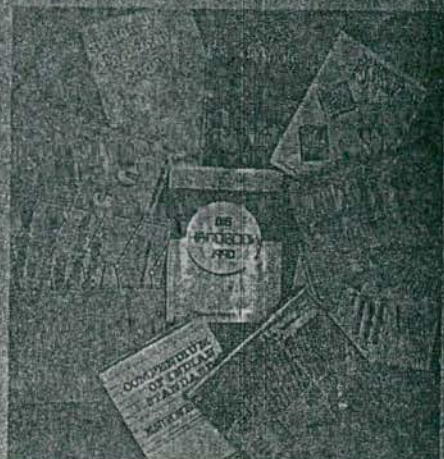
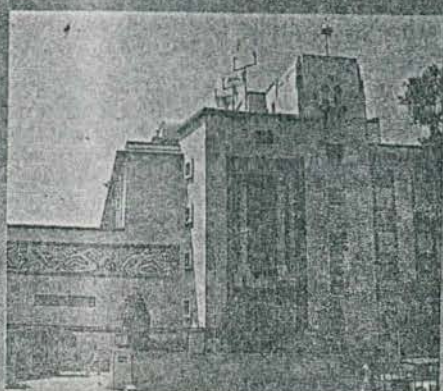


BUREAU
OF
INDIAN
STANDARDS

ANNUAL REPORT
1990—91



ANNUAL REPORT 1990-91

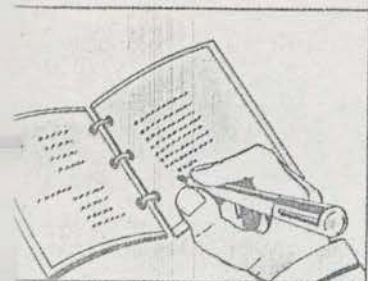


BUREAU OF INDIAN STANDARDS

MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG,
NEW DELHI-110 002

CONTENTS

Director General's Report	3
Policy Planning	9
Development of Standards	11
Certification Marking	15
Quality Systems	22
Laboratory-Products and Development Testing	23
Standards Promotion	25
Regional and Branch Offices	32
International Cooperation	35
Computerization and Office Automation	39
Plan Projects	41
Human Resources Development	43
Finance	46
Annex A	
Accounts for 1990-91	48
Annex B	
Principal Offices of the Bureau, Executive Committee, Advisory Committees and the Directorate General	64
Annex C	
State Level Committees for Standardization and Quality Systems	67



DIRECTOR GENERAL'S REPORT

During the period under review, economy of the country faced a situation of unprecedented crisis because of factors like lack of resources for investment, dwindling foreign exchange reserve, stagnation in market demand and a run away rise in prices. Naturally, this situation also cast its shadow on the activities of the Bureau. But, despite the massive adversity of circumstances, it is a matter of credit that the Bureau succeeded eminently in sustaining the tempo of its activities. A reflection of this is manifest in the self-reliance achieved by the Bureau, for the second successive year, in meeting its non-plan expenditure through its own resources without having to depend upon any grant from the Government.

Other notable achievements of the year included creation of a new Division Council for Management and Systems (MSDC), establishment of a new office at Vadodara, procurement of residential flats at Bombay and Madras for use of staff members, completion of the construction of new office-cum-laboratory complex building at Gandhi Nagar in Gujarat and laboratory buildings at Calcutta and Madras. Draft Eighth Five-Year Plan which provides a framework for the growth and development of Bureau and its activities in the ensuing 5-year period was also finalized during the year.

On the international front, the Bureau was elected member of the ISO Council for three-year term (1991-93). A prestigious Agreement for Technical Cooperation in the Field of Standardization and Quality Certification was signed with the Government of Poland. Interaction with the Standardization set up of EEC was greatly enlarged in the perspective of the impending consolidation of the European market by January 1992. On another front, the programme of providing technical assistance to the developing countries in matters of standardization and quality promotion were pursued with renewed vigour.

It will not be out of place to put on

record the able lead and guidance provided by the members of the Bureau and its various Advisory Committees which contributed greatly to the success achieved in different sectors. A summary assessment of the progress achieved during the period is given below.

Policy Planning

In line with the national objectives and priorities, the Bureau finalized the draft Eighth Five-Year Plan which provides a broad frame work for creation of a national system of standardization, identification of thrust areas, strengthening of testing infrastructure, increased interaction with international standardization and certification systems, and promotion of increased awareness about standardization. A corporate plan was also brought out during the year to strengthen internal systems and procedures.

A loan of Rs 95.4 million was successfully negotiated with the World Bank. The loan amount which carries no interest but a service charge of 1 percent is payable over the next 15 years with a moratorium of 4 years. The loan amount will be utilized for strengthening infrastructure in areas like laboratory network, quality development, standards development, training programmes and promotional efforts.

The BIS network of Regional and Branch Offices was enlarged further by opening a new office at Vadodara. The office will make available on-the-spot services to industries located in its neighbouring areas.

To stimulate the industry to achieve excellence in quality, a scheme for institution of National Quality Awards was approved.

Development of Standards

BIS formulated 755 standards bringing the number of standards in force to 15 186 as on 31 March 1991. Important subjects cov-

ered during the year include basic standards like checking of bias in sampling of ores, tests for skin sensitizing potential of synthetic detergents, water-proofing and damp proofing of wet areas in buildings, guidelines for laying foundations in weak soils, optical fibre cables, testing of TV ferrite components, domestic washing machines, fertilizer metering mechanism, installation and maintenance of power tillers, performance requirements of short wave therapy equipment, copper-T, LPG tubing, pneumatic hose couplings, overall planning of river basins, colour fastness of textiles to perspiration, radiator fans and pneumatic tubes.

A significant development was the creation of a new Management and Systems Division Council (MSDC) by reorganizing the work of the erstwhile Basic Standards, Systems and Services Division Council (BSDC). The new Division Council will guide development and promotion of standards in the fields of quality assurance, inspection procedures, quality systems, capability approval, material and production management, documentation and graphic technology. Product sampling procedures dealt previously by BSDC have been assigned to the relevant Division Councils.

To cater to the need of organizations requiring a large number of standards in related fields, activities were initiated for the first time to supply status reports on standards in identified areas. Two important reports brought out in this series were titled 'Indian Standards Influencing Energy Conservation' and 'Standards for Cleaner and Greener Environment'. In the preparation of the first report, financial cooperation was extended by the Department of Power.

As part of its commitment towards the Technology Mission on Drinking Water, the Bureau supplied important documents dealing with :

- a) Guide for defluoridation of water,

- b) Removal of iron from water, and
- c) Specification for deepwell hand pumps.

In addition, compendiums of Indian standards on (a) Pipes used in water supply, and (b) Pumps including handpumps were compiled while a Manual on location, operation, and maintenance of bore wells was finalized for printing.

Quality Certification

During the year, 1283 new licences covering 417 products were granted under the BIS Certification Marks Scheme bringing the cumulative number of operative licences to 11 572 as on 31 March 1991. Twentyseven products were brought under the Scheme for the first time. The total number of Indian Standards against which products have been certified has risen to 1 369 as on 31 March 1991. Of these about 280 standards relate to items of everyday use by common consumer.

Products coming under certification marking for the first time included, *inter-alia*, steam irons, sewing machine heads, monoset agricultural pumps, rigid PVC pipes for use in suction and delivery lines of agricultural pumps, thermostats for use in air conditioners and concentrates for non-alcoholic beverages. As many as 44 000 inspection visits were conducted for properly monitoring and controlling the operation of the BIS Certification Marks licences.

To get exact feedback on the operation of the Certification Marks Scheme, the Bureau organized 14 review meetings of its licence holders with concerned user interests of products like RCC pipes, wiring accessories, LPG cylinders, HDPE containers, 15-kg square tins, biscuits, diesel engines and GLS lamps. In addition, 13 get-togethers of licensees, purchasers, users, etc, were also organized to stimulate increased patronization of the BIS certified goods.

IECQ Certification

In the preceding year, India was admitted as a Certifying Member of the IECQ Quality System for Electronic Components operated by the International Electrotechnical Commission (IEC). During the period under review, approval under the system was granted to four more parties bringing the total number of approved manufacturers to 6. This approval enables the manufacturers of electronic components in India to export their products without the need for any further inspection and testing at the receivers' end.

Quality Systems

Steady progress was maintained in consolidating and extending the infra-structural base of the Quality Systems Certification Scheme (QSCS). The Scheme has an international complexion because of its operation on the basis of ISO 9000 (since adopted as IS 14000) series of standards and as such is a potent force for strengthening export trade particularly to the unified EEC market being created in the wake of EUROPE 92. It is anticipated that with the turn of the year, the EEC countries as a matter of policy will be placing virtually all import indents on manufacturers who are duly approved under the Quality Systems Certification Scheme.

For preparing BIS officials to take on the role of assessors and lead assessors under QSCS, three training and six awareness programmes were organized with the involvement of experts from EEC. Considerable progress was also made towards working out the organizational structure and other guidelines for the Scheme. The industry sectors having potential quality systems certification arrangements and those which could become ready in a short while to opt for the Scheme were identified.

Product and Development Testing

BIS laboratories tested 37 977 samples of

various products and also undertook several R&D projects primarily to help review the existing provisions in Indian Standards for their possible modification and updating.

For expanding and upgrading the existing testing facilities, equipment worth Rs 10.6 million was added to the laboratories. These included atomic absorption spectrophotometer, hydraulic test equipment for PVC pipes, UV - Visible Spectrophotometer, high voltage tester, etc.

Twentyone outside laboratories were recognized to undertake testing of samples under the BIS Certification Scheme bringing the total number of laboratories so recognized to 261.

Laboratories of BIS organized a number of training programmes in testing for the benefit of BIS as well as testing personnel of the licensees, applicants and BIS recognized laboratories. Products covered included domestic electrical appliances, food products, aluminium milk cans and engineering components.

