



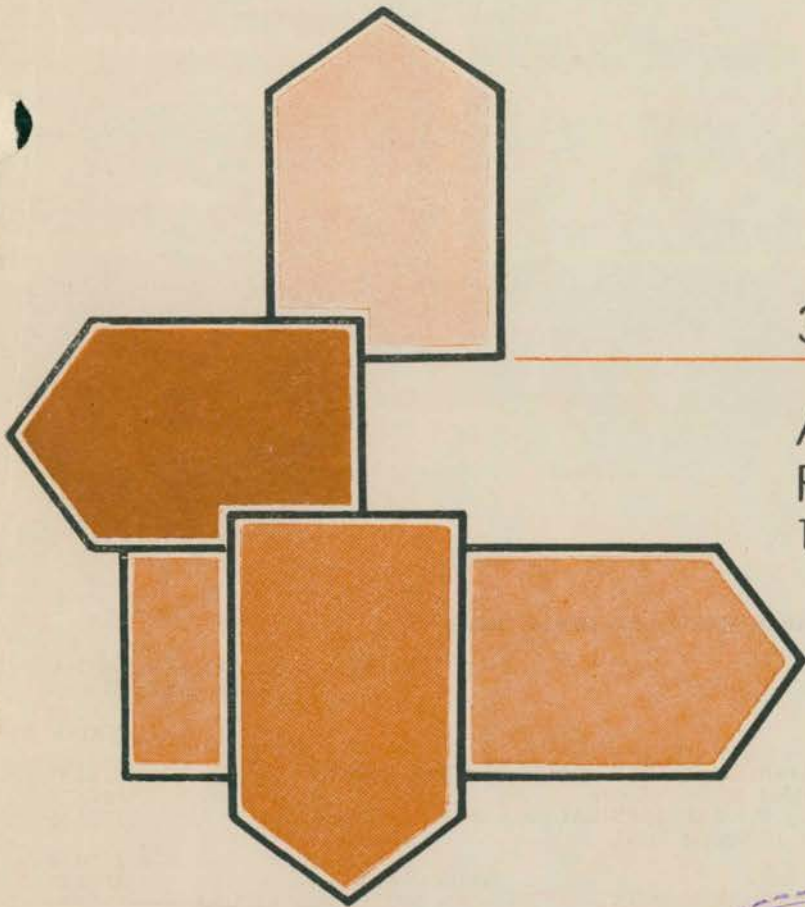
36th

ANNUAL  
REPORT

1982-83

INDIAN  
STANDARDS  
INSTITUTION





36th

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ANNUAL  
REPORT  
1982-83

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INDIAN STANDARDS INSTITUTION  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002



FREE TO MEMBERS

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## DIRECTOR GENERAL'S REPORT

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The Indian Standards Institution continued to forge ahead in different directions during 1982-83 to fulfil its obligations in regard to formulation of Indian Standards and provision of quality control expertise to the industry. While the Institution formulated and reprinted a record number of Indian Standards, the number of Certification Marks Licences granted touched a new peak surpassing the last year's figure which in itself was a record. The Institution's enhanced performance was also reflected in the revenue earned by it through sale of its publications and collection of Certification Marking fee which, along with membership subscription, brought about a record growth of 29.5 percent in income from its own sources.

### Development of Standards

The Institution formulated 851 Indian Standards during 1982-83 against 821 during the preceding year, thereby increasing the number of standards in force from 11 202 on 31 March 1982 to 11 703 at the end of March 1983.

Besides, a record number of 1 343 standards were reprinted to meet the increasing demand for these standards. Some of the important standards published during the year related to guards for harvesting machines; carbon steel safety razor blades; wooden splints for safety matches; multi-channel television tuners; medical treatment lamps; tins for packing ghee, *vanaspati* and edible oils; guide on suitability of plastics for food packaging; corrosion prevention in electronic components and assemblies; and size designation of clothes. New Technical Committees concerning veterinary surgery instruments; farm transport equipment; sowing, fertilizer and manure application equipment; irrigation equipment; boiler water; and electrical insulation systems commenced work during the year.

The year also saw publication of four important handbooks on food analysis, textile testing, concrete mixes and earthquake engineering. A composite volume consisting of Parts V, VI and VII of the Handbook of Food Analysis published during the year covered



bakery and confectionery items, protein-rich foods, and spices and condiments. Intended to provide complete information on Indian Standard methods of food analysis, this Handbook is proposed to be issued in 15 parts. The other parts issued so far cover general methods (Part I) and dairy products (Part XI). The Handbook of Textile Testing, brought out under a Plan Project on Development of Handbooks for Implementation of Indian Standards, provides sampling procedures and methods of test for various fibres, yarns and fabrics based on methods covered in nearly 300 Indian Standards. The Handbooks on concrete mixes and earthquake engineering, which have been brought out under the projects entrusted to ISI by the National Committee on Science and Technology envisaging compilation of a series of design books, explanatory handbooks and design aids based on the National Building Code and various Indian Standards in the field of construction technology, provide useful guidance to professionals and students in the fields of concrete mixing and designing of structures to resist earthquake forces respectively. An important project undertaken during the year was revision of the National Building Code which now also includes *Development Control Rules* and special requirements for low-income housing and detailed fire safety requirements for high-rise buildings. A pamphlet published during the year highlighted the contribution made by ISI to the fulfilment of the objectives of the Prime Minister's New 20-Point Programme by providing standards and specifications in areas of critical importance to the nation's economy.

### Certification Marking

The Institution granted 1151 new licences under the ISI Certification Marks Scheme compared to 1007 during the previous year. With this the number of operative licences went up to 7144. The new licences covered 266 products, 34 of which came under the Scheme for the first time. The total number of Indian Standards against which products were certified stood at 1110 on 31 March 1983 against 1083 at the end of the preceding year. Of these, nearly 230 standards relate to items of everyday use of particular interest to consumers. Some of the products which came under the ISI Certification Marks Scheme for the first time are emergency lighting units, canvas boots, single-stage LPG regulators, slip-joint pliers, corrugated

fibreglass boxes, petroleum jelly and mineral oil for cosmetic industry, putting shots, cotton sewing threads and waterproofed dyed cotton fabrics. The revenue earned from certification marking amounted to Rs 35.57 million against the preceding year's figure of Rs 26.64 million, thus registering a record growth of 33.52 percent.

### ISI Laboratories

In the second phase of construction of the Central Laboratory building at Sahibabad taken up during the preceding year, work on the Administrative Block was completed while the Electrical Block and quarters for essential staff are nearing completion. A water treatment plant with an underground storage tank having a capacity of 40 000 litres is under installation.

Equipment worth over Rs 3.2 million was added to the ISI Laboratories to augment the testing facilities. Seven new outside laboratories were registered during the year to undertake testing in regard to the ISI Certification Marks Scheme. This brought the total number of outside laboratories registered with the Institution to 204.

### Implementation of Standards

The Institution continued its efforts to promote increased standards-consciousness in the country in a variety of ways. Special reference in this context may be made to the two conferences held in Patna and Jaipur specifically devoted to the implementation of Indian Standards in the States of Bihar and Rajasthan respectively. These Conferences recommended the establishment of Standards Cells in the various departments and agencies in the two States and formation of Standards Monitoring Committees to monitor the execution of orders issued by the respective Governments for the implementation of Indian Standards. Among the other important events during the year were Regional Workshop on Standards for Statistical Quality Control in Bombay and a Top Management Conference on Standardization and Productivity in New Delhi.

The Directorate General of Supplies and Disposals; Directorate of Standardization (Ministry of Defence); Research, Designs and Standards Organization (Ministry of Railways) and certain other Government Departments adopted 436 Indian Standards during the year, 132 of them being cases of new adoption.



The Institution also started SQC Consultancy Service for the benefit of industries in different fields. Under this service, the Institution's experts visit the concerned factory a number of times, review its existing system of quality control and suggest measures for improvement, wherever necessary.

### Information Services

The certification marks database of the Institution was redesigned to make it more efficient and informative. In the new form, the database would not only be useful in providing organized information as computer output for documents like Buyers' Guide and Classified List of Licensees but also provide proper feedback to Regional and Branch Offices which are responsible for the operation of the licences. The database on classified information on Indian and overseas standards was frequently used for generating bibliographies as direct computer outputs. During the year under review, the demand for such bibliographies, particularly from the organized sector of industries, increased appreciably. Some of the bibliographies made available in response to such demand related to computer hardware and software, refractories, LPG installations and transportation, diesel fuel, and milk and milk products.

Publication of a new series of Classified Lists of Indian Standards prepared by different departments of the Institution on specific subjects was also commenced during the year. The subjects covered so far include welding, office stationery, rubber hoses and measurement of civil engineering works. These compilations are aimed at promoting standardization by informing the users of standards — manufacturers, traders, purchasing organizations, etc — about the availability of relevant standards in their fields of operation. Besides, 36 bibliographies and 717 documentation lists giving detailed information on national, international and overseas standards and standard type documents were compiled in response to technical enquiries received from different quarters.

### New Pricing System for ISI Publications

The Institution introduced from 1 September 1982 a Group System for pricing its publications. The new system classifies the publications with pages up to 70 in A4 size and 140 in A5 size into

15 groups, each representing a particular price. Prices for publications with a large number of pages have to be determined specifically.

### International Involvement

The Institution continued to take active part in standardization work at the international level. An outstanding event of the year was election of Shri D. C. Kothari, Vice-President of ISI, to the august office of the President of ISO for a three-year term commencing 1 January 1983 which provides direct testimony to the recognition of India's pre-eminent position in the international standards fraternity. Shri Kothari is the second Indian to have gained this signal honour, the first being late Sir Jehangir J. Ghandy who was President of ISO during 1965-67. India was also re-elected to the ISO Council for the third consecutive triennial term 1982-85 and was elected to the IEC Committee of Action for a term of six years.

India hosted during the year meetings of two important Technical Committees of the International Organization for Standardization. The twelfth meeting of the ISO Technical Committee ISO/TC 104 Freight Containers, held in Bombay in December 1982, considered the need for standardization of small containers, increase in the height of containers and marking of the designed weight of containers. The thirtieth plenary meeting of ISO/TC 45 Rubber and Rubber Products, held in New Delhi along with its two Subcommittees and Working Groups in December 1982, set up a task force under the leadership of India with members from UK, Germany and France to suggest an alternate accelerator to ethylene thiourea (ETU) which is banned in India.

ISI also collaborated with the Central Institute of Agricultural Engineering, Bhopal, in hosting a Regional Workshop on Standardization in Agricultural Machinery during March 1983. The Workshop, organized by the Regional Network for Agricultural Machinery (RNAM) functioning under the aegis of the Economic and Social Commission for Asia and the Pacific (ESCAP), recommended the development of a strong linkage between national standards bodies and national institutions of the RNAM countries.

As a matter of policy the Institution is extending assistance to developing nations to provide them the needed insight for organizing and properly



coordinating their standardization programmes. The Institution organized during 1982-83 the Fifteenth International Training Programme in Standardization for Developing Countries which was attended by 27 trainees from 15 countries. Under this Programme, training has so far been imparted to 212 technical personnel from 38 developing countries of Asia, Africa and Latin America.

Four officers of the Institution were deputed to Saudi Arabia for rendering assistance in matters relating to standardization and quality control.

### Staff Welfare

Welfare of the employees remained one of the important concerns of the Institution during the year. To remove stagnation among officers in the ISI Service Cadre, a scheme of Three-Level Flexible Complementing was introduced by creating a new level of Senior Deputy Director. Twentythree new selection grade posts were created for Grades II, III and IV employees of the Institution. Besides, benefits like house building loan, group insurance for employees

working in hazardous environments, holiday home facilities and subsidized staff canteens continued to be extended to the staff during the year. Dependents of three employees who died in harness were given financial assistance through the Benevolent Fund. Representation of Scheduled Castes/Scheduled Tribes in the various categories of posts increased from 240 to 251 during the year under report.

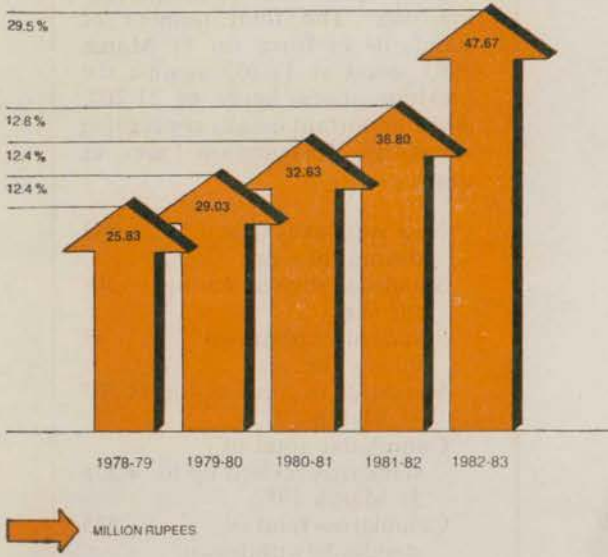
### Acknowledgement

The Institution owes a word of appreciation to various organizations and individuals for their unstinted support and assistance extended by them in the achievement of its objectives — to committee members for providing expert guidance in the formulation of standards, to subscribing members for their financial contributions and to various public and private sector organizations for their growing involvement in standardization work and increasing patronage to certification marks activity. This augurs well for the Institution, for it further strengthens its resolve to serve the industry and the consumers with redoubled vigour.

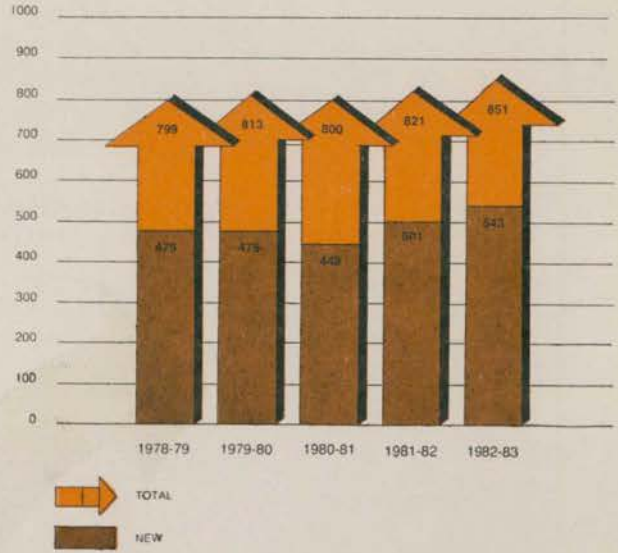


### GROWTH OVER THE YEARS

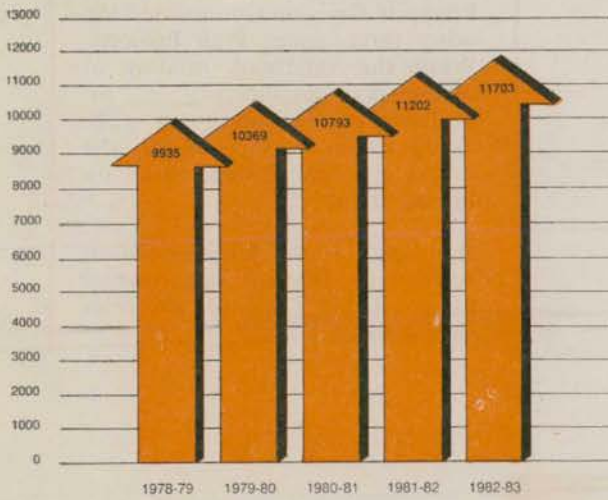
Income from own resources



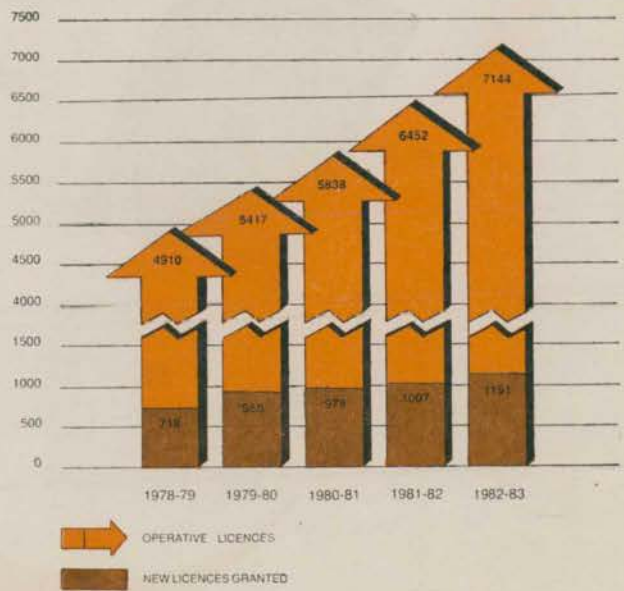
### STANDARDS ISSUED



### STANDARDS IN FORCE



### PROGRESS OF ISI CERTIFICATION MARKS SCHEME



## FORMULATION OF STANDARDS

The Institution issued 851 new and revised standards during 1982-83 against 821 in the preceding year. The total number of standards in force on 31 March 1983 stood at 11 703 against the previous year's figure of 11 202. Some important details concerning standards formulation are as under:

New standards issued during the year	543
Standards revised during the year	308
Standards withdrawn during the year	41
Standards in force as on 31 March 1983	11 703
Cumulative total of standards revised up to 31 March 1982	4 538
Cumulative total of standards withdrawn up to 31 March 1982	575
Standards reprinted	1 343
Amendments issued	363

Besides, four important handbooks relating to food analysis, textile testing, concrete mixes and earthquake engineering were published, that on food analysis under the routine programme of work of the Agricultural and Food Products Division Council and the other three under Plan Projects. While the handbook relating to earthquake engineering is an explanatory handbook on published codes on the subject, the others are compilations based on Indian Standards.

Highlights of the standardization activity in different departments follow. Table 1 records the relevant data.



TABLE 1 RECORD OF TECHNICAL WORK (FOR THE YEAR 1982-83)

<i>Department</i>	<i>No. of Committees</i>	<i>No. of Meetings</i>	<i>New and Revised Standards Published and Under Print</i>	<i>Amendments to Standards</i>	<i>Drafts Issued into Wide Circulation</i>	<i>New Subjects Included in Programme of Work</i>
Agricultural and Food Products	152	60	80	51	39	4
Chemicals	222	103	71	5	43	28
Civil Engineering	320	130	100	77	89	37
Consumer Products and Medical Instruments	103	82	63	21	50	79
Electronics and Telecommunication	78	43	82	7	54	10
Electrotechnical	209	64	77	46	87	26
Marine, Cargo Movement and Packaging	96	50	41	—	28	6
Mechanical Engineering	324	142	145	72	120	102
Petroleum, Coal and Related Products	162	54	47	2	43	—
Structural and Metals	326	70	85	65	104	18
Textiles	111	51	47	17	44	22
Miscellaneous	76	24	13	—	17	3
<b>TOTAL</b>	<b>2 179</b>	<b>873</b>	<b>851</b>	<b>363</b>	<b>718</b>	<b>335</b>

## Agricultural and Food Products

Noteworthy among the standards developed during the year relate to swinging type draw bar for agricultural tractors; endosulphan, nitrofen and phenthoate granules; chlorfenvinphos, technical; cage wheel for power tillers; method of test for manually operated sprayers; methods for determination of fenitrothion residues in foods and carbaryl residues in fruits and vegetables; method for sensory evaluation of processed cheese; and guidelines for declaration of power of agricultural tractors.

Of the standards revised, that on guards for harvesting machines deserves special mention.

