

34

ANNUAL REPORT 1980-81



INDIAN STANDARDS INSTITUTION
Manak Bhavan, 9 Bahadur Shah Zafar Marg,
New Delhi-110002

C O N T E N T S

DIRECTOR GENERAL'S REPORT	1
FORMULATION OF STANDARDS	1
CERTIFICATION AND QUALITY ASSURANCE	15
PROMOTIONAL ACTIVITIES	24
Implementation of Indian Standards	24
Interplant Standardization	27
Technical Information Services	28
Public Relations	30
Sale of Standards	30
Publications	31
Periodical Service	31
Progressive Use of Hindi in ISI Work	31
REGIONAL AND BRANCH OFFICES	33
INTERNATIONAL COLLABORATION	47
PLAN PROJECTS	56
PERSONNEL MANAGEMENT	59
FINANCES	63
APPENDIX A	67
Audited Accounts	
APPENDIX B	74
Principal Officers of ISI	

**ISI
REGIONAL
AND
BRANCH
OFFICES**

REGIONAL OFFICES

BOMBAY 400007 3rd Floor, Novelty Chambers, Grant Road (Phone: 3797 29)
CALCUTTA 700054 1/14 C.I.T. Scheme VII M, V.I.P. Road, Maniktola (Phone: 36 23 30)
MADRAS 600020 C. I. T. Campus, Adyar (Phone: 41 24 42, 41 25 19 & 41 29 16)
MOHALI (near Chandigarh) 160051 Industrial Focal Point, SAS Nagar (Punjab)

BRANCH OFFICES

AHMADABAD 380001 Pushpak (3rd Floor), Nurmohamed Shaikh Marg, Khanpur (Phone: 2 09 91)
BANGALORE 560002 'F' Block, Unity Building, Narasimharaja Square (Phone: 2 76 49)
BHOPAL 462093 Gangotri Complex (6th Floor), Bhadbhada Road, T. T. Nagar (Phone: 6 27 16)
BHUBANESHWAR 751014 22E Kalpana Area (Phone: 5 36 27)
HYDERABAD 500001 5-8-56C L. N. Gupta Marg (Nampally Station Road) (Phone: 22 10 63)
JAIPUR 302005 R 14 Yudhister Marg, C Scheme (Phone: 6 98 32)
KANPUR 208005 117/418 B Sarvodaya Nagar (Phone: 4 72 92)
PATNA 800013 Patilputra Industrial Estate (Phone: 6 26 06)
TRIVANDRUM 995001 Hantex Bldg (2nd Floor), Railway Station Road (Phone: 32 27)

while ISI is providing the needed expertise and is bearing the running cost of the service. A similar scheme was under finalization during the year with the Government of Karnataka which is undertaking to construct and make available to the Institution an office-laboratory building at Bangalore and provide the needed capital equipment. Proposals on the same lines are also under consideration of the Governments of Gujarat, Madhya Pradesh and Rajasthan. The Government of Punjab made available a spacious building at Sahibzada Ajit Singh Nagar, Mohali (near Chandigarh), to the Institution for housing its Northern Regional Office and the associated laboratories on rent-free basis.

THE ISI MARK

Regarding the progress made by the ISI Certification Marks Scheme during 1980-81 mention may be made of the grant of 978 new licences covering 310 products. As many as 50 of these products had come under certification marking for the first time. Their range commenced with articles of general consumption like handloom dhoties, wire for office staples and pins, ice-cream cones, fluorescent tubes, synthetic detergent powders and tablets, plastic emulsion paints, etc, and ended with articles of high technology like airconditioners, teleprinter paper rolls and transportation tankers for milk. Under the provisions of the GATT Standards Code, the possibility of making the ISI Mark available to manufacturers in other countries through an amendment to the ISI Certification Marks Act is also under consideration.

FINANCIAL INCENTIVES

To encourage entrepreneurs joining the fold of the ISI Certification Marks Scheme, the Government of Rajasthan announced a 50 percent subsidy up to a maximum of Rs 1 000 to small scale industrial units in the State for meeting their expenses towards application fee, annual licence fee, marking fee and renewal fee for the certification licence. The Government of Kerala came forward to enhance the subsidy to small scale industries from a maximum of Rs 10 000 to a maximum of Rs 25 000 to cover 50 percent of their cost for establishing laboratory facilities for obtaining ISI Certification Marks licence. The State Government is also separately reimbursing 50 percent of the cost incurred by small scale units by way of application fee for ISI Certification Marks licences, renewal fee and marking fee.

New organizations taking policy decisions for procuring ISI-certified goods, where available, included the Public Works Department, Government of Pondicherry; Madras Refineries Ltd, Madras; All India Radio, Madras; Delhi Development Authority, New Delhi; Haryana State Electricity Board; and the Central Public Works Department, New Delhi. The State Bank of Saurashtra, Hyderabad, is the latest among the financial institutions to offer incentives to ISI licensees in the small sector. The incentive comprises relaxation in the margin up to 10 percent for advances towards purchase of testing/quality control equipment costing up to Rs 100 000 and also relaxation in margin up to 10 percent on advances against finished goods bearing the ISI Mark.

DEVELOPING COUNTRIES

As a matter of policy, the Institution is extending assistance to developing nations to give them the needed insight for organizing and properly coordinating their standardization programmes. The assistance includes provision of exclusive facilities for man-power training, deputation of experts, etc. During 1980-81 the Institution, under its International Training Programme in Standardization, provided instructions to as many as 21 standards engineers from 15 developing countries. So far, 13 such programmes have been organized which have received participation from 148 specialists from 37 countries of Asia, Africa and Latin America. Senior officers of the Institution have also been deputed for providing expert assistance to the Governments of Barbados, Ethiopia, Tanzania, Nigeria and Iraq.

THE INTERNATIONAL FRONT

The Institution continued to maintain its position in the international circles of standardization. A direct evidence of this is provided by the election of Director General, ISI as Chairman of the Development Committee (DEVCO) of ISO for the three-year term beginning January 1981. The Director General has also been re-appointed as ISO Regional Liaison Officer for South East Asia-Iran region for another term of three years. The financial constraint compelled the Institution to restrict the number of delegations to meetings held abroad. The country could, however, be represented effectively in important executive and policy-making forums of both ISO and IEC including ISO Council,

ISO Planning Committee (PLACO), DEVCO and IEC Committee of Action. Specialist delegates from India could also be sponsored to take part in some of the technical committees dealing with subjects of particular interest to the country, such as steel sections, petroleum products, coffee, textiles, rubber, thermal insulation, measurement of flow in open channels (like canals and rivers), water quality, freight containers, bicycles, oils and fats, and electric fans.

NEW CHALLENGE

Now that the Institution has entered the era of the eighties, it is facing new and more onerous challenges and responsibilities. The number of standards in force has risen steadily to nearly 11 000 but the fact remains that a large proportion of them is based on the technology of the sixties and the seventies which in many cases is no more relevant. The imperatives of production too have shifted phenomenally. A decade or so ago the main stress in the country was on creation and augmentation of industrial infrastructure for bulk production of goods, maybe of only a serviceable quality, for mass consumption. But now both the producers and the consumers are putting increasing premium on parameters like quality and performance and are indeed calling for tightening of specification limits in standards or, where inevitable, stipulation of more than one quality grade of a product for the same end service. Revision and updating of the concerned standards which is thus called for is indeed a stupendous task. The Institution does look forward to the necessary resources becoming available to it to meet this challenge effectively.

ACKNOWLEDGEMENT

In conclusion, a word of appreciation is owed to the unstinted support and assistance received by the Institution from various quarters - subscribing members of the Institution for their financial contributions; committee members for their expert guidance and counsel during the formulation of standards; and various authorities, institutions and organizations in the public and private sectors for their growing involvement with standardization programmes and patronage to certification marking activity. Needless to say that it is this support and cooperation which determines in main the strength of the Institution for the excelling service it has been providing year after year.

FORMULATION OF STANDARDS

During the year under review, 800 new and revised Indian standards were issued. Amendments were issued to 471 existing Indian standards. Besides, 24 existing Indian standards were withdrawn. Full information regarding total number of Indian standards in force, standards revised and standards withdrawn is given below :

New standards issued during the year	-	448
Standards revised during the year	-	352
Standards withdrawn during the year	-	24
Standards in force as on 31 March 1981	-	10 793
Cumulative total of standards revised up to 31 March 1981	-	3 965
Cumulative total of standards withdrawn up to 31 March 1981	-	500

A department-wise progress of work achieved in different fields of standardization is given in Table 1.

AGRICULTURE AND FOOD PRODUCTS

The 70 standards formulated by the Agricultural and Food Products Division Council covered fields, such as processed foods for export, pesticides, food additives, spices, dairy products, livestock feed, equipment required for post-harvest operations, agricultural machinery and laboratory equipment. The constitution of the following two new Sectional Committees was another noteworthy feature:

AFDC 56 Pesticides Residue Analysis - The limits for different pesticide residues are being stipulated under PFA rules. The Committee which has been constituted by upgrading the corresponding subcommittee will help make available the needed testing procedures expeditiously.

TABLE 1 RECORD OF WORK OF TECHNICAL DIVISIONS AND DEPARTMENTS (FOR THE YEAR 1980-81)

<u>Division or Department</u>	<u>No. of Committees</u>	<u>No. of Meetings</u>	<u>New and Revised Standards Published and Under Print</u>	<u>Amendments to Standards</u>	<u>Draft Stds Circulated</u>	<u>New Subjects Taken up</u>
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Agricultural and Food Products	151	62	70	59	76	12
Chemical	241	110	70	56	59	42
Civil Engineering	328	96	100	44	88	27
Consumer Products and Medical Instruments	100	73	65	56	55	24
Electronics and Telecommunication	74	34	78	12	87	8
Electrotechnical	240	57	70	71	70	18
Marine, Cargo Movement and Packaging	105	36	30	3	33	23
Mechanical Engineering	309	127	140	112	139	95
Petroleum, Coal and Related Products	155	71	54	10	42	-
Structural and Metals	309	79	77	32	64	32
Textiles	116	35	42	15	26	13
Miscellaneous	69	49	4	1	5	6
TOTAL	2 197	829	800	471	744	300

AFDC 57 Sampling Methods for Food Products and Agricultural

Inputs - The Committee will take up formulation of standards relating to sampling for pesticides, fish and fisheries products, green coffee and foodstuffs in general.

Handbook of Food Analysis - The Handbook is being brought out in 15 parts for making available a consolidated publication of methods of analysis for various foods.

Part I of the Handbook comprising general methods has been published. The other fourteen parts under preparation will be covering methods of tests for sugar and honey; edible starches and starch products; foodgrains and foodgrain products; bakery and confectionery, protein-rich foods; spices and condiments; fruits and vegetables; stimulant foods, alcoholic drinks and carbonated beverages; dairy products, meat, fish and poultry; oils and fats, food colours and miscellaneous products.

CHEMICALS

The Chemical Division Council processed 39 new standards and 31 revisions of existing standards for printing. The important subjects dealt with included methods of test for slurry explosives, pyrites for chemical industry, management of solid wastes, activated alumina and guidelines for procurement of hides and skins. The important standard revised included those dealing with paper sizes, stabilized hydrogen peroxide, methods for determination of thermal conductivity of materials and treatment and disposal of effluents from cane sugar, cotton and synthetic textiles and viscose rayon industries.

Among the particularly noteworthy standards, mention may be made of the following :

IS:9620-1980 Guide for Units Used in Air Quality Measurements -

With the promulgation of Air Quality Act, it has become imperative that data on air quality measurement are presented in a uniform manner. The standard, therefore, prescribes the units and symbols to be used

while.....

while reporting the results of measurements made in relation to air pollution both for ambient air quality and emissions.

IS:9563-1980 Carbon Monoxide Filter Self-Rescuers - The Government has decided to supply carbon monoxide filter self-rescuers to all labourers working in mines where hazards could be expected. This standard will help the Government in making bulk purchases and in monitoring the quality of indigenous production.

CIVIL ENGINEERING

Among the 100 new and revised standards formulated, special mention may be made of the following :

Masonry Code - The structural adequacy of masonry walls depends upon a number of factors important among which are quality and strength of masonry units, masonry mortars, workmanship, etc. This Code first published in 1961 and revised in 1969 pertains to structural safety of buildings and lays down structural design requirements to ensure structural safety of masonry walls. The Code has been further revised to incorporate a number of changes as follows :

- a) Mix proportions and compressive strength of mortars has been revised,
- b) Basic compressive strength for masonry has been modified, and
- c) Maximum allowable slenderness ratio for load bearing wall has been increased.

IS:1592-1980 Specification for Asbestos Cement Pressure Pipes (Second Revision) - The specification gives detailed dimensions and requirements for pipes of Class 20 and Class 25 in addition to Class 5, Class 10 and Class 15 specified earlier. The standard also covers the requirements for pipes of diameter 80 to 600 mm for all the 5 classes of pipes instead of 80 to 200 mm as covered earlier. In order to cater to the small scale units manufacturing asbestos cement pressure pipes using mainly monolithic process, a separate Indian standard,

namely, 'IS:9627-1980 Specification for asbestos cement pressure pipes (light duty)' was formulated.

IS:1543-1980 Code of Practice for Pre-stressed Concrete (First Revision) - The revised code unifies the approach to the design of prestressed concrete structures in line with the current technological developments and practices all over the world. The use of limit state method of design has been included.