Standards Promotion

Appreciating the fact that development of standards was not an end in itself, the Bureau continued to pursue sustained activities to promote their implementation. As a result, a number of bulk procurement organizations including the following took policy decisions to indent for BIS certified goods only wherever a sufficient number of suppliers exist:

- a) Eastern Coalfields Ltd ;
- b) Madras Port Trust;
- c) National Hydroelectric Power Corporation Ltd ;
- d) Stores and Disposal Division, Government of Himachal Pradesh;
- e) NTPC, Mirzapur; and
- f) Rajasthan State Electricity Board.

To create greater awareness about the

contribution of the Bureau, combined facilities of mass media including TV, radio and daily press were utilized. Apart from this, the Bureau organized and participated in a number of important conferences and exhibitions in various parts of the country. Among these particularly noteworthy were the National Conference on Standardization (NACOSTAN-Calcutta, April 1990), the Conference on Standardization and Quality Systems for the 90's (New Delhi, July 1990), the Seminar on Environmental Protection Through Standards (New Delhi, October 1990), and the Second National Convention of Consumer Activists (New Delhi, February 1991).

Information Services

BIS continued to disseminate the latest information on progress of standardization and quality development activity in India and abroad. Its periodicals 'Standards India', 'Manakdoot' (in Hindi), 'Standards-Monthly Additions', 'Standards World Over' and 'BIS IT Standards' were brought out regularly.

The Central Enquiry Point set up at the BIS Headquarters under the GATT Agreement on Technical Barriers to Trade responded to a number of enquiries from within the country and abroad about standards, technical regulations and certification systems in vogue in various parts of the world.

Computerization and Office Automation

Continuing its thrust towards computerization and automation of its activities, the Bureau installed 39 additional personal computers (PC-XT's and PC-AT's), 2 Computer Aided Design Systems and 2 Desk Top Publishing Systems. Various application softwares were developed to generate management information reports for use in planning and review of the activities, provide feedback information reports, supply reliable infor-

mation to external users, and develop compatible database on standards for mutual exchange with international and overseas standards bodies. In the area of Certification Marking, softwares were further modified to incorporate facilities to generate various types of lists and related documentation.

International Cooperation

BIS continued to interact closely with the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) by participating in meetings of their selected technical, administrative and policy making forums. Efforts were also continued towards strengthening bilateral relations with countries like USSR, Poland, Japan and the EEC members. India, through BIS also took lead in mootng a proposal with the Development Committee of ISO (DEVCO) for creation of an International Registration Scheme for registering suppliers under Quality Systems. India also proposes to take active part in the studies underway for creation of an ISO Accreditation Scheme for Certification.

As a matter of policy, BIS has been extending assistance to the fellow developing countries in strengthening their standardization and quality promotion programmes. In pursuance of this objective, BIS organized the 23rd International Training Programme in Standardization for Developing Countries which was attended by 28 participants from 20 developing countries. Training under this programme has so far been imparted to 406 personnel from 49 countries of Asia, Africa and Latin America.

Human Resources Development

A total of 2 397 persons were on the BIS roles as on 31 March 1991 as against 2 430 in the preceding year. Strength of scheduled caste/scheduled tribes personnel in the

various categories of posts stood at 390.

With a view to developing the manpower resources and for improving employee efficiency, as many as 32 in-house training programmes were organized which received participation from 764 personnel. In addition, a large number of employees were deputed to attend special training programmes organized by outside agencies.

Employee-employer relations continued to be cordial throughout the year. Various problems and issues between the management and the employees were sorted out through mutual consultations and discussions.

Several measures adopted by BIS for the welfare of employees were continued, including provision of holiday home facilities, employees' consumer cooperative store, house building loan (interest subsidy) scheme and group personnel accident insurance scheme. Financial assistance was also provided to dependents of employees dying in harness through the Benevolent Fund. Dependents of such employees were also provided employment on compassionate ground.

Finance

For the second successive year, BIS achieved the goal of self-reliance in meeting its non-plan expenditure without any budgetary support from the Government of India. Income realized during the year came to Rs 174.7 million against Rs 167 million in the previous year. The income from certification marking operation came to Rs 158.3 million against Rs 149.8 million in the preceding year thus registering a growth rate of 6 percent.

Consumer Protection

The Bureau continued to pursue

diligently its policy of affording protection to consumers for safeguarding their economic interest and minimizing risk to their life and property. To this end, Bureau took active part in the meetings of the Central Consumer Protection Council, Consumer Protection Councils of various State Governments and the Programme Advisory Groups (PAG) for Consumer Protection. BIS was nominated a member of the Working Group constituted by the Ministry of Food and Civil Supplies to review and suggest amendments to the *Consumer Protection Act, 1986* and *MRTTP Act*. A brochure titled 'BIS and Rights of Consumers' was brought out in English and Hindi and circulated at different forums.

Europe 1992

Europe 92 is throwing a veritable challenge to the world trade because of the impending consolidation of the market through adoption of unified EEC standards, certification system and test procedures. A number of initiatives were, therefore, taken under the Indo-EEC Programme of Technical Cooperation for meeting the situation as it emerge. The main lines of action include:

- a) Harmonization of BIS standards with EEC standards wherever feasible for articles of mutual trade,
- b) Gearing up of the certification system, and
- c) Upgradation of testing laboratories particularly in the sectors of automobile components, processed foods and domestic electrical appliances.

Indo-Polish Cooperation

An agreement for cooperation in the field of applied sciences and technology was signed between the Republic of Poland and the Government of India in Warsaw on 5 July 1990. As a follow up, a two-member Polish delegation visited India to help elaborate the

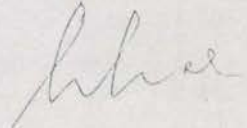
scope and procedures for cooperation between the two countries in the field of standardization. Specific areas in which cooperation programme will be pursued actively comprise:

- a) Coal mining,
- b) Light industries like leather and textiles,
- c) Animal live stock feed, and
- d) Tea and coffee.

Looking Ahead

Presently, the country is passing through a historic moment where the economy is being given a radically new turn towards freer market and global orientation. For internationalization of the Indian industry and

trade, plans have been initiated to dismantle regulatory barriers, reduce protection and place added premium on quality and competitiveness. In this emerging scenario, the Bureau will have a colossal challenge at its hands to update and upgrade its performance and contribution in keeping with the changing technology trends and consumer preference. Given the unstinted cooperation and support of all the concerned interests (Government, industry, community of scientists and technologists, public and private sector organizations, chambers of industry and trade, etc) as in the past, there is no doubt that the Bureau will rise to the occasion and live up to the expectations of the consumers, industry and the Government.



(Lieut General H. Lal)



POLICY PLANNING

The Bureau of Indian Standards took a number of initiatives during 1990-91 for promoting a national policy on standards and strengthening quality infrastructure at the enterprise level. A major highlight was the formulation of the VIII Five Year Plan of the Bureau in line with the national priorities and objectives. The Plan provides a framework for directing efforts towards creation of a broad based national system of standardization, identification of thrust areas for standardization and keeping the standards contemporary, becoming partners in international certification system, compulsory certification of items affecting health and safety of the consumer, strengthening laboratory infrastructure, modernization of office operations and creating awareness of standards and quality and inculcating international competitiveness.

A corporate plan was brought out during the year to strengthen internal systems and procedures for speedier realization of goals in areas like standards formulation, certification marking and standards promotion. Detailed attention was also paid to schemes aimed at employees motivation to stimulate their increased involvement with their duties and responsibilities.

During the year, a major initiative was taken to strengthen infrastructure in the following areas for which a loan of Rs 95.4 million was successfully negotiated with the World Bank:

- a) Upgrading BIS laboratory network,
- b) Upgrading quality,
- c) Standardization management and standards developments,
- d) Strengthening BIS training activities,
- e) Strengthening BIS promotional efforts,
- f) Technical assistance to exporters, and
- g) Establishing standards information centres.

The loan carries only a service charge of one percent and is payable over a period of 15 years with a moratorium of 4 years.

Strengthening Certification

The Minister of Food and Civil Supplies reviewed the work of BIS and gave directions for initiation of action in regard to the following:

- a) Creation/ Establishment of an Apex Council on Quality, and
- b) Enlargement of the product range under compulsory certification to include various other items of mass consumption and those affecting health and safety of consumers.

The Bureau of Indian Standards, the highest policy making body of BIS, met on 28 December 1990 and chartered new initiatives and policy plans for extending the existing spectrum of activities. The broad decisions taken can be summarized as follows:

- a) To safeguard the interest of consumers, electrical energy meters and water meters should be brought under compulsory certification.
- b) To achieve higher productivity, improved industrial efficiency and faster rate of growth, initiatives should be taken for development of a national policy.

Europe 1992

Europe 1992 has thrown a big challenge to the international trade because of the possible creation of a consolidated EEC market through adoption of unified standards, certification and laboratory test procedures. BIS, therefore, took a number of initiatives under the Indo-EEC Cooperation Programme as also through other channels to be ready to face Europe 1992. The main steps taken include:

- a) Harmonization of BIS standards with EEC standards for export items where feasible,
- b) Gearing up certification system

- particularly of quality system certification which has become almost a prerequisite for trade of commodities, and
- c) Upgradation of test laboratories so that they could be mutually recognized and their test results accepted as basis for trade.

The priority areas identified are processed foods, domestic electrical appliances and automotive components.

Executive Committee

Five meetings of the Executive Committee (EC) of the Bureau were held during 1990-91. During these meetings, EC monitored the on-going operations and gave guidelines for further growth and development of different activities.

To keep abreast of the developments at the international level and provide timely information to the industries on the impending changes, EC gave its approval for BIS to become a certifying body under the IEC System for Conformity Testing to Standards for Safety of Electrical Equipment (IECEE).

To stimulate and encourage Indian industries to achieve excellence in quality, EC also approved the institution of a National Quality Award. A scheme has also been approved under which services of outside experts can be obtained for formulation and updating of standards (including compilation of standards) in specialized areas. To begin with, a few projects have been identified in the fields of food and agriculture, and civil engineering.