Three more parts of the ISI Handbook of Food Analysis, namely, Parts V, VI and VII, covering -bakery and confectionery items, protein-rich foods, and spices and condiments respectively, were issued. All the three parts are included in a single volume. Intended to provide complete information on Indian Standard methods of food analysis, the Handbook is proposed to be issued in 15 parts. The other parts issued so far are Parts I and XI, covering general methods and dairy products respectively.

## Chemicals

A major highlight was elevation of the Panel for Boiler Feed Water and Its Treatment, working under the Water Sectional Committee, to the status of a Sectional Committee to see that problems relating to

boiler water are dealt with more effectively. The new committee, called the Boiler Water Sectional Committee, held its first meeting in October 1982 and finalized for printing six new and revised standards on important subjects like chemical cleaning of boilers; treatment of water for boilers; and feed water, boiler water and condensate requirements for various types of boilers.

Other important new subjects dealt with during the year include baby toilet soaps, air quality with respect to sulphur dioxide and suspended particulate matter, control of air pollution in petroleum refineries, utilization and disposal of fly ash and solid wastes from steel plants, plastic filter funnels, breathing apparatus, auxiliary syntans, oil-field workmen protective boots, safety rubber ankle boots for miners and safety footwear for steel plants, while important revisions relate to household laundry detergent powders and bars, tolerance limits for inland surface waters subject to pollution, sash tool brushes for paints and varnishes, and leathers for shuttlecock caps and hockey, rugby and cricket balls.

## Civil Engineering

Among the standards formulated, special mention may be made of the codes of practice for sampling of soils by thin wall sampler with stationary piston, photogeological interpretation and mapping of river valley project, design and construction of floors and roofs using precast reinforced/prestressed concrete ribbed or cored slab units, and manufacture of lime based blocks;



guidelines for design and construction of prestressed rock anchors, preparation of completion reports for multi-purpose river valley projects, and concrete mix design; and method of measurement of excavation for foundation in river valley projects.

The National Building Code of India, first published in 1970, was revised. Inclusion of *Development Control Rules*, special requirements for low-income housing and detailed fire safety requirements for high-rise buildings in the revised code is among the important modifications made.

### Consumer Products and Medical Instruments

Some of the important standards developed during the year under review relate to carbon steel safety razor blades, sterile hypodermic syringes for single use, electrically operated single and double pan deep fat fryers for large catering establishments, hot-food trolleys for hospitals and industrial canteens, wooden splints for safety matches, handsaws for plaster, and angled-to-side scissors for bandage and clothing.

Noteworthy among the revised standards are specifications for handmade lever type padlocks, postmortem tables and stainless steel safety razor blades.

### Electronics and Telecommunication

Of the standards developed during the year, those considered to be of special interest relate to 32.768 kHz quartz crystal units for wrist watches, 7- and 8-bit coded character sets for information interchange, multichannel television tuners and measurement of colour television picture tubes.

Important revisions relate to general requirements and tests for relays for electronic and telecommunication equipment and for printed wiring boards.

Preparation of an Indian Standard on colour television receivers is another important project taken up during the year. The requisite number of samples have already been got tested in the Research Department of All India Radio and the Central Electronics Engineering Research Institute, Pilani, with a view to formulating performance limits of the receivers being produced in the country.

The Standing Working Committee, Electronics and Telecommunication (SWCLT), in its fourth meeting held on 8 December 1982, requested the Standardization, Testing and Quality Control (STQC) Group of the Department of Electronics Government of

India, to help promote general awareness regarding the ISI Certification Marks Scheme through the agency of consumer societies.

### Electrotechnical

Among the standards developed during 1982-83, those of special interest relate to galvanized steel reinforced aluminium conductors for overhead transmission at extra high voltage (400 kV and above), moving coil voltage regulators, spacers and space dampers for twin horizontal bundle conductors, severities for environmental tests for automotive electrical equipment, medical treatment lamps, and terms commonly used for name-plates and similar data of electrical power equipment and their Hindi equivalents.

Indian Standard on carriers and bases used in rewirable type electric fuses up to 650 volts was one of the important standards revised during the year.

The Electrotechnical Division Council, in its 24th meeting held in New Delhi on 2 December 1981, had constituted two panels, one to recommend referee temperature to be adopted for electrical equipment in the light of the adoption of 25°C in place of 27°C as referee temperature by the Electronics and Telecommunication Division Council and the other to study the gaps in the standardization activity in the field of agricultural pumps for pinpointing areas for concentration of further efforts to ensure installation of pumpsets with improved efficiency and reliable performance to promote economy in energy consumption. The panel for referee temperature has now recommended that there need be no change in the referee temperature of  $27 \pm 1^\circ\text{C}$  for electrical equipment. The other panel has since identified the gaps in the present standardization activity of the Institution relating to agricultural pumps as also the standards needing an early review. Follow-up on the recommendations of the Panel has been initiated.

The Division Council had also stressed at the above meeting the need for producing 250 V incandescent lamps as 230 V lamps failed frequently in service. As a follow-up, the manufacturers capable of supplying 250 V lamps have been identified and their names communicated to bulk purchasers. It may be mentioned here that the Government of India is also considering legislative measures to statutorily control the quality of general lighting service lamps being manufactured in the country.

### Marine, Cargo Movement and Packaging

Noteworthy among the standards formulated during the period under report cover



guidelines for estimation of engine power for small mechanized fishing boats, acceptance tests and trials for fishing vessels, general requirements of packages for commercial high explosives, pine-needle hard-board boxes for packing apples, and tins for packing ghee, *vanaspati* and edible oils.

## Mechanical Engineering

Of the standards formulated during the year, those deserving particular mention cover procedure for basic climatic and durability tests for optical instruments; guidelines for selection of tipplers for broad gauge open railway levels; guidelines for format and contents of manual for and code of practice for preservation and storage of earth moving equipment; guidelines for application and installation of oil hydraulic systems; dimensions for modular units for machine tool construction in respect of wing bases for columns, rotary tables and wing bases for slide units; and glossary of terms relating to fluid power.

Various parts of the revised International Standard relating to quantities, units and symbols for different fields of science and technology (ISO 31) have been adopted as revision of the corresponding Indian Standard (IS : 1890) to fall completely in line with the international usage.

Indian Standard on technical supply conditions for milling cutters was another among the important standards revised.

## Petroleum, Coal and Related Products

Positive lists of constituents and specifications for polyethylene, styrene polymers and polyvinyl chloride (PVC) for their safe use in contact with foodstuffs, pharmaceuticals and drinking water were some of the noteworthy subjects covered by Indian Standards during 1982-83. Other new standards of special interest relate to guide on suitability of plastics for food packaging, and automotive internal combustion engine lubricating oils from base stocks of mixed crudes.

## Publications

Guidelines for presentation of translations, guidelines for presentation of abstract sheets in serial publications, and specification for density of silver-gelatin type microforms were the three important standards formulated during 1982-83 by the Documentation Sectional Committee, EC 2, functioning under

the Executive Committee of ISI through the Publications Department.

## Statistics

The Industrial Statistics Sectional Committee, EC 3, and the Management and Productivity Sectional Committee, EC 9, both functioning under the Executive Committee of ISI through the Statistics Department, developed during the year under report four important standards relating to management information charts and forms used in the organization of a quality control system, manual on quality assurance systems, designs for industrial experimentation and glossary of terms in inventory control.

The Statistics Department also holds the secretariats of the Methods of Sampling Sectional Committees working under various Division Councils. New standards formulated by these committees during the year relate to methods of sampling steel wires, grey iron and malleable iron castings, and bentonite. Methods of sampling iron ores, and dolomite, limestone and other allied materials; and difference/preference tests for statistical analysis of data pertaining to sensory evaluation of foods are the revisions brought out.

Besides, the Department carried out a number of statistical studies to resolve certain specific problems relating to standardization and certification marking. Notable among these are analysis of data on active ingredient content of various pesticidal formulations to recommend tolerances, efficiency and other characteristics of pumps to formulate procedure for their sampling, and performance tests of safety razor blades to evaluate consistency of judges.

The Department carried out a study on the method of pricing ISI publications and recommended a new pricing system. This new system classifies the publications with pages up to 70 in A4 size and 140 in A5 size into 15 groups, each representing a particular price. Prices for publications with a larger number of pages have to be determined specifically. The system has been brought into effect from 1 September 1982.

A study involving ABC analysis of the consumables purchased for the Central Laboratory was also carried out and a strategy for inventory control recommended.

## Structural and Metals

Standards of special interest among those developed during 1982-83 include specifications for carbon and low alloy steel



investment castings for general applications, flux grade limestone and dolomite for use in steel plants, sand rammers, lancing pipes, and snap flask moulding boxes and jackets; dimensions for hot-rolled track shoe section TS-L1, and rubber seating rings of nominal diameter up to 200 mm for cast iron detachable joints in asbestos cement pressure pipes; methods for determination of plane strain fracture toughness of metals and magnetic permeability of iron and steel; and recommendations for CO<sub>2</sub> gas shielded metal arc welding for structural steels, manual tungsten inert gas arc welding of copper and copper alloys, general pipeline welding, coating and wrapping of underground mild steel pipelines, and corrosion prevention in electronic components and assemblies.

Some of the important revisions cover comparison of Indian and overseas basic sizes for sheet and wire, steel plates for pressure vessels, fire precautions in welding and cutting operations, and methods for spectrographic analysis of high purity zinc and zinc base alloys for die castings and for testing local thickness of electroplated coatings.

## Textiles

Indian Standard on size designation of clothes is one of the noteworthy standards finalized for printing during the year. Based on the international system of designating the sizes of clothes by way of the corresponding body measurements, the Standard gives, in different parts, definitions and body measurement procedure and details of the methods of designating the sizes of men's and boys' outerwear garments; women's and girls' outerwear garments; infants' outerwear garments; men's and boys' underwear, nightwear and shirts; women's and girls' underwear, nightwear, foundation garments and shirts; gloves; and headwear.

Some of the other new standards of special interest relate to 8-strand plaited polyamide multifilament ropes, guide for positioning of labels in garments, and guide for care and maintenance of carpets.

Indian Standard on methods for identification of textile fibres was among the important standards revised.



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# CERTIFICATION AND QUALITY ASSURANCE

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The Institution granted 1 151 new licences under the ISI Certification Marks Scheme during 1982-83, bringing the total number of licences issued since the inception of the Scheme to 11 769. The new licences covered 266 products, 34 of which came under the Scheme for the first time. The total number of Indian Standards against which products were certified stood at 1 110 on 31 March 1983 against 1 083 at the end of the preceding year. Of these, nearly 230 standards relate to items of every-day use of particular interest to consumers.

## Progress of the Scheme

There were 7 144 operative licences on 31 March 1983 against 6 452 on 31 March 1982. The operation of 814 licences was, however, deferred to enable the licensees to take suitable corrective action. The number of licences in actual operation on 31 March 1983 was thus 6 330. Industrywise and regionwise break-up of licences in operation as on 31 March 1983 is given in Tables 1 and 2 respectively.

This year, the number of licences lapsed on account of unsatisfactory performance of the licensee, closure of the licensee's factory and lack of interest on the part of the licensee to continue the licence came to 459. This brought the number of licences lapsed since the inception of the Scheme to 4 625.

## Certification Revenue

The certification revenue during 1982-83 amounted to Rs 35.57 million against the preceding year's figure of Rs 26.64 million, thus registering a record growth of 33.52 percent. The value of the goods certified during the year is estimated at Rs 25 000 million.



TABLE 1 INDUSTRYWISE DISTRIBUTION OF CERTIFICATION MARKS LICENCES  
(AS ON 31 MARCH 1983)

<i>Sl No.</i>	<i>Industry</i>	<i>No. of Licences in Operation</i>
i)	Agricultural and food products:	
	a) Food products and food colours	505
	b) Pesticides	1 059
ii)	Chemicals	453
iii)	Civil engineering and plywood:	
	a) Construction materials and other engineering items	532
	b) Plywood panels, battens and metal fittings	179
iv)	Consumer products and medical instruments	228
v)	Diesel engines, pumps, LPG cylinders/valves and other mechanical engineering items	422
vi)	Electrotechnical including electronics and telecommunication (cables and conductors, flameproof electrical equipment, electrical motors, etc)	1 118
vii)	Marine, cargo movement and packaging (containers, packaging materials, etc)	59
viii)	Petroleum, coal and related products	231
ix)	Structural and metals:	
	a) Metal products	320
	b) Steel	803
x)	Textiles and allied products:	
	a) Jute	250
	b) Textiles and textile machinery	171
xi)	Deferred licences	814
<b>TOTAL</b>		<b>7 144</b>

TABLE 2 REGIONWISE DISTRIBUTION OF CERTIFICATION MARKS LICENCES  
(AS ON 31 MARCH 1983)

<i>Sl No.</i>	<i>Region</i>	<i>Branch Office (Areas Covered)</i>	<i>No. of Licences in Operation</i>
i)	Eastern	a) Calcutta (West Bengal, Assam, Arunachal Pradesh, Meghalaya, Nagaland, Tripura, Manipur and Mizoram)	1 314
		b) Bhubaneswar (Orissa)	82
		c) Patna (Bihar)	217
ii)	Western	a) Bombay (Maharashtra and Goa)	1 075
		b) Ahmadabad (Gujarat, Daman and Diu)	552
iii)	Northern	a) S. A. S. Nagar (Chandigarh) [Punjab, Himachal Pradesh, Jammu and Kashmir, Haryana (Districts other than those indicated in Delhi)]	637
		b) Bhopal (Madhya Pradesh)	232
		c) Delhi [including States of Haryana (Districts Faridabad, Gurgaon, Rohtak, Sonapat, Panipat and Jind), Uttar Pradesh (Districts Ghaziabad, Bullandshahr, Mathura, Muzaffarnagar, Saharanpur, Dehra Dun, Bijnaur, Meerut and Rajasthan (Districts Alwar and Bharatpur)]	883
		d) Jaipur [Rajasthan (Districts other than those indicated in Delhi)]	253
		e) Kanpur [Uttar Pradesh (Districts other than those indicated in Delhi)]	315
iv)	Southern	a) Madras (Tamil Nadu and Pondicherry)	739
		b) Bangalore (Karnataka)	384
		c) Hyderabad (Andhra Pradesh)	311
		d) Trivandrum (Kerala)	150
<b>TOTAL</b>			<b>7 144</b>



TABLE 3 INSPECTIONS CARRIED OUT DURING 1 APRIL 1982 TO 31 MARCH 1983

SI No.	Region	Branch Office	Preliminary Inspections	Periodic Inspections	Other Inspections
i)	Eastern	a) Calcutta	232	3 816	1 314
		b) Bhubaneshwar	10	133	29
		c) Patna	36	668	140
ii)	Western	a) Bombay	155	2 530	525
		b) Ahmadabad	85	1 036	475
iii)	Northern	a) S. A. S. Nagar (Chandigarh)	202	1 247	279
		b) Bhopal	52	362	3
		c) Delhi	311	2 972	641
		d) Jaipur	76	705	268
		e) Kanpur	84	943	33
iv)	Southern	a) Madras	174	2 618	116
		b) Bangalore	41	1 605	198
		c) Hyderabad	124	992	217
		d) Trivandrum	34	529	42
TOTAL			1 616	20 156	4 280

### Inspections

Over 26 000 inspections, which include preliminary inspections for grant of licences, periodic inspections for supervision of the operation of the Scheme by the licensees and lot and preshipment inspections for quality assurance, were carried out during the year. Table 3 gives the regionwise break-up.

### New Products Covered Under the ISI Certification Marks Scheme

Thirtyfour new items were brought under the ISI Certification Marks Scheme during the period under review. These may be broadly classified as under:

- a) *Chemicals*—Sodium sulphide, technical; silica gel; chlorine tablets; ready mixed paint, brushing, bituminous, black, lead-free, acid-, alkali-, water- and chlorine-resisting; menthol; and 1-phenyl-3-methyl-5-pyrazolone.
- b) *Construction Materials and Other Civil Engineering Items*—Admixtures for concrete, CBR moulds, continuous (piano) hinges, and floor springs (hydraulically regulated) for heavy doors.
- c) *Electrotechnical*—Emergency lighting units.
- d) *Footwear*—Canvas boots, rubber sole.

- e) *Hospital Equipment*—Wheel chairs, folding, with removable armrests and swinging footrests.
- f) *Laboratory Apparatus*—Binocular eyepieces for microscope, pathological microscopes, and density hydrometers.
- g) *Mechanical Engineering Items*—Cold-coiled compression springs, single-stage LPG regulators, slip-joint pliers, and calibrated high tensile steel chain (round link) for chain conveyors and coal ploughs used in mines.
- h) *Metal Products*—Abrasion-resistant iron castings.
- j) *Packaging*—Corrugated fibreboard boxes.
- k) *Pesticides*—Phorate granules, encapsulated.
- m) *Petroleum/Coal Products*—Vanillin, petroleum jelly for cosmetic industry, mineral oil for cosmetic industry, industrial white oils, and flexible polyurethane foam for domestic mattresses.
- n) *Rubber Products*—Water suction and discharge hose of rubber, heavy duty.
- p) *Sports Goods*—Putting shots.
- q) *Textiles*—Cotton sewing threads; polyester-cotton blended yarn; dyed cotton fabric, waterproofed; and cones for winding yarn.

# ISI LABORATORIES

The network of ISI laboratories comprises the Central Laboratory at Sahibabad, District Ghaziabad; the laboratories at the Regional Offices at Calcutta, Bombay, S. A. S. Nagar (Punjab) and Madras; and the laboratory at Patna Branch Office.

The Central Laboratory shifted to its present premises in 1981-82 when its service and electrical blocks were still under construction. The work on the service block has been completed this year; the electrical block is also expected to be ready in a few months. A 250-kVA generating set is being purchased. A water-treatment plant having a capacity of 5 000 litres per charge, with an underground storage tank of a capacity of 40 000 litres, is being installed.

## Samples Tested

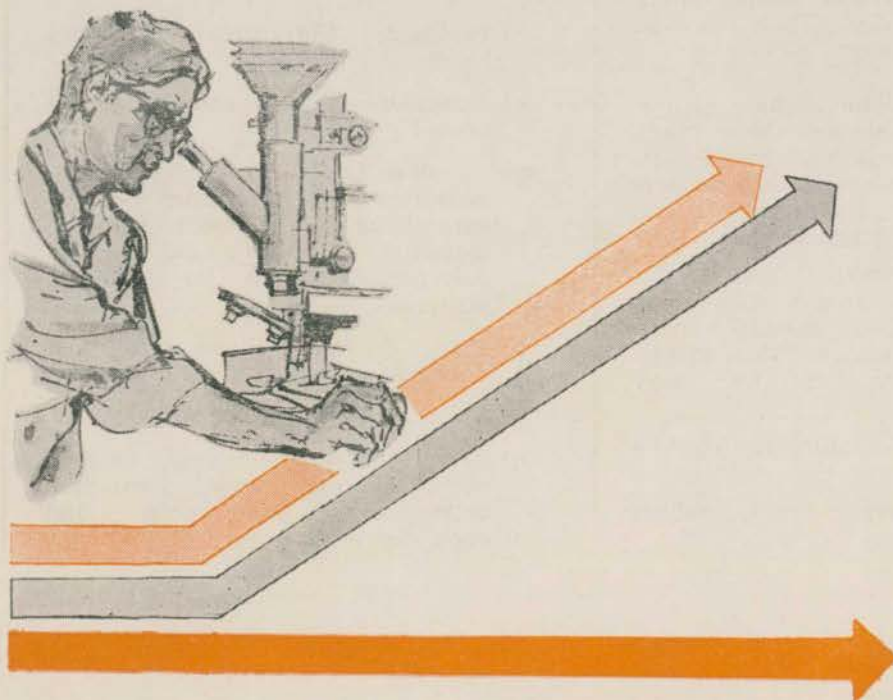
The ISI laboratories tested 20 758 samples during the year under report, the estimated value of the testing work executed being

Rs 4 558 027. The preceding year's figures were 19 377 and Rs 3 163 792 respectively.