Cold Weather Concreting - The procedures and precautions to be observed while concreting in cold weather (at temperature 5°C and below) in order to minimize the detrimental effect of cold weather on concrete have been comprehensively covered in 'IS:7861(Part II)-1981 Code of practice for extreme weather concreting: Part II Recommended practice for cold weather concreting' which is a sequel to Part I of the standard covering hot weather concreting [IS:7861(Part I)-1975].

IS:9698-1980 Code of Practice of Low Density Polyethylene Film Lining for Canals - The code (IS:9698-1980) is based on the experience available in the country with regard to use of low density polyethylene lining in the states of Gujarat, Karnataka, Tamil Nadu, Madhya Pradesh, etc. The standard also reflects the extensive investigations and research work carried out by different research institutes in this field.

CONSUMER PRODUCTS AND MEDICAL INSTRUMENTS

In the field of consumer products, particular mention may be made of 'IS:2653-1980 Specification for safety matches in boxes (first revision)'. The revised specification covers quality requirements which include performance of matches in normal as well as in damped condition, their safety, maximum number of defects permissible, etc. Requirements of wax coated paper matches in boxes are also covered.

On the medical side, the important standard formulated included the following :

IS:3236-1980 Specification for Hypodermic Syringes for General Purposes (First Revision) - The specification now covers requirements for

for 30-ml and 100-ml capacity syringes as well. Requirements in regard to interchangeability specified in the earlier edition have been taken out.

IS:9430-1980 Specification for Haemometer Tube - Haemometer tubes are used for haemoglobin measurement for humans. The standard stipulates requirements in regard to material, types of graduations, colour coding of graduations, etc.

IS:9689-1980 Microtome Knives - Microtome knives are mainly used by the pathological laboratories for making slides of the tissues for pathological examination. This standard specifies important dimensions (the cutting edge angle and the tolerances on various dimensions) hardness value, corrosion test and performance tests.

IS:9717-1981 Specification for Trays, Impression, Dental - The specification gives the details of material, shapes and dimensions and the tests for dental impression trays used in obtaining the impression of teeth and jaws. The standard is expected to provide the basis for manufacturing impression trays of specific varieties thereby leading to variety reduction.

ELECTROTECHNICAL

Setting up of a new Sectional Committee to deal with tools for live working was an important highlight. These tools facilitate easy maintenance and repair of energized transmission lines while eliminating costly shut downs of major installations.

Priority areas were also identified for formulation of standards in the field of equipment and accessories needed for transmission of power at 400 kV.

Out of 70 standards sent for printing special mention may be made of the following :

IS:1860-1980 Code of Practice for Installation, Operation and Maintenance of Electric Passenger and Goods Lifts (Second Revision) -

The code is expected to bring in uniformity in the different Lift Acts

and Rules being followed by various states in the country.

IS:9559-1980 Guide for Selection of Electrical and Electronic Equipment for Coal Mines - The standard also provides guidance regarding conditions under which ordinary equipment could be used besides the use of flameproof and the intrinsically safe equipment in mines.

IS:9676-1980 Reference Ambient Temperature for Electrical Equipment - The standard defines the reference ambient temperature for electrical equipment and brings out the relative importance of factors like peak ambient temperature, daily average ambient temperature and yearly average ambient temperature and is based on actual meteorological data for representative locations in India. The standard also provides guidance for calculation of reference ambient temperature when actual conditions for the use of the equipment are different.

IS:9708-1980 Specification for Stock Bridge Vibration Dampers for Overhead Power Lines - Vibration dampers are fitted on overhead lines to damp the aeolian vibrations on conductors. The standard specifies the requirements and tests for stock bridge vibration dampers for two or more resonant frequencies for use on overhead power lines.

ELECTRONICS AND TELECOMMUNICATION

India has become a member of the IEC Quality Assessment System for Electronic Components. In the light of the information received from IEC, adoption of 25°C as reference temperature has been recommended. A panel has also been set up to devise means for expeditious formulation of standards in view of the fast technological changes in this field.

Among the standards processed for printing, special mention may be made of the following :

IS:9501(Parts I and II)-1980 Methods of Measurement of Electrical Characteristics of Microcircuits - The standard covers requirements of microcircuits which are used in every field of electronics. Part I deals with digital microcircuits and Part II covers analogue microcircuits.

The measurements and conditions are so specified as to achieve the required degree of accuracy. Additional test methods, such as pulse methods, have also been given which will give compatible results.

IS:9538-1980 Specification for Electronic Calculators (Non-programmable Type) - The standard deals with general purpose calculators, scientific/engineering calculators, statistical calculators and financial calculators and gives their general operation and other requirements. In view of the fact that the core material is imported, the standard lays importance on functional and durability aspects of the calculators which can be met by proper assembly/production methods.

IS:9593(Part I)-1980 Specification for Plastic Film Dielectric Variable Tuning Capacitors Grade 2: Part I Tests and General Requirements -
The standard which lays down uniform requirements for judging the mechanical, electrical and environmental properties would extend the needed assistance for promoting the quality of tuning capacitors. The individual requirements for various types of tuning capacitors will be covered in subsequent parts.

IS:9692 Guide on Maintainability of Equipment - This guide is being prepared in seven parts and would cover introduction to maintainability; maintainability requirements in specifications and contracts; maintainability programme; test and diagnostic procedures; maintainability design studies; maintainability verification; and collection, analysis and presentation of data related to maintainability.

IS:9702-1980 Specification for Magnetic Tapes for Cassettes for Sound Recording and Reproduction - This standard specifies the general, physical, mechanical and electrical performance requirements for non-perforated magnetic tapes used for sound recording and reproduction and covers domestic as well as commercial tape records (musicassettes). The values of the performance characteristic is based on the findings of the National Physical Laboratory which undertook testing of a

number of samples of cassette tapes - both imported and of indigenous origin, as also the information collected from various manufacturers and consumers.

MARINE, CARGO MOVEMENT AND PACKAGING

Of the 30 standards formulated by the Division Council, the following are considered to be of special interests :

IS:9734-1981 Guidelines for Tests and Trials for Shipboard Air-Conditioning System - The guide will help ensure performance of one of the important systems on modern ships.

Industrial Trucks - In these trucks which operate in industrial premises of both normal and hazardous atmosphere, safety is of prime importance to avoid loss of life or equipment. These aspects have been taken care of by a group of the following four standards including the two which have been updated in accordance with the international requirements :

IS:6305 Safety code for powered industrial trucks

IS:6305 (Part I)-1980 Application, operation and maintenance
(first revision)

IS:6305 (Part II)-1980 Manufacture (first revision)

IS:9099 (Part II)-1980 Performance testing of powered industrial truck working in hazardous area : Part II Electric-battery-powered industrial trucks

IS:9701-1980 Brake performance of powered industrial trucks

IS:9738-1981 Specification for Polyethylene Bags for General Purposes - The specification will help make available bags for packing general consumer goods with adequate physical strength to protect the contents against any damage to the pack in handling.

IS:9503-1980 Packaging of Pesticides - Appropriate packaging of pesticides is an important aspect from marketing as well as operational safety point of view. Specification for aluminium bottles is a partial development in this direction.

MECHANICAL ENGINEERING

As many as 140 standards were finalized for printing and 139 issued in wide circulation. Among these, major interest would attach to 'IS:10000-1980 Methods of tests for internal combustion engines' and 'IS:10005-1980 International system of units (SI) and guide to its use'. IS:10000 is being published in 12 parts, each part covering a particular test method or information related to test method. The standard which takes into account the current international practice, will be complementary to the 'Specification for performance requirements of different types of IC engines'. IS:10005-1980 will provide the needed guidance for a smooth changeover to the use of SI units.

Other noteworthy standards included :

- a) IS:9405-1980 Methods of test for mechanical belt fasteners
- b) IS:9494-1980 Man riding cars used in mines
- c) IS:9542-1980 Horizontal centrifugal monoset pumps for clear, cold fresh water
- d) IS:9574-1980 Technical supply conditions for clamps for leaf springs assemblies
- e) IS:9619-1980 Identification code for shell type needle bearing (including sealed bearing)
- f) IS:9639-1980 Code of practice for visual inspection of newly manufactured low pressure welded steel gas cylinders
- g) IS:9694-1980 Code of practice for the selection, installation, operation and maintenance of horizontal centrifugal pumps for agricultural application (published in four parts)

PETROLEUM, COAL AND RELATED PRODUCTS

Finalization for publication of the 'Indian Standard viscosity, classification of industrial liquid lubricants (IS:9466-1980) was an important development. The standard makes use of a new viscosity classification based on a temperature of 40°C which has been accepted by ISO to meet the immediate need of the petroleum industry for a

uniform ...

uniform classification of liquid petroleum lubricants. Other important standards on greases brought out during the year included 'Specification for calcium copper grease (IS:9136-1980)' and 'Specification for lubricants for wire ropes and fibre cores [IS:9182(Parts I-III)-1979'].

Of the total of 54 standards processed for publication, particular mention may also be made of the following :

IS:1448(P:97)-1980 Methods of Test for Petroleum and Its Products : Thermal Oxidation Stability of Aviation Turbine Fuels (JFTOT Method) -
For the determination of thermal oxidation stability of aviation turbine fuels, a new test procedure, namely, 'Jet Fuel Thermal Oxidation Tester (JFTOT)', has been adopted all over the world, which is much more reliable than the earlier 'CFR Test Method'.

In order to fall in line with the international practice, India has also adopted JFTOT method for its aviation turbine fuels (IS:1571).

IS:9127-1979 Methods for Petrographic Analysis of Coal : Part I Definitions of Terms Relating to Petrographic Analysis of Coal, and Part II Preparation of Coal Samples for Petrographic Analysis -
Petrographic analysis of coal has been recognized internationally as a practical method of studying the genesis, metamorphism and usage of coal as also the properties of the individual blend components of a blended coal. These standards would help in increased understanding and consequently improved utilization of coal for various applications. Parts III and IV of this series would cover (a) determination of the maceral group composition of coal, and (b) microscopical determination of the reflectance of vitrinite, respectively.

Research and Testing

During the period under review, a number of testing and research investigations were carried out including the following:

- a) Development of a suitable method for specific and/or overall migration of the constituents of plastics materials and articles intended to come into contact with foodstuffs;

b) ...

- b) Collaborative testing for determination of creep characteristics of oil and water binding pastes and to study the time limit of demarcation persists of the lipsticks;
- c) Collaborative investigations on ion-exchange resins for attrition characteristics;
- d) Testing of samples of Surma chemically as well as toxicologically; and
- e) Determination of ash, iron and silicon content in calcined petroleum coke - correlation study.

STRUCTURAL AND METALS

Some of the important standards formulated or revised relate to cast CTC segments; heat resisting steels; acceptance standards for ultrasonic inspection of steel castings; test methods for fluid self hardening sand; aluminium tubes for refrigeration purposes; code of practice for coating and wrapping of underground mild steel pipelines; tubular steel poles for overhead power lines; recommendations for fusion welding of carbon and carbon manganese steels; and recommended procedure for repair welding of steel components by aluminic-thermic process. The number of drafts finalized for publication and issued for circulation came to 77 and 64, respectively.

In view of the growing interest in utilization of sponge iron as a raw material for steel making, work was taken in hand for developing the needed standards with the cooperation of the concerned mini-steel plants.

New-Sectional Committee - A new committee, entitled 'Special Alloys Sectional Committee (SADC 33)' was set up to deal with standards for special alloys like nickel, chromium, titanium, iron and cobalt-based alloys to meet the growing demand of the Defence and other specialized users.

TEXTILES

A notable highlight was the publication of 'IS:9648-1980 Requirements of colour fastness of cotton textiles'. The standard gives minimum requirements for colour fastness ratings of mill-made cotton textiles to various agencies, like light, washing, perspiration and rubbing. Particular interest will also attach to 'IS:9517-1980 Specification for polyester blend suiting', and 'IS:9543-1980 Specification for spun polyester sewing thread'. Polyester blend suitings, apart from being popular owing to their elegant appearance, durability, easy to care wear and better finish, have also been accepted as uniform cloth by organized consumers.

The specification for polyester sewing thread covers 18 varieties keeping in view the general end-use of each variety. The need to stitch polyester and its blend with spun polyester sewing thread which has several advantages over the conventional cotton sewing thread can hardly be exaggerated.

In all 42 standards were finalized for publication and 26 issued in wide circulation.

EC COMMITTEES

Documentation Sectional Committee, EC2 - The thirtyfifth meeting of the Documentation Sectional Committee, EC2, was held on 2 March 1981. Three drafts approved for wide circulation dealt with (a) Guide for bibliographic description of different kinds of documents: Data elements and record format for computer based bibliographical data bases, (b) Specification for A6 size microfiche, and (c) Recommendations for international standards serial numbering.

Publications and Graphic Technology Sectional Committee, EC10 - The fifth meeting of the Publications and Graphic Technology Sectional Committee, EC10, was held on 24 September 1980 at which the Indian

Standards Guidelines for presentation of information in Technical manuals (IS:9637-1980) was finalized for printing.

STATISTICS

Among the Indian Standards sent for printing was the first revision of IS:7200 'Presentation of Statistical Data (Part I) Tabulation and Summarization'. Sampling standards were also brought out for products like tyre yarn, tyre cord and tyre cord fabric made from polyamide (IS:4910 Part X); surgical dressing cloth (IS:9710) and continuous filament polyester and polyamide flat yarn (IS:7703 Part IV).