DEVELOPMENT OF STANDARDS



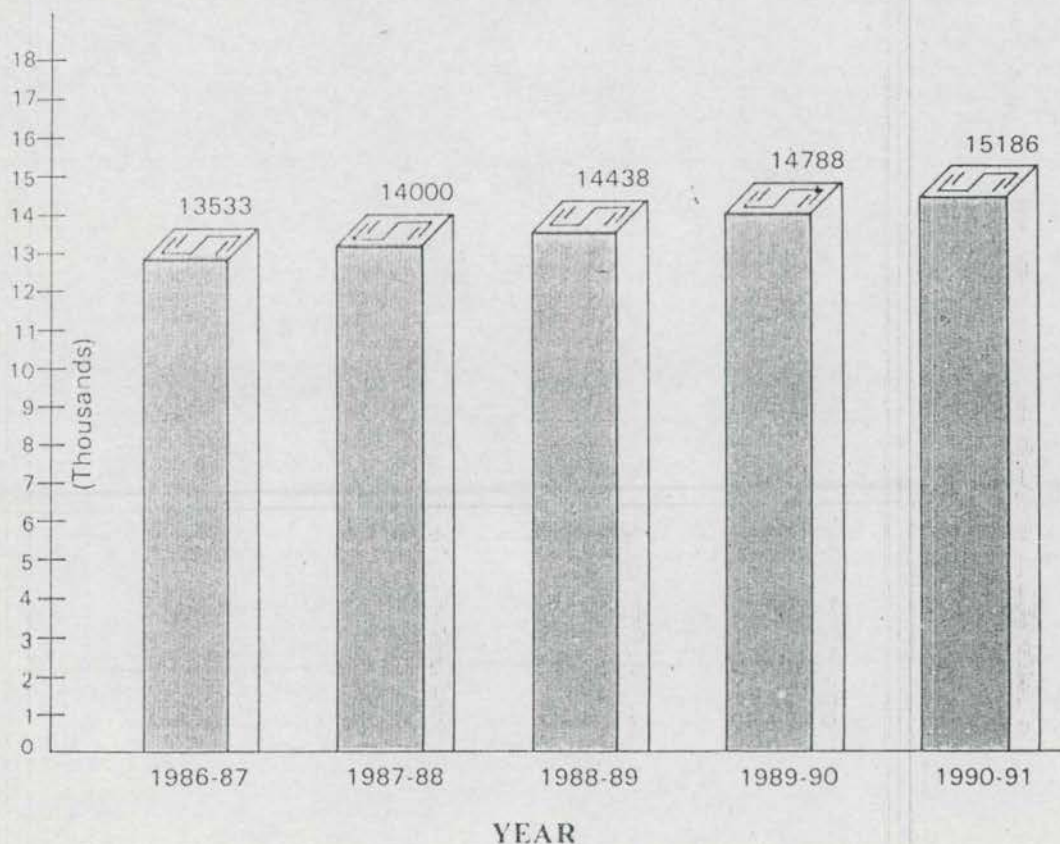
Development of standards is being carried out by 15 technical divisions in their respective fields under the overall guidance of the Standards Advisory Committee. In its third meeting held in New Delhi on 4 April 1990, Standards Advisory Committee decided to constitute a new Management and Systems Division Council (MSDC) by reorganizing the work of the erstwhile Basic Standards, Systems and Services Division Council (BSDC). The new Division Council has been entrusted the task of preparation of basic standards, guides, etc., in the field of quality assurance, inspection procedures, quality systems, capability approval,

materials and production management and related subjects. The Council has got off to a good start by holding its first meeting on 20 November 1990.

Progress in Standards Developments

BIS formulated 755 standards including revision of 316 standards bringing the number of standards in force to 15 186 as on 31 March 1991. The growth of the number of standards in force over the last five years is illustrated in Fig. 1.

Fig.1 Standards In Force



Some of the salient features of the standard formulation activity are highlighted in Table 1.

Table 1 Standards Development During 1990-91

Departments	No. of Meetings	New & Revised Standards Formulated	Standards Reviewed	Amendments Issued	Drafts Issued into Wide Circulation
(1)	(2)	(3)	(4)	(5)	(6)
Chemicals	24	69	417	13	63
Civil Engineering	30	77	489	31	41
Electronics & Telecommunications	25	68	176	3	29
Electrotechnical	28	68	101	37	31
Food and Agriculture	24	69	339	28	45
Heavy Mechanical Engineering	16	48	221	12	19
Light Mechanical Engineering	13	48	173	6	31
Management and Systems	5	6	27	—	1
Medical Equipment & Hospital Planning	9	37	113	6	6
Metallurgical Engineering	25	68	190	4	88
Petroleum, Coal & Related Products	7	45	355	14	29
Production Engineering	14	37	244	—	30
River Valley Projects	14	19	217	4	28
Textiles	21	58	78	10	19
Transport Engineering	3	38	203	—	37
Total	258	755	3 343	168	497

Important Standards Developed

Some of the important, new as well as revised, standards formulated during the year in different areas are listed below:

Chemicals

- Test for skin sensitization potential of synthetic detergents
- Writing and printing papers
- Methods of test for mineral wool thermal insulation products
- Safety glass for general purposes
- Drinking water

Civil Engineering

- Specification for flyash-lime bricks
- Silica-asbestos cement flat sheets
- Recommendations for water-proofing and damp-proofing of wet areas in building
- Selection of ground improvement techniques for foundation in weak soils — Guidelines

Electronics and Telecommunication

- Optical fibres
- Optical fibre cables
- Single-fibre and dual-fibre cables
- Code of practice for installation and maintenance of indoor PLC equipment
- Performance requirements and methods of test of TV ferrite components

Electrotechnical

- Domestic electrical clothes washing machines.
- Guide for testing of electric irons
- Guide for requirements and testing of electric immersion water heaters
- Guide for requirements and testing of electric stoves

Food and Agriculture

- Fertilizer metering mechanisms
- Code for installation and preventive maintenance of power tillers
- Drawbar for agricultural tractors
- Ready mixes for *Khichdi*, *upma*, *suji-halwa*, vegetable *pulao* and spiced & curried *dal* mix.

Heavy Mechanical Engineering

- Solar flat plate collector
- Deepwell handpumps (VLOM)

Light Mechanical Engineering

- Grooved pins
- Power transmission belts, endless flat
- Dimensions for shaft ends

Management and Systems

- Statistical interpretation of data — Determination of

statistical tolerance interval

- Life cycle costing — Glossary of terms
- Techniques of work study — Method study
- Methods for checking the bias of sampling of ores

Medical Equipment and Hospital Planning

- General safety and performance requirements for short-wave therapy equipment
- Requirements for safety-performance and construction for ultrasonic therapy equipment
- Intra uterine contraceptive devices — Copper T (200 B)

Metallurgical Engineering

- Eddy current examination of round steel bars
- Guidelines for controlling foundry rejection
- Acceptance standards for radiography — inspection of steel castings
- Mica insulation bricks for high temperature application
- Carbon bonded silicon carbide crucibles

Petroleum, Coal and Related Products

- Thermoplastic fumigation covers
- Lipstics
- Shampoo
- Flexible tubing for liquefied petroleum gas
- Test methods of plastics

Production Engineering

- Care and protection of hand-operated hand tools
- Proforma for purchase specification for machine tools
- Recommendations for commissioning and maintenance of complete hydraulic systems
- Pneumatic hose couplings
- Screwing taps

River Valley Projects

- Inspection, testing and maintenance of hydraulic hoist
- Guidelines for overall planning of river basin
- Hydraulic design of duckbill spillways

Textiles

- Mosquito nets
- Apparatus for testing colour fastness of textile materials to washing, laundering and dry-cleaning
- Textile dyestuffs — C.I. Reactive Black 5 and C.I. Reactive Red 2
- Apparatus for testing colour fastness of textile materials to perspiration

Transport Engineering

- Method of test for pressure charged engines
- IC engine radiator fans
- Small water tight hatches
- Tubes for pneumatic tyres

Review of Standards

Periodically standards are taken up for review to bring them in line with the latest state-of-progress in the fields of industry and technology. Accordingly, during the year 3 343 standards were reviewed of which 351 standards were identified for revision and 36 withdrawn. The remaining 2 956 were reaffirmed. During the year 168 amendments were issued.

Multi-Disciplinary Coordination

A number of organizations need a large number of standards in related fields like energy conservation, environmental protection, consumer protection, etc. Such organizations have naturally interest in the availability of consolidated information about the relevant standards. To meet this demand, the Bureau pursues activities to develop and supply status reports on standards in various identified areas incorporating classified lists of available standards. During the year, significant progress was achieved in the areas of energy conservation and environmental protection as follows:

Energy Conservation

Interaction with other agencies engaged in the area of energy conservation has been intensified to bring to bear the effect of standardization on energy conservation. An updated status report on Indian Standards Influencing Energy Conservation was brought out with the cooperation including financial participation of the Department of Power.

Environmental Protection

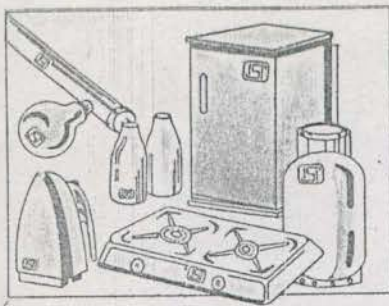
A seminar on 'Environmental Protection

Through Standards' was organized on 15 October 1990 on World Standards Day. A brochure 'Standards for Cleaner and Greener Environment' was brought out incorporating a detailed list of standards relevant to the theme of the maintenance of the purity of the environment.

Technology Mission on Water Supply

In keeping with the national priorities, the Bureau continued to provide active support to the Technology Mission on Drinking Water in villages particularly under the special project on the Quality Assurance for Water Supply Mission. BIS responsibility in this regard includes speedier development and supply of the needed standards and guidelines for instituting quality assurance measures for the products used in the implementation of the Mission Schemes.

