantially agrees with ISO/R 184-1961</i>	1:50
255.	IS: 1790-1961 Method for Brinell Hardness Test for Light Metals and Their Alloys <i>Corresponds and substantially agrees with ISO/R 191-1961</i>	1:50
256.	IS: 1810-1961 Method for Vickers Hardness Test for Light Metals and Their Alloys <i>Corresponds and agrees with ISO/R 192-1961</i>	1:50
257.	IS: 1816-1961 Method for Tensile Test for Light Metals and Their Alloys <i>Corresponds and substantially agrees with ISO/R 190-1961</i>	2:00
258.	IS: 1828-1961 Method for Load Calibration of Testing Machines for Tensile Testing of Steel <i>Corresponds and substantially agrees with ISO/R 147-1960</i>	2:50
Methods of Sampling		
259.	IS: 1811-1961 Methods of Sampling Foundry Sands	3:00
260.	IS: 1817-1961 Methods of Sampling Non-Ferrous Metals for Chemical Analysis	2:00
Refractories		
261.	IS: 1528-1962 Methods of Sampling and Physical Tests for Refractory Materials	6:00
262.	IS: 1529-1961 Blast Furnace Refractories for Steel Plants	1:50
Steel Castings		
263.	IS: 1030-1961 Steel Castings for General Engineering Purposes (Revised)	2:50
Steel Forgings		
264.	IS: 1875-1961 Carbon Steel Bars, Billets, Blooms and Slabs for Forgings	2:00
265.	IS: 2004-1962 Carbon Steel Forgings for General Engineering Purposes	2:00
Steel Tubes, Pipes and Fittings		
266.	IS: 1914-1961 Carbon Steel Boiler Tubes and Superheater Tubes	3:00
267.	IS: 1978-1961 Line Pipe	4:00
268.	IS: 1979-1961 High-Test Line Pipe	4:50
Structurals		
269.	IS: 811-1961 Cold Formed Light Gauge Structural Steel Sections	5:50

APPENDIX A — Indian Standards Published and in Press — Contd

Sl. No.		Rs
270.	IS: 1730-1961 Dimensions for Steel Plate, Sheet and Strip for Structural and General Engineering Purposes	6'00
271.	IS: 1731-1961 Dimensions for Steel Flats for Structural and General Engineering Purposes	1'50
272.	IS: 1732-1961 Dimensions for Round and Square Steel Bars for Structural and General Engineering Purposes	1'00
273.	IS: 1852-1962 Rolling and Cutting Tolerances for Hot Rolled Steel Products	3'50
274.	IS: 1863-1961 Dimensions for Rolled Steel Bulb Plates	1'50
Structural Engineering		
275.	ISI Handbook for Structural Engineers; No. 2 Steel Beams and Plate Girders	10'00
276.	ISI Handbook for Structural Engineers; No. 3 Steel Columns and Struts	7'50
Welding General		
277.	IS: 1393-1961 Code of Practice for Training and Testing of Oxy-Acetylene Welders	10'00
Wrought Steel Products		
278.	IS: 279-1961 Galvanized Iron and Steel Wire for Telegraph and Telephone Purposes (<i>Revised</i>)	2'00
279.	IS: 412-1962 Expanded Metal Steel Sheets for General Purposes (<i>Revised</i>)	1'50
280.	IS: 1812-1961 Mild Steel Wire for Manufacture of Wood Screws	1'50
TEXTILES		
Chemical Test Methods		
281.	IS: 1390-1961 Method for Determination of pH Value of Aqueous Extracts of Textile Materials	1'50
282.	IS: 1560-1962 Method for Estimation of Carboxylic Acid Groups in Cellulosic Textile Materials	1'50
283.	IS: 1564-1962 Method for Quantitative Chemical Analysis of Binary Mixtures of Cellulose Triacetate and Certain Other Fibres	1'50
284.	IS: 1815-1961 Methods for Detection and Estimation of Damage in Cotton Yarn and Cordages Due to Micro-Organisms	2'00
285.	IS: 1889-1962 Method for Quantitative Chemical Analysis of Binary Mixtures of Regenerated Cellulose Fibres and Cotton	1'50
286.	IS: 1967-1961 Method for Estimation of Residual Starch in Cotton Fabrics After Desizing	1'50
287.	IS: 2005-1962 Method for Quantitative Chemical Analysis of Binary Mixtures of Polyamide Fibres and Certain Other Fibres	1'50
288.	IS: 2006-1962 Method for Quantitative Chemical Analysis of Binary Mixtures of Protein Fibres and Certain Other Fibres	1'50
289.	IS: 2010-1962 Method for Detection and Estimation of Damage in Jute Fabrics Due to Micro-Organisms	2'00
290.	IS: 2011-1962 Method for Detection and Estimation of Damage in Jute Yarn and Cordages Due to Micro-Organisms	2'00
Coir		
291.	IS: 1858-1961 Door Mats, Creel, Bit and Fibre	2'00

APPENDIX A — Indian Standards Published and in Press — Contd

Sl. No.		Rs
Colour Fastness		
292.	IS : 984-1962 Method for Determination of Colour Fastness of Textile Materials to Washing in Presence of Sodium Hypochlorite ...	2-00
293.	IS : 1807-1961 Method for Determination of Colour Fastness of Textile Materials to Formaldehyde ...	1-50
294.	IS : 1962-1961 Method for Determination of Fastness of Dyestuffs to Metals in the Dyebath : Chromium Salts ...	1-50
295.	IS : 1968-1961 Method for Determination of Fastness of Dyestuffs to Metals in the Dyebath : Iron and Copper ...	1-50
Cotton Fabrics, Handloom		
296.	IS : 1814-1961 Handloom Cotton <i>Mootus</i> , Striped or Checked ...	2-00
297.	IS : 1937-1961 Handloom Cotton Bleeding Madras, Loomstate ...	2-00
298.	IS : 1939-1961 Handloom Cotton Handkerchiefs, Bleached, Striped or Checked ...	2-00
Cotton Fabrics, Mill-Made		
299.	IS : 1782-1961 Cotton Lining Cloth (Warp Faced Satin), Dyed ...	1-50
Cotton Mill Accessories		
300.	IS : 1794-1961 Shuttles for Plain Calico Looms : Suction Threading Type ...	2-50
301.	IS : 1896-1961 Picking Arms (or Sticks) for Overpick Cotton Looms ...	2-00
302.	IS : 1906-1961 Raw Hide Round Foot Pattern 4B Pickers for Cotton Overpick Looms ...	2-00
303.	IS : 1936-1961 Inset Mail Wire Hcalds for Use in Cotton and Silk Weaving (Excluding Jacquard and Fancy Weaving) ...	2-50
Cotton Spinning Machinery		
304.	IS : 1927-1961 Flat Driving Chains for Carding Engines ...	1-50
Jute Fabrics		
305.	IS : 1943-1961 A-Twill Jute Bags for Packing Sugar ...	2-50
Jute Mill Accessories		
306.	IS : 1903-1961 Raw Hide Pickers for Jute Looms ...	2-00
307.	IS : 1938-1961 Cotton Cambs for Use in Jute Looms ...	2-00
Narrow Fabrics		
308.	IS : 1895-1961 Cotton Tape Newar, Grey or Dyed ...	2-00
309.	IS : 1923-1961 Cotton Selvedge Tape for Electrical Purposes ...	2-50
310.	IS : 1974-1961 Cotton Spindle Tape (for Jute Textile Mills) ...	2-50
Physical Test Methods		
311.	IS : 1793-1961 Guide for Marking Textile Materials Made of Wool ...	1-50
312.	IS : 1954-1961 Method for Determination of Dimensions of Fabrics ...	2-00
313.	IS : 1963-1961 Method for Determination of Ends and Picks per Unit Length in Woven Fabrics ...	2-00
314.	IS : 1964-1961 Methods for Determination of Weight per Square Metre and Weight per Linear Metre of Fabrics ...	1-50
315.	IS : 1966-1961 Methods for Determination of Bursting Strength of Woven and Knitted Fabrics ...	1-50
316.	IS : 1969-1961 Method for Determination of Breaking Load and Elongation at Break of Woven Fabric (By Constant-Rate-of Traverse Machine) ...	2-00

APPENDIX A — Indian Standards Published and in Press — Contd

Sl No.		Rs
Ropes		
317.	IS : 1084-1961 Hawser-Laid Manila Rope (<i>Revised</i>)	3-00
318.	IS : 1085-1961 Shroud-Laid Manila Rope (<i>Revised</i>)	3-00
319.	IS : 1086-1961 Cable-Laid Manila Rope (<i>Revised</i>)	3-00
Sizing and Finishing Materials		
320.	IS : 2033-1962 Tapioca Flour for Use in the Cotton Textile Industry ...	3-00
Twines		
321.	IS : 1857-1961 Tarred Hemp Marline, Two-Ply	2-50
322.	IS : 1887-1961 Spun Jute Yarn, 18-Ply	2-00
323.	IS : 1912-1961 Country Jute Twine, Three-Ply	2-50
324.	IS : 1920-1961 White Indian Hemp Line	2-50
Yarn and Similar Structures		
325.	IS : 1803-1961 Cotton Embroidery Thread, Bleached or Dyed ...	2-00
EC		
326.	IS : 1020-1961 Conversion Tables for Ordinary Use (<i>Revised</i>) ...	1-00

INDIAN STANDARDS WITHDRAWN DURING 1961-62

- IS : 3-1949 Inch-Millimeter Conversion for Industrial Use
- IS : 19-1949 Procedures for Testing Cotton Textiles and Cordages
(Other than Jute) for Resistance to Attack by Micro-Organisms
- IS : 84-1950 White Spirit for Paints
- IS : 372-1952 Manganese Ore — Battery Grade (*Tentative*)
- IS : 373-1952 Manganese Ore — Metallurgical Grade (*Tentative*)
- IS : 541-1954 Stationary Accumulators, Lead-Acid Type (*Tentative*)