## Investigations

Investigations handled during the year, mainly at the instance of the technical committees, included the following:

- a) Determination of acidity of the extracted fat in soya flour.
- b) Determination of thickness and proportion of skin in tapioca chips.
- c) Testing the presence of iron and evaluating iron sulphide content in samples of zinc phosphide.
- d) Comparative study of the results of dimethoate content determination by UV and IR spectrophotometric methods.
- e) Standardization of the samples of malathion, technical, by comparison with Malathion Standard Reference Material.





- f) Determination of carbon black content in PVC film.
- g) Formulation of the requirements for reverse bend testing of brain spatula.
- h) Testing the feasibility of specifying the range for width of safety razor blades as '21.85 to 22.09 mm' in place of the present '21.90 to 22.04 mm' in IS : 7371-1977 'Specification for Blades, razor, safety (first revision)'.  
j) Chemical analysis and determination of corrosion resistance properties of zinc base alloy pressure regulating device of pressure cookers.
- k) Testing the fineness of cement paint by wet sieving method.
- m) Performance assessment of a new design of miners' safety helmets against the requirements specified in the relevant Indian Standard.

### New Equipment for ISI Laboratories

Testing facilities in various ISI laboratories were augmented by adding new testing equipment. Some of the important pieces of apparatus added are as follows:

- a) Autoclave for cement;
- b) Electronic tensile strength tester for PVC material, rubber components, paper, fabrics, wires, etc;
- c) Impact testing machine for PVC pipes;
- d) Reversion testing machine for PVC pipes;
- e) Brinell hardness tester;
- f) Gas flowmeters;

- g) Duct for testing exhaust fans for air delivery;
- h) Autotransformer, 30 kVA, 3-phase, 50 A;
- j) Hydraulic press, 40 t;
- k) Gas chromatograph;
- m) Air compressor;
- n) Hydraulic hand-operated compression testing machine;
- p) Tinsley polarograph;
- q) Compression machine for testing manhole covers;
- r) Glass reflectance meter;
- s) Abrasion testing machine;
- t) Torsion testing machine;
- u) Tensile testing machine;
- v) Spectrophotometer;
- w) Pendulum impact tester; and
- y) Eddy current dynamometer.

### Registration of Outside Laboratories

Seven new outside laboratories were registered during the year to undertake testing in regard to the ISI Certification Marks Scheme. This brought the total number of outside laboratories registered with the Institution to 204.

### ISI Laboratory for Karnataka State

The network of ISI laboratories is going to have another laboratory at Bangalore very soon. The foundation stone for the new ISI Testing Laboratory has been laid on 2 December 1982 by Shri B. R. Prabhakara, Secretary, Commerce and Industries Department, Government of Karnataka.



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# PROMOTIONAL ACTIVITIES

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## Creating Standards-Consciousness

The Institution went ahead with its efforts to promote increased standards-consciousness in the country. The press was increasingly used to highlight the standardization activity through press conferences, press releases, press interviews, display advertisements, special features, etc. Radio and television also gave adequate coverage to important events in their news bulletins. A number of interviews, talks, group discussions and features were specially broadcast/telecast. A Hindi documentary on the work of the ISI Central Laboratory, produced by the Television News Features (TVNF), was telecast by Delhi Doordarshan on 14 March 1983 in its Science Programme. Among the exhibitions in which ISI participated, the following deserve particular mention:

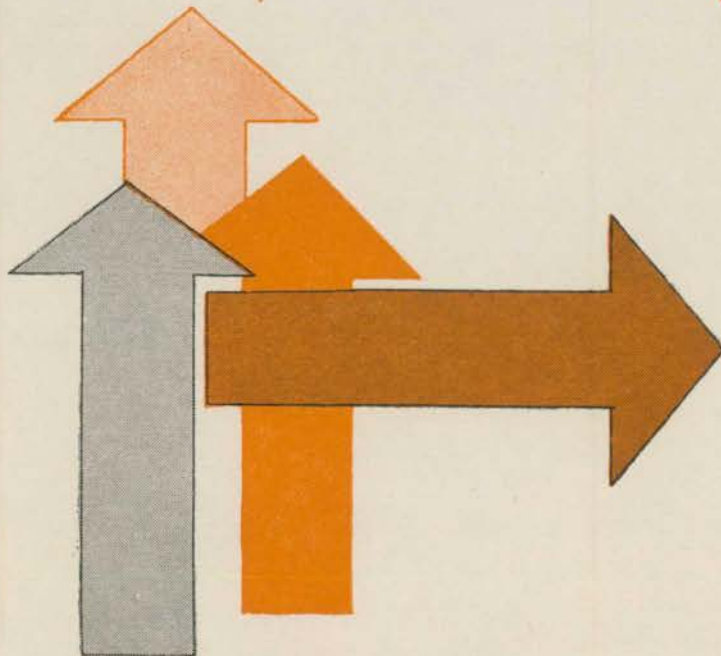
- a) Trichurpooram Exhibition 1982, Trichur (Kerala);
- b) International Food Exhibition, AHARA 1982, Bangalore;

- c) Mysore Dassara Exhibition 1982, Mysore;
- d) Exhibition on Machine Tools organized on the occasion of 'Buyer and Seller Meet' and 'Seminar on Modernization of Machine Tool' at Ludhiana;
- e) Ganatantra Mela Pardarshni, Jaipur; and
- f) Trichurpooram Exhibition 1983, Trichur (Kerala).

Special programmes were arranged on the occasion of World Standards Day both at the ISI Headquarters and at Regional and Branch Offices of the Institution.

## Implementation of Indian Standards

The Institution has been constantly striving for greater implementation of Indian Standards. During the year, the Directorate General of Supplies & Disposals, Directorate of Standardization (Ministry of Defence), Research, Designs and Standards Organization (Ministry of Railways)





and certain other Government Departments adopted 436 Indian Standards, 132 among these being cases of new adoption. Besides, a number of organizations/authorities took steps to implement Indian Standards as indicated below:

- a) Panchayati Raj Department, Government of Andhra Pradesh, Hyderabad, decided to prefer ISI-certified deep-well hand pumps in purchases under Rural Water Supply Scheme;
- b) Vishakhapatnam Port Trust, Vishakhapatnam decided to make specific mention in all tender notices that the products with ISI Certification Mark would be given preference;
- c) All the four stations of All India Radio in Kerala, namely, those at Trivandrum, Trichur, Alleppey and Calicut, decided to purchase, as far as possible, electrical and hardware stores bearing ISI Mark;
- d) Director of Panchayats, Trivandrum, advised all the District Panchayat Officers to ensure that the goods bearing ISI Mark were given preference in the purchase programmes of Panchayats;
- e) Kerala State Housing Board, Trivandrum, issued instructions to all its concerned officers to procure, as far as possible, ISI-marked materials; and
- f) Steel Authority of India Ltd, New Delhi, and Public Works Department, Government of Nagaland, Kohima, issued directives to their respective executives to make use of the relevant Indian Standards for measurement of building and civil engineering works including measurement of plinth, carpet and rentable areas of buildings.

#### *Bihar and Rajasthan State Conferences on Implementation of Indian Standards*

The Institution, in collaboration with the Department of Industries, Government of Bihar, organized the Second Conference on Implementation of Indian Standards in Bihar at Patna on 6 November 1982. The Conference was inaugurated by Shri Yogeshwar Prasad 'Yogesh', Minister for Industries and Rajbhasha, Bihar, on behalf of the Chief Minister Dr Jagannath who could not be present due to preoccupation. Shri Arun Pathak, Commissioner and Secretary, Department of Industries, Government of Bihar, presided.

The First Conference on Implementation of Indian Standards in Rajasthan, organized jointly by the Directorate of Industries, Government of Rajasthan, and ISI, was held

at Jaipur on 12 March 1983. It was inaugurated by Shri Shiv Charan Mathur, Chief Minister of Rajasthan, and was presided over by Shri Jagtar Singh Kang, Deputy Minister of Industries and Irrigation, Rajasthan.

About 130 delegates took part in the Bihar Conference while the Rajasthan Conference had a participation of over 350, with adequate representation from Government departments, purchasing agencies, industries, trade associations, scientific and technical institutions, financing organizations, etc.

The recommendations of the Conferences covered mainly the following points:

- a) Establishment of Standards Cells in various departments and agencies of the State Government for effective involvement of its experts in the development of national standards and their implementation in the State;
- b) Formation of a Standards Monitoring Committee by the State Government to monitor the execution of orders issued by the Government for implementation of Indian Standards and recognition of the ISI Certification Marks Scheme by purchasing agencies in the State and to recommend measures for promoting standardization and quality control including a State Plan on the subject;
- c) Grant of concessional credit and other incentives to industries by financial institutions for adopting the ISI Certification Marks Scheme;
- d) Adoption by the State Government of measures to ensure that critical raw materials supplied to small scale industries are accompanied by test certificates against relevant Indian Standards;
- e) Extension of technical assistance by ISI and other Government institutions to small scale units; and
- f) Purchase of ISI-certified goods by Government agencies.

#### *Conference on Implementation of Indian Standards Relating to River Valley Projects*

A Conference on Implementation of Indian Standards Relating to River Valley Projects was organized jointly with the Irrigation Department, Government of Gujarat, at Himatnagar on 19 December 1982. The Conference, inaugurated by Shri J. F. Mistry, Joint Secretary and Chief Engineer, Department of Irrigation, Government of Gujarat, was attended by some 200 delegates.



The following recommendations emerged from the deliberations of the Conference:

- a) Indian Standards relating to river valley projects should be adopted by the Irrigation Department;
- b) ISI-marked materials should be used as far as possible to ensure quality of construction materials for various projects;
- c) A complete set of Indian Standards on river valley projects should be purchased by all the Superintending and Executive Engineers for day-to-day reference;
- d) All the Superintending and Executive Engineers in North Gujarat should become subscribing members of ISI;
- e) Due cognizance should be taken of the suggestions regarding subjects for preparation of Indian Standards made at the Conference;
- f) Any suggestions in regard to changes in the provisions of a standard should be intimated to ISI to see whether the modifications were necessary in the light of feedback;
- g) The concerned officers at all levels should be made aware of the Indian Standards available on the subject; and
- h) Similar conferences should be arranged in other parts of the State.

### Company Standardization

To convince the top management about the role of standardization as a tool for increasing productivity, a Top Management Conference on Standardization and Productivity was organized in collaboration with Delhi Section of the Institute of Standards Engineers (SEI) on 13 August 1982 in Vigyan Bhavan, New Delhi. Some 60 participants comprising top level executives of industrial units and representatives of Government departments took part in the deliberations.

To prepare a cadre of standards engineers for manning standards activity in industrial units and similar organizations, ISI has been regularly organizing Company Standardization Training Programmes for executives working in them. During the year, two such programmes were organized in Bangalore (20-23 October 1982) and Bombay (14-17 March 1983) with a total participation of 74 trainees from 56 organizations from all over the country.

### Interplant Standardization in Steel Industry (IPSS)

This important activity continued to forge ahead inasmuch as there was 50 percent

increase in the number of standards finalized — 32 against 21 last year. The Steel Authority of India Limited (SAIL) extended financial and technical support and posted an officer to the IPSS Secretariat. The work of IPSS, which broadly falls under the two groups of 'Consumable Stores and General Equipment' and 'Design Parameters', encompassed items like gear boxes, grease guns, electric motors, centrifugal compressors, pipes and pipe fittings, pulley blocks, portable electric hand tools, crane hooks and hook blocks besides design parameters of ingot mould cars, auto dump cars, acceptance norms for EOT cranes, etc, which are used extensively in various steel plants. Some 220 executives/engineers from the steel plants, heavy engineering establishments and design organizations participated in the work of formulation of IPSS Standards.

### SQC Programmes

Seven training programmes in statistical quality control were conducted in which 195 persons from 73 organizations participated. These training programmes were held at Vadodara, Alwar, Hissar, Trivandrum, Bangalore, Kolhapur and Rohtak covering diesel engines for tractors, steel tubes, cables and conductors, diesel engines and centrifugal pumps for agricultural use and fasteners. The programme at Trivandrum was conducted for the scientists and engineers of Vikram Sarabhai Space Centre, which is noted for its high level of specialization.

A Regional Workshop on Standards for SQC was conducted in Bombay in April 1982. Thirtyeight persons including quality control managers from 36 organizations attended the Workshop and discussed problems relating to SQC standards. The Workshop was inaugurated by Dr A. K. Gupta, Director General ISI, and conducted under the guidance of Prof P. K. Bose who is Chairman of the Quality Control and Industrial Statistics Sectional Committee (EC 3) of ISI.

ISI also provided faculty for lectures on various aspects on quality control in programmes organized by other organizations like Government Polytechnic, Rajkot; Defence Science Laboratories; Posts and Telegraphs Department; Indian Institute of Foreign Trade; Indian Association for Quality and Reliability; Small Industries Service Institute, Indore; and Railway Staff Training College, Vadodara.

### SQC Consultancy Service

A beginning was made for SQC Consultancy Service with technical advice to M/s P. M. Diesels Pvt Ltd, Rajkot. Under this service, the Institution's experts visit the concerned



factory a number of times to review its existing system of quality control and suggest measures for improvement, wherever necessary. For this purpose, ISI has already developed some indices for monitoring the level of overall quality in an industrial unit.

## Educational Programmes

To increase awareness about Indian Standards among faculty members and students of technical institutions, four Programmes on Educational Utilization of Standards were organized as under:

- a) Programme on Educational Utilization of Standards in the fields of Mining and Minerals organized in collaboration with the Indian School of Mines at Dhanbad during 16-17 April 1982;
- b) Educational Utilization of Standards in the Fields of Agriculture and Food Products organized in collaboration with the College of Agriculture at Vellayani (Kerala) during 20-21 July 1982;
- c) Educational Utilization of Standards in the Field of Agricultural Engineering organized in collaboration with the Tamil Nadu Agricultural University at Coimbatore on 24 July 1982; and
- d) Educational Utilization of Standards in the Field of Engineering organized in collaboration with the Regional Engineering College at Durgapur during 29-30 November 1982.

Eleven organizations took part in these programmes, attended by about 250 participants.

As a result of the programmes, the collaborating organizations have agreed to set up nodal points to monitor standardization activity, update their standards libraries and utilize Indian Standards in testing, teaching curricula, etc.

Based on the specific recommendations made at these programmes, a Model Curriculum on Standardization for Agricultural Engineering was prepared and forwarded to 27 universities/colleges in the country for their consideration for the purpose of its inclusion in their curricula.

## Publications and Communication

During the year under review, 820 new and revised Indian Standards were printed while 1 343 standards were reprinted. Besides, four major publications, namely, ISI Handbook of Textile Testing, Explanatory Handbook on Codes for Earthquake Engineering, ISI Handbook of Food Analysis and Handbook on Concrete Mixes were published.

The ISI Handbook 1982, which provides a comprehensive guide for information on national standards and other publications of the Institution, came off the press. Another important publication brought out during the year was a pamphlet 'The New 20-Point Programme and ISI' which identified the relevance of ISI work to the Prime Minister's programme for economic progress in the country.

To bring the Indian Standards in different subject areas to the notice of the concerned interests, the Institution issued, *inter alia*, a series of Sectional Lists of Indian Standards. A number of informative pamphlets were also brought out to disseminate information about the activities and achievements of the Institution.

### Periodicals

The Institution's four periodicals, namely, *ISI Bulletin*; *Standards: Monthly Additions*, *Standards Worldover: Monthly Additions*; and *Manakdoot* were issued regularly. These periodicals are playing a notable role in promoting awareness about standardization and the important contribution being made by ISI towards furthering the cause of economic and industrial growth.

### Translation Service

During 1982-83, a good deal of assistance was provided to various experts in locating relevant data and information from standards and other technical documents in foreign languages. A large number of documents comprising standards, technical reports and scientific and technical papers were translated from different foreign languages, such as French, German and Russian, into English.

## Technical Information Services

### Library Services

The Information Services Department at the Headquarters received and processed 22 801 standards and other technical publications. Thirtysix bibliographies and 717 documentation lists giving detailed information on national, international and overseas standards and standard type documents were prepared in response to technical enquiries received from ISI members and officers.

The number of visitors served by the ISI Library was 3 192 while that of publications loaned and consulted by the users came to 70 000. Some 584 periodicals were received under subscription/exchange/complementary arrangements. To keep the readers well informed about new additions to the library, the following documentation lists were brought out monthly:

- a) Standards Worldover: Monthly Additions;



- b) Current Published Information on Standardization; and
- c) Additions to the Library: Books and Pamphlets.

To meet the immediate needs of the Indian industry and trade, information about world standards in a number of subject areas was fed into the computer terminal at ISI and printouts made available to the concerned parties on a nominal charge of Rs 5 per page. Bibliographies frequently in demand include those on computer hardware and software, refractories, LPG installations and transportation, diesel fuel, and milk and milk products.

Regional and Branch Offices of the Institution were supplied with reference books/standards to meet the information needs of members in the respective regions.

#### *Computer Cell*

The Certification Marks database was re-designed with a view to making it more efficient and informative. In the re-structured database, additional elements of information like party code, party address, and contact points both in the office and factory of the licensee were also introduced. In this form, the database would be useful not only in providing organized information as computer output for documents like the Buyers' Guide and Classified List of Licensees but also provide proper feedback to the Branch Office responsible for the operation of the licences.

To fully acquaint the persons responsible for computer inputs at Branch Office level with the computerized database, orientation programmes were organized at the four Regional Offices.

The project relating to revision of marking fees and creation of a Computerized Marking Fee Directory was completed during the year.

The database on the classified information on Indian and overseas standards was developed satisfactorily and was frequently used for generating bibliographies as direct computer outputs. During the year under review, the demand for such bibliographies, particularly from the organized sector of industry, increased appreciably.

In connection with the obligations under the ISONET and GATT Standards Code, experiments for the design and development of a database on standards and technical regulations on Cyber System of the National Informatics Centre continued to progress.

The Computer Cell also undertook a number of one-time jobs including statistical analysis of data for determining process capabilities for the purpose of making recommendations to standards committees and scientific

computation work for standards development involving complicated mathematical formulae.

#### *Classified Lists of Indian Standards*

Publication of a new series 'Classified Lists of Indian Standards' providing compilations of Indian Standards issued by different departments of the Institution on specific subjects, was started during the year. The subjects covered so far include welding, office stationery, rubber hoses and measurement of civil engineering works.

The compilation is aimed at promoting standardization by informing the users of standards — manufacturers, traders, purchase organizations, etc — about the availability of relevant standards in their fields of operation.

Besides, a list of Indian Standards covering a wider field, namely, agricultural equipment industry, was also published, giving information about 580 standards in areas such as tillage, seeding, fertilizer applications, irrigation, harvesting and threshing, farm produce processing and farm transport.

### **Institute of Standards Engineers (SEI)**

ISI agreed to provide secretarial facilities to SEI, a professional body of practising standards engineers with a membership of over 1 600. This is expected to give impetus to the activities of SEI which would, in turn, promote standardization and implementation of Indian Standards at an accelerated pace and help provide the necessary feedback to ISI.