Some of the important standards formulated during the year comprise Deepwell handpumps (VLOM), Guide for defluoridation of water for drinking purposes (chemical treatment), and Guide for removal of iron from water for rural drinking water supply (chemical treatment). Draft Compendiums of Indian Standards on (a) Pipes used in water supply, and (b) Pumps including handpumps were compiled. Two state-level awareness programmes on standards promotion and certification activity were organized at Thiruvananthapuram and Chandigarh in July 1990 and August 1990, respectively, which received participation from over 100 Public Health Engineers of each State. Two Quality Control training programmes were organized for manufacturers of (a) handpumps, and (b) submersible pumps at Hyderabad and Coimbatore in January 1991 and February 1991, respectively.



CERTIFICATION MARKING

Quality Certification

The BIS Certification marks Scheme continued to make reassuring progress during 1990-91. The income received from certification fees increased by 6 percent over the preceding year to touch the figure of Rs 158.3 million. The new licences issued under the Scheme during the year numbered 1 283 and covered 417 products. Of these, as many as 27 products came under the BIS Certification Marks Scheme for the first time. These included:

- a) Steam irons,
- b) Sewing machine heads for light duty industrial use,
- c) Polyester blend suiting,
- d) Monoset pumps for agricultural purposes,
- e) Rigid PVC pipes for use in suction and delivery lines of agricultural pumps,
- f) Pressure sensitive adhesive tapes,
- g) Decorative lighting outfits,
- h) Precast concrete manhole covers and frames,
- j) Thermostat for use with air conditioners for use on AC circuits only,
- k) *Papad*,
- m) Hair oils,
- n) Non-alcoholic beverages bases (concentrates) for domestic use, and

- p) Unbacked flexible PVC flooring.

Indian Standards Under Certification

The number of Indian Standards against which products have been certified has gone up to 1 369. Of these, approximately 280 standards relate to items of everyday use of particular interest to common consumers. Some of the important consumer items covered under certification so far are LPG cylinders, LPG stoves, oil pressure stoves, pressure cookers, safety matches, safety razor blades, vanaspati, cement, biscuits, GLS lamps, fluorescent tubes, dry cell batteries, cotton vests, powder hair dyes, desert coolers, etc. The value of the goods certified annually is estimated to be of the order of Rs 70 000 million.

The total number of operative licenses as on 31 March 1991 stood at 11 572 as against 11 499 last year. The industry-wise and region-wise break-up of these licenses is given in Tables 2 and 3.

The growth in the number of licences in operation during the 5 year period ending 1990-91 and their broad industry-wise distribution are given in Fig 2 and 3.

Fig.3 Licences In Operation

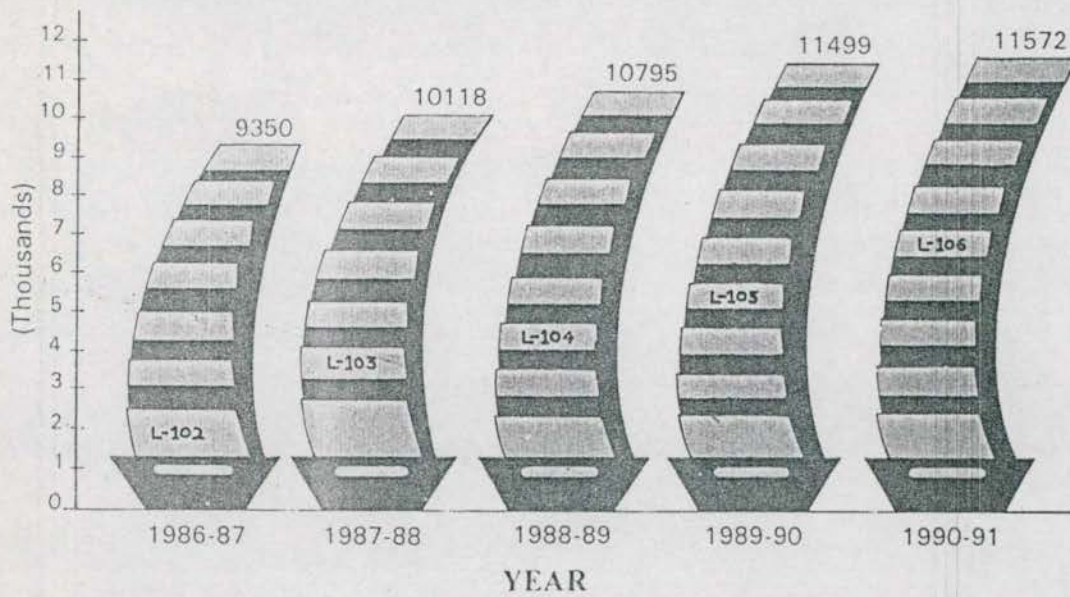


Table 2 Industry-Wise Distribution of Certification Marks Licences
(As on 31 March 1991)

Sl No.	Field	Licences in Operation (Including Deferred)
1.	Civil Engineering	2 224
2.	Chemicals	794
3.	Electrotechnical	2 406
4.	Food and Agriculture	1 957
5.	Heavy Mechanical Engineering	1 245
6.	Light Mechanical Engineering	120
7.	Electronics and Telecommunication	14
8.	Medical and Hospital Equipment	72
9.	Metallurgical Engineering	1 416
10.	Petroleum, Coal and Related Products	622
11.	Production Engineering	43
12.	Transport Engineering	63
13.	Textiles	596
TOTAL		11 572

**Table 3 Region-Wise Distribution of Certification Marks Licences
(As on 31 March 1991)**

Sl No.	Region	Branch Office	Licences in Operation (Including Deferred)
1.	Central	a) Delhi	1 169
		b) Bhopal	588
		c) Ghaziabad	369
		d) Jaipur	467
		TOTAL	<u>2 593</u>
2.	Eastern	a) Calcutta	1 544
		b) Bhubaneshwar	139
		c) Patna	392
		TOTAL	<u>2 075</u>
3.	Northern	a) Chandigarh	1 277
		b) Faridabad	302
		c) Kanpur	264
		d) Lucknow	251
		TOTAL	<u>2 094</u>
4.	Southern	a) Madras	674
		b) Bangalore	454
		c) Coimbatore	408
		d) Hyderabad	505
		e) Thiruvananthapuram	178
		TOTAL	<u>2 219</u>
5.	Western	a) Bombay	1 615
		b) Ahmadabad	976
		TOTAL	<u>2 591</u>
GRAND TOTAL			<u>11 572</u>

Supervision of Operative Licences

The number of inspections carried out for grant, supervision, operation, etc., of licences during the period under review is given in Table 4.

Table 4 Inspections Carried Out From 1 April 1990 to 31 March 1991

Sl No.	Region	Branch	Inspections		
			Preliminary	Periodic	Others
1.	Central	a) Delhi	350	2 686	793
		b) Bhopal	183	1 746	728
		c) Ghaziabad	45	756	229
		d) Jaipur	91	1 565	467
		TOTAL	669	6 753	2 217
2.	Eastern	a) Calcutta	152	3 020	308
		b) Bhubaneshwar	43	269	617
		c) Patna	55	771	101
		TOTAL	250	4 060	1 026
3.	Northern	a) Chandigarh	93	3 805	960
		b) Faridabad	77	1 056	3 030
		c) Kanpur	24	1 027	133
		d) Lucknow	90	473	121
		TOTAL	284	6 361	4 244
4.	Southern	a) Madras	26	2 540	175
		b) Bangalore	93	1 185	275
		c) Coimbatore	76	993	41
		d) Hyderabad	110	1 703	254
		e) Thiruvananthapuram	54	643	293
		TOTAL	359	7 064	1 038
5.	Western	a) Bombay	271	5 059	359
		b) Ahmadabad	220	3 074	629
		TOTAL	491	8 133	988
GRAND TOTAL			2 053	32 371	9 513

Expired/Cancelled and Operative Licences

During the year, 1 210 licences were expired including the number of licences which were cancelled bringing the total number of licences expired/cancelled since the institution of the scheme to 10 775. The reasons for expiring/cancellation of licences include unsatisfactory performance by the licensees, closure of the licensee's factory, lack of interest on the part of the licensees to continue manufacture of the product covered by the licence, etc.

Certification Fees

The certification fees received during the year rose to Rs. 158.3 million registering a growth of 6 percent over the preceding year.

Review of Operations

Review meetings of the BIS licensees and the concerned consumer interests in specified fields are held periodically to obtain feedback on the operation of the BIS Certification Marks Scheme, technical difficulties encountered in the implementation of standards, users' preferences for quality parameters in a product, etc. The feedback data received comes handy for reviewing the standards and certification procedures.

During the year, 14 review meetings as detailed in Table 5 were organized.

In addition 13 get-togethers of licensees, purchasers, users, etc, were also organized at various places during the year.

Table 5 Review Meetings Organized During 1990-91

Subject Field	Date	Venue
Miniature Circuit Breakers (MCB)	24 April 1990	New Delhi
RCC Pipes	25 April 1990	Faridabad
RCC Pipes	11 May 1990	Saharanpur
RCC Pipes	10-11 May 1990	Pune
Wiring Accessories	15 June 1990	Bombay
LPG Cylinders	28 August 1990	Bangalore
PVC Pipes and Fittings and HDPE Pipes	12 September 1990	Pune
LPG Cylinders and Valves	13 November 1990	New Delhi
Protective Steel Toe Caps for Footwear	14 November 1990	Jamshedpur
HDPE Containers for Vanaspati	15 November 1990	New Delhi
15-kg Square Tins	30 November 1990	Calcutta
Biscuits	30 November 1990	Bombay
Diesel Engines	3 January 1991	Rajkot
GLS Lamps	27 February 1991	Calcutta

IECQ Certification System For Electronic Components

India is a Certifying Member of the IECQ Quality System for Electronic Components operated by the International Electrotechnical Commission. Electronic components certified under this system when

exported need not be further inspected and tested at the receiver's end. Under this system, manufacturer's approval has been granted to six manufacturers (three manufacturing fixed capacitors and one each manufacturing cores for inductors, and transformers, discrete semiconductor devices, and switches and relays).