APPEN

(See

INCOME AND EXPENDITURE ACCOUNT FOR

EXPENDITURE

Sl No.	HEADS OF EXPENDITURE	AMOUNT
		Rs
1.	Pay of Officers	690 956·00
2.	Allowances of Officers	86 294·77
3.	Provident Fund Contribution for Officers: i) Interest	26 186·00
	ii) Contribution	60 479·00
4.	TA for: i) Officers	168 223·84
	ii) Committee Members	32 322·35
5.	Pay of Establishment	739 395·26
6.	Allowances of Establishment	240 507·43
7.	Provident Fund Contribution for Staff: i) Interest	16 364·00
	ii) Contribution	58 153·00
8.	TA for Staff	18 388·34
9.	Subscription for ISO & IEC	31 201·83
10.	Printing	406 679·04
11.	Conferences: i) National	21 440·05
	ii) International	—
12.	Testing: i) Certification Testing	39 436·06
	ii) Laboratory Equipment	32 908·45
13.	Research and Consultation	24 422·73
14.	Publicity: i) Exhibition	70 851·85
	ii) Advertising, etc	79 549·84
	iii) Museum	6 991·14
15.	Other Charges: i) Stationery	98 210·85
	ii) Postage & Telegrams	77 662·21
	iii) Library	37 013·85
	iv) Telephones	41 323·04
	v) Furniture	45 331·78
	vi) Office Equipment	13 212·05
	vii) Rent & Taxes	43 127·86
	viii) Electric & Water Charges	22 425·73
	ix) Advertisement (Recruitment of Staff)	11 198·34
	x) Audit Charges	1 000·00
	xi) Maintenance of Building, etc	15 948·14
	xii) Medical Relief	42 267·82
	xiii) Maintenance & Purchase of Staff Car	9 772·78
	xiv) Miscellaneous	47 988·82
	xv) Depreciation	126 612·56
	TOTAL	3 483 846·81

DIX B

page 10)

THE YEAR ENDED 31 MARCH 1962**INCOME**

Sl No.	HEADS OF INCOME	AMOUNT Rs
1.	Income Other than Government Grants:	
	i) Subscription	650 660·05
	ii) Sale Proceeds of ISI Publications (Net)	341 675·91
	iii) Commission on Sale of Publications Other than ISI Publications	60 348·39
	iv) Certification Marks Fees and Inspection Charges	312 453·64
	v) Contribution by ISI Employees to CHSS	7 951·50
	vi) Miscellaneous Receipts	34 432·58
	vii) Advertisement in ISI Bulletin	53 903·53
		<u>1 461 425·60</u>
2.	Government Grants for:	
	i) Recurring Expenditure	1 885 000·00
	ii) Laboratory Equipment (Capital)	50 000·00
3.	Museum (Transferred from Balance Sheet)	16 468·53
		<u>3 412 894·13</u>
	 Add Excess of Expenditure Over Income	 70 952·68
	TOTAL	<u><u>3 483 846·81</u></u>

APPEN
BALANCE SHEET AS

LIABILITIES

Sl. No.	Rs	AMOUNT Rs
1. Advance Subscription:		
i) For 1962	465 287-79	
ii) For 1963 (Balance Sheet Item)	25-00	
		465 312-79
2. IEC & ISO Annual Group Meetings Fund:		
i) By Amount as per Last Year's Balance Sheet	69 831-98	
ii) Add Receipt During the Year	2 507-50	
Less Expenditure During the Year	72 339-48	
	13 001-67	
		59 337-81
3. Contributory Provident Fund:		
i) Opening Balance as at 1-4-61	658 363-00	
ii) Add Subscription (Less Withdrawals) During the Year	147 436-00	
iii) Add Contribution (Less Refunds) During the Year	591 582-00	
		1 397 381-00
4. ISI Building (Manak Bhavan) Fund:		
i) Collection up to 31-3-61 (Balance Sheet Item)	2 095 390-07	
ii) Add Collection During the Year	7 857-13	
		2 103 247-20
5. K. L. Moudgill Prize Fund:		
i) Collection up to 31-3-61 (Balance Sheet Item)	12 845-76	
ii) Add Collection During the Year	1 435-13	
iii) Less Expenditure During the Year	14 280-89	
	1 150-00	
		13 130-89
6. Gratuity Fund:		
i) Collection up to 31-3-61 (Balance Sheet Item)	21 000-00	
ii) Add Collection During the Year	16 428-23	
		37 428-23
7. Sundry Creditors:		
i) Inland	283 969-89	
ii) Abroad	213 635-29	
		497 605-18
8. Capital Account:		
i) Balance (Brought Forward)	434 971-35	
ii) Less Excess of Expenditure Over Income	70 952-68	
		364 018-67
	CARRIED OVER	4 937 461-77

DIX B—Contd

AT 31 MARCH 1962

ASSETS

Sr. No.	AMOUNT	
	Rs	Rs
1. Cash:		
i) At the Banks:		
a) State Bank of India, Delhi/Calcutta/Madras/Kanpur	598 893·51	
b) Bank of Baroda Ltd., New Delhi/Bombay	437 711·14	
ii) In Office (Including Imprest):		
New Delhi/Bombay/Calcutta/Madras/Kanpur	1 661·49	
iii) Postage Stamps in Hand	4 809·19	
		1 043 075·33
2. Investments:		
i) Deposits with Banks	38 104·91	
ii) K. L. Moudgill Prize Fund (Shares of Jay Engineering Works)	11 400·00	
iii) Contributory Provident Fund:		
a) National Savings Certificates	1 187 000·00	
b) Outstanding Advances with Members	71 315·00	
c) Bank Balance (State Bank of India, Delhi)	139 066·00	
		1 446 885·91
3. Sundry Debtors:		
i) Advances to Staff:		
a) Conveyance	36 201·12	
b) Miscellaneous	1 685·13	
ii) Security Deposits:		
a) Telephone Deptt., Bombay & Delhi	250·00	
b) The Calcutta Electric Supply Corporation Ltd.	100·00	
c) Madras Electricity System, Madras	60·00	
d) NDMC, New Delhi (Balance Sheet Item)	3 600·00	
iii) Others:		
a) Sale of Publications	177 710·52	
b) Advertisement in ISI Bulletin	21 223·86	
c) ISI Club Canteen	1 000·00	
d) ASTM	956·00	
		242 786·63
4. Stock:		
i) Printing Paper in Hand	125 518·05	
ii) Library Books	12 848·46	
iii) Furniture, Office Equipment & Laboratory Equipment	141 492·65	
		279 859·16
5. Staff Cars (Two)		23 151·11
6. ISI Building (Manak Bhavan):		
i) Cost as at 31-3-61 (Balance Sheet Item)	1 935 844·89	
ii) Add Expenses During the Year	30 009·81	
	1 065 854·70	
iii) Less Depreciation	98 967·20	
		1 866 887·50
	CARRIED OVER	4 902 645·64

A P P E N
BALANCE SHEET AS

L I A B I L I T I E S

	AMOUNT
	Rs
BROUGHT FORWARD	4 937 461·77

TOTAL 4 937 461·7

I certify that I have obtained all the information and explanations that I require and that subject to the remarks in the Audit Report, the Balance Sheet exhibits, in my opinion, the true financial position of ISI according to the best of my information and the explanations given to me and as shown by the books of ISI.

Sd, S. K. RAMNANI
Assistant Audit Officer
Food, Rehabilitation, Supply, Commerce, Steel & Mines, New Delhi

DIX B — Contd

AT 31 MARCH 1962

Sl No.	ASSETS		AMOUNT
		Rs	Rs
	BROUGHT FORWARD		4 902 645·64
7.	Expenses Prepaid:		
	i) Deputy Controller of Government Stationery Office, Calcutta	15 823·78	
	ii) Surveyor General of India (Balance Sheet Item)	1 000·00	
	iii) M/s. Ghosh Estates, Calcutta (Balance Sheet Item)	5 028·75	
	iv) National Physical Laboratory, New Delhi	11 803·39	
	v) Director, Map Publications, Survey of India, Dehra Dun	394·19	
	vi) Director General of Supplies & Disposals (DGS&D), New Delhi	766·02	
		<hr/>	34 816·13
		TOTAL	<hr/> <hr/> 4 937 461·77

Sd. P. CHATTERJEE
Offg. Secretary (Administration)
Indian Standards Institution, New Delhi

APPENDIX C

(See page 94)

NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME DURING 1961-62

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LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-290 28.4.61	M/s. Kirti Chemical Works, Bombay	15.5.61 to 14.5.62	Copper Oxychloride Dusting Powder (IS:1506-1959)	1 tonne	Re 1.00 per unit with a minimum of Rs 1000.00 for production during a calendar year
CM/L-291 28.4.61	do	do	Copper Oxychloride Water Dispersible Powder Concentrates (IS:1507-1959)	do	Rs 5.00
CM/L-292 28.4.61	M/s. Burmah-Shell Oil Storage & Distributing Co. of India Ltd., Bombay	do	Aldrin Emulsifiable Concentrates (IS:1307-1958)	1 litre	3 nP per unit with a minimum of Rs 1000.00 for production during a calendar year
CM/L-293 28.4.61	do	do	Endrin Emulsifiable Concentrates (IS:1310-1958)	do	do
CM/L-294 28.4.61	M/s. Devidayal (Sales) Private Ltd., Bombay	do	do	do	do
CM/L-295 28.4.61	M/s. Bharat Pulverising Mills Private Ltd., Bombay	do	do	do	do
CM/L-296 28.4.61	M/s. Indian Rare Earths Ltd., Alwaye (Kerala State)	do	Trisodium Phosphate Technical Dodecahydrate Grade (IS:573-1954)	1 tonne	Re 1.00

APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — *Contd*

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-297 28.4.61	M/s. P.S.G. & Sons, Charity Industrial Institute, Coimbatore	15.5.61 to 14.5.62	Small AC and Universal Electric Motors with Class 'A' Insulation (IS : 996-1959)	1 motor	25 nP per unit with a minimum of Rs 750.00 for production during a calendar year
CM/L-298 28.4.61	M/s. Sri Shunmuga Metal Works, Tiruchirapalli	do	Wrought Aluminium and Aluminium Alloy for Utensils (IS : 21-1959)	1 ton	Rs 2.00
CM/L-299 28.4.61	M/s. J.B. Mangharam & Co., Gwalior	do	Biscuits (Excluding Wafer Biscuits) (IS : 1011-1957) of the following Varieties: Honey Glen, Glucose, Ginger Nuts, Arrowroot, Petit Beurre, Nice, Vanilla Green, Golden Snack, Energy Food, Rosberry Cream, Salto, Custard Cream, Royal Cream and Bourbon	do	Rs 1.25
CM/L-300 28.4.61	M/s. New Digvijaysinhji Tin Factory, Jamnagar	do	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1000.00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above

**APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — Contd**

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-301 17.5.61	M/s. National Saw and Plywood Works, Tinsukia (Assam)	20.5.61 to 19.5.62	Tea-Chest Plywood Panels (IS : 10-1953)	100 sq ft	Nil (Contribution to the Plywood Industry Voluntary Contribution Fund would continue to be made to the Development Wing, Ministry of Commerce & Industry)
CM/L-302 25.5.61	M/s. National Plywood Industries, Calcutta	1.6.61 to 31.5.62	do	do	do
CM/L-303 30.5.61	M/s. Tata-Fison Ltd., Agra	15.6.61 to 14.6.62	BHC Water Dispersible Powder Concentrates (IS : 562-1958)	1 ton	Rs 2.00 per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-304 30.5.61	do	do	DDT Water Dispersible Powder Concentrates (IS : 565-1955)	do	Rs 5.00
CM/L-305 30.5.61	M/s. India Supplies Engineering Works Ltd., Kanpur	do	Small AC and Universal Electric Motors with Class 'A' Insulation (IS : 996-1959)	1 motor	25 nP per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-306 30.5.61	M/s. Hindustan Breakfast Food Mfg. Factory, New Delhi	do	Pearl Barley (IS : 1156-1957)	1 kg	1 nP
CM/L-307 30.5.61	do	do	Rolled Oats (Quick-Cooking Type) (IS : 1484-1959)	do	$\frac{1}{2}$ nP
CM/L-308 30.5.61	M/s. Devidayal (Sales) Private Ltd., Bombay	do	DDT Water Dispersible Powder Concentrates (IS : 565-1955)	1 ton	Rs 5.00
CM/L-309 30.5.61	M/s. Jayant Metal Manufacturing Co., Bombay	1.7.61 to 30.6.62	Copper Wire Nails (IS : 725-1956)	1 kg	4 nP

APPENDIX C—NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62—Contd

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-310 30.5.61	M/s. Aminchand Payarelal, Jullundur City	15.6.61 to 14.6.62	Gunmetal Gate, Globe and Check Valves for Water, Steam and Oil only (Not Intended for Use in Petroleum Industry) (IS: 778-1957)	1 lb	3 nP per unit with a minimum of Rs 1500-00 for production during a calendar year
CM/L-311 26.6.61	M/s. Prem Industrial Corpn., Madras	1.7.61 to 30.6.62	Hard-Drawn Stranded Aluminium and Steel-Cored Aluminium Conductors for Overhead Power Transmission Purposes (IS: 398-1953)	1 ton	Re 1-00
CM/L-312 26.6.61	M/s. Sonawala Industries Private Ltd., Bombay	do	Sulphuric Acid, Battery, Pure and Analytical Reagent Grades (IS: 266-1950)	1 lb	2 nP per unit with a minimum of Rs 1000-00 for production during a calendar year
CM/L-313 26.6.61	M/s. Nahan Foundry Ltd., Nahan Distt. Sirmur (Himachal Pradesh)	do	Three-Phase Induction Motors Up to 10 Horse Power (IS: 325-1959)	1 hp	15 nP
CM/L-314 26.6.61	M/s. Hyderabad Asbestos Cement Products Ltd., Hyderabad-Dn	do	Unreinforced Corrugated and Semi-Corrugated Asbestos Cement Sheets (IS: 459-1955)	1 tonne	20 nP
CM/L-315 26.6.61	M/s. Rohtas Industries Ltd., Dalmianagar	do	do	do	do
CM/L-316 26.6.61	The Reliable Water Supply Service of India Private Ltd., Lucknow	do	Flushing Cisterns for Water Closets and Urinals (IS: 774-1957)	1 cistern	25 nP

APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — *Contd*

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-317 26.6.61	M/s. Cable Corporation of India Limited, Bombay	1.7.61 to 30.6.62	Paper-Insulated Lead-Sheathed Cables for Electricity Supply (IS: 692-1957)	100 yd <i>or</i> 100 m	25 nP <i>or</i> 27.5 nP
CM/L-318 29.6.61	M/s. N.G.K. Electrical Industries, Bombay	15.7.61 to 14.7.62	Three-Phase Induction Motors Up to 5 Horse Power (IS: 325-1959)	1 hp	15 nP
CM/L-319 29.6.61	M/s. Hind Timber Industries, Yamunanagar, Distt. Ambala	do	Ply wood Tea-Chest Battens (IS: 10-1953)	100 sets	35 nP per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-320 18.7.61	M/s. R. S. Brothers, Jaipur	1.9.61 to 31.8.62	Bicycle Frames (IS: 623-1955)	1 bicycle frame	5 nP per unit with a minimum of Rs 500.00 for production during a calendar year
CM/L-321 18.7.61	M/s. Jaipur Cycle & Parts Industries, Jaipur	do	do	do	do
CM/L-322 18.7.61	M/s. Rajasthan Cycle Industries (Regd.), Jaipur	do	do	do	do
CM/L-323 18.7.61	The Metal Box Company of India Ltd., Madras	1.8.61 to 31.7.62	18-Litre Square Tins (IS: 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000.00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above

APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — *Contd*

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MAEKING FEE PER UNIT
CM/L-324 26.7.61	The Sports Goods Training-cum-Production Centre, Calcutta	1.8.61 to 31.7.62	Footballs, Volley-balls, Basket-balls and Water Polo Balls (IS:417-1953)		Not applicable because the inspection would be done by the Director of Industries, Government of West Bengal, who has been appointed as the competent authority for West Bengal under Section 10 of Indian Standards Institution (Certification Marks) Act, 1952
CM/L-325 23.7.61	M/s. Devidayal (Sales) Private Ltd., Bombay	do	BHC Emulsifiable Concentrates (IS:632-1958)	1 gallon	30 nP per gallon with a minimum of Rs 2 000.00 for production during a calendar year
CM/L-326 26.7.61	M/s. Tata-Fison Ltd., Salkia, Howrah	do	do	do	do
CM/L-327 31.7.61	M/s. India Plywood Co., Pathipookar (Dum Dum), Calcutta	do	Tea-Chest Plywood Panels (IS:10-1953)	100 sq ft	Nil (Contribution to the Plywood Industry Voluntary Contribution Fund would continue to be made to the Development Wing, Ministry of Commerce & Industry)
CM/L-328 31.7.61	The Metal Containers Pvt. Ltd., Allahabad	15.8.61 to 14.8.62	18-Litre Square Tins (IS:916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000.00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above

**APPENDIX C—NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62—Contd**

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-329 31.7.61	M/s. Delta Spokes Mfg. Co., Bombay	15.8.61 to 14.8.62	14 SWG Bicycle Spokes (Plain), with Nipples & Washers (IS: 630-1955)	1 gross	2 nP per unit with a minimum of Rs 1 500.00 for production during a calendar year
CM/L-330 7.8.61	M/s. Murarka Engineering Works, New Delhi	do	Spring Leaf for Automobile Suspension (IS: 1135-1957)	1 tonne	Rs 2.00
CM/L-331 10.8.61	M/s. Hindustan Tin Works Private Ltd., Ghaziabad	do	i) Round Paint Tins (IS: 1407-1959)	1 tin	$\frac{1}{4}$ nP per unit for the first 500 000 units with a minimum of Rs 1 250.00 for production during a calendar year; $\frac{1}{8}$ nP per unit for the next 500 000 units; $\frac{1}{10}$ nP per unit for 1 000 001st unit and above
			ii) Round Vanaspati Tins (IS: 1413-1959)	do	do
CM/L-332 10.8.61	M/s. Tata-Fison Ltd., Bombay	do	Endrin Emulsifiable Concentrates (IS: 1310-1958)	1 litre	3 nP per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-333 24.8.61	M/s. Tata-Fison Ltd., Agra	1.9.61 to 31.8.62	DDT Dusting Powders (IS: 564-1955)	1 ton	Rs 2.00
CM/L-334 24.8.61	M/s. Ramakrishna Industrials Private Ltd., Coimbatore	do	Small AC and Universal Electric Motors with Class 'A' Insulation (IS: 996-1959)	1 motor	25 nP per unit with a minimum of Rs 750.00 for production during a calendar year

**APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — Contd**

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-335 24.8.61	M/s. Alpha Electric & Engg. Co., Bombay	15.9.61 to 14.9.62	Small AC and Universal Electric Motors with Class 'A' Insulation (IS : 996-1959)	1 motor	25 nP per unit with a minimum of Rs 750.00 for production during a calendar year
CM/L-336 28.8.61	M/s. Devidayal Cable Industries Pvt. Ltd., Darukhana, Bombay	do	Enamelled High Conductivity Annealed Round Copper Wire (Synthetic Enamel) (IS : 1595-1960)	1 tonne	Rs. 10.00 per unit for the first 250 units or less with a minimum of Rs 2 500.00 for production during a calendar year; Rs 5.00 per unit for the next 500 units; Rs 2.00 per unit for the 751st unit and over
CM/L-337 1.9.61	M/s. Nahan Foundry Ltd., Nahan, Distt. Sirmur (Himachal Pradesh)	do	Small AC and Universal Electric Motors with Class 'A' Insulation (IS : 996-1959)	1 motor	25 nP per unit with a minimum of Rs 750.00 for production during a calendar year
CM/L-338 1.9.61	M/s. Indo-Asian Traders Pvt. Ltd., Jullundur	do	15 Amp Metal Clad Switches (IS : 1567-1960)	1 switch	15 nP per unit for the switches of capacity 15 amp, 30 amp and 60 amp; 50 nP per unit for switches of 100 amp capacity with a minimum of Rs 2 000.00 for production during a calendar year
CM/L-339 1.9.61	Production Centre for Electric Motors (Govt. of India, Ministry of Commerce & Industry) Tiruvalla, Kerala State	do	Three-Phase Induction Motors (IS : 325-1959)	1 hp	15 nP

**APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — Contd**

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-340 20.9.61	M/s. Mysore Insecticides Company, Madras	1.10.61 to 30.9.62	DDT Dusting Powders (IS : 564-1955)	1 ton	Rs 2·00
CM/L-341 20.9.61	M/s. Mysore Insecticides Company (A n d h r a), Vijayawada	do	BHC Dusting Powders (IS : 561-1958)	do	Re 1·00 per unit with a minimum of Rs 1 000·00 for production during a calendar year
CM/L-342 20.9.61	M/s. All India Medical Corporation, Bombay	do	DDT Water Dispersible Powder Concentrates (IS : 565-1955)	do	Rs 5·00
CM/L-343 27.9.61	M/s. S.G. Can Factory, Yamunanagar (Rly. Station Jagadhri)	15.10.61 to 14.10.62	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000·00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above
CM/L-344 29.9.61	M/s. Godrej Soaps Private Ltd., Bombay	do	i) Stearic Acid, Technical, Grade 3 (IS : 1675-1960)	1 metric tonne	Re 1·00 per unit with a minimum of Rs 1 000·00 for production during a calendar year
			ii) Oleic Acid, Technical, Grade 3 (IS : 1676-1960)	do	do
CM/L-345 29.9.61	M/s. AFCO Limited, Bombay	do	Extension Ladders for Fire Fighting Purposes (IS : 930-1959)	1 ladder	Rs 50·00 per unit with a minimum of Rs 750·00 for production during a calendar year

APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — *Contd*

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-346 29.9.61	M/s. AFCO Limited, Bombay	15.10.61 to 14.10.62	Wheeled Fire Escape (IS : 931-1959)	1 escape	Rs 200.00 per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-347 29.9.61	The Mysore Chemical Works Ltd., Bangalore	do	Lead-Acid Storage Batteries (Light Duty) for Motor Vehicles (IS : 395-1959)	1 battery	12.5 nP per unit for the first 30 000 units or part thereof with a minimum of Rs 2 500.00; 6.5 nP per unit for the 30 001st unit and over
CM/L-348 11.10.61	The Malwa Vanaspati Chemical Co. Ltd., Indore	13.10.61 to 12.10.62	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000.00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{2}$ nP per unit for the 500 001st unit and above
CM/L-349 20.10.61	M/s. Cable Corporation of India Limited, Bombay	1.11.61 to 31.10.62	PVC Insulated (Heavy Duty) Electric Cables for Working Voltages Up to & Including 1100 Volts [IS : 1554 (Part I)-1961]	100 m	15 nP per unit with a minimum of Rs 2 500.00 for production during a calendar year
CM/L-350 25.10.61	M/s. Firoz Trading Co. Pvt. Ltd., Bombay	do	Mutton Tallow Grade 1 & 2 (IS : 887-1960)	1 kg	1 nP per unit with a minimum of Rs 1 000.00 for production during a calendar year

APPENDIX C—NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62—Contd

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-351 31.10.61	M/s. Bharat Wood Works, P.O. Dibrugarh, Assam	17.11.61 to 16.11.62	Tea-Chest Plywood Panels (IS : 10-1953)	100 sq ft	Nil (Contribution to the Plywood Industry Voluntary Contribution Fund would continue to be made to the Development Wing, Ministry of Commerce & Industry)
CM/L-352 31.10.61	M/s. Devidayal Cable Industries Pvt. Ltd., Bombay	15.11.61 to 14.11.62	PVC Cables, 250 Volts Grade (IS : 694-1960)	1 000 m	25 nP per unit for the first 5 000 units with a minimum of Rs 1 250·00 for production during a calendar year; 15 nP per unit for the 5 001st unit and above
CM/L-353 31.10.61	M/s. Union Sales Corpn., Bombay	do	Oil, Cutting, Soluble (IS : 1115-1957)	1 litre	2 nP per unit with a minimum of Rs 500·00 for production during a calendar year
CM/L-354 31.10.61	M/s. T. Maneklal Manufacturing Co. Ltd., Bombay	do	Rubber-Insulated Cables for Electric Power and Lighting, TRS Type, 250 Volts Grade (IS : 434-1953)	1 000 yd or 1 000 m	12·5 nP per 1 000 yards or 13·5 nP per 1 000 metres
CM/L-355 31.10.61	M/s. Cauvery Spinning and Weaving Mills Ltd., Cauverynagar P.O., Vellalur, Trichy Distt.	do	Cotton Yarn, Grey, for Handlooms (counts 32 ^s , 40 ^s and 40 ^s /2 only) (IS : 1539-1960)	1 bale of 400 lb	25 nP per unit with a minimum of Rs 2 500·00 for production during a calendar year

APPENDIX C—NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62—Contd

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-356 20.11.61	M/s. Zeta Industrial Corporation Pvt. Ltd., Modinagar	1.12.61 to 30.11.62	Metal Clad Switches Capacity Up to 60 amp 500 Volts (IS : 1567-1960)	1 switch	15 nP per unit for the switches of capacity 15 amp, 30 amp and 60 amp; 50 nP per unit for switches of 100 amp capacity, with a minimum of Rs 2 000·00 for production during a calendar year
CM/L-357 20.11.61	M/s. Electrical & Mechanical Corpn. (India), Jullundur City	do	Metal Clad Switches, 15 amp 250 Volts only (IS : 1567-1960)	do	do
CM/L-358 20.11.61	M/s. Indian Traders Pvt. Ltd., New Delhi	do	Rubber-Insulated Cables TRS Type, 250 Volts Grade (IS : 434-1953)	1 000 yd or 1 000 m	12·5 nP per 1 000 yards or 13·5 nP per 1 000 metres
CM/L-359 20.11.61	M/s. Burmah-Shell Oil Storage & Distributing Co. of India Ltd., Bombay	do	Dieldrin Emulsifiable Concentrates (IS : 1054-1957)	1 litre	3 nP per unit with a minimum of Rs 1 000·00 for production during a calendar year
CM/L-360 27.11.61	M/s. Devidayal Metal Industries Pvt. Ltd., Darukhana, Bombay	15.12.61 to 14.12.62	Brass Sheets (IS : 410-1959)	1 tonne	Rs 5·00 per unit with a minimum of Rs 1 000·00 for production during a calendar year
CM/L-361 27.11.61	M/s. Modi Vanaspati Mfg. Co., Modinagar	do	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000·00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{2}$ nP per unit for the 500 001st unit and above

APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — *Contd*

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-362 30.11.61	M/s. Hindustan Wire Products Ltd., Patiala	1.1.62 to 31.12.62	i) Synthetic Enamelled Copper Wires (IS : 1595-1960) ii) Oleo-Resinous Enamelled Wires (IS : 449-1953)	1 tonne	Rs 10-00 per unit for the first 250 units or less with a minimum of Rs 2 500-00 for production during a calendar year Rs 5-00 per unit for the next 500 units; Rs 2-00 per unit for the 751st unit and over
CM/L-363 30.11.61	M/s. New India Electric Corporation, Bombay	15.12.61 to 14.12.62	Three-Phase Induction Motors Up to 10 HP (IS : 325-1959)	1 hp	15 nP
CM/L-364 30.11.61	M/s. Kirki Chemical Works, Jogeshwari, Bombay	do	Cuprous Oxide Water Dispersible Powder Concentrates (IS : 1665-1960)	1 tonne	Rs 5-00
CM/L-365 12.12.61	M/s. Ditz Electricals (India) Ltd., Delhi	1.1.62 to 31.12.62	Electric Portable Immersion Heaters for Domestic Use (500 Watts to 4 000 Watts Capacity) (IS : 368-1952)	1 electric immersion heater	10 nP per unit for the first 10 000 units with a minimum of Rs 1 000-00 for production during a calendar year; 7 nP per unit for the 10 001st unit and above
CM/L-366 15.12.61	M/s. Tungabhadra Industries Ltd., Kurnool (Andhra Pradesh)	do	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000-00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above

APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — *Contd*

CE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-367 15.12.61	M/s. Bharat Pulverising Mills (Private) Ltd., Madras	1.1.62 to 31.12.62	Endrin Emulsifiable Concentrates (IS : 1310-1958)	1 litre	3 nP per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-368 22.12.61	M/s. Electrical Instruments Mfg. Co., Bombay	do	15 amp Metal Clad Switches 250 and 500 Volts Grade (IS : 1567-1960)	1 switch	15 nP per unit for the switches of capacity 15 amp, 30 amp and 60 amp; 50 nP per unit for switches of 100 amp capacity with a minimum of Rs 2 000.00 for production during a calendar year
CM/L-369 22.12.61	The D.C.M. Container Works, New Delhi	do	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000.00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above
CM/L-370 22.12.61	M/s. Excel Industries Private Ltd., Bombay	do	Zinc Phosphide, Technical (IS : 1251-1958)	1 tonne	Rs 5.00 per unit with a minimum of Rs 1 500.00 for production during a calendar year
CM/L-371 22.12.61	M/s. Berar Oil Industries, Vanasdepeth, Akola	do	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000.00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above

**APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — Contd**

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-372 11.1.62	M/s. Tata-Fison Ltd., Agra	1.2.62 to 31.1.63	BHC Emulsifiable Concentrates (IS : 632-1958)	1 gallon	30 nP per gallon with a minimum of Rs 2 000·00 for production during a calendar year
CM/L-373 11.1.62	The Vasanta Mills Ltd., Singanallur, Coimbatore	do	Cotton Yarn, Grey, for Handlooms (Counts 10 ^s , 30 ^s , 20 ^s /2 and 40 ^s /2 only) (IS : 1539-1960)	1 bale of 400 lb	25 nP per unit with a minimum of Rs 2 500·00 for production during a calendar year
CM/L-374 11.1.62	M/s. Abrol Engineering Co., Kapurthala	do	Metal Clad Switches (Capacity 15 and 30 amps, DP & TP, 250 Volts and 500 Volts) (IS : 1567-1960)	1 switch	15 nP per unit for the switches of capacity 15 amp, 30 amp and 60 amp; 50 nP per unit for switches of 100 amp capacity, with a minimum of Rs 2 000·00 for production during a calendar year
CM/L-375 12.1.62	M/s. Balgopaldas Iron & Steel Co. Pvt. Ltd., Calcutta	15.1.62 to 14.1.63	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a minimum of Rs 1 000·00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above
CM/L-376 16.1.62	M/s. Surma Valley Saw-mills Pvt. Ltd., P. O. Bhangabazar, Assam	1.2.62 to 31.1.63	Tea-Chest Plywood Panels (IS : 10-1953)	100 sq ft	Nil (Contribution to the Plywood Industry Voluntary Contribution Fund would continue to be made to the Development Wing, Ministry of Commerce & Industry)

APPENDIX C—NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62—Contd

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-377 25.1.62	M/s. Travancore Chemical & Mfg. Co. Ltd., Manjurnal, Alwaye	15.2.62 to 14.2.63	BHC Dusting Powders (IS : 561-1958)	1 ton	Re 1.00 per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-378 25.1.62	do	do	BHC Water Dispersible Powder Concentrates (IS : 562-1958)	do	Rs 2.00 per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-379 25.1.62	The National Screw & Wire Productions Ltd., Belur, P. O. Belur Math	do	Hard-Drawn Stranded Aluminium and Steel-Cored Aluminium Conductors for Over-Head Power Transmission Purposes (IS : 398-1953)	do	Re 1.00
CM/L-380 25.1.62	M/s. Menco Electricals Pvt. Ltd., Olavakkot	do	Metal Clad Switches (Capacity 15 and 30 amps, DP, TP, 250 Volts & 500 Volts) (IS : 1567-1960)	1 switch	15 nP per unit for the switches of capacity 15 amp, 30 amp and 60 amp; 50 nP per unit for switches of 100 amp capacity with a minimum of Rs 2 000.00 for production during a calendar year
CM/L-381 9.2.62	M/s. Pesticides India, Udaipur	do	BHC Dusting Powders (IS : 561-1958)	1 ton	Re 1.00 per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-382 9.2.62	M/s. Narhari Engineering Works, Bombay-15	1.3.62 to 28.2.63	Three-Phase Induction Motors Up to 3 hp only (IS : 325-1959)	1 hp	15 nP
CM/L-383 12.2.62	M/s. Prabhat Electric Equipment Corporation, Bombay	do	Three-Phase Induction Motors Up to 10 hp (IS : 325-1959)	do	do

APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — Contd

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-384 14.2.62	M/s. Khalsa Foundry & Workshop Coop. Ind. Society Ltd., Sultanpur Lodhi (Kapurthala)	1.3.62 to 28.2.63	Fractional Horse Power Single Phase Motors (IS: 996-1959)	1 motor	25 nP per unit with a minimum of Rs 750.00 for production during a calendar year
CM/L-385 14.2.62	M/s. Assam Saw Mills and Timber Co. Ltd., Calcutta	15.2.62 to 14.2.63	Tea-Chest Plywood Panels (IS: 10-1953)	100 sq ft	Nil (Contribution to the Plywood Industry Voluntary Contribution Fund would continue to be made to the Development Wing, Ministry of Commerce & Industry)
172 CM/L-386 5.3.62	The Indian Yeast Co. Ltd., Bhadrakali Konnagar, West Bengal	15.3.62 to 14.3.63	Baker's Yeast, Dried (IS: 1320-1958)	1 kg	3 nP per unit with a minimum of Rs 1 500.00 for production during a calendar year
C/ML-387 5.3.62	M/s. Boots Pure Drug Co. (India) Private Ltd., Bombay	do	Copper Oxochloride Dusting Powders (IS: 1506-1959)	1 tonne	Re 1.00 per unit with a minimum of Rs 1 000.00 for production during a calendar year
CM/L-388 5.3.62	M/s. Prabhat (Stove & Lamp) Products Co. Pvt. Ltd., Bombay	do	Oil Pressure Stoves (IS: 1342-1959)	1 stove	3 nP per unit for the first 50 000 units; 2 nP per unit for the 50 001st unit and above with a minimum of Rs 2 500.00 for production during a calendar year
CM/L-389 5.3.62	The National Insulated Co. of India Ltd., 24 Parganas, West Bengal	do	PVC Cables only (250 Volts and 650 Volts Grade) (IS: 694-1960)	1 000 m	25 nP per unit for the first 5 000 units with a minimum of Rs 1 250.00 for production during a calendar year; 15 nP per unit for the 5 001st unit and above

APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — *Contd*

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-390 5.3.62	M/s. Girdhar Gopal Tin Factory, Agra	15.3.62 to 14.3.63	18-Litre Square Tins (IS : 916-1958)	1 tin	$\frac{1}{2}$ nP per unit for the first 200 000 units with a mini- mum of Rs 1 000.00 for production during a calendar year; $\frac{1}{4}$ nP per unit for the next 300 000 units; $\frac{1}{8}$ nP per unit for the 500 001st unit and above
CM/L-391 20.3.62	M/s. Hindustan Steel Ltd., Durgapur Steel Project, P.O. Durgapur	2.4.62 to 1.4.63	Structural Steel (IS : 226- 1958)	—	As may be decided by the Government of India from time to time
CM/L-392 20.3.62	do	do	Mild Steel and Medium Tensile Steel Bars for Concrete Reinforcement (IS : 432-1960)	—	do
CM/L-393 20.3.62	do	do	High Tensile Structural Steel (IS : 961-1957)	—	do
CM/L-394 20.3.62	do	do	Rivet Bars for Structural Purposes (IS : 1148-1957)	—	do
CM/L-395 20.3.62	do	do	High Tensile Rivet Bars for Structural Purposes (IS : 1149-1957)	—	do
CM/L-396 20.3.62	M/s. Hindustan Steel Ltd., Bhilai Steel Works, P.O. Bhilai, Distt. Durg	do	Structural Steel (IS : 226- 1958)	—	do
CM/L-397 20.3.62	do	do	Mild Steel and Medium Tensile Steel Bars for Concrete Reinforcement (IS : 432-1960)	—	do

**APPENDIX C — NEW LICENCES ISSUED UNDER ISI CERTIFICATION MARKS SCHEME
DURING 1961-62 — Contd**

LICENCE No.	NAME AND ADDRESS OF THE LICENSEE	PERIOD OF VALIDITY	ARTICLE (NUMBER OF RELEVANT INDIAN STANDARD)	UNIT	MARKING FEE PER UNIT
CM/L-398 20.3.62	M/s. Hindustan Steel Ltd., Bhilai Steel Works, P.O. Bhilai, Distt. Durg	2.4.62 to 1.4.63	High Tensile Structural Steel (IS : 961-1957)	—	As may be decided by the Government of India from time to time
CM/L-399 20.3.62	do	do	Rivet Bars for Structural Purposes (IS : 1148-1957)	—	do
CM/L-400 20.3.62	do	do	High Tensile Rivet Bars for Structural Purposes (IS : 1149-1957)	—	do
CM/L-401 29.3.62	M/s. Modi Vanaspati Mfg. Co., Modinagar	15.4.62 to 14.4.63	Stearic Acid, Technical Grade 3 (IS : 1675-1960)	1 tonne	Re 1.00 per unit with a minimum of Rs 1 000.00 for production during a calendar year

APPENDIX D

(See Clause 12.4, page 95)