A number of statistical studies were carried out to resolve some of the specific problems of standardization and certification marking including revision of the strength properties of materials like jute fabrics and laminated bags; moisture content and alcohol soluble content of different chemicals; optimum sample size for determination of paper substance; and frequency of testing for certification of products like welding electrodes, steel sheet and strip, etc.

Sampling procedures included in various draft international standards were studied in detail and emendations proposed in a number of cases including those involving determination of moisture content of iron ore; mechanical sampling of coal and coke; sampling of ferro-alloys and of ores of iron, manganese and chromium; and important characteristic of tea including loss of mass at 103°C, ash content and caffeine content.

CERTIFICATION AND QUALITY ASSURANCE

The new licences under the Scheme issued during the year numbered 978 which covered 310 products (5 new). With this the total number of licences granted since the inception of the Scheme rose to 9 611 from 8 635 at the end of last year. Likewise, the number of Indian Standards against which products were certified rose to 1 047 from 997 at the end of last year. Of these, 206 standards relate to consumer items like condensed milk, ice-cream, infant milk food, soluble coffee powder, common salt, tobacco products, laundry soaps, electric irons, hot plates, immersion heaters, mixies, refrigerators, stationery items, sports, goods, etc.

PROGRESS OF THE SCHEME

Lapsed and Operative Licences - During the year, 557 licences lapsed bringing the number of the lapsed licences since the inception of the Scheme to 3 773. The reasons for lapse include unsatisfactory performance of the licensee, closure of the licensee's factory, and the manufacturer not being interested in continuing the licence. The total number of operative licences on 31 March 1981 stood at 5 838 as compared to 5 417 last year. Of these, operation of 535 licences was deferred to enable the licensees to take suitable corrective action. Thus, on 31 March 1981, the number of licences in actual operation was 5 303. The industry-wise and region-wise break up is given in Tables 2 and 3 respectively.

Certification Revenue - The Certification revenue touched the Rs 22.79 million mark registering a growth of 13.96 percent. The value of the goods certified annually is estimated to be of the order of Rs 22 000 millions.

Government of Rajasthan has decided to give a subsidy up to Rs 1 000 to small scale industries for meeting the expenses towards application fee, annual licence fee, marking fee and renewal fee for ISI Certification Marking of their products.

TABLE 2 INDUSTRY-WISE DISTRIBUTION OF CERTIFICATION MARKS LICENCES
(AS ON 31 MARCH 1981)

<u>Sl. No.</u>	<u>Industry</u>	<u>No. of Licences in Operation</u>
(1)	(2)	(3)
i)	Agricultural and food products:	
	a) Food products and food colours	368
	b) Pesticides	1 026
ii)	Chemicals	397
iii)	Civil engineering and plywood:	
	a) Construction materials and other engineering items	410
	b) Plywood panels, battens and metal fittings	186
iv)	Consumer products and medical instruments	148
v)	Electrotechnical including electronics and telecommunication (cables and conductors, flame-proof electrical equipment, electrical motors, etc)	773
vi)	Marine, cargo movement and packaging (containers, packaging materials, etc)	53
vii)	Diesel engines, pumps, LPG cylinders/valves and other mechanical engineering items	332
viii)	Petroleum, coal and related products	194
ix)	Structural and metals:	
	a) Metal products	214
	b) Steel	813
x)	Textile and allied products:	
	a) Jute	225
	b) Textile and textile machinery	164
xi)	Deferred licences	535
	Total	5 838

TABLE 3 REGION-WISE DISTRIBUTION OF CERTIFICATION MARKS LICENCES
(AS ON 31 MARCH 1981)

Sl No.	Region	Branch Office (Areas Covered)	No. of Licences in Operation
(1)	(2)	(3)	(4)
i)	Eastern	a) Calcutta (West Bengal, Assam, Arunachal, Meghalaya, Nagaland and Andamans)	1 215
		b) Patna (Bihar)	161
		c) Bhubaneshwar (Orissa)	13
ii)	Northern	a) Delhi [including states of Haryana (Districts Faridabad, Gurgaon, Rohtak, Sonapat, Mohindergarh and Bhiwani) and Uttar Pradesh (District Ghaziabad, Bullandshahr and Meerut)]	672
		b) Chandigarh [Punjab, Himachal Pradesh, Jammu and Kashmir, Haryana (Districts other than those indicated in Delhi)]	446
		c) Kanpur [Uttar Pradesh (Districts other than those indicated in Delhi)]	252
		d) Jaipur (Rajasthan)	132
		e) Bhopal (Madhya Pradesh)	158

(Continued)

TABLE 3 REGION-WISE DISTRIBUTION OF CERTIFICATION MARKS LICENCES (Contd)

Sl No.	Region	Branch Office (Areas Covered)	No. of Licences in Operation
(1)	(2)	(3)	(4)
iii)	Southern	a) Madras (Tamil Nadu and Pondicherry)	623
		b) Bangalore (Karnataka)	336
		c) Hyderabad (Andhra Pradesh)	256
		d) Trivandrum (Kerala)	125
iv)	Western	a) Bombay (Maharashtra and Goa)	982
		b) Ahmadabad (Gujarat, Daman and Diu)	467
Total			5 838

NEW PRODUCTS COVERED UNDER THE SCHEME

- a) Food and Agriculture - Stainless steel road milk tankers, Azotobacter chroococcum inoculants; Green S food grade; ice-cream cones; and insulated stainless steel milk storage tanks.
- b) Pesticides - Carbendazim (MBC) WDPC; fluchloralin EC; edifenphos EC; fenitrothion, technical; paraquat dichloride salt aqueous solution; methyl parathion DP; and dimethoate, technical.
- c) Civil Engineering, Fire Fighting and Water Services - Steel shelving cabinets (adjustable type); landing valves (internal hydrants), universal branch pipe for fire fighting purposes; injection moulded PVC socket fittings with solvent cement

- joints for water supplies; mild steel sliding door bolts; and steel scaffold fittings.
- d) Chemicals, Soaps and Allied Materials - Synthetic detergent tablets for laundry use; plastic emulsion paints for interior use; paraffin wax for explosive and pyrotechnic industry; and one type carbon paper, type A.
- e) Consumer Products - Non-folding wheel chairs, institutional models; and discs;
- f) Electricals - Carbon brushes for electrical machines; brush materials for carbon brushes for electrical machines; miniature air-circuit breaker for voltages not exceeding 1 000 volts; heavy duty dry batteries; mica insulated heating element; and teleprinter paper rolls.
- g) Mechanical - Evaporative air coolers (desert coolers); POWRAH, room air-conditioners, deep well hand pumps; valves for newly manufactured LPG cylinders of more than 5-litre water capacity; shallow well hand pump; and piston rings for internal combustion engines.
- h) Steel and Metal Products - Cast iron detachable joints for use with AC pressure pipes; steel wire for office staples, pins and clips; ferromolybdenum; stainless steel sheets and coils; forged CMC segments; manual blow pipes for welding and cutting; pressure regulators for gas cylinders used in welding cutting; cold-rolled stainless steel strip

for razor blades, and wrought aluminium and aluminium alloys, bars, rods, tubes and sections for electrical purposes.

- j) Petroleum - Automotive grease, axle oil, shellac jointing or gasket compound; and lubricants for rope dressing in service.

USERS' PREFERENCE FOR ISI CERTIFIED PRODUCTS

- a) Public Works Department, Government of Pondicherry has decided to give preference to ISI certified material.
- b) Madras Refineries Limited, Madras have decided to give preference to ISI certified materials in their purchases.
- c) Director of Agriculture, Government of Karnataka has requested all agencies and firms to manufacture rhizobium inoculants in accordance with the relevant specification (IS:8268-1968) and market the product with ISI Mark.
- d) All India Radio, Madras has intimated that due care should be taken while purchasing electrical and other hardware items that such products bear the ISI Mark and that the necessary clauses are incorporated in the tender schedule.
- e) Delhi Development Authority, Delhi has issued instructions to its various sub-offices to:
- 1) use materials conforming to ISI specifications; and
 - 2) give preference to material carrying ISI Mark.
- f) Haryana State Electricity Board, Chandigarh has issued instructions to all the field officers that the paints bearing the ISI Mark should only be purchased.

ISI LABORATORIES

SAMPLES TESTED AND SPECIFICATIONS COVERED

During the year, ISI laboratories tested 21 087 samples, the value of the testing work executed being estimated at Rs 3 239 216.00. The period also witnessed the laboratories undertaking testing in accordance with 96 new specifications.

INVESTIGATIONAL PROBLEMS

The laboratories took up 42 investigational problems mainly at the instance of technical committees. The list of major investigations handled is as follows:

- a) Testing of hypodermic needles for leakage test with change in bulb dimensions.
- b) Evaluating workmanship, finish and performance of surgical blades with change in carbon percentage.
- c) Evaluating safety pressure relief device in the pressure cookers.
- d) Evaluating thermal efficiency of the prototype LPG stoves.
- e) Evaluating the residue of sieve content of cement paints.
- f) Testing of samples of disinfectant-cum-deodorizer for formulation of Indian Standard.
- g) Testing of waxed paper for confectionary for formulation of Indian Standard.

TRAINING COURSES

Eleven training courses were conducted during the period which received participation from a total of 154 candidates. The programmes imparted instructions in testing of centrifugal pumps (8-10 September 1980), testing of conductors and power cables (15-19 September 1980), testing of diesel engines (6-10 October 1980), testing of electric motors (10-14 November 1980), testing of sphygmomanometers (24-26 November 1980), testing of polyethylene and PVC pipes (26-28 November 1980), testing of stationery items (1-3 December 1980), and physical testing of metals (15-19 December 1980).

Central Laboratory - The Central Laboratories which have so far been functioning in Manakalaya have partly shifted to the new building at Sahibabad Industrial Complex (Ghaziabad). The job of constructing sheds, chemical and mechanical blocks and workshop is more or less complete while the work is in progress for the construction of electrical block. Eventually, a service block and quarters for essential staff will also be added.

Western Regional Office-cum-Laboratory - The WRO Laboratory is presently functioning at the premises which has been provided by the Maharashtra Government in their Industrial Testing Laboratory at Chunna Bhatti at Bombay. The shortage of space has limited its activities to testing of a new items like chemicals, pesticides, electrical cables, etc. The construction work of the new three storeyed office-cum-laboratory building at Bombay is nearing completion.

Eastern Region Office-cum-Laboratory - ERO Laboratory is presently equipped to test steel, timber products, jute, chemicals, light engineering items and cables, and its expansion was being hampered because of limited space available. With the new

five-storey ...

five-storey laboratory-cum-office building having been completed during the year, it will be now possible to take up the additional work load of testing.

Southern Regional Office-cum-Laboratory - The SRO Laboratory is working at its three-storeyed office-cum-laboratory building. The laboratory has been equipped to test domestic electrical appliances, diesel engines, cables, conductors, electrical wiring accessories, pesticides, inks, light mechanical engineering items and physical testing and metal analysis.

Patna Branch Office-cum-Laboratory - The PBO Laboratory has started functioning in the PBO Office-cum-laboratory building transferred to it by the Government of Bihar. This laboratory is presently testing diesel engines, paraffin wax, pesticides, paints and leather in addition to physical testing of materials according to relevant IS specifications. This laboratory will also be extending service to the industries for training and promotion of quality control.

Office-cum-Laboratory Building at Chandigarh - The office-cum-laboratory building at Sahibzada Ajit Singh Nagar, Mohali (Chandigarh) has been built by the Government of Punjab. Action is being taken for equipping the laboratory with the needed testing equipment.

PROMOTIONAL ACTIVITIES

CREATING STANDARDS CONSCIOUSNESS

With a view to promoting increased standards consciousness among different sectors of economy, the Institution continued to intensify its efforts towards making the best use of various media of mass communication. The press was increasingly utilized for projecting the work of the Institution through press releases, press interviews, display advertisements, special supplements, etc. A number of talks, discussions, interviews and features were specially broadcast by different stations of All India Radio apart from coverage of important events in the news bulletins and newsreels. Radio spots were also broadcast over the Commercial Broadcasting Service of AIR. The Delhi TV Centre telecast quite a few feature programmes projecting different aspects of the work of the Institution, besides covering special functions and other significant events. The Institution also participated actively in a number of important exhibitions including:

- a) International Textile Machinery Exhibition at Bombay;
- b) International Exhibition of Ultrasonics at New Delhi; and
- c) All-India Ideal Home Exhibition at Madras.