QUALITY SYSTEMS

Quality Systems Certification Scheme (QSCS) aims at providing an adequate level of confidence to the customer that the firm's quality systems conform to the requirements of the stipulated quality systems standard. The operation of the scheme involves assessment and subsequent surveillance of the quality systems instituted by the firm for verification of the conformity of its systems to the prescribed requirements of the ISO 9000 series of standards which has been adopted as IS 14000 series of standards by BIS. The scheme is envisaged to be launched under the *Bureau of Indian Standards Act, 1986*. Towards this end, during the year under review, the required legal regulations were drafted and submitted to Department of Civil Supplies, Government of India for approval.

Training

For preparing the BIS officials to take on the role of assessors and lead assessors, six awareness and three training programmes were organized. These training programmes, which were conducted with the involvement of experts from the European Economic Community, provided the requisite instructions on role and responsibilities of assessors/lead assessors. These programmes received participation from 57 BIS officials and one each from DGQA, STQC and EIA.

The awareness programmes were aimed at creating basic awareness about the significance and implication of the various quality systems techniques. The total number

of individuals trained under these programmes came to 197.

Preparation For Certification

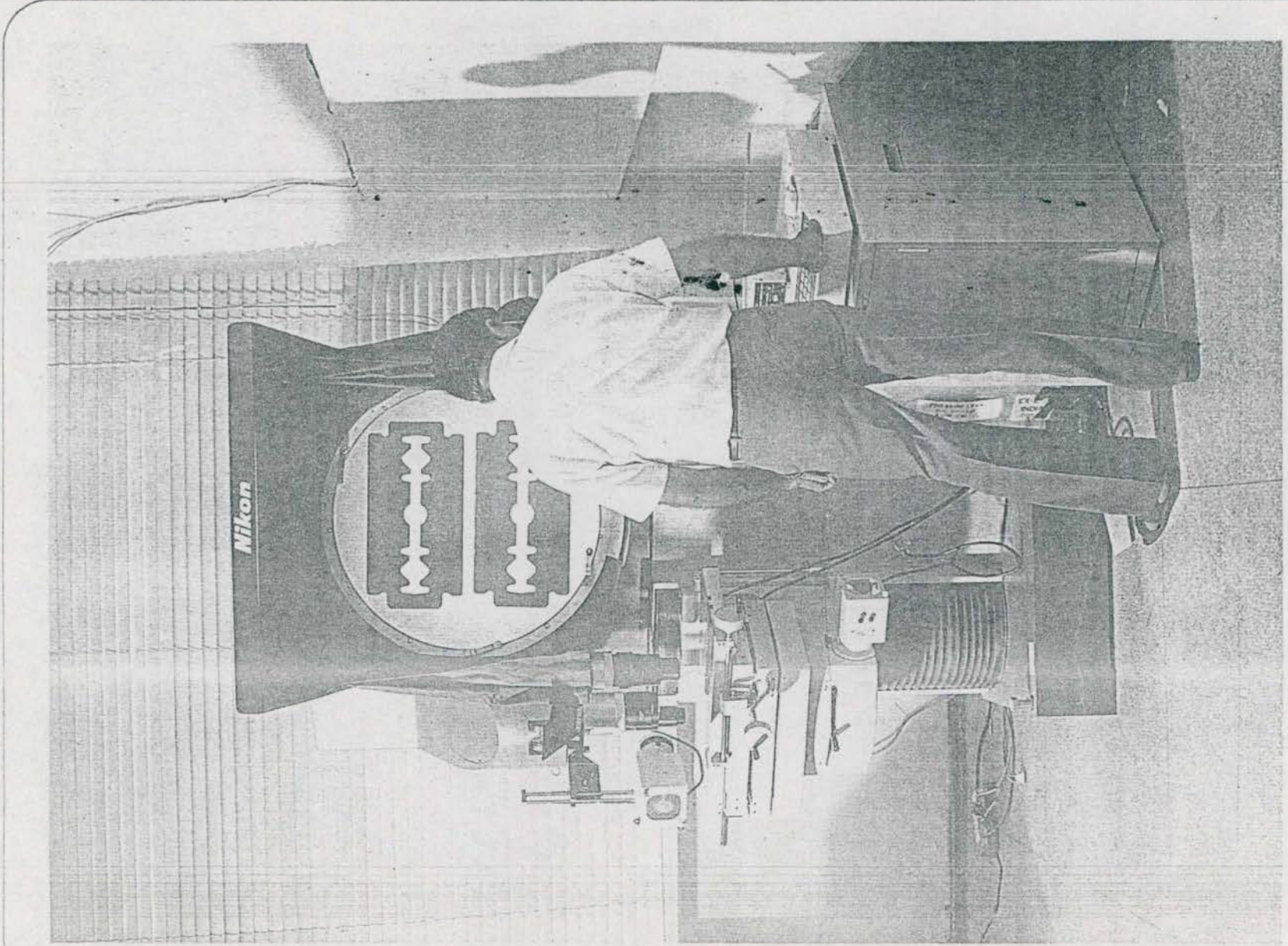
The industry sectors which were ready or which could become ready in a short time to opt for Quality Systems Certification Scheme were identified so that they could take advantage of this scheme as soon as it is launched. Considerable progress was also made towards working out the organizational structure and finalizing policy matters and other guidelines of operation of the Scheme.

Alignment With Systems Abroad

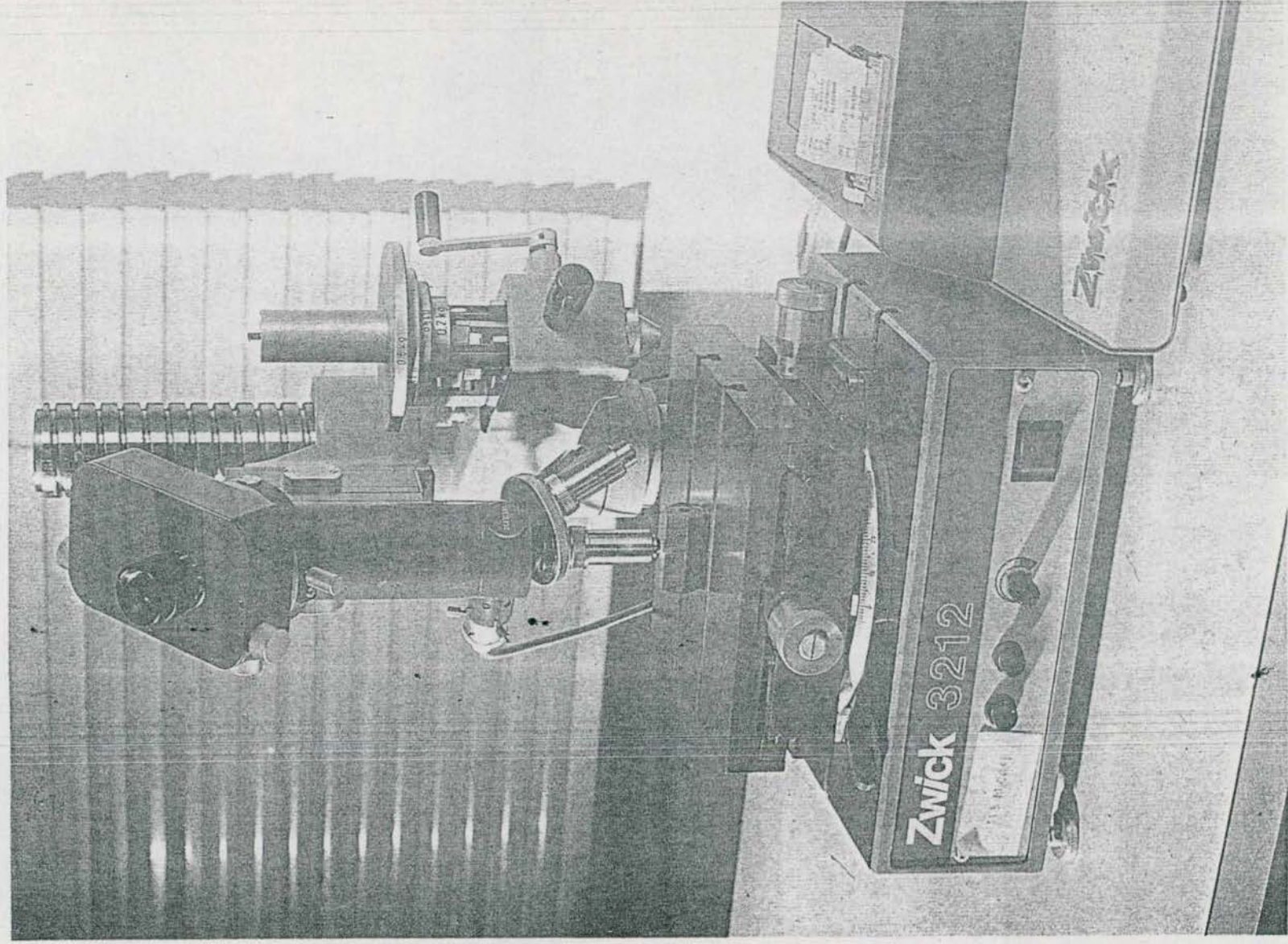
Initially the demand for certification of quality systems is anticipated to be generated by potential Indian exporters to Europe. In order to serve this group, efforts are on to see that the certification systems, eventually to be launched by BIS, are in line with similar schemes operating overseas particularly in Europe so that mutual recognition of such schemes is facilitated.

Pre-Certification of Firms

Presently, a number of organizations in the country are extending the facility of pre-certification services to firms interested in instituting programmes of quality system. During the year, moves were initiated to examine whether BIS too could provide pre-certification services to the units desirous of installing Quality Systems Scheme.



A profile projector in action. The projector helps in manifold magnification of profiles of objects like shaving blades for proper verification of their different design parameters.