ARTICLES COVERED BY STANDARD MARKS SPECIFIED DURING 1961-62

Sl. No.	PRODUCT/CLASS OF PRODUCT	NO. AND TITLE OF THE RELEVANT INDIAN STANDARD	NO. AND DATE OF THE GAZETTE NOTIFICATION
1.	Small AC and Universal Electric Motors	IS : 996-1959 Small AC and Universal Electric Motors	SO 1010 dated 6.5.1961
2.	Trisodium Phosphate, Technical	IS : 573-1954 Trisodium Phosphate, Technical	SO 1010 dated 6.5.1961
3.	Aldrin Emulsifiable Concentrates	IS : 1307-1958 Aldrin Emulsifiable Concentrates	SO 1010 dated 6.5.1961
4.	Endrin Emulsifiable Concentrates	IS : 1310-1958 Endrin Emulsifiable Concentrates	SO 1010 dated 6.5.1961
5.	Copper Wire Nails	IS : 725-1956 Copper Wire Nails	SO 1327 dated 10.6.1961
6.	Gunmetal Gate, Globe and Check Valves for Water Steam and Oil Only (Not Intended for Use in Petroleum Industry)	IS : 778-1957 Gunmetal Gate, Globe and Check Valves for Water Steam and Oil Only (Not Intended for Use in Petroleum Industry)	SO 1327 dated 10.6.1961
7.	Pearl Barley	IS : 1156-1957 Pearl Barley	SO 1327 dated 10.6.1961
8.	Rolled Oats (Quick-Cooking Type)	IS : 1484-1959 Rolled Oats (Quick-Cooking Type)	SO 1327 dated 10.6.1961
9.	Portable Chemical Fire Extinguisher, Soda Acid Type	IS : 934-1960 Portable Chemical Fire Extinguisher, Soda Acid Type	SO 1443 dated 24.6.1961
10.	*Plywood for General Purposes	IS : 303-1960 Plywood for General Purposes (Revised)	SO 1444 dated 24.6.1961
11.	†Sulphuric Acid, Battery Grade	IS : 266-1950 Sulphuric Acid	SO 1519 dated 1.7.1961
12.	Unreinforced Corrugated Asbestos Sheets	IS : 459-1955 Unreinforced Corrugated Asbestos Cement Sheets	SO 1518 dated 1.7.1961
13.	†Tea-Chest Battens	IS : 10-1953 Plywood Tea-Chests (Revised)	SO 1579 dated 8.7.1961
14.	Bicycle Frames	IS : 623-1955 Bicycle Frames (Tentative)	SO 1751 dated 29.7.1961

*Consequent upon the revision of IS : 303-1951, the Standard Mark was revised.

†Additional Standard Mark specified under the existing Indian Standard.

APPENDIX D—Contd

ARTICLES COVERED BY STANDARD MARKS SPECIFIED DURING 1961-62

Sl. No.	PRODUCT/CLASS OF PRODUCT	NO. AND TITLE OF THE RELEVANT INDIAN STANDARD	NO. AND DATE OF THE GAZETTE NOTIFICATION
15.	Footballs, Volley-balls, Basket-balls and Water Polo Balls	IS : 417-1953 Footballs, Volley-balls, Basket-balls and Water Polo Balls (Tentative)	SO 1824 dated 5.8.1961
16.	Bicycle Spokes (Plain) with Nipples and Washers	IS : 630-1955 Bicycle Spokes (Plain) and Nipples for Spokes (Tentative)	SO 1891 dated 12.8.1961
17.	Spring Leaf and Leaf Spring for Automobile Suspension	IS : 1135-1957 General Requirements for Leaf Springs for Automobile Suspension	SO 1950 dated 19.8.1961
18.	Round Paint Tins	IS : 1407-1959 Round Paint Tins	SO 1953 dated 19.8.1961
19.	Round Vanaspati Tins	IS : 1413-1959 Round Vanaspati Tins	SO 1953 dated 19.8.1961
20.	Metal Clad Switches	IS : 1567-1960 Metal Clad Switches (Current Rating not Exceeding 100 Amperes)	SO 2213 dated 16.9.1961
21.	*Packing Paper, Water-proof, Bitumen Laminated	IS : 1398-1960 Packing Paper, Waterproof, Bitumen Laminated	SO 2280 dated 23.9.1961
22.	PVC Insulated (Heavy Duty) Electric Cables	IS : 1554 (Part I)-1961 PVC Insulated (Heavy Duty) Electric Cables, Part I For Working Voltages Up to and Including 1100 Volts	SO 2535 dated 28.10.1961
23.	Mutton Tallow	IS : 887-1960 Mutton Tallow	SO 2585 dated 4.11.1961
24.	Oil, Cutting, Soluble	IS : 1115-1957 Oil, Cutting, Soluble	SO 2648 dated 11.11.1961
25.	Cotton Yarn, Grey, for Handlooms	IS : 1539-1960 Cotton Yarn, Grey, for Handlooms	SO 2650 dated 11.11.1961
26.	Dieldrin Emulsifiable Concentrates	IS : 1054-1957 Dieldrin Emulsifiable Concentrates	SO 2758 dated 25.11.1961
27.	Cuprous Oxide Water Dispersible Powder Concentrates	IS : 1665-1960 Cuprous Oxide Water Dispersible Powder Concentrates	SO 2885 dated 9.12.1961

*Standard Mark for Water-proof Packing Paper covered by IS : 293-1951 has been rescinded vide Gazette Notification No. SO 2281 dated 23.9.61.

APPENDIX D — *Contd*

ARTICLES COVERED BY STANDARD MARKS SPECIFIED DURING 1961-62

Sl. No.	PRODUCT/CLASS OF PRODUCT	NO. AND TITLE OF THE RELEVANT INDIAN STANDARD	NO. AND DATE OF THE GAZETTE NOTIFICATION
28.	Electric Portable Immersion Heaters for Domestic Use	IS : 368-1952 Electric Portable Immersion Heaters for Domestic Use (<i>Tentative</i>)	SO 3011 dated 23.12.1961
29.	Zinc Phosphide, Technical	IS : 1251-1958 Zinc Phosphide, Technical	SO 18 dated 6.1.1962
30.	Extension Ladders for Fire Fighting Purposes	IS : 930-1959 Extension Ladders for Fire Fighting Purposes	SO 2440 dated 14.10.1961
31.	Wheeled Fire Escape	IS : 931-1959 Wheeled Fire Escape	SO 2440 dated 14.10.1961
32.	Stearic Acid, Technical	IS : 1675-1960 Stearic Acid, Technical	SO 344 dated 3.2.1962
33.	Oleic Acid Technical	IS : 1676-1960 Oleic Acid, Technical	SO 555 dated 24.2.1962
34.	Baker's Yeast	IS : 1320-1958 Baker's Yeast	SO 748 dated 17.3.1962
35.	Oil Pressure Stoves	IS : 1342-1959 Oil Pressure Stoves	SO 748 dated 17.3.1962
36.	Structural Steel	IS : 226-1958 Structural Steel (<i>Second Revision</i>)	SO 909 dated 31.3.1962
37.	Mild Steel and Medium Tensile Steel Bars and Hard-Drawn Steel Wire for Concrete Reinforcement	IS : 432-1960 Mild Steel and Medium Tensile Steel Bars and Hard-Drawn Steel Wire for Concrete Reinforcement (<i>Revised</i>)	SO 909 dated 31.3.1962
38.	High Tensile Structural Steel	IS : 961-1957 High Tensile Structural Steel	SO 909 dated 31.3.1962
39.	Rivet Bars for Structural Purposes	IS : 1148-1957 Rivet Bars for Structural Purposes	SO 909 dated 31.3.1962
40.	High Tensile Rivet Bars for Structural Purposes	IS : 1149-1957 High Tensile Rivet Bars for Structural Purposes	SO 909 dated 31.3.1962
41.	Single Pole 5 Ampere Tumbler Switches for AC/DC	IS : 1087-1957 Single Pole 5 Ampere Tumbler Switches for AC/DC	SO 1063 dated 7.4.1962

APPENDIX E

(See page 102)

ISO RECOMMENDATIONS ISSUED DURING 1961-62*

1. ISO/R 31/XI-1961 Mathematical Signs and Symbols for Use in the Physical Sciences and Technology
[*Endorsed as IS : 1890 (Part XI)-1961*]
2. ISO/R 171-1961 Determination of Bulk Factor of Moulding Materials
[*Corresponds and agrees with IS : 867 (Part I)- 1956*]
3. ISO/R 172-1961 Detection of Free Ammonia in Phenol-Formaldehyde Mouldings (Qualitative Method)
4. ISO/R 173-1961 Determination of the Percentage of Styrene in Polystyrene with Wijs Solution
5. ISO/R 174-1961 Determination of Viscosity Number of Polyvinylchloride, Resin in Solution
6. ISO/R 175-1961 Method of Test for the Determination of the Resistance of Plastics to Chemical Substances. Change of Weight and Dimensions after Contact with Chemical Substances
7. ISO/R 176-1961 Method of Test for the Determination of the Loss of Plasticizers from Plastics by the Activated Carbon Method
8. ISO/R 177-1961 Method of Test for the Determination of Migration of Plasticizers from Plastic
9. ISO/R 178-1961 Determination of Flexural Properties of Rigid Plastics
10. ISO/R 179-1961 Determination of the Charpy Impact Resistance of Rigid Plastics (Charpy Impact Flexural Test)
11. ISO/R 180-1961 Determination of the Izod Impact Resistance of Rigid Plastics (Izod Impact Flexural Test)
[*Corresponds and partially agrees with IS : 867 (Part I)-1956*]
12. ISO/R 181-1961 Method of Test on Incandescence Resistance of Rigid Self-Extinguishing Thermosetting Plastics
13. ISO/R 182-1961 Method of Test for the Determination of the Thermal Stability of Polyvinylchloride and Related Copolymers and their Compounds by the Congo Red Method
14. ISO/R 183-1961 Method of Test for the Determination of the Bleeding of Colorants from Plastics
15. ISO/R 184-1961 Brinell Hardness Test of Grey Cast Iron
[*Corresponds and Substantially agrees with IS : 1789-1961*]
16. ISO/R 185-1961 Classification of Grey Cast Iron
17. ISO/R 186-1961 Method for Sampling Paper for Testing
[*Corresponds and Substantially agrees with IS : 1060 (Part I)-1956*]
18. ISO/R 187-1961 Method for the Conditioning of Paper and Board Test Samples
[*Corresponds and agrees with IS : 1060 (Part I)-1956*]
19. ISO/R 188-1961 Accelerated Ageing or Simulated Service Tests on Vulcanized Natural or Synthetic Rubber
20. ISO/R 189-1961 Principles of Operation of Standards Marks

*For complete list of ISO Recommendations see p. 155-163 of Handbook of ISI Publications 1962.