IMPLEMENTATION OF INDIAN STANDARDS

Among the important highlights, mention may be made of the decisions taken by a number of organizations (see Table 4) to implement the provisions of various standards in their respective production/procurement programmes

TABLE 4 DIRECTIVES FOR IMPLEMENTATION OF STANDARDS

<u>Organization</u>	<u>Subject/Product</u>	<u>Directives/Decisions</u>
1) Tuticorin Port Trust, Tuticorin	Ventilation	To implement the provisions contained in the relevant Indian Standards in the port, wherever applicable
2) Tamil Nadu Warehousing Corporation, Madras	Fire extinguishers	To insist always upon the ISI Mark on the goods at the time of purchase
3) Bombay Port Trust, Bombay	Ropes, gunny bags, etc	To follow the Indian standard specifications as far as possible in the future purchase of items
4) Central Public Works Department, New Delhi	Builders' hardware	To use only those products in future which bear the ISI Mark
5) Delhi Development Authority, Delhi	Builders' hardware	To give preference for purchase of materials bearing ISI Mark
6) Directorate of Health Services, Maharashtra State, Bombay	Eye surgery instruments	To implement the Indian standards in manufacturing, purchasing, testing and inspection programmes
7) Medical, Health and Family Welfare Services, Uttar Pradesh, Lucknow	Electro-medical equipment	To specify the relevant Indian Standard specifications on electro-medical equipment during future procurements
8) State Bank of Saurashtra, Hyderabad	ISI-certified goods	To offer the following relaxations to small scale industrial units resorting to ISI certification marking : i) Relaxation in margin up to 10 percent for purchase of testing/quality control equipment up to a maximum limit of Rs 100 000.00 subject to a certificate from ISI that the equipment is needed essentially for introducing/improving the quality control (Contd)

<u>Organization</u>	<u>Subject/Product</u>	<u>Directives/Decisions</u>
		ii) Relaxation in margin up to 10 percent on finished goods bearing ISI Mark
9) Tamil Nadu Housing Board, Madras	ISI-certified goods	To insist on ISI-Marked products in all the tenders
10) Industries Department, Government of Rajasthan	ISI-certified goods	To offer subsidy to small scale industries for registration with ISI to obtain the ISI Mark

Conference on Implementation of Indian Standards

ISI, in collaboration with Directorate of Industries, Andhra Pradesh, organized the second 'Andhra Pradesh State Conference on Implementation of Indian Standards' during 1 - 2 May 1980 at Hyderabad. The Conference attracted 200 delegates representing purchasing agencies, industrial establishments, research institutions and autonomous corporations of the State.

The recommendations of the Conference covered the following points :

- a) Establishment of a standards monitoring committee by the State Government to review the position of implementation of Indian standards.
- b) Creation of standards cells in major purchasing departments.
- c) Provision of financial assistance for procurement of testing equipment by small scale units for quality assessment and ensuring that the new projects include adequate provisions for equipment for quality control purposes.
- d) Request to the Government of India for introducing in a phased manner compulsory quality certification of basic raw materials,

such ...

such as PVC components and aluminium rods required by small scale industries for manufacturing quality products.

- e) Allocation of scarce raw materials for small scale units operating the ISI Certification Marks Scheme for the products for which the raw material is required.

The Institution also took active part in a number of important conferences, conventions, symposia, seminars, etc, held in various parts of the country details of which are given separately under the activity reports of the concerned regional and branch offices.

INTERPLANT STANDARDIZATION

Interplant Standardization in Steel Industry (IPSS)

The highlights of this on-going project during the year under review were :

- a) At the request of the Steel Authority of India Limited (SAIL), ISI agreed to set up a full-fledged IPSS Secretariat in ISI; the detailed proposals for this made by ISI have also been agreed to by SAIL. A full-fledged IPSS Secretariat would start functioning from 1 April 1981; all expenses in this connection including the salaries of the officers and staff would be reimbursed by SAIL.
- b) Five documents pertaining to valves, pumps, circuit breakers and dc mill/crane motors were approved for printing.
- c) Nineteen technical committee meetings were held in which about 20 draft interplant standards were processed through various stages.
- d) The Fourth Workshop on Interplant Standardization in Steel Industry was organized at Bumpur on 15 January 1981 in which engineers and executives of the Indian Iron and Steel

Company Limited (IISCO) participated in large numbers. The objectives of this programme were to promote improved understanding of the role of interplant standards and their benefits to the steel industry, and thus motivating technical personnel of IISCO to contribute effectively in the formulation and implementation of interplant standards.

TECHNICAL INFORMATION SERVICES

Computer Terminal

Data bank for classified information on Indian and overseas standards was created which is being suitably tapped for retrieval of information in bibliographical form. Current information received in the ISI Library is also being processed and regularly published through the 'Standards Worldover - Monthly Additions'.

Another data bank has been organized to cover different aspects of the certification marking scheme including management of decentralized revenue assessment and collection. This data bank is aimed at providing up-to-date and timely information about various aspects of certification marking activity for efficient management, coordination and control of the Scheme.

The Computer Cell also undertook a number of other activities including statistical analysis of a large volume of data on jute bags; designing of stock card system for managing stocks of Indian Standards in distribution section; scientific computation work for standards development involving complicated mathematical formulae, for example, generation of tables for sectional properties of unequal leg angles (metric series) (revision of IS:800); steam tables; conversion factors and tables for power adjustment factor Alpha for IS:1600, 1601, 1602 and 1603; and conversion tables for units used in the field of civil engineering.

Educational Programmes

A programme on utilization of Indian Standards in the field of Home Science Education was held at the SVT College of Home Science, Bombay. Forty faculty members from seven institutions and 20 officials of the Government of Maharashtra and other departments participated in it. Another programme on educational utilization of Indian Standards in the field of agriculture and food products was held at Korala Agricultural University, Trichur during 24-25 September 1980.

The significance of utilization of Indian Standards in the teaching curricula of various vocational trades was brought home to the participants in the all-India meeting of the National Council for Training of Vocational Trades (NCTVT) organized by the Directorate General of Employment and Training in New Delhi.

Technical Inquiry Service

Apart from attending to individual technical enquiries relating to Indian and overseas standards, exhaustive lists of standards covering the following subject fields were compiled and circulated:

- a) Indian Standards for Automobile Industry;
- b) Indian Standards on Safety - standards dealing with occupational and hazard wise safety aspects as well as personal protective equipment for industrial workers; and
- c) Indian Standards for Instruments and Accessories for Electronics Industry.

ISI Library

✓ During the year, the Library at the Headquarters received and processed 24 061 standards and other technical publications, and compiled 50 bibliographies. The number of visitors served was 3 652 and the number of publications loaned came to 17 414.

An important service started by the Library was the publication of a monthly periodical 'Standards Worldover - Monthly Additions' which lists the latest publications of different standards bodies received by the Institution. The periodical has been well received as evidenced from the increasing number of its paid subscribers which has made it a self-supporting venture. ✓

PUBLIC RELATIONS

The number of subscribing members of the Institution increased from 5 891 as on 31 March 1980 to 6 084 as on 31 March 1981 representing an increase of 193 members. Also, the revenue from subscribing members during 1980-81 amounted to Rs 4.56 million as against Rs 4.29 million during the preceding year.

The position regarding different categories of membership as on 31 March 1980 and 31 March 1981 is given in Table 5.

TABLE 5 DISTRIBUTION OF SUBSCRIBING MEMBERSHIP

<u>Class of Membership</u>	<u>Number of Members as on</u>	
	31 March 1980	31 March 1981
(1)	(2)	(3)
Patrons	17	19
Donor Members	58	74
Sustaining Members	1 818	1 875
Associate Members	2 169	2 258
Ordinary Members	1 530	1 582
Individual Members	299	276

Sale of Standards

The revenue from sale of Indian standards registered an increase of 11 percent over the previous year's figures. In addition, overseas standards ...

standards worth Rs 2.4 million were made available to interested parties. The relevant figures are given in Table 6.

TABLE 6 SALE OF INDIAN AND OVERSEAS STANDARDS

	1979-80 Rs	1980-81 Rs	Percent Increase
Indian Standards	3 559 049	3 963 560	11
Overseas standards	2 002 078	2 431 364	21
Commission earned on the sale of over- seas standards	667 000	810 000	21

During the year under report, Indian Standards were sold to parties in America, Australia, France, Iraq, Japan, Sri Lanka, UK, West Germany, etc.

PUBLICATIONS

During the year under review, 902 new and revised Indian Standards were printed and 671 Indian Standards were reprinted to replenish the stocks. Other important publications printed included Handbook of Food Analysis: Part I; Design Aids for Reinforced Concrete to IS:456-1978; ISI Buyers' Guide and ISI Handbook 1980.

PERIODICAL SERVICE

The two existing periodicals, namely, ISI Bulletin and Standards; Monthly Additions were issued regularly. In addition, two new periodicals - the quarterly Hindi Manakdoot and a monthly publication Standards Worldover: Monthly Additions - commenced publication.

PROGRESSIVE USE OF HINDI IN ISI WORK

An outstanding achievement was the release of a quarterly Hindi periodical 'Manakdoot'. The journal commenced publication in July 1980

and is serving as a useful channel for disseminating the message of standardization through the medium of Hindi.

A number of staff members were trained in Hindi language, Hindi typewriting and Hindi stenography under the Hindi Teaching Scheme. A large number of documents were issued comprising CMD notifications, certification marks licences, circular letters, general orders, memoranda, letters, advertisements, press communiques, notices, etc, bilingually in Hindi and English.

The Official Languages Implementation Committee of the Institution held three meetings during the year to review the work done and also to provide guidance on important issues. A workshop for ISI employees on noting and drafting in Hindi was organized during 5 January-11 February 1981 which received participation from 20 employees.

The Third Parliamentary Official Languages Subcommittee visited the Institution on 17 April 1980 to inspect the use of Hindi in ISI as prescribed in the Official Languages Act and Official Languages Rules 1976 framed thereunder. The visit led to the gearing up of the implementation programme for the use of Hindi in day-to-day work of ISI.

Two Indian Standards, namely, 'IS:2052-1968 Compounded feeds for cattle (first revision)'; and 'IS:4512-1967 Footwear lasts (wooden) (first revision)' were translated into Hindi and printed during the year. Hindi translations of two more Indian Standards - specification for safety matches in boxes and code of practice for operation, preventive maintenance and installation of combine harvesters are at different stages of processing.

REGIONAL AND BRANCH OFFICES

The Institution's network of 4 regional offices, 10 branch offices and 13 inspection offices spread all over the country continued to exert effectively to provide on the spot service in quality control to various sections of industry and technology. As a result, considerable progress was achieved in regard to activities like implementation of standards, certification marking, enrolment of new members, sale of publications and wider dissemination of information about standards and standardization. The highlights of the activity of the individual offices are briefly reviewed as follows:

EASTERN REGION

The five-storey Office-cum-Laboratory complex constructed at a cost of Rs 3.2 million with a covered area of 24 000 sq m was formally inaugurated by Dr Kanailal Bhattacharya, Minister-in-Charge of Commerce & Industry, Government of West Bengal, on 21 February 1981. Shri Braja Mohan Mohanty, Union Deputy Minister for Civil Supplies and Co-operation, presided over the function. The building was constructed by the State PWD which had waived the supervision charges amounting to Rs 0.4 million. Rs 2.6 million of the total cost was received as grant from the Government of India and the bulk of the remaining Rs 0.6 million was received from the industrial and business establishments of the region as donation.

To consolidate the gains, increasing emphasis was laid on implementation of standards in selective areas through group discussions, seminars, conferences, technical meetings sponsored in collaboration with the various techno-commercial/trade associations. These activities led to improved appreciation of the usefulness of standards and importance of their implementation in manufacturing and purchasing programmes.

Celebration of the All India Consumers' Week from 1-7 April 1980 in association with other Central and State Government agencies created popular enthusiasm about the activities of the Institution. The programme included popular lectures to the teachers and the students of a number of degree colleges. All India Radio, Calcutta Station, broadcast a number of talks on consumerism and gave spot publicity through well-chosen slogans.

The Regional Office put up a pavilion in the Calcutta Book Fair - 1981 from 30 January to 10 February 1981 which was visited by as many as 10 000 people. Besides the ISI publications, the pavilion had on display a number of graphs and charts illustrating the activities of the Institution and significance of standards.

A number of meetings to review the performance of the licensees for a product or group of products were held to streamline the system where called for. The third review meeting of the tea-chest metal fittings held on 7 July 1980, the thirteenth review meeting of the plywood panel held on 15 September 1980 and the first review meeting of the carbon paper held on 31 January 1981 were of special importance. Each of the review meetings identified a number of problems and recommended measures for more effective operation of ISI Certification Marks Scheme.

Bhubaneswar

In collaboration with the Directorate of Export Promotion and Marketing, the Branch Office organized a Quality Control Seminar at Rourkela which was attended by a large number of industrialists in the State.

Another Seminar on Standardization as a Discipline was organized in collaboration with the Institution of Engineers. An exposition of Standards was also arranged during this occasion.

Spot surveys of the industrial estates at Bhubaneswar and Balasore were carried out. Individual units in these industrial estates were informed about Indian Standards for the products manufactured by them and also the importance of ISI Certification Marks Scheme.

Patna

First ISI Certification Marks licences were granted for POWRAH, wire rope lubricant and axle oil. The Laboratory of the Branch Office which started functioning from June 1980 is equipped to undertake testing of products like steel (physical properties like tensile strength, elongation, etc), mild steel wire, diesel engines (up to 6 kW), pesticides, biscuits, chewing tobacco (zarda), etc.

Active participation with the work of the State level Research, Design and Development Committee was maintained throughout the year.

A programme for quality improvement in cement flooring tiles was approved with the objective of bringing the cement flooring tiles manufacturing units under the ISI Certification Marks Scheme.

Efforts on the front of implementation led to the decision of the Police Department, Public Health Engineering Department and PWD to adopt Indian Standards in place of departmental specifications.

WESTERN REGION

Commendable progress was made in regard to the construction of the new building of the Western Regional Office -cum-Laboratory Complex which is expected to be ready for occupation by July 1981. The project is estimated to cost Rs 5.4 million out of which Government of India has given a grant of Rs 4.4 million. The donations received in the building fund amounted to Rs 836 859.29 as on 31 March 1981.