### **Public Relations**

#### *Subscribing Membership*

The number of subscribing members of the Institution increased from 6 333 as on 31 March 1982 to 6 620 as on 31 March 1983. The revenue collected from subscribing members during 1982-83 amounted to Rs 5.12 million as against Rs 4.92 million during the preceding year. The position regarding different categories of membership as on 31 March 1982 and 31 March 1983 is given in Table 1.

#### *Sale of Standards*

The revenue received from the sale of Indian and overseas standards for the year 1982-83 is as follows:

	<i>Revenue Received</i> Rs
Indian standards	5 635 660
Overseas standards	2 181 970
Commission earned on the sale of overseas standards	859 904



TABLE 1 DISTRIBUTION OF SUBSCRIBING MEMBERSHIP

Class of Membership	Number of Members as on	
	31 March 1982	31 March 1983
Patrons	23	26
Donor members	76	99
Sustaining members	1 934	2 090
Associate members	2 390	2 520
Ordinary members	1 615	1 583
Individual members	295	302
<b>TOTAL</b>	<b>6 333</b>	<b>6 620</b>

### Progressive Use of Hindi in ISI Work

Documents numbering over 5 100 relating to Certification Marks Notifications, Certification Marks Licences, circular letters, general orders, office notes, advertisements, technical papers for seminars, etc. were translated into Hindi. Besides, press releases covering important activities of the Institution were issued to newspapers and magazines. The Hindi Unit published four issues of the quarterly magazine 'Manakdoot' in Hindi meant for disseminating popular information about standardization and quality control.

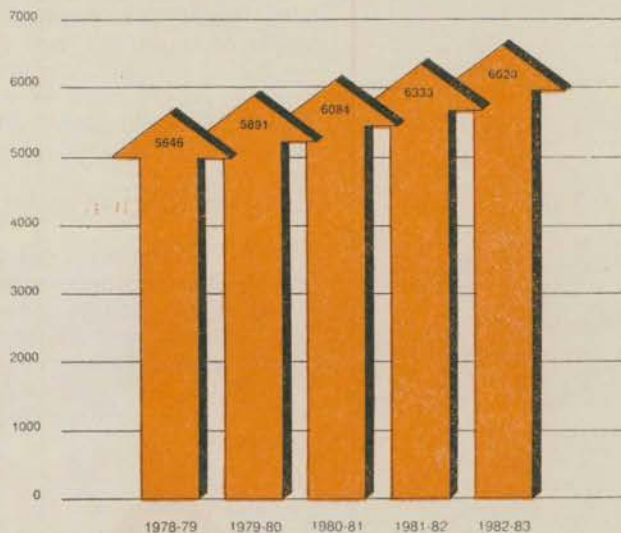
#### Hindi Extension Work

Twentytwo employees were nominated for training in Hindi and Hindi typewriting and stenography under the Hindi Teaching Scheme. The Official Languages Implementation Committee (OLIC), which looks after the work of progressive use of Hindi at the ISI Headquarters, held three meetings during the year. The Official Languages Implementation Committees at the Regional and Branch Offices of the Institution, which are eight in number, also held their meetings. Quarterly reports regarding progressive use of Hindi in these offices were received and reviewed by the OLIC at the Headquarters.

Officers of the Union Ministry of Civil Supplies and the Department of Official Languages visited the Headquarters and Branch Offices located at Ahmadabad and Kanpur for the purpose of reviewing the progress and arrangements made for the use of Hindi in official work. Progress was also made in the direction of introducing Hindi as a medium for training and conducting departmental tests as well as recruitment examinations. Question papers for the tests conducted for recruitment of staff for the Laboratory as well as for Office Manual test and shorthand and typewriting tests besides drawing, editing and trade tests were provided both in Hindi and English. For

examinations for recruitment to the posts of Assistant Directors (Trainees), Assistants, Junior Stenographers and Lower Division Clerks, it has been decided to provide question papers both in Hindi and English. The decision on providing question papers in Hindi for Style Manual Test based on IS : 12-1964 'Guide for drafting Indian Standards' has, however, been kept in abeyance till a separate Style Manual has been prepared for drafting Indian Standards in Hindi. It has also been agreed upon partly to use Hindi as a medium for providing training to Assistant Directors (Trainees) and Technical Assistants (Trainees).

SUBSCRIBING MEMBERS



#### Translation of Indian Standards into Hindi

On the basis of the directives of the Third Parliamentary Official Languages Committee in respect of translation of all Indian Standards except those of a highly technical nature, an Advisory Committee was set up to select Indian Standards for translation. More than 500 Indian Standards relating to consumer items produced in Hindi-speaking areas were selected in the first instance and sent to the Central Translation Bureau, Ministry of Home Affairs, for translation into Hindi. The position of work relating to translation into Hindi and printing of various documents in Hindi was reviewed by Hindi Salahakar Samiti of the Ministry of Civil Supplies at its Second Meeting held in February last at ISI Headquarters and decided that such matters as well as those relating to budget for work in Hindi may be considered by a Committee of Officials of the Ministry of Civil Supplies and the Department of Official Languages as well as ISI. During the year, an Indian Standard IS : 2052-1979 'Specification for compounded feed for cattle' was published in Hindi.



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## REGIONAL AND BRANCH OFFICES

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The Institution's network of Regional, Branch and Inspection Offices spread all over the country, besides supervising effectively the operation of the ISI Certification Marks Scheme, continued providing on-the-spot service in standards implementation and quality control to various sections of industry. Concerted efforts were also made for promoting the cause of standardization through mass media, seminars, conferences, training programmes, lectures and liaison with industrial units and governmental organizations.

### Eastern Region

The ISI Certification Marks activity in the Region continued to progress satisfactorily. Some of the new items covered under the ISI Certification Marks Scheme are ceiling fans, deep-well/shallow-well hand pumps, cement bags and lubricants.

To review the performance of the ISI licensees for flameproof enclosures and to suggest measures for more effective operation of the Scheme, a review meeting was arranged. To consider upgrading of Group II licensees for steel re-rolling, a conference of steel re-rollers having ISI Certification Marks Licence was organized jointly with the West Bengal Rolling Mills Association. The inspection procedure for LPG steel sheets has been streamlined.

The laboratory at the Eastern Regional Office was equipped for complete testing of paraffin wax, PVC cables, valves, pipes, bib cocks, duplicating ink and paper including stencil paper.

A Programme on Educational Utilization of Indian Standards on Mining and Mineral Industry was organized at Dhanbad during 16-17 April 1982.





In collaboration with the Department of Industries, Government of Assam, a Seminar on Quality Control and Standardization was organized at Gauhati. An exposition of Indian Standards was also arranged on the occasion.

An ISI stall was put up at the Eighth Calcutta Book Fair during 4-20 February 1983. The stall was visited by over 20 000 people drawn from elite segment of the society including a large number of students.

Besides, senior officers of the Regional Office participated actively in a number of important seminars and other programmes including the following held at Calcutta:

- a) Training Programme on Packaging in Pharmaceutical Industry organized by Indian Institute of Packaging (22 June 1982);
- b) Seminar on Bakery Products organized by All India Bakery Manufacturers' Association (21 September 1982);
- c) Seminar on Development of Ancillary Industries organized by Small Industries Service Institute (8 October 1982);
- d) All India Seminar on Development of Technology for Rural Engineering organized by Institution of Engineers (22 January 1983);
- e) Seminar on Fruits and Vegetables Processing Industry organized by Small Industries Service Institute and Fruit Processing Industry (4 March 1983);
- f) Seminar on Domestic Electric Appliances and Electric Goods organized by Small Industries Service Institute, Traders' Association and Directorate of Cottage and Small Scale Industries, West Bengal (18 March 1983); and
- g) Seminar on Standardization and Quality Control for Fasteners organized by Small Industries Service Institute (25 March 1983).

Expositions of the relevant Indian Standards were arranged at the venues of many of these programmes.

#### *Bhubaneshwar*

The first meeting of the Bhubaneshwar Office Advisory Committee was held on 27 April 1982 under the chairmanship of Shri L. I. Parija, Commissioner and Secretary to Industries Department, Government of Orissa. Useful suggestions were made at the meeting for expanding the activities of the Branch Office.

During the year, the small-scale industries in the State showed great interest in covering their products under the ISI Certification Marks Scheme.

Items brought under the Scheme for the first time in Orissa State include deep-well hand pumps, biscuits and paraffin wax.

There has been an increasing demand for Indian Standards from a large number of organizations. A complete set of Indian Standards was purchased by the Orissa Small Industries Corporation for opening a standards library for the use of small-scale industries in Cuttack.

The World Standards Day was celebrated jointly with Orissa State Centre of the Institution of Engineers by organizing a lecture programme on standardization and quality control for small-scale industries.

The Branch Office had active participation in the following programmes:

- a) Seminar on Quality Control for Paint Industries organized by Small Industries Service Institute;
- b) Seminar on Engineering and Environment organized by Orissa Engineering Congress; and
- c) Open-House Discussion on Lamp Industry organized by Small Industries Service Institute.

#### *Patna*

The Second Bihar State Conference on Implementation of Indian Standards was held at Patna on 6 November 1982.

Among the products for which ISI Certification Marks Licences were issued during the year, special mention may be made of lindane and butachlor emulsifiable concentrate formulations, deep-well hand pumps, steel ingots and billets for the production of carbon steel wire rods, enamelled round winding wires with high mechanical properties and wires with temperature index 180.

The testing laboratory at the Branch Office, besides testing the samples drawn under the ISI Certification Marks Scheme, continued rendering service to the industry. Over 100 samples, mainly of engineering items, were tested during the year for various small-scale units.

The Branch Office excelled its previous year's performance in regard to sale of standards by nearly 30 percent.

The Branch Office maintained close liaison with the Department of Industries, Bihar, and other State Government departments as also with premier industrial organizations in the State and their representative bodies like the Bihar Chamber of Commerce and the Bihar Industries Association. The Officers of the Branch Office delivered lectures in



various seminars and symposia organized by the Small Industries Service Institute.

## Western Region

The ISI Certification Marks Scheme made substantial progress during the year in the Western Region. New products covered under the Scheme include density hydrometers, menthol, calibrated high-tensile steel chain for chain conveyors and coal ploughs used in mines, and 1-phenyl-3-methyl-5-pyrazolone.

Review meetings of ISI licensees for LPG cylinders and LPG stoves were organized. The meetings helped in making improvements in the ISI system for quality control during production in the light of past experience.

Testing facilities in the laboratory at the Regional Office were augmented to undertake testing of safety blades, HDPE pipes and LPG stoves.

The Second Regional Workshop on Standards for Statistical Quality Control was organized during 14-16 April 1982. A Training Programme in Statistical Quality Control for Diesel Engines and Centrifugal Pumps Industry was organized jointly with Kolhapur Productivity Council during 1-4 February 1983 at Kolhapur. Besides, a Training Programme on Company Standardization was held during 14-17 March 1983.

The First Conference of Subscribing Members of ISI in the Western Region was held as a part of World Standards Day celebrations. The deliberations of the Conference, attended by about 250 delegates provided the much needed feedback on the extent of utilization of various services offered by ISI.

A Buyer-Seller Meet for ISI-Certified Steel Products was organized jointly with the Steel Re-rollers' Association of Maharashtra. The Meet helped in generating greater support for the ISI Certification Marks Scheme from organized consumers in the form of preference to ISI-certified products.

Besides, senior officers of the Regional Office addressed delegates at various seminars and symposia organized by the Bombay Management Association, Electric Research & Development Association, Institute of Standards Engineers, Indian Institute of Technology, Maharashtra Small Industries Development Corporation, Associations of Industries, etc.

Coverage of ISI's activities by mass media was also arranged from time to time.

### *Ahmadabad*

Fluorescent tubes, PVC pipes, HDPE pipes and dry powder for fire extinguishers were brought under the ISI Certification Marks Scheme during the year.

A Training Programme in Statistical Quality Control was organized jointly with the Baroda Productivity Council at Vadodara during 23-25 August 1982.

A Conference on Implementation of Indian Standards on River Valley Projects was organized jointly with the Irrigation Department, Government of Gujarat at Himatnagar on 19 December 1982. An exposition was also arranged on the occasion. The Branch Office participated actively in the Workshop on Technological Needs of Household Electrical Appliances Manufacturers organized jointly by the Small Industries Service Institute, Ahmadabad and Electrical Research and Development Association, Vadodara, at Ahmadabad on 16 December 1982.

World Standards Day was celebrated by organizing a function and an exhibition of ISI-certified products. Shri Baldevbhai Dosabhai Patel, President, Gujarat Chamber of Commerce & Industry, presided over the function and inaugurated the exhibition. In his Presidential address, Shri Patel stressed the need for setting up an ISI Laboratory in Ahmadabad in view of the increasing number of licensees in the State. On the occasion of its eleventh anniversary on 12 July 1982, the Branch Office arranged special supplements in leading dailies on the Institution's activities.

## Northern Region

The Institution's activities in the Northern Region forged ahead vigorously during 1982-83.

Against a target of 80 ISI Certification Marks Licences to be issued during the year, the actual achievement of the Marks Department based at the Regional Office at S.A.S. Nagar was 184 licences, thereby exceeding the target by 130 percent. The most spectacular advance was in the field of threshers where as many as 110 licences came into operation. This is indeed a welcome development as the operation of the ISI Certification Marks Scheme in this area will help make available to farmers threshers of improved safety. Also, the first ISI Certification Marks Licence for LPG cylinders in the area was granted.

Testing facilities in the laboratory at the Regional Office were augmented to undertake testing of many new items, such as threshers, cables and conductors, pesticides, food products, structural steel, mild steel tubes and LPG stoves. The Government of Punjab has since agreed to provide an additional grant of Rs 500 000 for making additions to the building to further extend the facilities for covering testing of products like diesel engines, pumps and water meters.



During the year, the Government of Haryana decided to upgrade its membership from 'Donor' to the 'Patron' category. The Government of Punjab is already a Patron member of the Institution. The Punjab State Industrial Development Corporation and the Industrial Cables, Rajpura, also upgraded their membership from 'Sustaining' to the 'Donor' category.

A review meeting of the manufacturers of RCC pipes was organized at Chandigarh on 9 December 1982. The meeting made a detailed evaluation of the certification marking activity which led to upgradation of the scheme of testing and inspection.

A meeting of the major manufacturers of threshers was organized at Ludhiana on 10 December 1982 to apprise them of the implications and utility of standardization and certification marking.

A meeting of the manufacturers of domestic electric food mixers was held at Ambala on 19 July 1982 for the purpose of inducing them to join the fold of the ISI Certification Marks Scheme.

An important meeting was held with the Chief Secretary, Government of Punjab, regarding possible certification of industrial effluents for their safe disposal in water courses, over land, etc.

Due assistance was provided to the Controller of Stores, Government of Haryana, for the selection of RCC pipes. As a result, the Government of Haryana decided to indent ISI-marked RCC pipes only.

The Regional Office participated in the Training Programme for Entrepreneurs organized by the Indian Investment Centre in collaboration with the Director of Industries, Himachal Pradesh, at Parwanoo in October 1982. The trainees were suitably introduced to the concepts of standardization, quality promotion and certification marking.

The Regional Office also took part in the Exhibition on Machine Tools held at Ludhiana during 26-29 November 1982.

#### *Bhopal*

In view of the Institution's services to the State, the Government of Madhya Pradesh has proposed the establishment of ISI Laboratory in Bhopal for which land, building and equipment may be provided by the Government.

The ISI Certification Marks Scheme continued to make steady progress. The products covered under the Scheme for the first time in the State include power threshers, domestic LPG stoves and industrial detergents.

Meetings were held with the Director of Industries and Director of Agriculture, Madhya Pradesh, for implementation of the *Quality Control of Power Threshers Act, 1981* and *Household Electrical Appliances (Quality Control) Order, 1981*.

The Branch Office also maintained close liaison with the District Industries Centres at Indore, Gwalior, Jabalpur, Raipur, Dewas and Ratlam.

#### *Delhi*

The Certification Marks activity at the Marks Department, Delhi, which covers industries in and around Delhi, picked up added pace. Special mention may be made of the progress made in the field of domestic gas stoves for use with liquefied petroleum gases and domestic cooking ranges, including grillers for use with LPG, and welded low carbon steel gas cylinders for the storage and transportation of low pressure liquefied petroleum gases. The total number of licences in the case of gas stoves rose to 24, domestic cooking ranges to 5 and LPG cylinders to 10. Another product for which the total number of licences rose to 15 was unplasticized PVC pipes for potable water supplies. During 1982-83, a total of 194 new licences were granted against the target figure of 125, thus exceeding the target by 55 percent. Some of the important products which were covered under the ISI Certification Marks Scheme for the first time on all-India basis are as under:

- a) Corrugated fibreboard boxes,
- b) Putting shots,
- c) Continuous piano hinges,
- d) Silica gel,
- e) Abrasion-resistant iron castings, and
- f) Floor springs (hydraulically regulated) for heavy doors.

#### *Jaipur*

The First Rajasthan State Conference on Implementation of Indian Standards was held at Jaipur on 12 March 1983.

To provide on-the-spot service to industries, the Branch Office organized, in collaboration with the Directorate of Industries and various associations of industries, Consultancy Camps on ISI Certification Marks Scheme at Jaipur, Alwar, Kota and Beawar.

A Seminar on the Role of Standardization in Industrial Productivity was organized as a part of World Standards Day celebrations. An exposition of ISI-certified products was also arranged on the occasion.

The Branch Office collaborated actively with different organizations and authorities. Special mention may be made of its participation in the following programmes:

- a) National Conference of Local Productivity Councils (8 May 1982);



- b) Meeting of the Officers of District Industries Centres (29 June 1982);
- c) Meeting of the representatives of various associations of industries of Rajasthan with the Director General of Supplies and Disposals (21 January 1983);
- d) Seminar on Productivity organized jointly by the Small Industries Service Institute, National Productivity Council and Rajasthan State Productivity Council (1 February 1983); and
- e) *Ganatantra Mela Pradarshni* (26 January-30 March 1983).

The Branch Office also continued its efforts to persuade the State Government to set up a laboratory in Jaipur for the promotion of the ISI Certification Marks Scheme.

#### *Kanpur*

A Seminar on Foundry Industry was organized at Agra as part of World Standards Day celebrations. An exhibition of ISI-marked products was also arranged on the occasion.

The Branch Office also took part in a number of seminars and meetings including the following:

- a) Meetings of the Assessment Committee of the Central Leather Research Institute and Panel of the Export Inspection Agency for examination of leather meant for export and issuance of export-worthiness certificates;
- b) Seminar on Quality Assurance for Manufacturing Electronic Products organized by Uptron India Ltd at Kanpur (14-16 July 1983);
- c) Meeting of Advisory Committee of Small Industries Service Institute (SISI), Kanpur (9 August 1982);
- d) Meetings organized by Export Promotion Council for Finished Leather and Leather Manufacturers, Kanpur;
- e) Seminar on Essential Oils, *Attar* and Perfumery Industries organized by SISI, Kanpur, at Kannauj (24 October 1982); and
- f) Buyer-Seller Meet organized by SISI, Agra (24-25 February 1983).

### **Southern Region**

The Institution's activities in the Region continued to progress steadily.