APPENDIX E—Contd

ISO RECOMMENDATIONS ISSUED DURING 1961-62

21. ISO/R 193-1961 Microcopies on Transparent Bases. Recommended Bases: Dimensions
22. ISO/R 196-1961 Method of Mercurous Nitrate Test for Copper and Copper Alloys
23. ISO/R 197-1961 Classification on Coppers
24. ISO/R 199-1961 Thrust Ball Bearings with Flat Seats. Normal Tolerances
25. ISO/R 200-1961 Internal Clearance in Unloaded Bearings. Definitions
26. ISO/R 201-1961 Radial Internal Clearance in Unloaded Radial Groove Type Ball Bearings with Cylindrical Bore. Values
27. ISO/R 202-1961 Flattening Test on Steel Tubes
28. ISO/R 203-1961 Interrupted Creep Testing of Steel at Elevated Temperatures
29. ISO/R 204-1961 Non-interrupted Creep Testing of Steel at Elevated Temperatures
30. ISO/R 205-1961 Determination of Proof Stress and Proving Test for Steel at Elevated Temperatures
31. ISO/R 206-1961 Creep Stress Rupture Testing of Steel at Elevated Temperatures
32. ISO/R 207-1961 Composition of 99.95 Unalloyed Magnesium Ingots
33. ISO/R 208-1961 Composition of Aluminium Alloy Castings (Complement to ISO/R 164-1960)
(*Corresponds and Substantially agrees with IS : 202-1960 and IS : 617-1959*)
34. ISO/R 209-1961 Composition of Wrought Products of Aluminium and Aluminium Alloys

APPENDIX F

(See page 124)

IEC PUBLICATIONS ISSUED DURING 1961-62*

1. Pub 34-1:1960 Amendment No. 1 to Publication 34-1 (sixth edition) (1960) — Recommendations for Rotating Electrical Machinery (Excluding Machines for Traction Vehicles) (*Corresponds and agrees with IS : 325-1961*)
2. Pub 48 :1961 Rules for Electric Traction Motors — 4th edition
3. Pub 50 (62):1961 International Electrotechnical Vocabulary, Group 62: Waveguides
4. Pub 64:1961 Tungsten Filament Lamps for General Service — 3rd edition (*Corresponds and substantially agrees with IS : 418-1957*)
5. Pub 78:1961 Characteristic Impedances and Dimensions of Radio-Frequency Coaxial Cables — 2nd edition
6. Pub 81:1961 Tubular Fluorescent Lamps for General Lighting Service — 2nd edition
7. Pub 95-1:1961 Lead-Acid Starter Batteries Part 1: General Requirements and Methods of Test
8. Pub 96-2 :1961 Recommendation for Radio Frequency Cables Part 2: Relevant Cable Specifications
9. Pub 122-1:1962 Quartz Crystal Units for Oscillators
Section One : Standard Values and Conditions
Section Two : Test Condition
10. Pub 122-3:1962 Quartz Crystal Units for Oscillators
Section Four : Standard Outlines
11. Pub 124 :1960 Recommendations for the Rated Impedances and Dimensions of Loudspeakers
12. Pub 125 :1961 General Classification of Ferromagnetic Oxide Materials and Definitions of Terms
13. Pub 126 :1961 I.E.C. Reference Coupler for the Measurement of Hearing Aids Using Earphones Coupled to the Ear by Means of Ear Inserts
14. Pub 127 : 1962 Cartridge Fuse Links for Miniature Fuses
15. Pub 128 :1961 International Code for the Designation of Photographic Projector Lamps
16. Pub 129:1961 Alternating Current Isolators (Disconnectors) and Earthing Switches
17. Pub 133 :1961 Dimensions for Pot-Cores Made of Ferromagnetic Oxides
18. Pub 134 :1961 Rating Systems for Electronic Tubes and Valves and Analogous Semiconductor Devices
19. Pub 135 :1961 Numbering of Electrodes and Designation of Units in Electronic Tubes and Valves
20. Pub 139 :1962 Preparation of Outline Drawings of Oscilloscope and Picture Tubes

*For full list of IEC Publications see p. 165-170 of the Handbook of ISI Publications, 1962.

APPENDIX G
PRINCIPAL OFFICERS
OF
INDIAN STANDARDS INSTITUTION
(As on 31 March 1962)

General Council

President SHRI K. C. REDDY
Minister for Commerce & Industry,
Government of India

Vice-Presidents LALA SHRI RAM
22 Curzon Road,
New Delhi

SHRI Erach A. NADIRSHAH
11 Khatau Mansion, 17 Cooperage,
Bombay

Executive Committee

Chairman LALA SHRI RAM

Finance Committee

Chairman SHRI Erach A. NADIRSHAH

Member Secretary of General Council,
Executive Committee, Finance Com-
mittee, and Director ISI DR. LAL C. VERMAN

Joint Director ISI DR. A. N. GHOSH

*Agricultural and Food Products Division
Council (AFDC)*

Chairman DR. M. S. RANDHAWA
Adviser (Resources), Planning Com-
mission, New Delhi

Vice-Chairman DR. V. SUBRAHMANYAN
Director, Central Food Technological
Research Institute, Mysore

Secretary DR. D. V. KARMARKAR
Deputy Director (Agricultural & Food Pro-
ducts)

Building Division Council (BDC)

Chairman SHRI Erach A. NADIRSHAH
11 Khatau Mansion,
17 Cooperage, Bombay

Vice-Chairman SHRI C. P. MALIK
Director, National Buildings Organi-
sation, New Delhi

Secretary DR. H. C. VISVESVARAYA
Deputy Director (Building)

Chemical Division Council (CDC)

Chairman DR. G. P. KANE
Senior Industrial Adviser,
Development Wing, Ministry of Com-
merce & Industry, New Delhi

Vice-Chairman	SHRI MADHAV B. BHAGVAT Chief Executive Officer (Operations), Tata Chemicals Ltd., Bombay
Secretary	DR. SADGOPAL Deputy Director (Chemical)
<i>Electrotechnical Division Council (ETDC)</i>	
Chairman	VACANT (SHRI M. HAYATH till 1 March 1962)
Vice-Chairman	SHRI B. V. BALIGA Managing Director, Bharat Electronics Ltd., Bangalore
Secretary	SHRI Y. S. VENKATESWARAN Deputy Director (Electrotechnical)
<i>Engineering Division Council (EDC)</i>	
Chairman	SHRI S. L. KIRLOSKAR Kirloskar Oil Engines Ltd., Kirkee, Poona 3
Vice-Chairman	DR. B. D. KALELKAR Senior Industrial Adviser (Eng), Develop- ment Wing, Ministry of Commerce & Industry, New Delhi
Secretary	SHRI M. V. PATANKAR Deputy Director (Engineering)
<i>Structural & Metals Division Council (SMDC)</i>	
Chairman	SHRI J. J. GHANDY Director-in-Charge, Tata Iron & Steel Co. Ltd., Jamshedpur
Vice-Chairman	DR. B. R. NIJHAWAN Director, National Metallurgical Labora- tory (CSIR), Jamshedpur
Secretary	SHRI B. S. KRISHNAMACHAR Deputy Director (Structural & Metals)
<i>Textile Division Council (TDC)</i>	
Chairman	SHRI BHARAT RAM Delhi Cloth & General Mills Co. Ltd., Delhi
Vice-Chairman	DR. T. S. SUBRAMANIAN Director, Ahmedabad Textile Industrys' Research Association, Ahmedabad
Secretary	SHRI MAHARAJ KISHEN Deputy Director (Textile)
<i>Certification Marks Advisory Committee (CMAC)</i>	
Chairman	SHRI PRABHU V. MEHTA Director, Calico Dyeing & Printing Mills Private Ltd., Bombay
Secretary	SHRI C. N. MODAWAL Deputy Director (Marks)

*Advisory Committee on (ACIIS)
Implementation of Indian Standards*

Chairman

SHRI N. E. S. RAGHAVACHARI
Director General, Supplies & Disposals,
Directorate General of Supplies &
Disposals, Parliament Street, New Delhi

Secretary

DR. A. K. GUPTA
Deputy Director (Implementation)

*ISI Industrial Safety Advisory Committee
(ISAC)*

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INDIAN STANDARDS INSTITUTION

GENERAL INFORMATION

Aims and Objects

The Indian Standards Institution (ISI) was set up in 1947, in pursuance of a decision of the Government of India, for the purpose of preparing and promoting national standards for Indian Industry. This decision followed the recommendations of the Industrial Research Planning Committee (1945), and was welcomed by the industry as the fulfilment of a demand, first put forward by the Twelfth Industries Conference held in Lucknow in 1940. The objects of ISI include preparation, promotion and general adoption, at the national and international levels, of standards relating to materials, commodities, structures, practices and operations. ISI aims at assisting in the rationalization of Industry by co-ordinating the efforts of producers and consumers for the improvement of appliances, processes, raw materials and products. It promotes quality control methods, and provides for the registration of Standard Marks applicable to materials, commodities, etc, conforming to standards issued by it.

Organization and Work

The overall control of the Institution rests with the General Council (GC), on which are represented Industry, Central Government, State Governments, scientific organizations, subscribing members and the Division Councils of ISI. The Executive Committee (EC), appointed by GC, is responsible for the actual management of the affairs of the Institution. Financial matters are under the purview of a Finance Committee (FC), similarly appointed. The income of the Institution is derived from Government grants from the Centre; subscription from members, including State Governments; from sale of standards, and from certification mark fees.

In the preparation of standards, ISI functions through a large number of Sectional Committees, Subcommittees and Panels, consisting of scientists, technologists and representatives drawn from industrial, Government, purchase and consumer organizations. These Committees are appointed by EC or the seven Division Councils of ISI, namely, the Agricultural and Food Products Division Council (AFDC), the Building Division Council (BDC), the Chemical Division Council (CDC), the Electrotechnical Division Council (ETDC), the Engineering Division Council (EDC), the Structural and Metals Division Council (SMDC) and the Textile Division Council (TDC).