Licences for the following 9 new products were granted during the year / under the ISI Certification Marks Scheme:

- a) Ferromolybdenum
- b) Evaporative air coolers
- c) Steelwire for office staples, pins and clips
- d) Stainless steel sheets and coils
- e) Green S, Food grade
- f) Mica insulated heating element
- g) Carbendazim (MBC) / ^{WDP}
- h) Fluchloralin EC
- j) Azotabacter Chroococcum inoculants

Ahmadabad

Keeping in view the steady increase in the activities of the Institution in State, it has been agreed by the Government of Gujarat to provide land and building to ISI for setting up an office-cum-laboratory complex in Ahmadabad.

A four-day Training Programme in Statistical Quality Control for Diesel Engines was organized at Rajkot from 24-27 September 1980. The programme which aimed at assisting the manufacturers in improving and maintaining quality of their products was attended by 40 participants.

New products brought under the ISI Certification Marks Scheme included milk bottles, clinical thermometers and ice-cream.

NORTHERN REGION

The Northern Regional Office which came to be established in the preceding year continued to provide effective service through the Branch Offices located at Bhopal, Chandigarh, Jaipur and Kanpur as also the facilities available to it from the Headquarters. Plans and programmes were finalized for shifting the Northern Regional Office to Chandigarh which was expected to take place by July 1981.

The products covered under the ISI Certification Marks Scheme for the first time included the following:

Discus (IS:4142); Plastic emulsion paint (IS:5411); Room air conditioners (IS:1391); Valves for newly manufactured cylinders [IS:8737 (Part II)]; Teleprinter paper page rolls (IS:9031); One time carbon paper type A (IS:9055); and Automotive grease, grade II (IS:506).

Bhopal

The Branch Office continued to be associated with the Panel formed by the Government of Madhya Pradesh for expansion and establishment of new laboratories. Negotiations with the State Government for acquiring a plot of land for the construction of the building of Branch Office were continued.

The Branch Office participated in the 'National Book Festival', organized by the National Book Trust, India from 26 October 1980 to 2 November 1980 at Indore.

The State Government through its Directorate of Industries expressed keen interest for implementation of Electrical Appliances Control Order, in the State with the help of ISI. An exhaustive list of the needed testing equipment has been made available to the Directorate.

Chandigarh

The Branch Office continued to maintain a close liaison with the Departments of Industries of the States of Punjab, Himachal Pradesh, Jammu and Kashmir and Haryana. Full cooperation was extended to the Department of Industries, Government of Punjab in regard to the implementation of Household Electrical Appliances Control Order.

The Branch Office took active part in joint visits organized by the Export Inspection Council for assessment of the export worthiness of the various manufacturing units located in Punjab.

A Conference on Standardization of Surgical Instrument and Bio-Medical Equipment was held in October 1980 at Jullundur. The Conference helped generate substantial interest in the activities of the Institution, particularly in the field of formulation of standards for surgical instruments and bio-medical equipment.

With a view to improving upon the operation of the activities concerning certification of tea chest battens, a review meeting of the licensees was organized in August 1980.

New products covered under the ISI Certification Marks included XLPE cables [IS:7098 (Part II)-1973]; Miniature air-break circuit-breakers for voltages not exceeding 1 000 volts (IS:8828-1978); CI steps for manholes (IS:5455-1969); Underground fire hydrants, sluice valve type (IS:909-1975); Diesel engines (IS:1601-1960); and Portland pozzolana cement (IS:1489-1976).

Jaipur

A plot of land measuring 3 000 sq m for the construction of office-cum-laboratory complex building of the Branch Office in Vishwakarma Industrial Area, Jaipur has been offered by the Government of Rajasthan at concessional rate.

During the year, the Directorate of Industries, Government of Rajasthan decided to give a subsidy up to Rs 1 000.00 to small scale industries for meeting the expenses towards application fee, annual licence fee, marking fee and renewal fee for ISI Certification Marking of their products.

The Branch Office participated in the 10th National Book Fair held at Jaipur from 2-11 January 1981 where a number of Indian Standards were put on display.

Kanpur

The Branch Office collaborated actively with the State Technical Committee for Diesel Engines constituted under the chairmanship of the Agricultural Production Commissioner for formulating guidelines

relating to selection of pump sets, electrical and diesel powered, bank to be supplied against/loans to the farmers. Active liaison was also maintained with the Research, Design and Development Committee set up by the Small Industries Service Institute to deal with the problems faced by the industries in the State. The Committee, at its meeting held on 20 August 1980, has advised that the necessary approval should be obtained by the Madan Mohan Malviya Engineering College, Gorakhpur, from ISI for augmenting facilities for testing of diesel engines in the State.

A Quality Control Training Programme for the benefit of applicants and licensees of diesel engines was organized at Agra during 27-29 August 1980. An exposition of standards relating to diesel engines, SQC techniques and foundry industry was also organized on this occasion.

The Committee for the Foundry Testing Development Laboratory met in Agra on 25 February 1981 to take stock of the progress achieved by it. A time bound programme for the development of testing facilities and training of personnel has been suggested so that costly equipment could be properly utilized and common testing facility made available for other physical and chemical tests for small scale industries involved in casting and other foundry jobs.

SOUTHERN REGION

Among the new products covered under the ISI Certification Marks Scheme in Tamil Nadu mention may be made of tower-bolts, ceiling-roses, fluorescent tubes, injection moulded PVC socket fittings, mild steel drums, etc. Special mention may be made of the following items

which ...

which have been covered by the ISI Mark for the first time in India:

- a) Storage milk tank,
- b) Transport milk tankers,
- c) Steel pipe flanges,
- d) Wax coated match sticks, and
- e) Gasket compound for shellac jointing.

First licence on all India basis was also granted for handloom cotton dhoties conforming to IS:748-1970. At a specially organized function on 30 March 1981, the first ISI-certified dhoti was handed over by Shri S. Thirunavakarasu, Minister of Industries, Government of Tamil Nadu to Shri R.M. Veerappan, Minister of Information and Hindu Religious Endowments.

An extensive drive for bringing small scale manufacturers of surgical cotton, bandage cloth and gauze under the fold of ISI Certification Marks Scheme has been initiated. It is expected a number of small scale units will come forward for certification of these items.

Efforts were pursued with the Industries Department for effective implementation of the existing Government Order for giving price preference to ISI-marked goods. Two Review and Orientation Programmes were organized for licensees in the field of grey cotton yarn (Salem, 7-8 May 1980) and cotton vests (Tiripur - 16 July 1980). Training programmes were also organized for testing of pesticides, cotton vests, pressure cookers and dhoties.

The Regional Office took part in the following exhibitions:

<u>Place</u>	<u>Particulars</u>	<u>Date</u>
Coimbatore	Government Exhibition	30 March-19 May 1980
Neyveli	Seminar on Residential Buildings	27 July 1980
Coimbatore	Consumer Guidance Exhibition	13-17 October 1980
Madras	Science Sammelan Exhibition	27-30 December 1980
	All India Ideal Home Exhibition	25 December-4 January 1981
	International Leather Fair	31 January-4 February 1981

Bangalore

ISI Laboratory-cum-Administrative Office - The Government of Karnataka has allotted 1.2 hectares of land in the Peenya Industrial Estate for setting up a composite testing laboratory-cum-administrative office and has earmarked Rs 3.5 million for building and equipment.

Issuance of Government Circular - The Additional Secretary, Department of Industries and Commerce, Government of Karnataka issued a circular letter to the state undertakings to support standardization activity by enrolling themselves as sustaining members of ISI which led to 12 public sector undertakings of the Government of Karnataka enrolled as sustaining members.

Under the ISI Certification Marks Scheme, licences were issued for the following products for the first time:

- a) Synthetic detergent tablets for laundry use;
- b) Synthetic detergent powder for household use;

c) Titanium ...

- c) Titanium dioxide, food grade;
- d) Methyl parathion dusting powders; and
- e) Deep well hand pumps.

The following products were brought under certification for the first time in Karnataka:

- a) Chlorpyrifos EC,
- b) Azotobacter chroococcum inoculants,
- c) Cotton belting duck,
- d) Milk powder,
- e) High speed tool steels, and
- f) Winding wires.

Special Inspections - The Branch Office conducted inspections of electric motors on behalf of the Canadian Standards Association, and printed circuits boards and electric relays on behalf of the Under Writers Laboratories, USA. Also preshipment inspection of aluminium phosphide tablet formulations with ISI-Mark and aluminium phosphide pellet formulations without ISI Mark were carried out.

Promotional Activities - Active assistance was provided to the Department of Rural Development, Government of Karnataka, to locate suitable manufacturers of deep well hand pumps, willing to supply the pumps with ISI Certification Mark. In this connection, necessary technical assistance was also given to the concerned parties. Needed assistance was also rendered to the Inspector General of Police and the officials of the police department of the Government of Karnataka, for procurement of helmets conforming to relevant Indian Standard for police force.

A 'Workshop on Standardization and Quality Control in Food Industry with Particular Reference to Small Scale Sector' was co-sponsored with the Association of Food Scientists and Technologists,

Bangalore Chapter which was held on 2 November 1980. Shri G.B. Shankar Rao, Education Minister of the Government of Karnataka inaugurated the Workshop.

Among the other noteworthy seminars, conferences, exhibitions, etc, in which the Branch Office participated actively, mention may be made of the following:

- a) Food Adulteration and ISI Certification (16 April 1980) organized by Family Planning Association of India;
- b) Open House Discussion on Modernization of Readymade Garments organized by Small Industries Service Institute (SISI), Bangalore (23 June 1980);
- c) Mysore Dasara Exhibition 1980 (9 October to 7 December 1980);
and
- d) Buyer-Seller Meet and Industrial Exhibition (10-18 January 1981).

Hyderabad

Second Andhra Pradesh State Conference on Implementation of Indian Standards was held during 1-2 May 1980. The Conference was inaugurated by Shri A. Veerappa, Minister for Small Scale Industries and Fisheries, Government of Andhra Pradesh. The objectives of the Conference which comprised of a General Session and three Technical Sessions on civil engineering, consumer products and electrical engineering were highlighted by Dr A.K. Gupta.

For spreading the message of standardization and quality control, the Branch Office took part in a number of conferences, seminars, workshops, etc, among which special mention may be made of the following:

- a) Seminar on 'Quality Control of Dairy Products' organized by the Indian Dairy Association (Southern Headquarters) in collaboration with AP Dairy Development Corporation;

- b) Meetings of AP Federation of Chambers of Commerce and Industries;
- c) Meetings of Consumer Guidance Society of India (Hyderabad Branch);
- d) Diamond Jubilee Celebration of the Institution of Engineers (Hyderabad Chapter);
- e) Panel discussion on 'ISI Standards for Electronics';
- f) Workshop for 'Modernization of Graphite Crucibles' sponsored by Small Industries Service Institute, National Metallurgical Laboratories, Graphite Crucibles Manufacturers Association and Directorate of Industries (AP);
- g) Workshop on 'Quality Assurance' organized by the Association of Indian Engineering Industries;
- h) 'Buyers and Sellers Meet' organized by Small Industries Service Institute, Hyderabad;
- j) Clinic on 'Steel Furniture' organized by Small Industries Service Institute, Hyderabad; and
- k) Seminar on 'Automatic Test Equipment'.

Expositions of Indian Standards and certified products were also arranged in some of the seminars/conferences. In addition, stalls were put up at a number of important exhibitions including the following:

- a) Exhibition organized by the Institution of Engineers (Hyderabad Chapter);
- b) Krishna Pushkaram Fair at Vijayawada; and
- c) Exposition of Safety Standards organized by the National Safety Council, AP (Chapter).

Licences to use ISI Mark had been granted for the first time

on all India basis for the following products:

- a) Steel shelving cabinets,
- b) Heavy duty batteries, and
- c) Ice cream cones.

The following products were brought under the ISI Certification Marks Scheme for the first time in the State:

Zinc sulphate, plywood for concrete shuttering work, thermometers, paraffin wax, barium carbonate, cold rolled strips, laminated jute bags, steel window section, processed cheese, wrought aluminium and aluminium alloys, and phenyl mercury.

Trivandrum

The Government of Kerala enhanced the subsidy to small scale industries from Rs 10 000 to Rs 25 000 for establishing laboratory facilities for obtaining ISI Certification Mark licences. The Government is also committed to reimburse 50 percent of the total cost incurred by a small scale unit by way of application fee for ISI Certification Marks licence, renewal fee and marking fee.

Among symposia, seminars, workshops, etc, in which the Branch Office participated actively, mention may be made of the following:

- a) 'Workshop on Fasteners for Aerospace Application' convened jointly by the Hindustan Aeronauticals Limited, Bangalore and Vikram Sarabhai Space Centre, Trivandrum;
- b) 'Seminar on Improvements Through Quality and Reliability' organized by the Indian Association for Quality and Reliability at Trivandrum;

c) ...

- c) 'Seminar on Food Adulteration' organized by the Association of Food Scientists and Technologists; and
- d) 'Seminar on Standardization and Quality Control for Small Scale Industries' organized jointly by the Directorate of Industries, Kerala and ISI at Ernakulam.

INTERNATIONAL ...

INTERNATIONAL COLLABORATION

The Institution continued to collaborate activity with International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) in their task of developing international standards. The highlight of the year included appointment of Dr A.K. Gupta, Director General, ISI as Chairman of DEVCO for the term 1981-83 and also his reappointment as ISO Regional Liaison Officer for South Asia-Iran Region for the same three-year term (1981-83).