The items covered for the first time under the ISI Certification Marks Scheme by the Marks Department based at the Regional Office at Madras are as follows:

#### *Tamil Nadu/Pondicherry First*

pH meter, industrial bitumen, dry powder for fire fighting, soda ash, silica gel, shoe polish, IC engine oil, zinc sulphate, LPG cylinder, welded and seamless steel dissolved acetylene gas cylinder, cocoa

powder, mineral mixture for supplementing cattle feeds, *bidi* and tarpaulin.

#### *All-India First*

Phorate granules; blended yarn; dyed cotton fabric, water resistant; and paper cones for winding yarn.

The laboratory facilities at the Regional Office were augmented to undertake testing of a number of new products including carbonyl granules; latex foam rubber; mineral-filled sheathed heating elements; three-pin plugs and socket outlets; shot firing cables; suture eye needles; steel wool; dry powder for fighting fire in metals; forceps; *lungis*; HDPE pipes; centrifugally cast (spun) pressure pipes for water, gas and sewage; metal rolling shutters and rolling grills; hot-rolled steel plates, sheets and strips for the manufacture of low-pressure gas cylinders; and welded steel wire fabric for general use.

Technical personnel from the Laboratory were deputed to undergo specialized training on testing of deep-well hand pumps and yarn, and identification of species of timber.

A meeting of the ISI licensees for pump sets was organized at Coimbatore to discuss the difficulties experienced by them in the testing of pumps at the approved laboratories.

A survey of co-operative handloom societies was carried out and efforts were made to bring them under the ISI Certification Marks Scheme for items like handloom cotton saris, mixed saris, honeycomb towels and terry towels. As a result, five societies have since applied for ISI Licences.

A Workshop-cum-Seminar on Deep-Well Hand Pumps was organized at Madras for the benefit of ISI inspecting officers. Mr Kenneth Grey, UNICEF representative in India, also delivered a lecture at the Programme.

A Training Programme on Cotton Vest Testing was arranged for the benefit of the ISI licensees/applicants in the Region.

A Seminar on Modernization and Quality Control of Domestic Electrical Appliances was organized jointly with the Small Industries Service Institute at Madras. An exhibition of ISI-marked appliances was also arranged on the occasion.

Besides, a Buyer-Seller Meet on Structural Steel Products was organized at Madras.

World Standards Day was celebrated by declaring an Open Day and organizing an informative exposition of standards and standardization. A function was also organized in collaboration with the Institute of Standards Engineers, Institution of Engineers (India), National Institution of Quality



Assurance, Indian Association for Quality and Reliability, and Institution of Valuers.

#### *Bangalore*

Laying of the foundation stone for the ISI Laboratory-cum-Administrative Office Complex at Bangalore by Shri B. R. Prabhakara, Secretary, Commerce and Industries Department, Government of Karnataka on 2 December 1982 was a major highlight of the year. The Laboratory, when established, will help promote ISI Certification Marks Scheme among industries in Karnataka by making available facilities for effective supervision and operation of the Scheme. Besides, it will provide specialized testing services to such small scale units as are not in a position to have their own facilities for controlling the quality of goods during production.

The construction of the Laboratory was estimated to cost Rs 4 200 000 with Rs 150 000 as Government grant. The remaining funds would be provided by the Karnataka State Small Industries Development Corporation Ltd (KSSIDC), Karnataka State Industrial Investment and Development Corporation Ltd (KSIIDC), Karnataka State Financial Corporation Ltd (KSFC), Mysore Minerals Ltd and Hutti Gold Mines Ltd.

The ISI Certification Marks Scheme continued to make steady progress. Lactometers, disinfectant fluids, admixtures for concrete, LPG cylinders and LPG stoves were covered under the Scheme for the first time in Karnataka.

A Training Programme on Company Standardization was held at Bangalore during 20-23 October 1982.

A Training Programme in Statistical Quality Control for Cable and Conductor Industry was organized at Bangalore during 21-24 December 1982.

World Standards Day was celebrated by organizing a Panel Discussion on Standardization and Productivity in collaboration with Karnataka State Centre of the Institution of Engineers (India) and Bangalore Section of the Institute of Standards Engineers.

The Branch Office participated in a number of conferences, seminars, workshops, etc, during the year. Notable among these are:

- a) Food Challenges of Eighties — First International Conference of Food Scientists & Technologists organized by the Association of Food Scientists & Technologists (AFST) India (24 May 1982);
- b) Training Seminar for Chemical Examiners organized by the Department of Health & Family Welfare Services, Government of Karnataka

(3-5 July 1982);

- c) National Workshop on Hospet and its Environ organized by the Institute of Social and Economic Change, Bangalore, and National Society of Urban Development, Hospet (5 to 7 July 1982); and
- d) Seminar on Fasteners organized by Bangalore Section of the Institute of Standards Engineers (11 February 1982).

Officers of Bangalore Branch Office were invited to deliver lectures at a number of important forums organized by other organizations. Special mention may be made of the lectures on the role of ISI in the development of small-scale industries delivered at a series of entrepreneurship development programmes organized by District Industries Centres at various places in the State.

The Branch Office also participated in as many as 9 exhibitions in which Indian Standards and ISI-certified products were put on display. Important among these are Mysore Dassara Exhibition 1982 (17 October-21 November 1982), Prevention of Food Adulteration (24-25 July 1982), International Food Exhibition, AHARA 1982 (23-31 May 1982), and All India Industrial Exhibition, KASSIA 1982 (10-24 May 1982).

#### *Hyderabad*

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

##### *All-India First*

Polyurethane foam, vanillin, washing machines, regulators for use with LPG cylinders, and chlorine tablets.

##### *Andhra-Pradesh First*

Electric ceiling fans; air conditioners; valve fittings for LPG cylinders; re-conditioning of LPG cylinders; detergent tablets; cooking ranges; heavy duty cables; tartrazine, foodgrade; shot firing cables; and unbonded slag wool.

Spot surveys of industrial estates were conducted with the help of District Industries Centres in the State to help the different units identify product standards and procedure for certification marking.

As a result of the implementation drive carried out by the Branch Office:

- a) the Vishakhapatnam Port Trust, Vishakhapatnam, has agreed to make a specific mention in the tender notices that products with ISI Certification Mark would be given preference;
- b) the Panchayati Raj Department, Government of Andhra Pradesh, has agreed to prefer ISI-marked materials;



- c) the Director of Agriculture, Government of Andhra Pradesh, has agreed to purchase pest control equipment with ISI Mark; he has also advised the manufacturers in Andhra Pradesh to obtain ISI Certification Marks Licences; and
- d) the Government of Andhra Pradesh has constituted a committee for implementation of the *Household Electrical Appliances (Quality Control) Order, 1981*.

A Workshop on *Household Electrical Appliances (Quality Control) Order, 1981* was organized jointly with the Directorate of Industries and Small Industries Service Institute. An exhibition of the relevant Indian Standards and certified electrical appliances was also arranged on the occasion.

World Standards Day was celebrated by organizing a Seminar on Standardization, Quality Control and Productivity in collaboration with the Institute of Standards Engineers; AP State Centre of the Institution of Engineers (India); and Association of Indian Engineering Industry (Southern Region).

The Branch Office participated actively in a number of seminars, conferences, workshops, meetings, etc, including the following:

- a) Workshop on Value Engineering organized by the Association of Indian Engineering Industry (Southern Region) at Secunderabad;
- b) Seminar on Technical Education conducted by the Government of Andhra Pradesh at Hyderabad;
- c) Seminar on Potential Development of Glass, Ceramic and Mineral Based Industries in Andhra Pradesh organized by Small Industries Service Institute at Gudur;
- d) Seminar on Productivity in Small Scale Industries organized jointly by the Small Industries Service Institute and the Commissioner of Industries, Government of Andhra Pradesh;
- e) Meeting organized by the Advanced Training Institute for finalization of syllabus, incorporating the relevant Indian Standards, for Civil Construction Trade Group for one-year basic training under the restructured pattern; and
- f) Meetings of the Tender Committee constituted by the Secretary of Education, Government of Andhra Pradesh for procurement of aluminium utensils under Mid-Day Meal Scheme for School Children, where it was agreed to procure all aluminium

utensils conforming to the relevant Indian Standards.

The Branch Office continued to maintain close liaison with District Industries Centres; Directorate of Industries, Government of Andhra Pradesh; South Central Railway; and AP State Handloom Weavers Co-operative Society Ltd (APCO), Hyderabad. Besides, expositions of Indian Standards and certified products were arranged on the occasion of various seminars and conferences including those organized by the Food Craft Institute, Hyderabad, in collaboration with the Consumer Guidance Society of India; Institution of Engineers and Directorate of Marketing and Inspection, Hyderabad.

#### *Trivandrum*

During 1982-83, the first ISI Certification Marks Licence (on all-India basis) for emergency lighting units was granted.

A Programme on Educational Utilization of Indian Standards in the Fields of Agriculture and Food Products was organized at Vellayani during 20-21 July 1982.

A Training Programme in Statistical Quality Control was held during 8-12 November 1982.

As a part of its implementation drive, the Branch Office organized conferences for tile, paint and pencil slat manufacturers. Due to persistent persuasion, all the four stations of All India Radio in Kerala and the Director of Panchayats have issued directives to their concerned executives for opting for ISI-certified products in their purchase programmes.

The message of standardization and quality control was carried forward by participating actively in a number of programmes including the following:

- a) QR Week celebrations organized by Trivandrum Branch of the Indian Association for Quality and Reliability;
- b) Industry Clinic for Coal and Coke organized by Small Industries Service Institute;
- c) Industry Workshop on Modernization of Tile Industry organized by Small Industries Service Institute; and
- d) Panel Discussion on Consumer Protection organized by Lions Club of Tellicherry.

Mass media were extensively utilized for promoting general awareness about the Institution's activities. A pavillion put up in the Trichurpooram Exhibition during April-May 1982 was adjudged as the second best among the pavillions organized by Central Government organizations.



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## INTERNATIONAL COLLABORATION

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The Institution took active part in the standardization work of the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) as in previous years. Among the notable events of the year are election of Shri D. C. Kothari, Vice-President ISI to the august office of President of ISO and India's re-election to the ISO Council and election to the IEC Committee of Action, which in a way provide direct testimony to India's significant role in the international standardization activity. The Institution also continued its efforts towards strengthening bilateral relations with other countries.

### International Organization for Standardization (ISO)

#### Election of ISO President

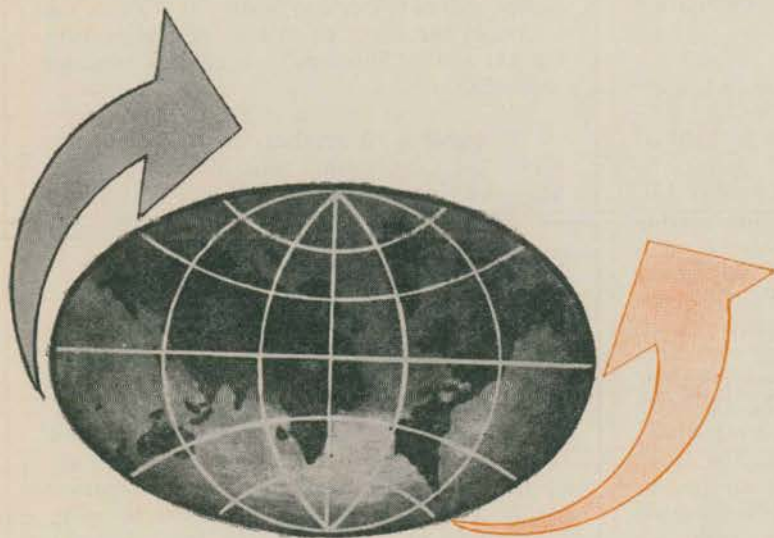
Shri D. C. Kothari, Vice-President ISI, was elected as President of

ISO at the 12th ISO General Assembly in Toronto on 17 September 1982. Shri Kothari, who began his three-year term of office from 1 January 1983, succeeds Mr Henri-Durand of France. He is the second Indian to have gained this signal honour, the first being late Sir Jehangir J. Ghandy who was President of ISO during 1965-67.

Shri Kothari has been closely associated with the various executive and policy-making forums of ISO for the past 10 years, having led Indian delegations to the meetings of ISO General Assembly and ISO Council on several occasions.

#### ISO General Assembly and Council

The 12th triennial ISO General Assembly and 36th meeting of ISO Council were held in Toronto during 8-17 September 1982. The Indian delegation to these meetings comprised Shri D. C. Kothari, Vice-President (*leader*);





Dr A. K. Gupta, Director General; Shri V. P. Punj, Chairman, Certification Marks Advisory Committee; and Shri S. Srinivasan, the then Additional Director General, ISI.

#### *ISO General Assembly*

Presided over by the then ISO President Mr Henri-Durand, the General Assembly was attended by delegates from 56 countries and 11 international organizations. Highlights of the Assembly other than the election of Shri D. C. Kothari as President ISO include re-election of India to the ISO Council for the third consecutive triennial term 1982-85.

In a session on 'Energy Resources and Conservation', the Assembly focussed attention on problems and prospects of availability, conservation and management of world energy resources. Another session related to 'Developing Country Involvement in International Standardization' at which Dr A. K. Gupta, Director General ISI and Chairman Development Committee (DEVCO) of ISO, presented a detailed paper on the subject, tracing the current level of involvement of developing countries in ISO technical work and indicating the steps necessary for increasing their participation.

#### *ISO Council*

Held under the chairmanship of the then ISO President Mr Henri-Durand, the Council was attended by delegations from 17 member bodies. Besides consideration of policy matters and financial issues, the deliberations of the meeting included endorsement of the ISO Long-Term Development Programme for 1983-85 and suggestion of measures for its effective implementation. The Council, with a view to obtaining better implementation of ISO standards in member countries, requested the member bodies to introduce through the medium of their periodical publications a procedure for inviting public review and comments on draft international standards during the normal period of their circulation for member body voting.

#### **Development Committee (DEVCO)**

The 17th meeting of DEVCO was held at Geneva during 10-12 May 1982 under the chairmanship of the Director General ISI. An important item discussed at the meeting related to ISO Long-Term Development Programme for 1983-85. The Programme, which is estimated to cost CHF 2 928 000, was formulated by DEVCO on the recommendations of a special *ad hoc* group with Shri S. Srinivasan, the then Additional Director General ISI, as its convener. The DEVCO finalized the Programme and recommended it for adoption to the ISO Council. The other issues discussed related to review of implementation of ISO Development Programme (1981-82), and programmes for technical

assistance to ISO member bodies from developing countries.

#### **Regional Liaison Officers (RLOs)**

The fifth meeting of RLOs was held on 9 May 1982 in Geneva under the chairmanship of Dr A. K. Gupta who is also the Regional Liaison Officer for South Asia and Iran Region. The following two main matters were discussed at the meeting:

- a) Guidance on a list of basic international standards that developing countries may adopt directly
- b) Guidance on the establishment of a classification system for various standards so that the standards available in the various developing countries may be made known to others having a specific need for them. This would also enable ISO Standards of interest to developing countries to be easily identified.

The recommendations of RLOs were endorsed by DEVCO.

#### **ISO Committee on Certification (CERTICO)**

The CERTICO meeting held in Geneva during 13-14 May 1982 was attended by 32 ISO member bodies including India in addition to six international organizations.

CERTICO is at present engaged in the development of a number of guides relating to various aspects of certification activity. The documents considered at the meeting related to (a) Methods of indicating conformity with standards; (b) General rules for a model third-party certification system for products; (c) Criteria for acceptance of certification bodies; (d) Requirements for acceptance of testing laboratories; (e) Requirements for acceptance of inspection bodies; (f) Corrective action in the event of misuse of certification marks; and (g) Standards suitable for product certification.

A one-day Workshop on Government Views on Certification was also held on 12 May 1982 in conjunction with the CERTICO meeting.

#### **ISO Meetings Hosted by India**

*Freight Containers (ISO/TC 104)* — The twelfth meeting of the ISO Technical Committee ISO/TC 104 Freight Containers was held in Bombay during 6-10 December 1982. The meeting was attended by 39 delegates from overseas countries and international agencies. The 20-member Indian delegation comprised representatives from the shipping community, port authorities, freight container



manufacturers, statutory bodies, road carriers, rail carriers and ISI, and was headed by Capt N. A. Tamhane.

The main items of interest to India discussed at the meeting were:

- a) proposals to increase the rating of 20-foot containers from 20 to 24 tons and the height of the containers from 8 feet 6 inches to 9 feet 6 inches as these have definite effect on inter-modal transportation concept of freight containers; and
- b) the need for standardization of small containers.

The Committee also reviewed the progress of work with regard to thermal containers, tank containers for liquids and gases, platform containers and marking of designed weight of containers.

*Rubber and Rubber Products (ISO/TC45)*—The thirtieth plenary meeting of ISO/TC 45 Rubber and Rubber Products, along with its two subcommittees and various working groups was held in New Delhi during 11-21 December 1982. The meeting was inaugurated by Union Minister for Civil Aviation & Civil Supplies and President ISI, Shri Bhagwat Jha Azad, and was addressed, among others, by Dr A. K. Gupta, Director General ISI. The meetings were attended by 143 delegates and 13 observers from 17 countries.

The Subcommittee ISO/TC 45/SC 2 Physical and Degradation Test for which India holds the secretariat, met for the first time under the chairmanship of Dr D. Banerjee who is Chairman of the corresponding national committee.

The points of interest to India emanating from the deliberations of these meetings were the following:

- a) Acceptance of Amperometric Titration Method for free sulphur determination in rubber, prepared by India, for circulation to members of the Working Group;
- b) Acceptance of pH standardization using additional temperature of  $27 \pm 1^\circ\text{C}$  and also filtration of latex samples through sieve to remove coagulum before testing, proposed by India;
- c) Establishment of a task force under the leadership of India with members from the UK, Germany and France to suggest an accelerator alternate to ethylene thiourea (ETU), on a suggestion from India for exclusion of ETU as accelerator as it is banned in India; and
- d) Request to India for developing

definitions for laminating, skim coating and sheeting.

## International Electrotechnical Commission (IEC)

The fortyseventh Annual General Meetings of IEC held in Rio de Janeiro (Brazil) during 31 May-11 June 1982 made substantial progress in reaching new international agreements in many key electrical and electronic sectors. Besides IEC Council and IEC Committee of Action, 34 Technical Committees and Subcommittees held their meetings which were attended by over 1 000 delegates from 37 countries. India was represented by a five-member delegation headed by Shri S. G. Ramachandra, Chairman, Electrotechnical Division Council (ETDC) of ISI and Executive Vice-President, Kirloskar Electric Company Ltd, Bangalore. The other members of the Indian delegation were Prof S. Sampath, Director, IIT, Kanpur; Shri V. S. Bhatia, Siemens India Ltd, Bombay; Shri M. L. Dongre, Chief Engineer (Supply), BEST Undertaking, Bombay; and Shri S. P. Sachdev, Director (Electrotechnical), ISI.

One of the highlights of the meetings was India's election to the Committee of Action for a term of six years. Other important decisions taken at the meetings included approval to set up a joint ISO/IEC Working Group for the coordination of IEC Guide 103 'Guide on dimensional coordination' and ISO preferred number series; and an agreement to chalk out a long-term programme of work for the Technical Committees to enable IEC to monitor the progress being made and to set priorities for work, thus increasing the overall efficiency of IEC and help ensure appropriate allocation of resources by the national committees. It was also agreed to establish a new Technical Committee on Information Technology Equipment to keep in step with the latest developments in the field.

### IEC Council

*Special Council Working Group*—The Council decided to set up a Special Working Group to review the organization of IEC technical work and working procedures with the aim of proposing changes resulting in greater efficiency and economy.