A microhardness tester installed in the BIS Central Laboratory. This sophisticated equipment is used for accurate determination of hardness values of materials like metals.



LABORATORY — PRODUCTS AND DEVELOPMENT TESTING

The network of eight BIS laboratories spread throughout India maintained an even pace in their activities to test conformity of the BIS certified products to the stipulated standards, undertake research and development in test methods and provide the needed support to the national standardization programmes.

For coping with the increasing workload of testing, BIS laboratory network is being expanded and modernized. During the year, over Rs. 16.8 million were spent on construction of new buildings and purchase of sophisticated equipment. The new laboratory buildings at Calcutta and Madras, and the laboratory-cum-office complex at Gandhi Nagar (near Ahmadabad) have been recently completed and are in the process of being equipped with the needed testing facilities.

Apart from the conformity testing, the Central Laboratory of the Bureau at Sahibabad (near Delhi) also provides specialized services, such as quality evaluation and investigational work related to standards formulation, development/modifications of test methods, comparative evaluation of products, calibration of testing equipment, training of BIS personnel and others from the industry, and recognition of

independent laboratories for carrying out testing of samples related to BIS product certification scheme.

Sample Testing

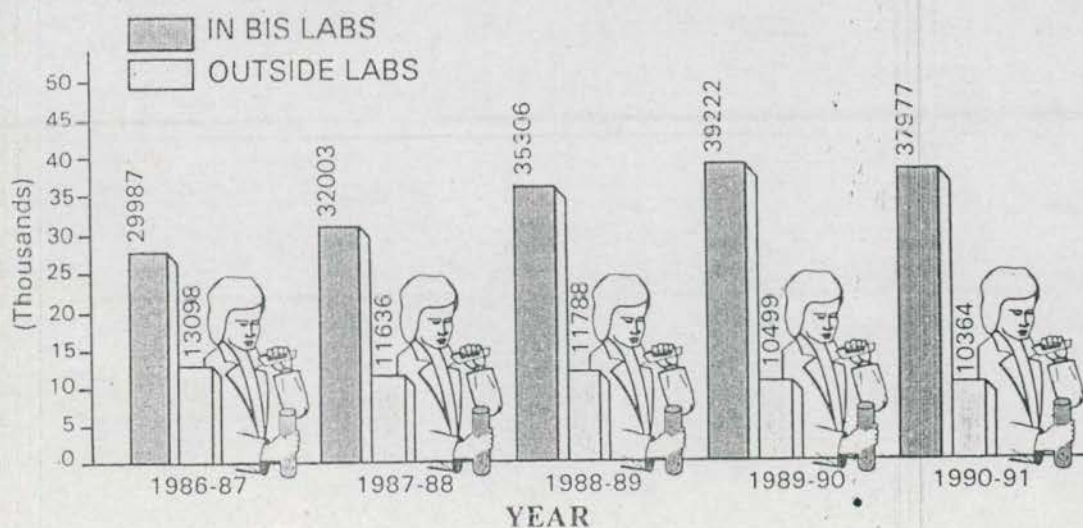
During the year, 37 977 samples covering more than 1100 different products were tested in BIS laboratories. In addition, 10 364 samples were got tested from the outside laboratories duly recognized by BIS for the purpose.

Region-wise distribution of samples tested in BIS laboratories during the year 1990-91 is given below:

BIS Laboratories	No. of Samples Tested
Central Laboratory, Sahibabad (near Delhi)	13 110
Calcutta, Patna and Guwahati	7 663
SAS Nagar (near Chandigarh)	4 911
Madras and Bangalore	7 153
Bombay	5 140
Total	37 977

The growth in the number of samples tested annually during the 5 year period ending 1990-91 is given in Fig. 4.

Fig. 4 Samples Tested



Research and Investigational Work

- Some of the important projects undertaken during the year were as follows:
- Study of flow characteristic of bib taps;
 - Study of the causes of failure of mild steel tubes in thickness requirements;
 - Study of the reliability of measuring dimensions of surgical blades by limit gauges *vis-a-vis* profile projector;
 - Study of compressive strength behaviour of cement cubes when samples were made out of standard sand-cement mixture by hand mixing and by mechanical mixing;
 - Estimation of nickel content in vanaspati;
 - Sulphated ash content in soft drink concentrates; and
 - Variation of transparency value of tracing cloth measured at different places on the same sheet.

Quality Assurance

BIS Laboratories, have been practising quality assurance since their inception. During the year, the Central Laboratory developed a laboratory quality manual covering all aspects of management and operations meeting the good laboratory practice requirements. The manual is being vigorously implemented in all sections. Work instructions and operating procedures for electrical testing have been completed.

Calibration

Calibration facilities have been created in areas of mechanical and electrical fields. This has enabled the Central Laboratory to carry out in-house calibration of length measuring instruments and gauges, pressure and vacuum gauges, tensile testing machines, universal testing machines, compression testing machines, a.c. and d.c. voltmeters, a.c. and d.c. ammeters, wattmeters, energy meters, high voltage testers, temperature indicators, Kelvin and Wheatstone bridges,

meggars and megohmmeters.

Expansion and Upgradation of Testing Facilities

Under the expansion and modernization plans, various BIS laboratories procured sophisticated instruments/equipment at follows:

EQUIPMENT	INSTALLED AT
Atomic Absorption Spectrophotometer	Calcutta and SAS Nagar
Long Term Hydraulic Test Equipment for UPVC Pipes	Bombay
UV-Visible Spectrophotometer	Bangalore
Test Rig for Cast Iron Fittings	Bangalore
Lovibond Tintometer	Bangalore, Madras and SAS Nagar

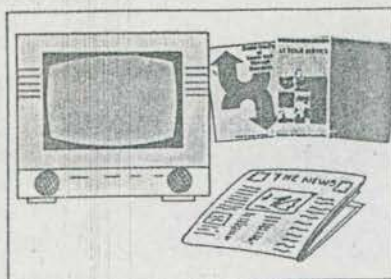
Training in Testing

During the year, a number of training programmes were conducted for improving the skills of the BIS testing personnel and also testing personnel of BIS licensees, applicants, other testing laboratories, etc. These included induction training programmes for freshly recruited technical assistants, training programmes for foreign trainee engineers/scientists, and specific training programmes covering testing of different items like domestic electrical appliances, food products, aluminium milk cans, and testing of mechanical equipment and component, etc.

BIS testing personnel were also sent to outside laboratories and organizations in India and abroad for undergoing specialized training in different aspects of testing and management.

Registration of Independent Laboratories

Under the scheme of recognizing independent laboratories for carrying out testing work on behalf of the Bureau, 21 new laboratories were recognized bringing the total number of the recognized laboratories to 261.



STANDARDS PROMOTION

Active steps continued to be taken to promote increased awareness about the importance and utility of national standards and the services provided by BIS. For the purpose, effective use was made of all the available media. Radio, TV and press gave extensive coverage to various important events and achievements taking place during the year.

Telecast of 60 seconds quickies in regional languages from Doordarshan Kendras was arranged on all India bases as free time slot. A radio spot of 15 seconds duration in Hindi and regional languages was broadcast from 29 commercial broadcast service centres of All India Radio.

Publicity campaign was undertaken on bus panels of State Transport buses in Union Territory of Delhi, States of Gujarat and Andhra Pradesh. Publicity brochures were brought out on different themes as follows:

Year Planner
 Energy Saving Standards
 Standards for Cleaner and Greener Environment
 Mandatory Certification by BIS
 BIS and Rights of Consumers (English & Hindi)
 BIS Laboratories
Aam Upabhokta Ki Seva Main Bhartiya Manak Bureau

The Bureau participated in a number of exhibitions organized in different parts of the country as follows:

IBPL Urja Research Foundation, Bombay	18 May 1990
Jantantra Mela Pradarshni, Jaipur	21 June-20 August 1990
Tamilnadu Government Exhibition, Salem	3 August-30 September 1990
Dr Ambedkar Mela, Ichapur	2-9 September 1990
International Conference on Computer Communication 90 Exhibition, New Delhi	5-9 November 1990
Consumer Awareness Exhibition, Bombay	8 November 1990
India International Trade Fair, New Delhi	14-23 November 1990

Patna Book Fair, Patna	20 November-3 December 1990
Energy India 90 Exhibition, Bombay	6-16 December, 1990
Calcutta Book Fair, Calcutta	30 January-10 February 1991
Consumer Awareness Exhibition, Bombay	19-20 January 1991
Ninth India Engineering Trade Fair, New Delhi	10-17 February 1991
Chandjkrit 91, Chandigarh	11-17 February 1991
Exhibition on Consumer Protection, New Delhi	15-18 March 1991
Computer Awareness Exhibition, Bombay	14-16 March 1991
Consumer Day Exhibition, Chandigarh	15-17 March 1991

Implementation of Indian Standards

Through monitoring of tender notices appearing in various newspapers and giving due feedback to the different indenting authorities on the importance of procuring BIS marked materials, a number of bulk purchasing organizations were motivated as follows to opt for stores duly certified by BIS wherever available:

Eastern Coalfields Ltd;
 Madras Port Trust;
 National Hydro-Electric Power Corporation Ltd;
 Hasdeo Bango Project;
 Central Mine Planning and Design Institute Ltd;
 Stores and Disposal Division, Government of Himachal Pradesh;
 DLF Construction Ltd;
 NTPC, Mirzapur; and
 Rajasthan State Electricity Board.

An interaction established with the Aluminium Manufacturers Association revealed that the industry was well informed about the standards pertaining to manufacture, process control, packaging,

pollution control and raw materials, etc., which were also being duly implemented.

Sectoral Committees

During the year 3 meetings of the Sectoral Coordination Committees for Standardization and Quality Certification were held dealing with the themes of steel (4 June 1990), power (25 August 1990) and textiles (21 February 1991). During these meetings, *inter alia* the Committees considered ways and means for promoting implementation of Indian Standards particularly by motivating the indenting authorities to opt for goods bearing BIS Mark, or in the alternative conforming to the relevant Indian standards.