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)

ISO Council - Thirtyfourth meeting of the ISO Council held from 17-19 September 1980 was attended by a three-member Indian delegation led by Shri D.C. Kothari, Vice-President, ISI. Discussions at this meeting related mainly to the strengthening of the representation of developing countries on ISO Council, acceptance of the ISO Development Work Programme for 1981-82 which aims at strengthening the national structures of ISO member bodies in developing countries to enable them to participate effectively in the ISO technical work, allocation of funds for execution of DEVCO Work Programme for 1981-82 and publication of annual report of ISO work for improved dissemination of information.

Planning Committee (PLACO) - PLACO held two meetings during September 1980 and March 1981 both of which were attended by the Director General, ISI. In the latter meeting, it was agreed to circulate to ISO member bodies India's proposal for setting up a new technical committee for jute and jute products. A new committee on geotechnics in which India has considerable interest has been set up.

Development Committee (DEVCO) - The meeting was held in Geneva during 23-24 June 1980 and was attended by Dr A.K. Gupta, Director General and Shri S. Srinivasan, Deputy Director General, ISI. For effective

execution of ISO Development Programme, the meeting delineated the functions of the three agencies involved, namely, DEVCO, Developing Countries Unit of ISO Central Office and Regional Liaison Officers. It was agreed that the Regional Liaison Officers would function as DEVCO Chairman's advisory group and Developing Countries Unit of ISO Central Office will act as the executive wing for implementation of approved programmes. Other matters discussed included status of implementation of international standards by member bodies in developing countries, results of training programmes conducted earlier and methods of utilization of exhibits and other public relation facilities of ISO.

Meeting of the GATT Code on Technical Barriers to Trade - This meeting was held in Geneva on 16 June 1980. One of the issues before the meeting was extension of the facilities of ISI Certification Marking to the manufacturers from other countries as well. It was noted that this would require amendment to the present ISI Certification Marks Act which has its jurisdiction within India only. Moreover, extension of the Mark to manufacturers in other countries would require agreement with the concerned governments on reciprocity of action and other modalities. Concerning the infringement of the Mark, several delegations reported that it would be difficult to resolve this problem except by making the government of the supplier country accept the responsibility.

INTERNATIONAL ELECTROTECHNICAL COMMISSION (IEC)

A six-member Indian delegation attended the Annual General Meetings of IEC at Stockholm during 2-13 June 1980. Besides, Council and Committee of Action, 33 Technical Committees and their subcommittees, including TC 43 Electric Fans for Household and Similar Purposes (Secretariat : India) met during this period. Over 100 documents were accepted for circulation under the "Six Months' Rule".

A new committee (TC 81) to cover lightning protection for structures and buildings as well as for persons, installations and contents in or on them has been set up. The Council also decided that inspection visits for verification of the National System of Surveillance Arrangements under the IEC Quality Assessment System for Electronic Components be arranged early for those countries which were agreeable to the visits.

Committee of Action decided to initiate work in the field of micro-processor assemblies by setting up a new Subcommittee SC 47 B. Similarly, Working Groups were set up to study the implications of taking up work in the fields of : (a) electronic measuring equipment for weighing machines, and (b) direct photo-voltaic conversion of solar energy into electrical energy.

IEC/TC 43 approved for circulation three drafts relating to safety requirements for electric fans and regulators for use in ships, safety requirements for jet fans, and test for robustness of the suspension system of the ceiling fans. The meeting was presided by Shri D.K. Sen of India.

INTERGOVERNMENTAL MEETING OF HEADS OF STANDARDS INSTITUTIONS IN ESCAP REGION

This meeting was convened by ESCAP Secretariat on 3-7 November 1980 at Bangkok to review the status of standardization in countries of the region. Director General, ISI attended this meeting and represented IEC. The meeting strongly recommended initiation of a programme of cooperation in the field of standardization in the countries of this region. It also recommended that ESCAP/UNIDO Division of Industry, Human Settlements and Technology should act as the focal point for promotion of standardization, quality control and metrology in the region.

MEETING OF DIRECTORS OF NATIONAL STANDARDS BODIES FROM DEVELOPING COUNTRIES

This meeting held in Geneva during 19-20 June 1980 emphasized the need for more cohesive approach among the standards organizations in developing countries in representing their situation at the international level. Shortage of technical staff, lack of finances, time taken for formulation of standards, difficulties in implementation of national standards, national standardization and foreign collaboration, etc, were among the important issues discussed.

ISO REGIONAL LIAISON OFFICERS (RLO)

The third meeting of RLOs was held in Geneva during 17-18 June 1980 and was attended by Director-General, ISI as Regional Liaison Officer. Matters relating to the preparation of DEVCO Work Programme 1981-82 were examined in detail and finalized.

INDO-SOVIET COOPERATION

Eighth meeting of the Indo-Soviet Working Group on Scientific and Technical Cooperation in the field of Standardization and Metrology was held in New Delhi during 2-6 February 1981. The Soviet delegation was headed by Mr. M.A. Ushakov, Head of the Department, Gosstandart. The meeting reviewed the progress made during the year on various themes and at the suggestion of the Soviet side accepted a new theme on 'Development of Scientific and Methodological Principles and Guidelines of Harmonization of Soviet and Indian Standards in the field of Machine Building and Instrument Making'.

Under various themes of cooperation in the field of Standardization and Metrology, five Soviet delegations visited India and four Indian delegations visited USSR.

Mrs G.V. Kolomeitseva, Head of the Department of the All Union Scientific Research Institute for Technical Information, Classification and Coding (VNIKI) of the Gosstandart visited the Institution during 28 August-4 September 1980. Her visit related to Theme 2.3 of the Agreement which provides for development of a unified coded nomenclature for articles of mutual trade. It was agreed that a concordance table linking the classification systems of the two countries be worked out, giving both the Russian and Indian numerical codes for articles of mutual trade.

A team of two Soviet delegates led by Mrs L.P. Demidova attended the first meeting of the Indo-Soviet Panel under Theme 4.5 Hot Rolled Steel Sheets and Strips during 25 to 29 September 1980. Experts of both the countries agreed upon the areas where there was scope for harmonization in the standards relating to these products.

ISI also participated in discussions with Soviet delegation under the Indo-Soviet Working Group on 'Large Scale Housing Construction Techniques'.

COOPERATION WITH OTHER COUNTRIES

International Training Programme in Standardization - The Thirteenth International Training Programme on Standardization for Developing Countries was held during 12 November 1980 to 6 February 1981. It received participation from 21 participants coming from Bangladesh, Burma, Ghana, Indonesia, Iran, Jamaica, Kenya, Republic of Korea, Malaysia, Nepal, Saudi Arabia, Sri Lanka, Sudan, Thailand and Zambia. Under the programme, which was started in 1964, training has been imparted to 148 technical personnel from 37 countries of Asia, Africa and Latin America.

Exchange of Experience with Personnel of Other Countries - Technical officers from national standards bodies of several developing countries (Mauritius, Nepal, Malaysia, Vietnam, Nigeria, Burma, Fiji and Saudi Arabia) visited ISI for exchange of experience and for familiarization with ISI's activities in specific fields and held discussions with senior ISI officers. Officials from Federal Republic of Germany, Government of Indonesia, and Sweden visited ISI and held discussions on specific activities of ISI.

Special Programmes - Special programmes of training were organized in ISI for nominees from Brazil, Burma, Fiji, Malaysia, Nepal, Nigeria, Vietnam and Zambia covering fields of metrology, quality control, certification marking and standards publication.

Assignments Abroad - On request from the Foreign Governments, Asian Development Bank, UN Economic Commission for Africa and under UNIDO, the following officers were deputed on overseas service :

<u>Sl No.</u>	<u>Name</u>	<u>Designation</u>	<u>Country</u>
i)	Shri A.S. Cheema	Deputy Director General	Barbados
ii)	Shri D. Ajitha Simha	Deputy Director General	Ethopia
iii)	Shri T. Rajaraman	Director	Tanzania
iv)	Shri R.K. Satia	Director (Accounts)	Nigeria
v)	Shri Y.R. Taneja	Deputy Director	Iraq
vi)	Shri T.C. Kausar	Deputy Director (Public Relations)	The Phillipines

Participation in Meetings Abroad - A break-up of the Indian delegations taking part in various important international meetings is given in Table 7. Of the 45 delegates which represented India at these forums, 16 were from ISI on whom the Institution incurred an expenditure of Rs 336 023.00.

TABLE 7 INDIAN DELEGATIONS SENT ABROAD

Sl No.	Meeting Attended	Country	No. of Delegates	
			Official	Non-official
(1)	(2)	(3)	(4)	(5)
i)	ISO/TC 172/SC 1 Optics and Optical Instruments/Fundamental Standards	West Germany (Pforzheim)	-	1
ii)	a) ISO/TC 17/SC 8/WG 2 Parallel Flange Sections	USA (Philadelphia)	2 (1 from ISI)	4
	b) ISO/TC 17/SC 8/WG 3 Structural Angles			
	c) ISO/TC 17/SC 8 Dimensions and Tolerances of Struc- tural Steel Sections and Bars			
	d) ISO/TC 17/SC 2 Terminology, Classi- fication and Desig- nation of Steel			
	e) ISO/TC 17 Advisory Group of INSM			
iii)	XIVth IEC General Meetings	Sweden (Stockholm)	3 (2 from ISI)	3
iv)	ISO/TC 28 Petroleum Products & Lubricants and its working group	Canada (Ottawa)	1	-
v)	a) ISO Regional Liaison Officers meeting	Switzerland (Geneva)	2 (from ISI)*	-
	b) First Meeting of Directors of ISO Member-Bodies in Developing Countries			
	c) ISO Development Committee			
	d) ISO Workshop - Public Relation Practice			

* Expenses for one delegate met by ISO.

(Contd)

TABLE 7 INDIAN DELEGATIONS SENT ABROAD (Contd)

Sl No.	Meeting Attended	Country	No. of Delegates	
			Official	Non-official
(1)	(2)	(3)	(4)	(5)
vi)	ISO/TC 34/SC 15 Coffee	UK (London)	1	-
vii)	ISO/TC 38 Textiles (and its subcommittees)	UK (London)	2 (1 from ISI)	-
viii)	ISO/TC 45 Rubber and Rubber Products (along with its subcommittees and various working groups)	Yugoslavia (Dubrownik)	1 (from ISI)	4
ix)	a) ISO/PLACO and ISO Council	Switzerland (Geneva)	1 (from ISI)	-
	b) Visit to Yugoslavia Institution for Standardization (JZS)	Yugoslavia (Belgrade)		
x)	ISO/TC 163 Thermal Insulation (and its subcommittees)	West Germany (Berlin and Munich)	1	1
xi)	ISO/TC 113 Measurement of Liquid Flow in Open Channels and its seven subcommittees	France (Paris)	1 (from ISI)	3
xii)	ISO/TC 147 Water Quality	West Germany (Berlin)	-	1
xiii)	ISO/TC 104 Freight Containers	Australia (Sydney)	2 (1 from ISI)	-
xiv)	Inter-governmental Meeting of Heads of Standards Institutions in the countries of ESCAP Region	Thailand (Bangkok)	1 (from ISI)	-
xv)	Indo-Soviet Cooperation in the field of Standardi- zation and Metrology under the Theme 3.4 'Exchange of Information on Quality Attestation System of USSR and the Certification System in India'	USSR (Moscow)	2 (from ISI)	-

(Contd)

TABLE 7 INDIAN DELEGATIONS SENT ABROAD (Contd)

Sl No.	Meeting Attended	Country	No. of Delegates	
			Official	Non-official
(1)	(2)	(3)	(4)	(5)
xvi)	ISO/TC 149/SC 1 Cycles and Major Subassemblies and ISO/TC 149/SC 2 Subassemblies and Components	UK (London)	1 (from ISI)	-
xvii)	ISO/TC 28/SC 4 Subcommittee on Classification and Specifications of Petroleum Products and Lubricants and its working groups	West Germany (Berlin)	1	-
xviii)	Regional Metrication Workshop organized by CSC (Commonwealth Science Council)	Swaziland (Mbabane)	1 (from ISI)*	-
xix)	ISO/TC 34/SC 11 Oils and Fats	Hungary (Budapest)	1	-
xx)	ISO/TC 70/SC 1 Definitions, ISO/TC 70/SC 4 Tests and ISO/TC 70/SC 5 Governing Requirements, Torsional Vibration and Special Requirements	USA (Charleston)	-	2
xxi)	a) Meeting with ISO, President and visit to AFNOR	France (Paris)	1 (from ISI)	1
	b) ISO/PLACO	Switzerland (Geneva)		
	c) Visit to INAPI	Algeria (Algiers)		

NOTE - Official delegates include those from government departments, public undertakings and ISI.

* Expenses met by the Commonwealth Science Council.

PLAN PROJECTS

Projects on which work was underway during the year were :
Central Laboratory Building at Ghaziabad, Office-cum-Laboratory Building at Bombay, Office-cum-Laboratory Building at Calcutta, and Testing Equipment for ISI Laboratories. A sum of Rs 8.5 million was allocated by the Government for these projects during 1980-81.

In addition to these, seven more projects have been proposed by the Institution under the Sixth Five Year Plan (1980-85). The total outlay on all the 10 projects is estimated at Rs 73.85 million.

The progress of the on-going plan projects is briefly given below :

Central Laboratory Building at Ghaziabad - Work on the construction of first phase of the Central Laboratory Building at Ghaziabad, comprising Chemical Laboratory, Mechanical Laboratory and Workshop has been completed.

Work on the construction of second phase comprising Electrical Laboratory, Administrative Block and quarters for essential staff is in progress.