*IEC Quality Assessment System for Electronic Components*—Accepting the report of the Certification Management Committee (CMC), the Council noted that 11 countries had become full members of the Inspectorate Coordinating Committee. Ten countries (including India) were currently participating members of the System and would be considered for full membership after their National Statement of Surveillance Arrangement had been approved.



The Council accepted the invitation of the Japanese delegation to hold the next IEC General Meetings in Tokyo in October 1983.

#### **IEC Committee of Action**

The General Secretary reported that the Central Office had sent a questionnaire to Secretaries of all Technical Committees and Subcommittees asking them to order their work into different categories of priority, including a category for work that might be abandoned altogether.

The Committee of Action agreed that a more efficient management of IEC work would be possible if the Technical Committees were to adopt long-term planning together with target dates. It also accepted the French proposal that when a national committee requested a new item of work to be undertaken in an existing Technical Committee/Subcommittee, it should submit a draft, or at least an outline of the proposed draft, so that the true nature of the work could be properly judged when the Technical Committee/Subcommittee voted on the initiation of a new item of work.

#### **Meeting of Coordinating Countries of the Non-aligned Movement in the Sphere of Standardization, Metrology and Quality Control**

The second meeting of Coordinating Countries of the Non-aligned Movement in the Sphere of Standardization, Metrology and Quality Control was held in New Delhi during 19-21 May 1982. The Committee considered the evolution of ways and means for greater cooperation among non-aligned and other developing countries in the fields of standardization, metrology and quality control to bring about a spirit of self-sufficiency, and collective self-reliance. Shri Mohammed Usman Arif, Union Deputy Minister of Agriculture and Civil Supplies, inaugurated the meeting. Mr Jorge Serra Almer, leader of the delegation from Cuba, which held the chairmanship of the Movement, presided over the inaugural session. Shri A. K. Majumdar, leader of the seven-member Indian delegation, was elected Chairman for the meeting. In all, 13 delegates from India, Cuba and Yugoslavia attended the meet. The following recommendations emerged from the deliberations:

- a) The members of the Non-aligned Movement should constitute themselves into functional groups on the basis of specific elements of cooperation by entering into arrangements for mutual interaction; formulation, as far as practicable, of harmonized standards and norms; and exchange

of information and experience for the purpose of evolving common practices among the countries participating in the functional groups and a common approach at international forums.

- b) The coordinating countries may meet annually to review the implementation of the Action Programme by the various functional groups, formulate target dates for completion of specific tasks, identify new areas of common interest and recommend a cooperative plan of action.
- c) A meeting of experts of Non-aligned and other Developing Countries may be held every two years to make an appraisal of the progress made towards implementation of the Action Programme and approve the future plan of action; identify new elements of interest for formulation of functional groups; evolve common strategies for participation in the work of international organizations; and organize workshops, seminars, etc, on the occasion of biennial meetings and other appropriate occasions.

#### **ESCAP Workshop on Standardization**

At the request of the Economic and Social Commission for Asia and the Pacific (ESCAP), ISI collaborated with the Central Institute of Agricultural Engineering, Bhopal, in hosting a Regional Workshop on Standardization in Agricultural Machinery during 16-21 March 1983. The Workshop was organized in New Delhi by the Regional Network for Agricultural Machinery (RNAM) functioning under the aegis of ESCAP. The Workshop was attended by delegates from national institutions and national standards bodies of India, Indonesia, Philippines, Republic of Korea, Sri Lanka and Thailand. Representatives of ISO, UNDP, ESCAP, UNIDO, FAO, Ford Foundation, International Rice Research Institute (IRRI) and RNAM also attended the Workshop. At the request of the ISO Central Secretariat, ISI represented the ISO interest at the Workshop.

The Workshop recommended the development of a strong linkage between national standards bodies and national institutions of the RNAM countries.

#### **Indo-Soviet Cooperation**

The Indo-Soviet Working Group on Scientific and Technical Cooperation in the field of Standardization and Metrology met in Moscow during 21-27 June 1982 to review the progress achieved in regard to the projects undertaken during 1981, identify new



areas for cooperation and chalk out the programme of work for 1982-83. The three-member Indian delegation was headed by Shri A. P. Banerji, Additional Director General ISI, and included Shri V. K. Batra of the National Physical Laboratory, New Delhi, and Shri S. Chandrasekharan of the Directorate of Weights and Measures, New Delhi. The 24-member Soviet delegation was headed by Prof V. V. Boitsov, President, *Gosstandart*. The following new areas of cooperation between the two countries were identified:

- a) Harmonization of standards for garage equipment.
- b) Exchange of information and standards containing different types of reliability indices.
- c) Exchange of information on methodology of collection and analysis of data concerning reliability index verification.
- d) Harmonization of technical requirements for jute fabrics and jute products.
- e) Comparison of national time and frequency standards of India and the USSR. India was entrusted with the work of conducting experiments for the evaluation of accuracy of TV signal transmission via earth's satellites.

Considerable progress was made under various themes of cooperation. Five Indian delegations visited the USSR for discussions and exchange of information with regard to the following:

- a) Development of methodological principles for preparation of unified coded nomenclature of articles of mutual trade;
- b) Harmonization of standards for ferro alloys;
- c) Steel for reinforced and prestressed concrete work;
- d) Radio frequency measurements, measurement of electrical circuit processes [emf voltage current (ac and dc)], and measurement of electrical circuit parameters (resistance, capacitance and inductance); and
- e) Technical documentation on measuring instruments and training in metrology.

A Soviet delegation visited India and held discussions with Indian experts with regard to comparison of national time and frequency standards of India and the USSR.

## Cooperation with Other Countries

### International Training Programme

The Fifteenth International Training Pro-

gramme in Standardization for Developing Countries was held during 15 December 1982-23 February 1983. It was attended by 27 trainees from 15 countries, namely, Afghanistan, Bangladesh, Ghana, Indonesia, Iran, Jamaica, Kenya, Nepal, Nigeria, Philippines, Sri Lanka, Sudan, Thailand, Vietnam and Malaysia. Under this programme, which was instituted in 1964, training has so far been imparted to 212 technical personnel from 38 developing countries of Asia, Africa and Latin America.

### Special Training Programmes

Special programmes of training were organized in ISI for nominees of developing countries on specific request. These were organized for nominees of Malaysia under UNIDO fellowship in the field of engineering inspection, of Nepal under Colombo Plan in the field of metrology and metrological testing and of Sri Lanka under UNIDO Fellowship in the field of standardization and quality control.

### Exchange of Experience with Personnel of Other Countries

Technical officers from national standards bodies of Iraq, Sri Lanka and Vietnam visited ISI for exchange of experience and familiarization with ISI's activities in specific fields, and held discussions with senior ISI officers. Officials from Pakistan, Indonesia, Algeria, the UK, Australia and the USSR also visited ISI and held discussions on specific activities of ISI.

### Deputation of Experts to Developing Countries

*Saudi Arabia* — On a specific request from Saudi Arabian Standards Organization (SASO) for technical cooperation, the following four officers were sent on deputation for a period of one year in the first instance to assist them in the fields of Laboratory Organization, Standards Writing, Certification System, and Library and Technical Information:

- a) Shri H. P. Ghose, Director;
- b) Shri J. Venkataraman, Senior Deputy Director;
- c) Shri V. K. Jain, Senior Deputy Director; and
- d) Shri D. N. Kulkarni, Chief Librarian.

*Algeria* — For the first time ISI entered into an agreement on technical cooperation with the Algerian Standards Institution (INAPI) on institution-to-institution basis. Under the Agreement, ISI will provide INAPI with the necessary expertise for organizing, applying and promoting standardization and quality control activities in Algeria. Standardization experts from India will assist INAPI in augmenting its operations in the fields of



standardization and quality control over a period of three years.

### Participations Abroad

A break-up of the Indian delegations which

took part in important meetings/programmes held abroad is given in Table 1. Of the 33 delegates who represented India at these forums, 14 were from ISI on whom the Institution incurred an expenditure of Rs 219 272.

TABLE 1 INDIAN DELEGATIONS SENT ABROAD

SI No.	Meeting/Programme	Country	No. of Delegates				
			Official	Non-official			
i)	Indo-Soviet Cooperation in the Field of Standardization and Metrology under Theme 4.2 Ferro Alloys	USSR	1 (from ISI)	1			
ii)	Indo-Soviet Cooperation in the Field of Standardization and Metrology under Theme 4.6 Steel for Reinforced and Pre-stressed Concrete Work	USSR	1 (from ISI)	1			
iii)	a) ISO <i>Ad hoc</i> Working Group for Drafting Long-Term Development Programme b) RLOs c) DEVCO d) CERTICO Workshop	Switzerland	2 (from ISI)	1			
iv)	Regional Workshop on Metrology in Quality Assurance				Malaysia	1 (from ISI)	—
v)	IEC Annual General Meetings				Brazil	1 (from ISI)	5
vi)	ISO/TC 28 Petroleum Products and Lubricants and its Working Group ISO/TC 28/WG 1				Italy	1 (from ISI)	2
vii)	ISO/TC 72/SC 1 Spinning Preparatory, Spinning and Doubling (Twisting) Machinery and ISO/TC 72/SC 2 Winding and Preparatory Machinery for Fabric Manufacture	Belgium	1 (from ISI)	2			
viii)	Indo-Soviet Working Group for Cooperation in Standardization and Metrology	USSR	2 (1 from ISI)	1			
ix)	ISO/TC 182 Geotechnics	Netherlands	1 (from ISI)	1			
x)	Conference of Inspection Agencies	Canada	1 (from ISI)	—			
xi)	ISO General Assembly and ISO Council	Canada	2 (from ISI)	2			
xii)	International Training Programme on Quality Control in Industry	Sweden	1 (from ISI)	—			
xiii)	ISO/TC 102/SC 1 Sampling of Iron Ores	Canada	—	1			
xiv)	ISO/TC 176 Quality Assurance and ISO/TC 69 Application of Statistical Methods	France	—	1			



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## PLAN PROJECTS

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### Central Laboratory Building at Sahibabad

In the second phase of construction of the Central Laboratory building, taken up during the preceding year, work on the Administrative Block has been completed this year while the Electrical Block and quarters for essential staff are nearing completion. The Chemical Block, Mechanical Block and Workshop had already been completed in the first phase during 1980-81.

### Office-Cum-Laboratory Buildings at Calcutta and Bombay

Office-cum-Laboratory Complexes of the Eastern Regional Office, Calcutta, and the Western Regional Office, Bombay, were inaugurated in February 1981 and March 1982 respectively. In the WRO building, however, work on the

internal organization of spaces is still in progress.

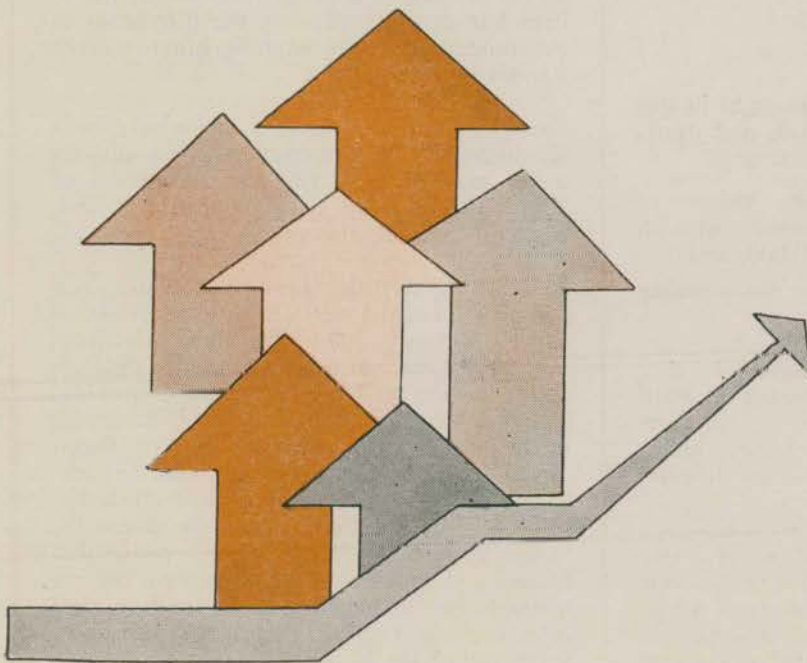
### Laboratory Equipment

During the year, equipment worth over Rs 3.2 million was added to the ISI laboratories to augment the testing facilities. Some of the important apparatuses added are listed in the report on ISI laboratories on page 14.

### 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 Building and Civil Engineering Construction (Project B-7), and
- b) Typification of Industrial Structures (Project B-8).





### *Code Implementation Programme*

This project, initiated during the Fifth Plan, envisages 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.

About 30 subjects have been identified for the preparation of handbooks. The following handbooks were printed during the year:

- a) SP: 22 (S&T)-1982 Explanatory handbook on codes for earthquake engineering (IS: 1893-1975 & IS: 4326-1976), and
- b) SP: 23 (S&T)-1982 Handbook on concrete mixes.

The Handbook on Causes and Prevention of Cracks in Buildings was processed for printing. Drafts of the following handbooks were completed and sent to experts for obtaining technical comments:

- a) Plumbing services, and
- b) Concrete reinforcement detailing.

Work on the following handbooks was progressed further during the year:

- a) Foundation of buildings,
- b) Timber engineering,
- c) Bulk storage structures in steel,
- d) Fire protection,
- e) Construction practices, and
- f) Chimneys.

The following bye-laws were brought in line with the National Building Code and drafts were finalized for further processing:

- a) Building bye-laws for cities of Rajasthan other than Jaipur and with population more than 50 000, and
- b) *Tamil Nadu Sub-division and Building Rules, 1982.*

### *Typification of Industrial Structures*

This project was also initiated during the Fifth Plan. The aim is to establish optimum standard structural designs for factory buildings which are amenable to standardization and mass production.

Typification would include structures with steel and concrete and with and without crane loads. This would involve analysis of about 14 000 conditions and equal number of designs. The first drafts on the following were

prepared for consideration by the committees:

- a) Steel gable truss structures (without cranes), and
- b) Reinforced concrete gable frames (without cranes).

Based on a critical technical study of these documents, modifications to these handbooks were also prepared. In addition, handbooks on the following subjects with only typical examples of analysis and design were prepared and considered by the relevant committees:

- a) Steel gable frames with hot-rolled I-sections (without crane),
- b) Reinforced concrete gable frames (with cranes),
- c) Steel lean-to-roof truss structures (without cranes), and
- d) Reinforced concrete gable trusses (without cranes).

### **Development of Handbooks for Implementation of Indian Standards**

The Project envisages preparation of handbooks arising out of Indian Standards issued in areas of economic, scientific and technological interests. Some of the handbooks would be compilations of Indian Standards in a given area of interest while others would be of explanatory type, explaining the provisions of the relevant standards and their application. The objective of the scheme is to make available to the user in one volume all related standards in a given area for ease of use and to ensure that he takes into account all the relevant standards in his work, and to help him in understanding the provisions of the standards, thereby enabling him to put the standards to better use.

Over 75 specialized subject areas have been identified for the preparation of handbooks under this Project. The ISI Handbook of Textile Testing, the first under the Project, came off the press this year.

The Textile Testing Handbook, which is a compilation of the methods of test for textiles covered in nearly 300 Indian Standards and is expected to serve as a comprehensive guide to textile testing and quality control, provides details of physical, chemical and biochemical methods of test for textiles in different forms including fibres, yarns, fabrics, felts, hosiery, mats, druggets, carpets, ropes and cordages. It also gives methods of test for dyestuffs. Definitions of related terms, conversion factors and conversion tables for yarn counts, methods of conditioning and sampling, and rules for rounding off numerical values also form part of the Handbook.



# PERSONNEL MANAGEMENT

The strength of the Institution on 31 March 1983 was 1 895 against 1 851 at the close of the previous year showing a net increase of 44 personnel.

The deployment of personnel in the principal activities of the

Institution during the last three years was as under:

Activity	Strength as on 31 March		
	1983	1982	1981
a) <i>Standards</i>	509	505	499
Preparation, publication, sale and distribution of standards, handbooks, ISI Bulletin and miscellaneous publications			
b) <i>Quality Assurance and Certification Services</i>	767	732	686
Operation and management of the ISI Certification Marks Scheme including laboratory testing			
c) <i>Technical Promotion</i>	128	128	107
Standards promotion, statistical quality control, library and technical information services, publicity, membership and computer service			
d) <i>Personnel Management and Supporting Services</i>	491	486	472
Personnel management, accounts, general services, building maintenance and security			
<b>TOTAL</b>	<b>1 895</b>	<b>1 851</b>	<b>1 764</b>

The officer-staff ratio worked out to 1: 2.7 whereas the ratio between technical and non-technical personnel stood at 1: 2.03.





## SC/ST Representation

The representation of the Scheduled Castes/Scheduled Tribes in various categories of posts increased from 240 to 251 during the year under report. Gradewise break-up of representation of SC/ST for the last three years is given below:

Grade	Number of SC/ST as on 31 March		
	1983	1982	1981
I	19	23	9
II	28	26	19
III	83	86	73
IV (Excluding Sweepers)	83	74	74
IV (Sweepers)	38	31	30
<b>TOTAL</b>	<b>251</b>	<b>240</b>	<b>205</b>

## Measures to Remove Stagnation

With a view to removing stagnation among Assistant Directors and Deputy Directors in the ISI Service Cadre, a scheme of Three-Level Flexible Complementing was introduced by creating a new level of Senior Deputy Director. According to the Scheme, the posts of Assistant Director, Deputy Director and Senior Deputy Director are treated as interchangeable and the officers promoted on the basis of length of service. On the staff side, 23 new selection grade posts were created in Grades II, III and IV under the scheme for award of Selection Grades to the staff.

## Training of Assistant Directors (Trainees)

Officers recruited as Assistant Directors (Trainees) are imparted detailed training for a period of one year in three phases of acclimatization and study (3 months), in-field training (3 months) and in-office training (6 months). During the year, in-field and in-office training of the officers of the eleventh batch was completed. The officers of the twelfth batch completed the first two phases and were posted to various offices of the Institution for in-office training.

## Specialized Training

As part of the programme to impart specialized training to the employees, the following

officers were deputed for training in different fields as indicated:

Name and Designation	Training Programme
<i>Training Abroad</i>	
Shri R. I. Midha, Director	International Training Programme on Quality Control in Industry in Stockholm (Sweden)
<i>Training in India</i>	
i) Shri P. K. Chatterjee, Sr DD	Training Programme on Packaging
ii) Shri R. Duggal, Sr DD	
iii) Shri Gulshan Rai, DD	Programme on Quality Engineering Management
iv) Shri V. K. Gogna, Sr DD	
	Short-Term Course on Industrial Architecture

## Employer-Employee Relations

Employer-employee relations continued to be cordial during the year under report. The following two employees, duly recommended by the ISI (HQ) Employees' Union, were sponsored for a 3-month Worker-Teacher Training Course organized by the Central Board for Workers' Education, New Delhi, from 24 December 1982 to 23 March 1983:

- Shri M. D. Chawla, Stenographer; and
- Shri J. P. Sethi, Stenographer

## Staff Welfare

Welfare of the employees remains one of the important concerns of the Institution. The ISI staff continued to benefit by the House Building Loans Scheme; group insurance for employees working in laboratories and some other categories of employees exposed to hazardous environments/working conditions including those carrying cash; holiday homes; Employees' Consumer Cooperative Store; clubs to promote social, cultural and recreational activities among employees; and departmental canteens to provide refreshments to the staff on subsidized rates. Through the Benevolent Fund, established to help the dependents of the employees who may suffer permanent incapacitation or die, the Institution provided assistance to the families of three employees to the tune of Rs 30 000 during the year. Besides, needy employees received suitable financial assistance from the Welfare Fund. Cash and other incentives under the Family Welfare Programme introduced by the Government were given to eligible employees.