It may be recalled that these Sectoral

Committees were established at the instance of the Committee of Secretaries, Government of India, by way of a coordination mechanism to ensure compatibility among the policies of various involved interest groups. So far six such Sectoral Committees have been established (the other three deal with the themes of food, automobiles and information technology).

Technical Conferences and Seminars

Several technical conferences and seminars were organized by BIS by itself or in collaboration with other organizations to generate increased awareness about standardization and quality systems in the country. Some of the important programmes held during the year are listed below:

Sl No.	Programme	Venue	Date
1.	National Conference on Standardization (NACOSTAN 90)	Calcutta	20-21 April 1990
2.	Workshop on Machines and Machining Practices	Indore	2 June 1990
3.	Seminar on Consumer Protection Measures in Textiles	New Delhi	12 June 1990
4.	Seminar on Quality Systems	Bombay	22-23 June 1990
5.	Seminar on Quality Control of Diesel Engines	Rajkot	27 June 1990
6.	Conference on Standardization and Quality Systems for the 90s	New Delhi	18-19 July 1990
7.	Workshop on Painting Technology on Steel Fabrication	Bhopal	21 July 1990
8.	State Level Conference on Standards Promotion and Quality Assurance for Water Mission	Chandigarh	23 August 1990
9.	Implementation Conference on Indian Standards Relating to River Valley Projects	Jamshedpur	31 August 1990
10.	Workshop on Introduction of Quality Systems	Bombay	8 September 1990
11.	Programme on Quality Systems and Open House Discussion on Certification	Pune	13 September 1990
12.	Seminar on Quality Systems and Standardization	Pune	14 September 1990

Sl No.	Programme	Venue	Date
13.	Seminar on Environmental Protection Through Standards	New Delhi	15 October 1990
14.	National Industry-Wise Conference on Drinks and Carbonated Beverages	Goa	23 November 1990
15.	National Conference on Container Standards and Their Economic Impact	Bombay	18 December 1990
16.	National Conference on Automobile Sector	Jamshedpur	3-4 January 1991
17.	Second National Convention on Consumer Activities	New Delhi	1-3 February 1991
18.	National Conference on Precision Measuring Instruments and Gauges	Pune	4 February 1991
19.	Consumer Day Celebrations	New Delhi	15 March 1991
20.	Technical Workshop on Automotive Sector	New Delhi Pune Madras	4-5 March 1991 6-7 March 1991 8-9 March 1991

Educational Utilization of Indian Standards

Seven Workshops on Educational Utilization of Indian Standards as listed below were organized to introduce the faculty members and senior students of technical institutions to the standards available in their fields of interest and the benefits accruing from their implementation:

Institution	Date	Target Group
Indian Institute of Technology, Madras	12 November 1990	Faculty Members
Bhilai Institute of Technology, Durg	29-30 November 1990	Faculty Members and Students
Workshop on Engineering Drawing Practices, Bangalore	5 December 1990	Faculty Members
Government Engineering College, Thrissur	12 December 1990	Faculty Members and Students
Thiyagaraja Polytechnic, Salem	7 February 1991	— do —
Government Leather Institute, Kanpur	7 February 1991	— do —
Regional Engineering College, Kurukshetra	14-15 February 1991	— do —

World Standards Day

World Standards Day 1990 was celebrated on 15 October 1990. The highlight of the celebrations was the organization of the Seminar on 'Environmental Protection Through Standards' in New Delhi. The Seminar was inaugurated by Hon'ble Minister of State for Food and Civil Supplies, Shri Ram Pujan Patel with Shri Mahesh Prasad, Secretary, Ministry of Environment & Forests, delivering the Key-Note Address. There were two technical sessions in which a number of thought provoking papers were presented by eminent authorities in the field.

The Valedictory Address was delivered by justice P.B. Sawant, Justice of the Supreme Court of India. Over 270 delegates from various organizations like Central Pollution Control Board, Tata Energy Research Institute, Ministry of Environment & Forests, National Wasteland Development Board and members of Institute of Standards Engineers (SEI) attended the programme. Lt. Gen H. Lal, Director General, BIS, presented the recommendations which called for

concerted efforts to control environmental pollution and create awareness among masses for the need to maintain ecological balance.

Additionally, seminars on the same theme were also organized on the occasion at various centres in the country, namely, Bhopal, Jaipur, Calcutta, Patna, Bhubaneshwar, Madras, Bangalore, Hyderabad, Cochin, Ahmedabad, Rajkot, Bombay and Pune which focussed attention on the importance of standardization and the role of standards in assuring a cleaner and greener environment. Expositions of standards relating to environmental protection were also arranged. The programmes received wide coverage in the available media including TV, radio and leading newspapers.

Company Standardization

For the facility of engineering and other technical personnel working in various organizations, the following training programmes were organized:

Middle Management Training Programme

Place	Date	Target Group
Bangalore	6-8 May 1990	Electronic Industry
New Delhi	27-31 August 1990	Trainers' Training Programme for BIS Officers
Hyderabad	15-16 September 1990	Cement Industry
Calcutta	22 September 1990	Senior and Middle Level Management Personnel
Bangalore	17-21 December 1990	Trainers' Training Programme for BIS Officers
Calcutta	22-25 January 1991	Trainers' Training Programme for BIS Officers
Chandigarh	4-8 March 1991	Trainers' Training Programme for BIS Officers
Wadi (Karnataka)	11-13 March 1991	Senior Personnel of Associated Cement Co Ltd
Cochin	11-13 March 1991	General Programme for Industry

Sale of Publications

The revenue earned from the sale of Indian standards during 1990-91 amounted to Rs 13.06 million and the commission on sale of overseas standards was Rs 0.47 million. To promote sales, efforts were

continued through release of advertisements and propagation of information among intended users including manufacturing houses, user bodies, technical institutions, etc. In addition sale/display counters of standards were organized in the following conferences/seminars:

Programme	Venue	Date
International Conferences on Standardization and Quality Systems for the 90's	New Delhi	18-19 July 1990
Seminars on Surgical Instruments and Medical Equipment	New Delhi	26 August 1990
Global Conference on Drinking Water	New Delhi	10-15 September 1990
Seminar on Environmental Protection Through Standards	New Delhi	15 October 1990
International Conference on Value Engineering in the 90's — Quest for Excellence	New Delhi	11-12 January 1991
Exhibition on Consumer Protection	New Delhi	16 March 1991

Periodical Publications

With a view to promoting awareness on standardization, the Bureau continued to bring out regular issues of the following publications/periodicals:

- i) Standards India
- ii) *Manak Doot* (Hindi)
- iii) Standards: Monthly Additions
- iv) Standards Worldover
- v) Current Published Information on Standards
- vi) Handbook
- vii) IT Standards

Translation Services

About 2 100 pages comprising standards, technical reports and scientific and technical papers were translated from French, German and Russian into English. Besides, over 400 queries pertaining to information contained in foreign language documents were responded to and a number of articles abstracted.

Use of Hindi in BIS

The Bureau continued to make efforts to promote the use of Hindi in all its activities. Workshops on Hindi noting and drafting were organized during 16-17 May 1990 in Patna, 14-15 June 1990 in Bhopal, 17-21 September 1990 in Madras and 27 March 1991 — 3 April 1991 in New Delhi.

The Official Language Implementation Committee (OLIC) held three meetings and took a number of important policy decisions for promoting use of Hindi in the Bureau's work. Hindi Day was celebrated at the Headquarters and Regional and Branch Offices during September 1990. Classes were conducted to impart training to employees in Hindi typing and Hindi stenography.

The Indian Standard Guide for Drafting and Presentation of Indian Standards (IS12:1988) was published bilingually in Hindi and English.

14 Indian standards of consumer interest were selected for translation into Hindi. The Hindi version of Indian standards published pertained to common consumer items like laundry soaps, national flag, handloom, wool blankets, bricks, safety razors, oil pressure stoves, paper stationery items for schools and food grade sodium benzoate.

Consumer Affairs

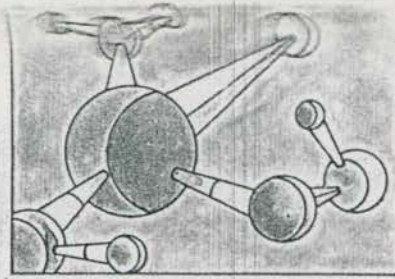
The Bureau actively participated in the meetings of the Central Consumer Protection Council of various State Governments and the Programme Advisory Groups (PAG) for Consumer Protection.

BIS was nominated a member of the

Working Group constituted by the Ministry of Food and Civil Supplies to review and suggest amendments to Consumer Protection Act, 1986 and MRTP Act.

The Bureau sponsored an Indian delegation to attend the 13th meeting of the Consumer Policy Committee (COPOLCO) of the International Organization for Standardization (ISO) held at Florida in April 1990.

The Consumer Affairs Department responded to public grievances and monitored the redressal of complaints. In addition, based on public complaints of serious nature, the Department organized studies to re-evaluate the Bureau's own system to eliminate deficiencies in the national standards, if any.