Office-Cum-Laboratory at Calcutta - Construction of the six-storey (2 000 sq m) Office-cum-Laboratory Building at Calcutta has been completed. The building was inaugurated in February 1981.

Office-Cum-Laboratory Building at Bombay - Construction of the four-storey building which was undertaken in January 1980 has also been completed. The building will be occupied shortly.

Science and Technology Projects - The National Committee on

Science and Technology (NCST) has entrusted the following two projects to the Institution :

- a) Development Programme on Code Implementation for Buildings and Civil Engineering Constructions (Project B-7) - This project, initiated during the Fifth Plan, consists of preparation of various types of handbooks relating to the National Building Code and other relevant codes; and extension work to promote the use of the National Building Code through implementation conferences, training programmes, etc. Another important area of work in this project is modification of building bye-laws of various corporations and municipalities in the country to bring them in line with the National Building Code.

Thirtyfive subjects have been identified for preparation of handbooks. Out of these, Design Aids for Reinforced Concrete to IS:456-1978 has been published. Explanatory Handbook on Earthquake Engineering Code (IS:1893 and IS:4326) has been completed.

Eleven handbooks are under compilation which cover the following themes:

Timber Engineering

Bulk Storage Structures in Steel

Foundation of Buildings

Functional Requirements of Industrial Buildings

Commentary on Concrete Code (IS:456)

Concrete Reinforcement

Functional Requirements of Buildings

Fire Protection

Layout of Plumbing Services

Tall Buildings

Construction Methods to Avoid Cracks in Buildings.

Revision ...

Revision of National Building Code - The finalization of different parts of revision of National Building Code of India 1970 was completed.

b) Typification for Industrial Buildings (Project B-8) - This project was also initiated during the Fifth Plan as a part of the S&T Plan for prefabrication including industrial systems of buildings. The aim is to establish optimum standard structural designs which would result in saving of scarce materials, such as cement and steel.

The Indian Institute of Technology, Madras which is associated with the project has completed the analysis, design and drawings for :

- a) Gable frame in concrete with fixed as well as hinged boundary condition (without cranes) - Analysis and design have been completed for 87 cases out of which detailed drawings have been completed for 36 cases.
- b) Lean to type of trusses in steel (without cranes) - Analysis and design have been completed for 169 cases of which detailed drawings have been completed for 7 cases.

The span lengths considered in the above 2 cases vary from 9 to 12 m in intervals of 3.0 m.

PERSONNEL MANAGEMENT

The total staff strength of the Institution as on 31 March 1981 stood at 1 764 showing a rise of 74 over the previous year.

The deployment of staff in the principal activities of the Institution as on 31 March 1980 and 1981 was as under:

<u>Activity</u>	<u>Strength as on</u>	
	<u>31 March 1981</u>	<u>31 March 1980</u>
a) <u>Standards</u>		
Preparation, publication, sale and distribution of standards	499	493
b) <u>Quality Assurance and Certification Services</u>		
Operation and management of Certification Marks Scheme including laboratory testing	686	637
c) <u>Technical Promotion</u>		
Technical information services; implementation, statistical quality control, library, ISI Bulletin and miscellaneous publications, publicity, membership and computer cell	107	95
d) <u>Personnel Management and Supporting Services</u>		
Personnel management, accounts general services, building maintenance and security	472	465
Total	<u>1 764</u>	<u>1 690</u>

The ratio of technical to non-technical staff was brought down further from 1:2.2 to 1:2. Similarly, working of the Institution is being given officer-orientation whereby the officer-staff ratio has been brought down from 1:3.53 to 1:3.31.

The ninth batch of Assistant Directors (Trainees) comprising 27 officers was recruited during the year. The list of principal officers of the Institution as on 31 March 1981 is given in Appendix B.

A scheme for introducing 'three level flexible complementing' in the cadre of technical officers for promoting the concept of 'all rights accrue from work well done' in the career development of the technical officers at the Assistant Director and Deputy Director level is under consideration. Similarly, a new system for performance appraisal of the employees of the Institution is under finalization for objective assessment.

To tackle the problem of stagnation in Grades II, III & IV staff, a scheme for introduction of Selection Grade has also been formulated in ISI.

The Institution encourages its employees to acquire higher professional qualifications. Three employees were granted financial assistance for pursuing different courses of study during the year under report.

Attempts were continuously made towards increasing representation of the schedule castes/schedule tribes in various categories of services of ISI. At the close of the year, the number of SC/ST employees stood at 205 as against 150 in the previous year. Position of representation of SC/ST in ISI in the last three years is given below:

Grade	No. of SC/ST		
	1981	1980	1979
I	9	8	7
II	19	9	4
III	73	46	20
IV(excluding Sweepers)	74	53	50
IV(Sweepers)	30	34	33
Total	205	150	114

It will be observed that out of the addition of 74 hands in 1980-81, a net addition of representation of SC/ST has been 55.

Besides the local training of Assistant Directors(Trainees), the Institution has been taking care of imparting specialized training to its officers from time to time. The list of the members of staff who were deputed for training in different fields is given in Table 8.

TABIE 8. TRAINING OF PERSONNEL

<u>Sl No.</u>	<u>Name and Designation</u>	<u>Period of Training</u>	<u>Training programme</u>
a) <u>Training Abroad</u>			
1.	Shri K.K. Sharma, Assistant Director (since promoted as Deputy Director)	7 April to 25 June 1980	UNDP International Training Course on Hydrology sponsored by UNESCO at Nanjing(China)
2.	Shri T.S. Subramanian, Deputy Director	30 March to 10 April 1981	UNIDO Follow-up Seminar on Introduction on Industrial Quality Control and Practices under Asian Conditions at Singapore
b) <u>Training in India</u>			
1.	Shri Harcharan Singh, Deputy Director	11 August to 6 September 1980	Total Quality Control Course organized by Delhi Productivity Council, New Delhi
3.	Shri B.C. Kapur, Deputy Director (since promoted as Director)	23 to 30 October 1980	Programme on Manpower and Employment Planning organized by the Institute of Applied Manpower Research, New Delhi
4.	Km Veena Kumari LDC(since resigned)	5 to 17 January 1981	Key-Punch Operators' Training Course by National Informatics Centre, New Delhi

Employer-Employee Relations - Employer-employee relations have been very cordial and a scheme for workers' participation in management through Unit Councils is under consideration.

Among the welfare measures to improve the morale of the employees, the Institution has set up four holiday homes, one in each Region. About 125 employees availed themselves of this facility during this year.

	1979-80 (Rs in million)	1980-81	Growth percent
Membership Subscription	4.31	4.58	6.3
Sale of Standards and Advertising Revenue	4.72	5.26	11.4
Certification Marking Fee	20.00	22.79	14.00
	<u>29.03</u>	<u>32.63</u>	<u>12.4</u>

The percentage of various sources of income during 1976-77 and 1980-81 are illustrated in the diagram given below.

Capital - The Planning Commission has approved an outlay of Rs 73.85 million for Sixth Five Year Plan for on-going and new projects as below:

Sl No.	Project	Outlay (Rs in million)
ON-GOING PROJECTS		
1.	Central Laborator, Building at Ghaziabad	6.70
2.	Lab-cum-Office Building at Calcutta	1.20
3.	Lab-cum-Office Building at Bombay	4.20
4.	Laboratory Equipment	30.00
SCIENCE AND TECHNOLOGY PROJECTS		
5.	Development Programme for Code Implementation for Building and Civil Construction (NCST Project B-7)	7.80
6.	Typification Organization for Industrial Building (NCST Project B-8)	3.95
		<u>53.85</u>
NEW PROJECTS		
7.	Laboratory Buildings at	
	a) Kanpur	}
	b) Ahmadabad	
	c) Hyderabad	
		3.20

8.	Development of Handbooks for Implementation of Standards	2.50
9.	International Standardization for Export Promotion	2.50
10.	Central Enquiry Point under GATT Standards Code	5.50
11.	Reprographic Equipment	1.30
12.	Staff Housing	5.00
		<hr/>
		20.00
		<hr/>
	Grand Total	73.85

During 1980-81, the first year of the Sixth Plan, the Government provided Rs 9.2 million for implementation of these projects. The major part of the grant was utilized for the purchase of laboratory equipment for use in the Central/Regional laboratories and towards construction of laboratory buildings at Ghaziabad, Bombay and Calcutta.

During 1980-81, the Institution received Rs 0.5 million for grant of house building loan to its employees. So far 88 employees have been benefitted under the scheme.

In addition, the Government provided a short term loan of Rs 0.37 million repayable from Institution's own resources in two annual instalments for purchase of MIG and HIG flats at Bombay. These flats would help in providing accommodation to employees who are under periodic postings/transfers.

Invisible Contributions - During the year under review, the Institution received as in the past invisible contributions from the industry and others who have representation in ISI Committees. Expenses were incurred by such members on travel within the country and abroad for active participation in the deliberations of the meetings of the Technical Committees. In addition, many organizations both in public and private sectors undertook studies and tests free of cost in regard to formulation

of standards. The total value of such invisible contributions during the year is estimated at Rs 3.31 million.

The Statement of Accounts for 1980-81 duly audited is given in Appendix 'A'.

A P P E N D I X A

Audited Accounts for the year 1980-81

INDIAN STANDARDS INSTITUTION

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1981

EXPENDITURE				INCOME			
PREVIOUS YEAR	SL NO	HEADS OF EXPENDITURE	AMOUNT (RS)	PREVIOUS YEAR	SL NO.	HEADS OF INCOME	AMOUNT (Rs)
	1.	<u>Pay</u>					
5 909 105		1.1 Officers	5 914 984	4 306 267	1.	Membership Subscription - Advance	2 769 960
6 117 667		1.2 Staff	6 855 091			- Current	<u>1 811 126</u>
	2.	<u>Allowances</u>			2.	<u>Sales</u>	
3 546 580		2.1 Officers	4 109 453	3 373 363		2.1 Indian Standards	3 578 123
5 198 113		2.2 Staff	6 762 918	185 588		2.2 Calculation Aids and Binders	188 306
				572 754		2.3 Overseas Publications (Commission)	820 662
488 680	3.	CGHS and Other Medical Charges	606 352	125 713	3.	Bulletin Advertisements	143 554
474 639	4.	Provident Fund Contribution	384 088	20 005 340	4.	*Certification	22 792 706
1 195 991	5.	Pension Fund	1 210 790	25 917	5.	CGHS Contributions	27 518
30 000	6.	Gratuity Fund	30 000	15 667	6.	Conferences (Delegates Fees)	-
112 552	7.	Staff Welfare	143 333	100 836	7.	Training Fees	95 595
	8.	<u>TA</u>		268 267	8.	Miscellaneous	374 492
240 849		8.1 Overseas	293 608	45 867	9.	Interest from House Building Loan	24 317
938 796		8.2 Officers and Staff	1 427 941	<u>29 025 579</u>	10.	<u>Government Grant</u>	
37 380		8.3 Committee Members	46 279			10.1 Unutilized Balance Transferred	
211 703		8.4 Leave Travel Concession	242 180			from 1979-80	131 789
	9.	<u>Subscription to International Organizations</u>		7 500 034		10.2 Received during 1980-81	<u>7 938 000</u>
941 704		9.1 ISO	964 423				8 069 789
473 766		9.2 IEC	473 232				
	10.	<u>Production</u>					
1 271 198		10.1 Standards	1 167 867				
525 230		10.2 Bulletin	635 912				
142 413		10.3 Calculation Aids and Binders	166 885				
108 038		10.4 Other Publications	242 740				
50 472	11.	Research and Consultation	55 844				
900 768	12.	Testing Fees	1 012 408				
682 691	13.	Laboratory Apparatus and Stores	1 045 414				
	14.	<u>Publicity</u>					
177 317		14.1 Exhibition	26 689				
236 539		14.2 Advertisings	59 274				
48 491		14.3 Miscellaneous	63 468				
<u>30 060 682</u>		Carried Over	<u>33 941 173</u>	<u>36 525 613</u>		Carried Over	<u>40 696 148</u>

(*Income under this Head has been taken on Cash basis and not on accrual basis)

EXPENDITURE

INCOME

PREVIOUS YEAR	SL NO.	HEADS OF EXPENDITURE	AMOUNT (Rs)	PREVIOUS YEAR	SL NO.	HEADS OF INCOME	AMOUNT (Rs)
30 060 682		Brought Forward	33 941 172	36 525 613		Brought Forward	40 696 148
147 321	15.	Conferences	126 140				
91 420	16.	Training Programmes	73 447				
13 371	17.	Electronic Data Processing	42 143				
	18.	<u>Library</u>					
	18.1	Books (Expenditure during the year (Less: Cost of Books capitalised)	146 985 <u>146 985</u>				
-							
120 417	18.2	Other Expenses	189 990				
	19.	<u>Office Expenses</u>					
897 740	19.1	Stationery	1 029 149				
411 394	19.2	Postage	391 366				
587 286	19.3	Telephones and Telex	671 109				
110 076	19.4	Recruitment	108 272				
64 988	19.5	Refreshment & Entertainment	86 332				
86 971	19.6	Liveries	109 057				
168 110	19.7	Conveyance & Cartage	209 706				
78 834	19.8	Insurance & Bank Charges	88 959				
197 459	19.9	Miscellaneous	362 558				
	20.	<u>Furniture & Equipment</u>					
	20.1	Furniture					
	a)	Expenditure during the year	174 441				
	b)	Less: Cost of Assets Capitalised	<u>174 441</u>				
-							
	20.2	Equipment					
	a)	Expenditure & during the year	255 577				
	b)	Less: Cost of Assets Capitalised	<u>255 577</u>				
-							
111 403	20.3	Repair and Maintenance	213 686				
	21.	<u>Buildings</u>					
736 209	21.1	Rent & Taxes	727 507				
777 807	21.2	Electricity & Water	618 770				
433 706	21.3	Maintenance	283 042				
	22.	<u>Local Transport</u>					
	22.1	Vehicles (Expenditure during the year (Less: Cost of Assets capitalised)	270 000 <u>270 000</u>				
-							
161 189	22.2	Maintenance	199 371				
35 256 383		Carried Over	39 391 777	36 525 613		Carried Over	40 696 148