Proposals for formulating Indian Standards are normally entertained from the members of ISI. Every proposal is scrutinized first by the appropriate Division Council and when approved, the Division

Council assigns the work to the Sectional Committee concerned with the subject, if one exists, or sets up a new committee.

A Sectional Committee is representative of the various interests concerned, but has to be weighted in favour of consumer interest. The Sectional Committees form subcommittees and panels, when required, and instruct them to prepare a working document or a draft on the subject after study of data and literature available on the subject. Where necessary, tests are carried out in collaborating laboratories. After the draft is approved by the Sectional Committee, it is issued in wide circulation for the purpose of eliciting comments, to interested parties in India and abroad. This draft is reconsidered in the light of comments received and, when finalized, becomes a recommendation of the Sectional Committee. It is, then submitted for approval of the Chairman of the Division Council concerned to whom power has been delegated to authorize its publication as an Indian Standard.

A period of one to three years may, therefore, elapse from the date that an item is proposed for standardization to the time when the standard is finally printed.

The bulk of the technical work towards the preparation of standards is done by ISI Committees. The staff in the ISI Directorate co-ordinates the work of these committees, undertakes the necessary secretarial duties, collects and supplies background data, organizes investigations and enquiries, and ensures that delays are avoided and standards appropriately examined at each stage of formulation. Finally, the standards are edited and published by the Directorate. The published standards are brought to the notice of the various indenting and purchase departments of the different Governments, Central and State, to ensure their early adoption.

Implementation

Indian Standards are voluntary, and the membership of the Institution does not involve any compulsion on the part of its members to follow them either in manufacture or in making purchases. However, during the formulation of these standards, all interests concerned with their implementation are taken into confidence with regard to different provisions. Decisions in technical committee are taken by a consensus of opinion, giving due regard to the special requirements of different interests. Such procedures stress the voluntary adoption of national standards formulated through co-operative efforts. Further, persuasive efforts are also made to emphasize the need for their implementation. The Government of India, as well as most of the State Governments have taken policy decisions to follow Indian Standards, wherever available, and to purchase goods manufactured according to the provisions of the relevant Indian Standards.

Conferences on implementation of Indian Standards at State level are held from time to time in different States of the Indian Union. Representatives of various Government departments, local bodies, manufacturers, etc, adopt recommendations at such Conference to implement Indian Standards. Contacts are also established with industry, both in public and private sectors, for implementing Indian Standards in their production programmes. Leading industrialists, realizing the importance of standardization, have taken decisions to implement Indian Standards.

Certification Marking

ISI is operating, under the ISI Certification Marks Act 1952, and the Rules & Regulations framed thereunder, the ISI Certification Marks Scheme. Under the Scheme, licences are granted to manufacturers for the use of ISI Certification Mark in respect of goods manufactured or processed in conformity with the requirements of the relevant Indian Standards published or adopted by ISI. The basic idea of ISI Certification Marking is to convey an assurance to the purchaser that the goods so certified have been inspected, tested and certified by a competent, impartial and independent agency and may be purchased with the guarantee that the requirements of the nationally approved standards of quality have been met with.

The ISI Certification Mark for any product is based on the ISI monogram which is superscribed by the number of the relevant Indian Standard, and subscribed by the grade, if any, of the article marked.

Before granting a licence to a manufacturer, the Institution makes thorough inspection of his factory, machinery and equipment, manufacturing processes and the availability of testing facilities, and satisfies itself completely with regard to the capacity of the factory to produce goods continuously according to Indian Standards. During the operation of the licence, surprise visits are paid to the factory by the technically qualified staff of the Institution and process and records examined. Further, Samples of products are taken at random not only from the factory but also from the open market and put to tests in independent laboratories.

International Co-ordination

The Institution serves national interest at the international level so far as standardization is concerned. Since its inception, ISI has been taking active interest in the work of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) — the two organizations dealing with standardization at the international level. Secretariats of important international committees in which India has vital interests such as mica, lac, spices and condiments, fans, etc, are held by ISI. In addition,

ISI maintains close liaison with the national standards bodies of Commonwealth countries.

ISI also takes active interest at the executive levels of ISO and IEC. It has been for a number of years an elected member of the governing Council of ISO and of the Committee of Action of IEC. The Director of the Institution was the elected Vice-President of ISO from 1949 to 1955.

Membership

Membership of ISI is open to all organizations and persons interested in the objects of ISI. According to ISI Constitution, there are two main categories of membership, namely, Committee Members and Subscribing Members. Committee members are those who serve on any Committee of the Institution. Subscribing Members are of three classes, that is, (a) Sustaining Members, (b) Sustaining Members (Associate), and (c) Ordinary Members. Sustaining membership is generally open to all organizations, companies, firms, Government departments and neighbouring countries, but Associate membership is limited to firms with an annual business turnover of less than Rs 2.5 lacs and professional, scientific, technological and educational institutions. Individuals interested in the work of ISI can join as ordinary members.

Depending upon the class of membership, members have the right to apply for information on standardization both in India and abroad, to give evidence at appropriate technical levels and continually to receive information concerning the development of standards on subjects in which they are interested.

Publications

The Indian Standards Institution has so far issued over 2 000 Indian Standards pertaining to different fields of industrial and commercial activity in the country. A complete list of Indian Standards including brief description of their contents, where necessary, is given in the ISI Handbook of Publications, which ISI issues from time to time. The handbook also includes an exhaustive alphabetical index of all subjects covered by Indian Standards, information relating to ISI Certification Marking Scheme, together with a classified list of manufacturers using ISI Certification Mark; and lists of technical committees as well as publications of the International Organization for Standardization and International Electrotechnical Commission.

The ISI Bulletin, published every two months, contains articles, research papers and other information relating to standardization both in India and abroad. The annual subscription of the Bulletin is Rs 10.00, but it is supplied free of charge to the Institution's members of all categories.

Besides, ISI issues every month a 'STANDARDS NEWS' giving information about the new and revised Indian Standards, amendments and errata published during the preceding month. It also includes similar information about British and other standards for which ISI holds sales agencies.

Standards Consciousness

With a view to creating standards-consciousness among the people and spreading the message of standardization throughout the country, different steps are taken by the Institution from time to time.

Indian Standards Conventions are organized every year in different industrial centres of the country. These Conventions are attended by leaders of industry and commerce; scientists, technological and research workers; Government officers; leading executives both in public and private sectors; and representatives of standards bodies of neighbouring countries. Subjects of topical interest are discussed in different technical sessions held during the Conventions.

Other measures taken to create standards-consciousness and to emphasize the utility of standardization in the context of the developing Indian economy include radio broadcasts; talks and lectures to distinguished gatherings; thought provoking papers, articles, and press notes in daily press and technical journals; participation in different national and international conferences; etc.

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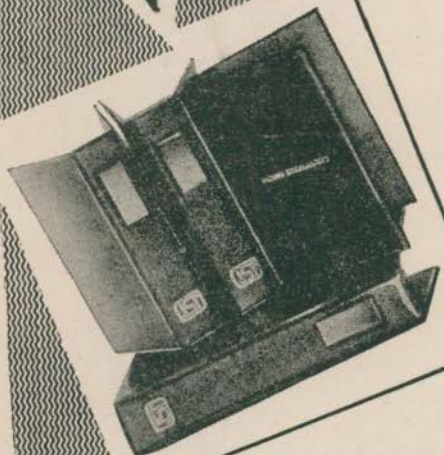
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Binders FOR INDIAN STANDARDS



FOR the convenience of users of Indian Standards, ISI has prepared an improved design of binders for standards in both A4 (210x297 mm) and A5 (148x210 mm) sizes.

These binders consist of stiff covers in black plastic and are provided with durable metallic screws to hold the standards securely.

Each binder can conveniently hold 500 pages.

Price :

A4 size	Rs 6.50 each
A5 size	Rs 4.50 each

(Postage and packing extra)



For enquiry and order, please write to:

INDIAN STANDARDS INSTITUTION
NEW DELHI I

BRANCH OFFICES : BOMBAY • CALCUTTA • KANPUR • MADRAS

Handbook of ISI Publications, 1962

The Handbook of ISI Publications just published is the fifth edition in the series. Compiled in four parts, it reviews 2034 Indian Standards and lists 243 ISO Recommendations and 96 IEC Publications. The fourth edition published in 1959 listed 1334 Indian Standards.

Part I of the Handbook covers ISI Bulletin; Report of the ISI Special Committee on Weights and Measures; Annual Reports; Handbooks for Structural Engineers; Handbook of Quantities, Conversion Factors, Formulæ and Tables; and a numerical and descriptive list of Indian Standards. Titles of 13 Indian Standards, which have been translated into Hindi, Kannada and Tamil are also given.

Part II deals with ISI Certification Marks and gives a brief review of the working of the Certification Marks Scheme. A classified list of the licencees under the scheme, that is manufacturers of goods conforming to Indian Standards and using ISI Certification Marks as on 31 March 1962, is also given.

International standardization which is dealt with in Part III relates to ISI's participation and collaboration in the work of ISO and IEC. Technical committees and publications of the two international organizations are listed. An indication of the nature of agreement between ISO and IEC publications and the corresponding Indian Standards, wherever these exist, is given in the two lists of the international publications. Similar information has also been included in the review of each relevant Indian Standards in Part I. A subject index, provided for quick and easy reference, comprises Part IV.

In a Foreword to the Handbook, Shri K. C. Reddy, President ISI and Union Minister for Commerce and Industry, speaks of the notable progress made by ISI as reflected in the Handbook and commends the publication to the attention of engineers, technologists, manufacturers, trading and purchasing agencies—government and others—and research and technological laboratories.

The Handbook [*Size A5* (148 × 210 mm), p. 233, *Price* Rs. 5.00] is available from the Sales Service of ISI.