The Institution's concerted efforts towards self-reliance brought about during 1982-83 a record growth of 29.5 percent in income from its own resources, which are mainly membership subscription, sale of standards and certification marking fee. This enabled the Institution to keep the component of Government grant in meeting recurring expenditure as low as 12.69 percent against the preceding year's 20.92 percent.

## Financial Analysis

### *Recurring*

The recurring expenditure during 1982-83 was Rs 54.60 million against Rs 47.81 million during the preceding year reflecting an increase of 14.2 percent. This increase is mainly due to the

grant of a number of instalments of Dearness Allowance to employees and merger of a part of the Dearness Allowance in pay for the purpose of computing their City (Compensatory) and House Rent Allowances. The Institution's income from its own resources during the year under report rose to Rs 47.67 million from Rs 36.80 million during the preceding year showing a growth of 29.5 percent. This increase in income resulted mainly from the increase in the number of Certification Marks Licences, revision of the rates of certification marking fee, and introduction of a new pricing system for ISI publications.

The Government provided recurring grant of Rs 10.90 million. Taking into account the excess of income over expenditure of Rs 3.97 million, the component of Government grant works out to Rs 6.93 million which constitutes 12.69 percent of the total expenditure. Thus, in spite of the growth in expenditure, the component of Government grant has sharply declined from the preceding year's figure of 20.92 percent.





### Capital

During 1982-83, the third year of the Sixth Five-Year Plan of the Institution, the Government provided Rs 4.9 million for implementation of ISI Plan Projects. The major part of the grant was utilized for the purchase of equipment for ISI laboratories and for the construction of the laboratory building at Sahibabad.

### Loans

During 1982-83, the Institution received a sum of Rs 1.65 million for grant of House Building Loan to its employees. So far, 168 employees have been benefited under this scheme.

### Invisible Contributions

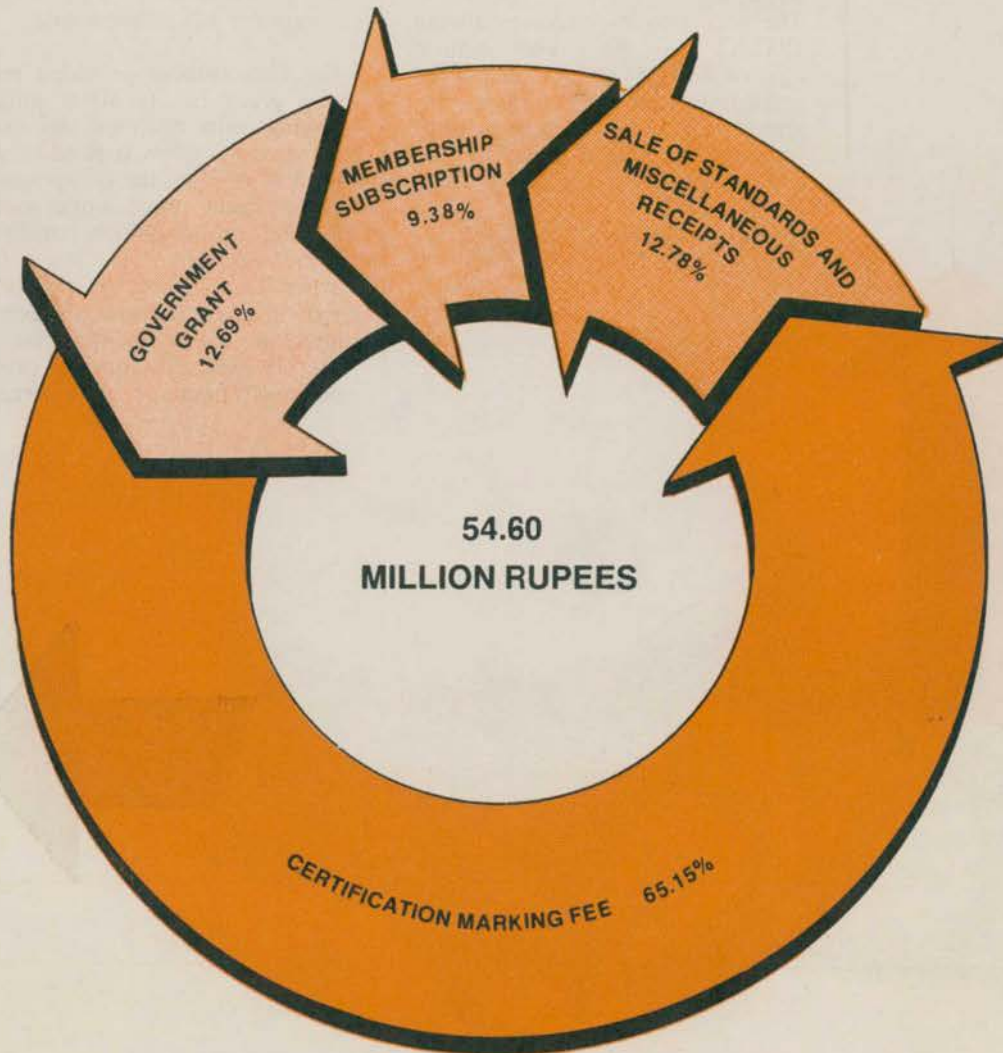
The Institution continued receiving invisible

contributions from the industry and others who have representations on 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. Besides, many organizations in the public and private sectors undertook studies and tests concerning standards formulation free of cost. The total value of such invisible contributions during the year is estimated at Rs 2.73 million.

### Statement of Accounts

The Statement of Accounts for 1982-83 is given in Appendix A.

## SOURCES OF INCOME (1982-83)





## APPENDIX A

# ACCOUNTS FOR 1982-83

(Figures have been rounded off to whole rupees)

## INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1983

### Income

PREVIOUS YEAR Rs	SL NO.	HEADS OF INCOME	Rs	AMOUNT Rs
4 923 216	1.	Membership Subscription	Advance Current	3 082 553 2 041 377
				5 123 930
	2.	<b>Sales</b>		
3 583 499		2.1 Indian Standards		5 290 623
151 510		2.2 Calculation Aids and Binders		151 958
856 623		2.3 Overseas Publications (Commission)		859 904
147 671	3.	Bulletin Advertisements		71 160
26 643 001	4.	*Certification		35 572 804
28 290	5.	CGHS Contributions		28 217
29 360	6.	Conference (Delegates' Fees)		—
120 032	7.	Training Fees		136 876
317 645	8.	Miscellaneous		436 297
36 800 847				47 671 769
10 000 000	9.	Government Grant		10 900 000
1 012 979		Excess of Expenditure over Income		—
<b>47 813 826</b>		<b>Total</b>		<b>58 571 769</b>

(\*Income under this head relating to Marking Fees only has been taken on Cash basis and not on accrual basis. A sum of Rs 571 483 realisable on accrual basis during the year has not been included.)



## Expenditure

PREVIOUS YEAR Rs	SL NO.	HEADS OF EXPENDITURE	AMOUNT	
			Rs	Rs
	1.	<b>Pay</b>		
6 021 119		1.1 Officers		6 339 047
7 331 217		1.2 Staff		7 857 847
	2.	<b>Allowances</b>		
5 198 991		2.1 Officers		6 662 555
8 646 741		2.2 Staff		11 490 147
599 164	3.	CGHS and Other Medical Charges		571 230
318 839	4.	Provident Fund Contribution		350 037
1 345 417	5.	Pension Fund		1 523 979
30 000	6.	Gratuity Fund		30 000
140 346	7.	Staff Welfare		205 576
	8.	<b>TA</b>		
317 272		8.1 Overseas		219 272
1 504 197		8.2 Officers and Staff		1 630 298
50 856		8.3 Committee Members		42 352
542 141		8.4 Leave Travel Concession		716 572
	9.	<b>Subscription to International Organizations</b>		
1 235 192		9.1 ISO		1 245 570
653 492		9.2 IEC		670 436
	10.	<b>Production</b>		
1 334 986		10.1 Standards		1 799 903
700 022		10.2 Bulletin		799 495
94 263		10.3 Calculation Aids and Binders		130 277
324 812		10.4 Other Publications		389 042
5 000	11.	Research and Consultation		—
1 573 007	12.	Testing Fees		1 761 689
913 461	13.	Laboratory Apparatus and Stores		978 667
	14.	<b>Publicity</b>		
40 100		14.1 Exhibition		27 571
268 170		14.2 Advertising		127 541
107 048		14.3 Miscellaneous		41 424
211 029	15.	Conferences		83 791
107 401	16.	Training Programmes		97 902
85 485	17.	Electronic Data Processing		129 642
	18.	<b>Library</b>		
		18.1 Books		
		a) Expenditure	210 914	
		b) Less: Cost of books capitalized	210 914	—
156 814		18.2 Other Expenses		135 513
39 856 582		Carried Over		46 057 555



Expenditure — Contd

PREVIOUS YEAR Rs	SL NO.	HEADS OF EXPENDITURE	Rs	AMOUNT Rs
39 856 582		Brought Forward		46 057 555
	19.	<b>Office Expenses</b>		
784 604		19.1 Stationery		820 816
422 924		19.2 Postage		566 488
757 927		19.3 Telephones and Telex		746 778
181 670		19.4 Recruitment		138 616
99 005		19.5 Refreshment and Entertainment		116 475
96 607		19.6 Liveries		136 279
377 089		19.7 Conveyance and Cartage		240 157
107 272		19.8 Insurance and Bank Charges		173 114
247 176		19.9 Miscellaneous		306 511
	20.	<b>Furniture and Equipment</b>		
		20.1 Furniture		
		a) Expenditure	147 525	
—		b) Less: Cost of Assets capitalized	147 525	—
		20.2 Equipment		
		a) Expenditure	190 213	
—		b) Less: Cost of Assets capitalized	190 213	—
184 283		20.3 Repair and Maintenance		209 220
	21.	<b>Buildings</b>		
807 852		21.1 Rent and Taxes		789 825
771 295		21.2 Electricity and Water Charges		821 805
363 611		21.3 Maintenance		374 761
	22.	<b>Local Transport</b>		
		22.1 Vehicles		
		a) Expenditure	100 000	
—		b) Less: Cost of Assets capitalized	100 000	—
264 801		22.2 Maintenance		276 094
56 619	23.	Audit Fee and Legal Charges		43 115
67 416	24.	Staff Training		28 898
280 480	25.	Interest on House Building Loan		380 854
336 000	26.	Investment Allowance Fund		186 000
—	27.	Loss on Assets Written off/Disposed off		1 500
	28.	<b>Depreciation</b>		
		28.1 Buildings		
		a) HQ		
		i) Manak Bhavan	24 324	
		ii) Manakalaya	63 961	
		b) Bombay	181 040	
		c) Calcutta	152 816	
		d) Madras	30 744	
		28.2 Laboratory Equipment	1 287 288	
		28.3 Furniture and Equipment	372 945	
		28.4 Vehicles	62 157	
1 682 169		28.5 Xerox Copying Equipment	13 670	2 188 945
68 444	29.	Deficit for 1981-82		—
47 813 826		Excess of Income over Expenditure		54 603 806
—				3 967 963
47 813 826		<b>Total</b>		<b>58 571 769</b>



# RECEIPT AND PAYMENT ACCOUNT

FOR THE YEAR ENDED 31 MARCH 1983

## Receipts

PREVIOUS YEAR Rs	SL NO.	HEADS OF RECEIPTS	AMOUNT	
			Rs.	Rs
	1.	<b>Opening Balance</b>		
		1.1 Cash and Bank Balance	6 143 674	.
6 223 407		1.2 Deposits	325 000	6 468 674
	2.	<b>Membership Subscription</b>		
		2.1 For 1982	2 041 377	
4 964 108		2.2 For 1983	3 649 945	5 691 322
	3.	<b>Recovery of Bills</b>		
		3.1 For Sale of Publications	7 910 053	
6 275 955		3.2 For Bulletin Advertisements	96 723	8 006 776
26 593 292	4.	Certification		35 522 292
28 290	5.	CGHS Contribution		28 217
29 360	6.	Conferences (Delegates' Fees)		—
120 032	7.	Training Fees		136 876
317 645	8.	Miscellaneous Receipts		436 297
	9.	<b>Government Grant</b>		
		9.1 For Recurring Expenditure	10 900 000	
18 400 000		9.2 For Non-recurring Expenditure	4 900 000	15 800 000
	10.	<b>Loans from Government</b>		
		10.1 For House Building Advance	1 650 000	
1 500 000		10.2 For Conveyance Advance	100 000	1 750 000
	11.	<b>Donations</b>		
55 956		11.1 For Bombay Office Building	260 193	
130 501		11.2 For Calcutta Office Building	—	260 193
5 710 573	12.	Contra Items		8 744 031
	13.	<b>Loans and Advances</b>		
		13.1 Conveyance	98 794	
		13.2 House Building	360 107	
		13.3 Festivals	158 210	
		13.4 Flood	14 733	
		13.5 Adjustable	2 286 070	
		13.6 TA	79 053	
		13.7 Earnest Money	61 021	
3 660 113		13.8 Security Deposits	11 100	3 069 088
696 184	14.	Sundry Receipts		619 184
<b>74 705 416</b>		<b>Total</b>		<b>86 532 950</b>



## Payments

PREVIOUS YEAR Rs	SL NO.	HEADS OF PAYMENTS	AMOUNT Rs
	1.	<b>Pay</b>	
6 021 119		1.1 Officers	6 339 047
7 324 497		1.2 Staff	7 857 847
	2.	<b>Allowances</b>	
4 967 589		2.1 Officers	6 552 155
8 289 720		2.2 Staff	11 307 512
599 164	3.	CGHS and Other Medical Charges	571 230
318 839	4.	Provident Fund Contribution	350 037
1 345 417	5.	Pension Fund	1 523 979
30 000	6.	Gratuity Fund	30 000
140 346	7.	Staff Welfare	205 756
	8.	<b>TA</b>	
317 272		8.1 Overseas	219 272
1 504 197		8.2 Officers and Staff	1 630 298
50 856		8.3 Committee Members	42 352
542 141		8.4 Leave Travel Concession	716 572
	9.	<b>Subscription to International Organizations</b>	
—		9.1 ISO	622 785
29 670		9.2 IEC	320 221
	10.	<b>Production</b>	
1 334 986		10.1 Standards	1 799 903
700 022		10.2 Bulletin	740 695
94 263		10.3 Calculation Aids and Binders	130 277
324 812		10.4 Other Publications	296 542
5 000	11.	Research and Consultation	—
1 573 007	12.	Testing Fees	1 733 559
913 461	13.	Laboratory Apparatus and Stores	978 667
	14.	<b>Publicity</b>	
40 100		14.1 Exhibition	27 571
224 734		14.2 Advertisings	119 281
107 048		14.3 Miscellaneous	39 424
211 029	15.	Conferences	83 791
107 401	16.	Training Programmes	97 902
85 485	17.	Electronic Data Processing	129 642
	18.	<b>Library</b>	
170 203		18.1 Books	204 777
71 297		18.2 Other Expenses	113 178
	19.	<b>Office Expenses</b>	
784 604		19.1 Stationery	820 816
422 924		19.2 Postage	566 488
757 927		19.3 Telephones and Telcx	746 778
181 670		19.4 Recruitment	116 946
99 005		19.5 Refreshment and Entertainment	116 475
96 607		19.6 Liveries	136 279
377 089		19.7 Conveyance and Cartage	238 257
107 272		19.8 Insurance and Bank Charges	173 114
247 176		19.9 Miscellaneous	306 511
40 517 949		Carried Over	48 005 936



Payments — *Contd*

PREVIOUS YEAR Rs	SL NO.	HEADS OF PAYMENTS	AMOUNT	
			Rs	Rs
40 517 949		Brought Forward		48 005 936
	20.	<b>Furniture &amp; Equipment</b>		
181 384		20.1 Furniture		145 386
308 929		20.2 Equipment		190 213
184 283		20.3 Repairs and Maintenance		209 220
	21.	<b>Buildings</b>		
807 852		21.1 Rent and Taxes		789 825
732 913		21.2 Electricity and Water Charges		821 805
363 611		21.3 Maintenance		374 761
	22.	<b>Local Transport</b>		
—		22.1 Vehicles		—
264 801		22.2 Maintenance		276 094
56 619	23.	Audit Fee and Legal Charges		43 115
67 416	24.	Staff Training		28 898
280 480	25.	Interest on House Building Loan		380 854
336 000	26.	Investment Allowance Fund		186 000
44 102 237				51 452 107
	27.	<b>Non-recurring</b>		
5 102 121		27.1 Laboratory Equipment		3 289 508
2 937 365		27.2 Central Laboratory Building at Ghaziabad		546 215
564 116		27.3 Bombay Office Building		314 409
61 688		27.4 Calcutta Office Building		—
109 241		27.5 GATT Project		—
446 147	28.	S&T Project		508 904
5 710 573	29.	Contra Items		8 744 031
	30.	<b>Loans and Advances</b>		
		30.1 Conveyance	138 703	
		30.2 House Building	1 649 520	
		30.3 Festivals	169 250	
		30.4 Flood	79	
		30.5 Adjustable	3 083 006	
		30.6 TA	91 457	
		30.7 Security Deposits	16 575	
5 170 640		30.8 Earnest Money	59 837	5 208 427
70 200	31.	Purchase of Flats for Employees at Bombay		126 800
125 000	32.	Refund of Conveyance Loan		125 000
3 837 414	33.	Sundry Remittances		4 423 440
	34.	<b>Closing Balances</b>		
325 000		34.1 Deposits		775 000
6 143 674		34.2 Cash and Bank Balances		11 019 109
<b>74 705 416</b>		<b>Total</b>		<b>86 532 950</b>



# BALANCE SHEET

AS AT 31 MARCH 1983

## Liabilities

PREVIOUS YEAR Rs	SL NO.		Rs	Rs	Rs
	1.	<b>Capital Fund</b>			
	1.1	As per Last Balance Sheet		42 343 469	
	1.2	<i>Add: Cost of Assets Capitalized</i>			
		a) Lab Bldg at Ghaziabad	546 215		
		b) Laboratory Equipment	3 289 508		
		c) Bombay Office Building	314 409	4 150 132	
				<u>46 493 601</u>	
	1.3	<i>Add</i>			
		a) Excess of Income over expenditure as per In- come & Expenditure A/c	3 967 963		
		b) <i>Less:</i> Refund of Govt Grant for 1981-82	4 005	3 963 958	
				<u>3 963 958</u>	
	1.4	<i>Add</i>			
		Amount Charged in Income & Expenditure Account Towards Investment Allow- ance Fund	186 000	186 000	50 643 559
42 343 469					
	2.	<b>Reserve and Funds</b>			
	2.1	K. L. Moudgill Prize Fund		14 412	
	2.2	Gratuity Fund		236 955	
	2.3	Benevolent Fund		96 797	
	2.4	<i>Laboratory Building at Ghaziabad</i>			
		a) Govt Grant Received	1 000 000		
		b) <i>Add:</i> Unutilized Grant carried forward from 1981-82	21 528		
			<u>1 021 528</u>		
		c) <i>Less:</i> Transferred to Capital Account	546 215	475 313	
				<u>475 313</u>	
	2.5	<i>Laboratory Equipment</i>			
		a) Govt Grant Received	3 500 000		
		b) <i>Add:</i> Unutilized Grant carried forward from 1981-82	1 362		
			<u>3 501 362</u>		
		c) <i>Less:</i> Transferred to Capital Account	3 289 508	211 854	
				<u>211 854</u>	
	2.6	<i>Bombay Office Building</i>			
		a) As per last Balance Sheet	637 848		
		b) <i>Add:</i> Donation	260 193		
			<u>898 041</u>		
		c) <i>Less:</i> Transferred to Capital Account	314 409	583 632	
				<u>583 632</u>	
42 343 469		Carried Over		1 618 963	50 643 559