Continued

LIABILITIES

ASSETS

Previous Year (1)	Sl. No. (2)	(Rs.) (3)	(Rs.) (4)	(Rs.) (5)	Previous Year (7)	Sl. No. (8)	(9)	(Rs.) (10)	(Rs.) (11)	(Rs.) (12)
	1. Capital Fund									
	1.1 As per last Balance Sheet			25 315 098						
	1.2 Add Cost of Assets Capitalized									
	a) Lab. Bldg. at Ghaziabad	2 776 809								
	b) Laboratory Equipment	2 012 522								
	c) Bombay Office Building	3 174 540			2 940 947					
	d) Calcutta office Building	933 362								
	e) Furniture and Equipment	168 415								
		-S&T Pr 95 617		9 065 648						
	1.3 Deduct	-GATT Pr 72 797		34 380 746						
	a) Unutilized Balance of Govt. Grant for 1979-80 transferred to Income & Expenditure Account		131 789		1 060 901					
	b) Excess of Expenditure over Income during 1980-81 as per annexed statement of Income & Expenditure A/c	276 201	407 990		7 422 606					
			33 972 756							
25 315 098	1.4 Add : Amount charged in Income & Expenditure A/c towards Investment Allowance Fund		250 000	34 222 756						
					1 049 276					
	2. Reserve and Funds									
	2.1 K.L. Moudgill Prize Fund		13 676							
	2.2 Gratuity Fund		234 177							
	2.3 Benevolent Fund		74 835		2 117 585					
	2.4 Laboratory Building at Ghaziabad									
	a) Govt. Grant Received	2 700 000								
	b) Add: Unutilized Grant carried forward from 1979-80	97 699		478 800						
		2 797 699								
	c) Less: Transferred to Capital Account	2 776 809	20 890							
					109 479					
25 315 098			Carried Over	343 578 34 222 756	15 179 494					
								Carried Over		22 219 888

Continued

25 315 098 Brought forward 343 578 34 222 756 15 179 494 Brought forward 22 219 888

2.5 Laboratory Equipment

a) Govt. Grant received	2 000 000		
b) Add: Unutilized Grant carried forward from 1979-80	<u>.16 005</u>		
	2 016 005		
c) Less: Transferred to Capital Account	<u>2 012 522</u>	3 483	

2.6 Bombay Office Building

a) As per last Balance Sheet	929 167		6 223 940
b) Add: Receipt during 1980-81			
i) Govt. Grant	3 200 000		
ii) Donation	<u>191 381</u>	<u>3 391 381</u>	
		4 320 548	
c) Less: Transferred to Capital Account	<u>3 174 540</u>	1 146 008	

2.7 Calcutta Office Building

a) As per Last Balance Sheet	334 386		
b) Add: Receipt during 1980-81			
i) Govt. Grant	600 000		
ii) Donations	<u>31 271</u>	<u>631 271</u>	
		965 659	
c) Less: Transferred to Capital Account	<u>933 362</u>	32 297	2 317 808

2.8 S & T Projects

a) Receipt during the year 1980-81			
i) Govt. Grant	500 000		
ii) Sale Proceeds	<u>199 778</u>	699 778	
b) Less: Expenditure			
i) During 1980-81*			148 100
ii) Due from Govt. for 1979-80	<u>400 810</u>	298 968	

1.8 Laboratory Equipment

a) As per Cost Value upto 1980-03-31		9 047 469	
b) Addition during 1980-81		<u>2 012 522</u>	
		11 059 991	
c) Less Depreciation w/o			
i) Upto 1980-03-31	2 823 529		
ii) During 1980-81	<u>513 917</u>	<u>3 337 446</u>	7 722 545

1.9 Furniture and Equipment

a) As per Cost Value upto 1980-03-31		4 245 659	
b) Deduct: Cost of Assets disposed of during 1980-81		<u>35 633</u>	
		4 210 026	
c) Additions during 1980-81		<u>598 433</u>	
(Includes i) S&T Project - 95617		4 808 459	
ii) GATT Project- 72798			
d) Less: Depreciation w/o			
i) Up to 1980-03-31	1 927 851		
ii) During 1980-81	<u>357 645</u>	<u>2 285 496</u>	
iii) Deduct: Depreciation on Assets Disposed of during 1980-81		<u>31 269</u>	2 254 227
			2 554 232

1.10 Vehicles

a) As per Cost Value upto 1980-03-31		330 374	
b) Additions during 1980-81		<u>270 000</u>	
		600 374	
c) Less: Depreciation w/o			
i) Up to 1980-03-31	182 274		
ii) During 1980-81	<u>29 620</u>	<u>211 894</u>	388 480

25 315 098 Carried Over 1 824 334 34 222 756 23 869 342 Carried Over 32 885 145

*i) 383 328
ii) 17 482

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
25 315 098		Brought Forward		1 824 334	34 222 756	23 869 342		Brought forward			32 885 145
	2.9	<u>GATT Project</u>						1.11	<u>Library Books</u>		
		a) Govt. Grant	200 000					a)	As per last Balance Sheet	783 288	
		b) Less Expenditure during 1980-81	<u>72 798</u>	127 202				b)	Deduct : Cost of Books w/o during 1980-81	<u>558</u>	
										782 730	
	2.10	Pension Fund		10 254 748		783 288		c)	Additions during 1980-81	<u>146 985</u>	929 715
	2.11	CPF		13 337 529				2.	<u>Investments (at cost)</u>		
32 334 060	2.12	GPF		<u>11 123 789</u>	36 667 602			2.6	Deposits with Bank		325 000
	3.	<u>Loans from Govt. for :</u>						2.2	Share of ISI Employees' Consumers Co-opt Store		7 500
	3.1	Conveyance Advance		300 000				2.3	Shares of Jay Engg. Works (A/c K.L. Moudgill Prize Fund)	<u>11 400</u>	343 900
	3.2	House Building Loan		3 200 000				2.4	Pension Fund	10 254 748	
	3.3	<u>Flats for Bombay Employees</u>						2.5	CPF	13 337 529	
		a) As per last Balance Sheet	400 000					2.6	GPF	<u>11 123 789</u>	34 716 066
		b) Received during 1980-81	<u>372 000</u>			31 215 900		3.	<u>Current Assets</u>		
3 425 000		c) Less : Refunded	<u>772 000</u> <u>250 000</u>	522 000	4 022 000			3.1	Stock of Printing Paper (at cost)		827 852
	4.	<u>Current Liabilities</u>						3.2	<u>Sundry Debtors</u>		
	4.1	Advance Subscription (1981)		3 041 661				a)	Sale of Publications	771 996	
	4.2	<u>Sundry Creditors</u>						b)	Bulletin Advertisements	108 545	
		a) Inland	852 719					c)	Licence, Inspection Charges etc.	219 458	
		b) Abroad	1 836 812					d)	Ministry of External Affairs (A/c ITEC Trainees)	920	
7 023 695		c) Earnest Money	<u>123 876</u>	<u>2 813 407</u>	5 855 068			e)	<u>Ministry of Finance</u>		
								i)	A/c Colombo Plan Trainees	82 923	
								ii)	A/c SCAP Trainees	43 423	
						2 211 898		f)	Steel Authority of India (A/c IPSSI Scheme)	25 122	
68 097 853		Carried Over		80 767 426		58 080 428				<u>1 252 387</u>	70 955 065

Continued

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10) (11) (12)

68 097 853

Brought forward

80 767 426

58 080 428

Brought forward

70 955 065

4. Loans and Advances

4.1 Loans for

a) Purchase of Conveyances 257 184
 b) House Building 2 613 745 2 870 929

4.2 Advances for

a) Festival 87 600
 b) Flood 19 271
 c) Store purchases etc. 761 068
 d) TA 10 013 877 952

4.3 Security Deposits

138 602

4.4 Prepaid expenses

26 471

3 241 675

5. Cash and Bank Balances

5.1 With Bankers
 (including Rs 337000.00
 for BO's A/cs II & III) 5 792 293

5.2 In hand (including imprest) 94 544

5.3 Postage Stamps 11 570 5 898 407

6 775 750

68 097 853

Total :

80 767 426

68 097 853

Total:

80 767 426

A P P E N D I X B

Principal Officers of ISI

Principal Officers of
INDIAN STANDARDS INSTITUTION

(As on 31 March 1981)

General Council (GC)

President

Reo Birendra Singh
Union Minister of Civil Supplies,
Government of India

Vice-Presidents

Shri D.C. Kothari
Shri Harish Mahindra

Executive Committee (EC)

Chairman

Shri D.C. Kothari

Finance Committee (FC)

Chairman

Shri Harish Mahindra

Agricultural & Food Products Division
Council (AFDC)

Chairman

Shri C.P. Natarajan

Vice-Chairman

Dr N. A. Ramaiah

Chemical Division Council (CDC)

Chairman

Dr S.P. Bhattacharya

Vice-Chairman

Shri S. Ramaswamy

Civil Engineering Division Council
(CEDC)

Chairman

Shri N.S.L. Rao

Vice-Chairmen

Prof Dinesh Mohan
Shri I.P. Kapila

Consumer Products and Medical
Instruments (CMIIC)

Chairman

Col R.D. Ayyar

Vice-Chairman

Brig Joginder Singh

Electronics and Telecommunication
Division Council (LTDC)

Chairman

Maj-Gen K.K. Mehta

Vice-Chairman

Shri T.V. Srirangan

STAFF (AS ON 31 MARCH 1981)

Director General	DR A. K. GUPTA	
Additional Directors General	SHRI Y. S. VENKATESWARAN SHRI A. P. BANERJI	
Deputy Directors General	SHRI S. SRINIVASAN SHRI A. S. CHEEMA SHRI RAM D. TANEJA DR B. N. SINGH SHRI D. AJITHA SIMHA SHRI S. SUBRAMANYAN	- Headquarters - Headquarters - Northern Region - Western Region - Southern Region - Eastern Region
Secretary	SHRI C. K. BASU	

DEPARTMENTS/SECTIONS

Agricultural and Food Products Director	SHRI T. PURNANANDAM
Chemical Director	DR HARI BHAGWAN
Civil Engineering Director	SHRI G. RAMAN
Consumer Products and Medical Instruments Deputy Director/Head	DR A. S. SETHI
Electronics and Telecommunication Deputy Director/Head	SHRI R. C. JAIN
Electrotechnical Director	SHRI S. P. SACHDEV
Marine, Cargo Movement and Packaging Director	SHRI P. S. DAS
Mechanical Engineering Director	SHRI S. P. BATTOO
Petroleum, Coal and Related Products Director	SHRI M. S. SAXENA
Structural and Metals Director	SHRI C. R. RAMA RAO
Textile Director	SHRI S. M. CHAKRABORTY
International Relations Director	DR G. M. SAXENA
Accounts Director	SHRI R. K. SATIA

Personnel Management Director	SHRI B. C. KAPUR
General Services Director	SHRI K. P. KHANNA
Central Marks Director I	SHRI C. B. CHANDORKAR
Director II	SHRI E. N. SUNDAR
Certification Marks (Delhi) Director	SHRI R. I. MIDHA
Implementation Director	SHRI S. R. KUPPANA
Central Laboratory Deputy Director/Head	SHRI T. C. KAPOOR
Library Director	SHRI V. P. VIJ
Public Relations Deputy Director/Head	SHRI J. K. BHAVNANI
Publications Director	SHRI GURCHARAN SINGH
Statistics Director	SHRI Y. K. BHAT
Technical Information Service Director	SHRI S. P. RAMAN
Legal Cell Director	SHRI GIRDHARI LAL
Computer Cell Deputy Director	SHRI D. S. AHLUWALIA
Eastern Regional Office Director, Steel Director	SHRI H. P. GHOSE DR A. K. BHATTACHARYA
Northern Regional Office Director	SHRI SOM PRAKASHA
Southern Regional Office Directors	SHRI M. RAGHUPATHY KM H. N. MYTHILI
Western Regional Office Deputy Director	SHRI M. MURUGKAR
Ahmadabad Branch Office Director	SHRI Y. R. TANEJA

Bangalore Branch Office Director	SHRI N. SRINIVASAN
Bhopal Branch Office Deputy Director/Head	SHRI K.C. SHARMA
Bhubaneshwar Branch Office Deputy Director/Head	SHRI L. RAMACHANDRA RAO
Chandigarh Branch Office Director	SHRI G.S. VILKHU
Hyderabad Branch Office Director	SHRI L.G. BANERJI
Jaipur Branch Office Director	SHRI S. CHANDRASEKHARAN
Kanpur Branch Office Director	SHRI S.L. BALI
Patna Branch Office Director	SHRI S.K. KARMAKAR
Trivandrum Branch Office Deputy Director/Head	SHRI P. VENKATARAMAN