## Liabilities — Contd

PREVIOUS YEAR Rs	SL NO.		Rs	Rs	Rs
42 343 469		Brought Forward		1 618 963	50 643 559
	2.7	Calcutta Office Building		101 110	
	2.8	<i>S &amp; T Projects</i>			
		a) As per Last Balance Sheet	135 664		
		b) <i>Receipts</i>			
		i) Govt Grant	200 000		
		ii) Sale Proceeds	141 586		
		iii) Due to ISI Recurring Account	50 000		
			<u>527 250</u>		
		c) <i>Less: Expenditure</i>	508 904	18 346	
	2.9	GATT Project		17 961	
	2.10	Reprographic Equipment		200 000	
	2.11	<i>Development of Handbook for Implementation of Indian Standards</i>			
		a) Govt Grant	200 000		
		b) <i>Less: Expenditure</i>	81 000	119 000	
	2.12	Pension Fund		13 165 942	
	2.13	CPF		15 850 630	
41 088 565	2.14	GPF		16 997 639	48 089 591
	3.	<b>Loans from Govt</b>			
	3.1	Conveyance Advance		250 000	
	3.2	House Building Loan		6 250 000	
	3.3	<i>Residential Flats (Bombay)</i>			
		a) As per Last Balance Sheet	186 000		
5 061 000		b) <i>Less: Refunded</i>	186 000	—	6 500 000
	4.	<b>Current Liabilities</b>			
	4.1	Advance Subscription		3 649 945	
	4.2	<i>Sundry Creditors</i>			
		a) Inland		750 239	
		b) Abroad		1 395 234	
		c) Earnest Money		102 067	
		d) Customers Balances		657 007	
6 370 698	4.3	Govt of Bihar (A/c Lab Equipment)		89 136	6 643 628
94 863 732		<b>Total</b>			111 876 778



## Assets

PREVIOUS YEAR Rs	SL NO.		Rs	Rs	Rs
	1.	<b>Fixed Assets</b>			
	1.1	<i>Buildings (HQ)</i>			
		a) As per Cost Value		4 921 703	
		b) <i>Less: Depreciation w/o</i>			
		i) Up to 82-03-31	2 174 049		
2 747 654		ii) During 1982-83	88 285	2 262 334	2 659 369
	1.2	<i>Madras Office Building</i>			
		a) As per Cost Value		1 133 556	
		b) <i>Less: Depreciation w/o</i>			
		i) Up to 82-03-31	138 729		
994 827		ii) During 1982-83	30 744	169 473	964 083
	1.3	<i>Lab Bldg at Ghaziabad (Under Construction)</i>			
		a) As per Last Balance Sheet		13 198 777	
13 198 777		b) Additions		546 215	13 744 992
	1.4	<i>Bombay Office Building</i>			
		a) As per Cost Value		4 787 932	
		b) Additions		314 409	
				5 102 341	
4 787 932		c) <i>Less: Depreciation w/o during 1982-83</i>		181 040	4 921 301
	1.5	<i>Calcutta Office Building</i>			
		a) As per Cost Value		3 112 635	
3 112 635		b) <i>Less: Depreciation w/o during 1982-83</i>		152 816	2 959 819
	1.6	<i>Residential Flats (Bombay)</i>			
		a) As per Last Balance Sheet		857 704	
857 704		b) Additions		126 800	984 504
	1.7	<i>Zerox Copying Equipment</i>			
		a) As per Cost Value		292 000	
		b) <i>Less: Depreciation w/o</i>			
		i) Up to 82-03-31	220 488		
71 512		ii) During 1982-83	13 670	234 158	57 842
	1.8	<i>Laboratory Equipment</i>			
		a) As per Cost Value up to 1982-03-31		16 162 112	
		b) Additions		3 289 508	
				19 451 620	
		c) <i>Less: Depreciation w/o</i>			
		i) Up to 82-03-31	4 400 509		
11 761 603		ii) During 1982-83	1 287 288	5 687 797	13 763 823
37 532 644		Carried Over			40 055 733



Assets — *Contd*

PREVIOUS YEAR Rs	SL NO.		Rs	Rs	Rs
37 532 644		Brought Forward			40 055 733
	1.9	<i>Furniture and Equipment</i>			
	a)	As per Cost Value up to 1982-03-31		5 279 533	
	b)	<i>Deduct:</i> Cost of Assets disposed of		13 464	
				<u>5 266 069</u>	
	c)	Additions		337 738	
				<u>5 603 807</u>	
	d)	<i>Less: Depreciation w/o</i>			
	i)	Up to 1982-03-31	2 634 241		
	ii)	During 1982-83	372 945		
			<u>3 007 186</u>		
2 645 292	iii)	<i>Deduct:</i> Depreciation on Assets disposed of	12 806	2 994 380	2 609 427
	1.10	<i>Vehicles</i>			
	a)	As per Cost Value up to 1982-03-31		600 374	
	b)	Additions		100 000	
				<u>700 374</u>	
	c)	<i>Less: Depreciation w/o</i>			
	i)	Up to 82-03-31	289 590		
310 784	ii)	During 1982-83	62 157	351 747	348 627
	1.11	<i>Library Books</i>			
1 104 586	a)	As per Last Balance Sheet	1 104 586		1 315 500
	b)	Additions	210 914		
41 593 306					<u>44 329 287</u>
	2.	<b>Investments (at Cost)</b>			
	2.1	Deposits with Bank	775 000		
	2.2	Share of ISI Employees' Consumers Co-opt Store	7 500		
	2.3	Shares of Jay Engg Works (A/c K. L. Moudgill Prize Fund)	11 400	793 900	
	2.4	Pension Fund	13 165 942		
	2.5	CPF	15 850 630		
39 989 501	2.6	GPF	16 997 639	46 014 211	46 808 111
81 582 807		Carried Over			91 137 398



Assets — Contd

PREVIOUS YEAR Rs	SL NO.		Rs	Rs	Rs
81 582 807		Brought Forward			91 137 398
	3.	<b>Current Assets</b>			
	3.1	Stock of Printing Paper (at Cost)		803 939	
	3.2	<i>Sundry Debtors</i>			
		a) Sale of Publications	1 640 352		
		b) Bulletin Advertisements	92 928		
		c) Licence, Inspection, Testing Charges, etc	319 679		
		d) <i>Ministry of Finance</i>			
		i) A/c Colombo Plan Trainees	121 707		
		ii) A/c SCAP Trainees	53 367		
		e) <i>Ministry of External Affairs</i>			
		ITEC Trainees	16 164		
2 427 323		f) Steel Authority of India (A/c IPSS Scheme)	163 797	2 407 994	3 211 933
	4.	<b>Loans and Advances</b>			
	4.1	<i>Loans for:</i>			
		a) Purchase of Conveyance	295 341		
		b) House Building	5 035 687	5 331 028	
	4.2	<i>Advances for:</i>			
		a) Festival	97 500		
		b) Flood	1 534		
		c) Store purchase, etc	899 482		
		d) TA	17 606	1 016 122	
4 709 928	4.3	Security Deposits		161 188	6 508 338
	5.	<b>Cash and Bank Balances</b>			
	5.1	With Bankers		10 914 444	
	5.2	In Hand (Including Imprest)		101 296	
6 143 674	5.3	Postage Stamps		3 369	11 019 109
94 863 732		<b>Total</b>			111 876 778

Note — The closing stock of Indian Standards has not been valued and included in the Accounts.

Sd/-  
(A. K. Gupta)  
Director General, ISI

Sd/-  
(G. V. Ramasubban)  
Director (Accounts), ISI

**Audit Certificate**

I have examined the Accounts and Balance Sheet of the Indian Standards Institution, New Delhi for the year ending 31 March 1983. I have obtained all the information and explanations that I have required and subject to the observations in the appended Audit Report, I certify as a result of audit that in my opinion these Accounts and Balance Sheet are properly drawn up so as to exhibit a true and fair view of the state of affairs of the Institution according to the best of my information and explanations given to me and as shown by the books of the Institution.

New Delhi  
Dated 8 November 1983

Sd/-  
(S. R. Mukerji)  
Director of Audit  
(AUDIT REPORT overleaf)



## Audit Report

### 1. Investment

i) In the Balance Sheet (Assets side), a sum of Rs 169.98 lakhs had been shown as investment of General Provident Fund. This included Rs 8.48 lakhs being the excess of expenditure over income in the Balance Sheet of General Provident Fund and not an investment.

ii) Investment in pension had been shown as Rs 131.66 lakhs which included amount recoverable from the General Provident Fund account (Rs 0.54 lakhs) and bank balance (Rs 13.55 lakhs) as on 31 March 1983.

iii) The investment shown in Contributory Provident Fund was Rs 158.51 lakhs which included accrued interest (Rs 5.20 lakhs), bank balance (Rs 3.70 lakhs) and the amount due from General Provident Fund (Rs 1.50 lakhs) as on 31 March 1983.

### 2. Reconciliation of Bank Account

The Institution is having 34 accounts in different banks all over India. Scrutiny of the bank reconciliation statement revealed that quite a number of items, the break-up of which is given below, remain unreconciled:

YEARWISE POSITION OF THE BANK RECONCILIATION

Sl No.	Particulars	1979-80		1980-81		1981-82		1982-83 (Up to December 1982)	
		No. of Items	Amount Rs	No. of Items	Amount Rs	No. of Items	Amount Rs	No. of Items	Amount Rs
i)	Cheques deposited in Bank but not credited in the Pass Book	2	369	22	11 523	26	50 701	50	82 186
ii)	Amount debited by the Bank but not traceable in the Cash Book	—	—	—	—	7	17 165	15	28 986
iii)	Amount credited by the Bank but not traceable in the Cash Book	—	—	5	6 199	15	12 542	33	16 906
	<b>TOTAL</b>	<b>2</b>	<b>369</b>	<b>27</b>	<b>17 722</b>	<b>48</b>	<b>80 408</b>	<b>98</b>	<b>128 078</b>

The Institution stated (October 1983) that 72 items (2 of 1979-80, 12 of 1980-81, 12 of 1981-82 and 46 of 1982-83) have since been cleared.

### 3. Certification Dues: Non-exhibition of, in the Annual Accounts

i) As on 31 March 1983, an amount of Rs 29.92 lakhs was outstanding to be collected from the licensees on account of Certification Marking Fees. This amount had not been reflected in the Accounts of the Institution for the year 1982-83. Yearwise break-up of these outstanding dues had also not been kept. The Institution stated (October 1983) that a sum of Rs 16.25 lakhs had since been recovered.

ii) Outstanding balances on account of Certification Fees also included an amount of Rs 3.20 lakhs on account of application fees, preliminary inspection and testing charges from the applicants for the issue of licences for the marking of ISI stamp, which according to the procedure laid down by ISI were required to be deposited by the applicants in advance.

The Institution stated (October 1983) that ordinarily applications received without application fees and preliminary inspection charges were not entertained. Whenever testing of samples was done, the applicant was required to pay the prescribed testing charges and the outstandings mainly pertained to such dues.

### 4. Testing of Samples

i) The Institution had 7 144 operative licences all over India on 31 March 1983, to whom ISI Mark had been granted for the manufacture of various items. As per the Institution's Scheme of Certification, eight samples on an average in respect of each licence (four samples drawn from the factory and four purchased from the market) are to be drawn in a year and tested to ensure the quality of goods marked with ISI Mark. However, during the year 1982-83, only 23 405 samples were received out of which 20 758 samples were tested.

The Institution stated (October 1983) that the number of samples drawn were less as 814 licences were deferred and not authorized to use ISI Mark and in a number of cases the licensees had not marked any quantity during the operative year. It was also stated that some samples of expensive products were neither drawn nor purchased for independent testing and this was done in the factory duly supervised by ISI Inspectors and some products like pesticides, threshers, etc, were seasonal and not available during the whole year.

ii) 8 898 samples were sent to outside laboratories for testing, on which an expenditure of Rs 17.62 lakhs was incurred as testing fees. It was stated (October 1983) that this became necessary due to non-availability of testing facilities in ISI laboratories and receipt of larger number of samples than the Institution could handle and make test reports available in reasonable time.

New Delhi  
Dated 8 November 1983

Sd/-  
(S. R. Mukerji)  
Director of Audit



## APPENDIX B

# PRINCIPAL OFFICERS OF ISI COUNCILS AND COMMITTEES

As on 31 March 1983

### General Council (GC)

President SHRI BHAGWAT JHA AZAD  
Union Minister of Food and  
Civil Supplies

Vice-Presidents SHRI D. C. KOTHARI  
PROF S. SAMPATH

Director General DR A. K. GUPTA

### Executive Committee (EC)

Chairman SHRI D. C. KOTHARI

### Finance Committee (FC)

Chairman PROF S. SAMPATH

### Agricultural and Food Products Division Council (AFDC)

Chairman DR M. V. RAO  
Vice-Chairman SHRI V. H. SHAH

### Chemical Division Council (CDC)

Chairman DR S. P. BHATTACHARYA  
Vice-Chairman DR M. S. VAIDYA

### Civil Engineering Division Council (CEDC)

Chairman SHRI N. S. L. RAO  
Vice-Chairmen PROF DINESH MOHAN  
SHRI PRITAM SINGH

### Consumer Products and Medical Instruments Division Council (CMIDC)

Chairman DR S. SRIRAMACHARI

### Electronics and Telecommunication Division Council (LTDC)

Chairman PROF S. SAMPATH  
Vice-Chairman LT-GEN D. SWAROOP

### Electrotechnical Division Council (ETDC)

Chairman SHRI S. G. RAMACHANDRA  
Vice-Chairman SHRI P. C. MANKODI

### Marine, Cargo Movement and Packaging Division Council (MCPDC)

Chairman SHRI S. PARAMANANDHAN  
Vice-Chairmen SHRI A. RAY  
CAPT N. A. TAMHANE

### Mechanical Engineering Division Council (EDC)

Chairman MAJ-GEN R. JANARDHANAM  
Vice-Chairmen SHRI ABHIJIT SEN  
SHRI A. K. GANGOPADHYA  
DR R. VASUDEVAN

### Petroleum, Coal and Related Products Division Council (PCDC)

Chairman DR D. BANERJEE

### Structural and Metals Division Council (SMDC)

Chairman SHRI J. G. KESWANI  
Vice-Chairmen PROF V. A. ALTEKAR  
SHRI M. DHAR

### Textile Division Council (TDC)

Chairman SHRI D. N. SHROFF  
Vice-Chairman SHRI SURESH MEHTA

### Certification Marks Advisory Committee (CMAC)

Chairman SHRI V. P. PUNJ

### Advisory Committee for Standardization of Instruments (ACSI)

Chairman SHRI K. N. RAMASWAMY

### Industrial Safety Advisory Committee (ISAC)

Chairman SHRI A. K. CHAKRABARTY

### Environmental Protection Advisory Committee (EPAC)

Chairman SHRI B. B. VOHRA

### Ahmadabad Office Advisory Committee

Chairman SHRI N. VITTAL

### Bangalore Office Advisory Committee

Chairman SHRI S. G. RAMACHANDRA

### Bhubaneswar Office Advisory Committee

Chairman SECRETARY, INDUSTRIES  
DEPARTMENT,  
GOVERNMENT OF ORISSA

### Calcutta Office Advisory Committee

Chairman SHRI B. K. JHAWAR

### Haryana State Advisory Committee for Northern Regional Office

Chairman CHIEF SECRETARY,  
GOVERNMENT OF  
HARYANA

### Hyderabad Office Advisory Committee

Chairman SHRI K. S. R. MURTHY

### Kanpur Office Advisory Committee

Chairman SECRETARY (INDUSTRIES),  
GOVERNMENT OF  
UTTAR PRADESH

### Madras Office Advisory Committee

Chairman SHRI D. C. KOTHARI

### Patna Office Advisory Committee

Chairman INDUSTRIES  
DEVELOPMENT  
COMMISSIONER,  
INDUSTRIES  
DEPARTMENT, BIHAR

### Punjab State Advisory Committee for

### Northern Regional Office

Chairman CHIEF SECRETARY,  
GOVERNMENT OF PUNJAB

### Trivandrum Office Advisory Committee

Chairman SHRI S. PEER MOHAMMED



# STAFF

As on 31 March 1983

Director General DR A. K. GUPTA

Additional Directors General SHRI A. P. BANERJI  
SHRI A. S. CHEEMA

Deputy Directors General SHRI D. AJITHA SIMHA  
— Southern Region  
SHRI S. SUBRAHMANYAN  
— HQ

## DEPARTMENTS/SECTIONS

Agricultural and Food Products Director SHRI T. PURNANANDAM

Chemical Director SHRI S. K. MATHUR

Civil Engineering Directors SHRI G. RAMAN  
SHRI K. RAGHAVENDRAN

Consumer Products and Medical Instruments Director DR A. S. SETHI

Electronics and Telecommunication Sr 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. CHANDRASEKHARAN

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

Computer Cell Director SHRI D. S. AHLUWALIA

Information Services Director SHRI V. P. VIJ

Publications Director SHRI GURCHARAN SINGH

Reprography and Printing Deputy Director SHRI M. L. MALIK

Standards Promotion Director SHRI M. RAGHUPATHY

Statistics Director SHRI Y. K. BHAT

Central Laboratory Director SHRI S. K. KARMAKAR

Central Marks Director I SHRI C. B. CHANDORKAR  
Director II SHRI E. N. SUNDAR

Certification Marks (Delhi) Director SHRI R. I. MIDHA

Accounts Director SHRI R. K. SATIA

General Services Director SHRI GIRDHARI LAL

Legal Cell Director SHRI GIRDHARI LAL

Personnel Management Secretary SHRI B. C. KAPUR

Public Relations Director SHRI K. P. KHANNA

Eastern Regional Office Directors DR HARI BHAGWAN  
SHRI S. P. RAMAN  
DR A. K. BHATTACHARYA

Western Regional Office Directors SHRI S. R. KUPPANNA  
SHRI T. RAJARAMAN  
SHRI M. MURUGKAR

Northern Regional Office Director SHRI K. C. SHARMA

Southern Regional Office Directors KM H. N. MYTHILI  
SHRI P. VENKATARAMAN

Ahmadabad Branch Office Director SHRI Y. R. TANEJA

Bangalore Branch Office Director SHRI N. SRINIVASAN

Bhopal Branch Office Sr Deputy Director/Head SHRI J. K. BHAVNANI

Bhubaneswar Branch Office Sr Deputy Director/Head SHRI L. RAMACHANDRA RAO

Hyderabad Branch Office Director SHRI L. G. BANERJI

Jaipur Branch Office Sr Deputy Director/Head SHRI N. C. TYAGI

Kanpur Branch Office Director SHRI S. L. BALI

Patna Branch Office Director SHRI G. S. VILKHU

Trivandrum Branch Office Sr Deputy Director/Head SHRI A. GOVINDAN