REGIONAL AND BRANCH OFFICES

INSPECTION

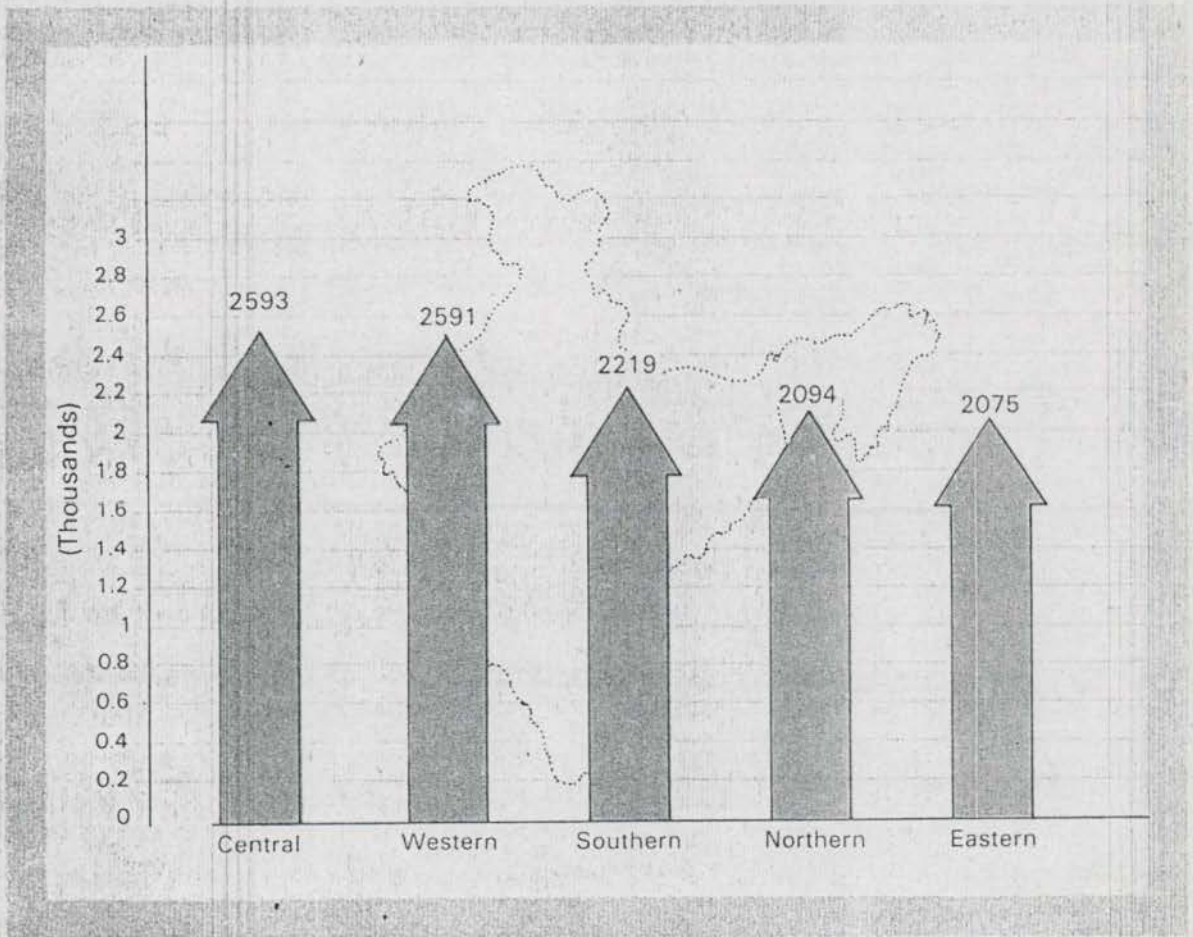
The BIS network of the Regional and Branch Offices spread throughout the country, not only provides on-the-spot services to intended users of the BIS services but also generates increased awareness about the importance and utility of standardization and quality certification activities. An important development pertaining to this network was opening of an Inspection Office at Vadodara. The new office will be in a position to make available greatly enlarged services in the areas of standards promotion, certification marking and dissemination of technical information to its clients in the nearby area.

As on 31 March 1991
The updated set up of Regional and Branch Offices of BIS with its Headquarters at New Delhi is as follows:

Regional Offices	Branch Offices
Central, New Delhi	Delhi, Bhopal, Jaipur and Ghaziabad
Eastern, Calcutta	Calcutta, Bhubaneshwar, Guwahati and Patna
Northern, Chandigarh	Chandigarh, Kanpur, Faridabad, Lucknow and Srinagar (Temporarily shifted to Jammu)
Southern, Madras	Madras, Bangalore, Hyderabad, Thiruvananthapuram and Coimbatore
Western, Bombay	Bombay and Ahmadabad

The region-wise position of BIS Certification Licences in operation is given in Fig. 5.

Fig.5 Regionwise Distribution of Certification Marks Licences (As on 31 March 1991)



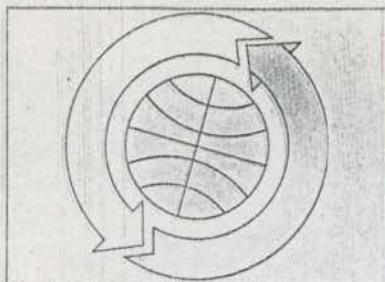
Technical Conferences And Seminars

— National Conference on Standardization (NACOSTAN 90)	Calcutta	20-21 April 1990
— Seminar on Consumer Protection Measures in Textiles	New Delhi	12 June 1990
— Workshop on Painting Technology on Steel Fabrication	Bhopal	21 July 1990
— State Level Conference on Standards Promotion and Quality Assurance for Water Mission	Chandigarh	23 August 1990
— Implementation Conference on Indian Standards Relating to River Valley Projects	Jamshedpur	31 August 1990
— Workshop on Introduction of Quality Systems	Bombay	8 September 1990
— Seminar on Environmental Protection Through Standards	New Delhi	15 October 1990
— National Conference on Automobile Sector	Jamshedpur	3-4 January 1991

State Level Committees on Standardization and Quality Systems (SLCs)

The State Level Committees (SLCs) have been set up by 19 State Governments and two Union Territories which provide a permanent mechanism at the state level for effective implementation of Indian Standards. These State Level Committees utilize the facilities provided by BIS and play a leading

role for helping the small scale units to improve quality of their products by utilizing the quality control schemes particularly the BIS Certification Marks Scheme. During the period under review, the State Level Committees of the Governments of Rajasthan and Himachal Pradesh held their inaugural meetings when they took a number of important decisions for stimulating standardization and quality certification programmes in their respective territories.



INTERNATIONAL COOPERATION

The Bureau continued to interact closely with the International Organization for Standardization (ISO) and International Electrotechnical Commission (IEC) by participating actively in its various administrative and technical forums. Efforts were also continued for further strengthening bilateral relations with standardization set up of a number of other countries/regional agencies, notably the USSR, Poland, Japan and European Economic Community (EEC).

Standardization and Quality Systems For The 90's

An outstanding event organized during the year was the Conference on Standardization and Quality Systems for the 90's which was held during 18-19 July, 1990 at New Delhi. The Conference received a keynote address from Dr Lawrence D. Eicher, Secretary General, ISO. Other speakers included Mr J.E. Ware, Chairman, Conformity Assessment Committee (CASCO), ISO; and Prof P. Soardo, Chairman, International Laboratory Accreditation Conference (ILAC).

International Organization For Standardization (ISO)

A three-member Indian delegation headed by Lieut Gen H. Lal, Director General, BIS, participated in the meetings of the ISO Regional Liaison Officers (RLOs), ISO Development Committee (DEVCO) and ISO Council Committee on Conformity Assessment (CASCO) held at Geneva during 13-18 May, 1990. The other members of the delegation comprised Grp Cpt M. Mukutmoni, Director General, STQC, Department of Electronics; and Shri S. Chandrasekharan, Director, Quality Systems, BIS.

ISO/DEVCO meeting mainly discussed and processed the first draft revision of the ISO Development Manual on Establishment and Management of a National Standards

Body submitted by India. Further in ISO/CASCO/DEVCO meetings, Director General, BIS, made detailed presentation on the registration of Suppliers Quality Systems, underlining the need for creation of an International Registration Scheme. Adoption of such a Scheme by the developing countries could help improve their competitiveness.

The highlight of ISO/CASCO meeting was the presentation made by the ISO Secretary General, Dr L.D. Eicher, outlining the need for an ISO 9000 club to afford an opportunity for ISO member bodies to play a more dominant role in the area of Conformity Assessment.

A Committee under CASCO was appointed to go into the feasibility of formulating an ISO Accreditation Scheme for Certification. India plans to participate actively in the work of this Committee so that the peculiar requirements of India and the developing world are kept in view during the formulation of the ISO Scheme. Developments at the level of CASCO have to be closely monitored by BIS to introduce procedures which are fully in line with the ISO perceptions in regard to formulation of standards and certification activities.

ISO Council

Lieut Gen H. Lal, Director General, BIS took part in the meeting of ISO Council held in Geneva during 18-21 September, 1990 at the invitation of ISO as Regional Liaison Officer for South Asia-Iran Region (SAIR).

India's Election As New Council Member of ISO

India has been elected as a member of ISO Council for the term 1991-1993 after a gap of three years.

ISO/UNIDO Workshop

A Workshop on exchanging experience

and building a concept of regional affinity in standardization and quality control was organized in Geneva during 4-6 December, 1990 by UNIDO under UNIDO Project UC/GLO/89/274—'Elaboration of concept of technical assistance project based on the regional approach to standardization, quality control and metrology activities in developing countries'.

Director General, BIS took part in this Workshop and submitted a project proposal for technical assistance based on a regional approach towards standardization, quality control and metrology activities in South Asia and Iran Region (SAIR). The proposal took into consideration the two project proposals submitted by Pakistan and Bangladesh to strengthen and build up resources and capability of the SAIR countries for strengthening competitiveness of their international trade through use of standards and quality system techniques.

International Electrotechnical Commission (IEC)

IEC General Meetings

The International Electrotechnical Commission (IEC) held its 54th General Meeting at Beijing, China during 23-25 October, 1990. The Indian delegation for this meeting comprised Shri A.K. Khosla (Leader), Chairman, Electrotechnical Division Council of BIS and Chairman, GEC Group of Industries; and Shri Jatinder Kumar, Additional Director, STQC, Department of Electronics.

President's Forum

In the President's Forum, the President IEC, Mr R.E. Brett called a meeting of the various national standards bodies to ascertain their views for giving an improved orientation to IEC activities. The Indian

delegation presented a detailed review of India's efforts for obtaining wider acceptance of goods complying with national/international standards and also activities underway for strengthening harmonization of national standards with those of IEC.

IEC Quality Assessment System For Electronic Components (IECQ)

An Indian delegation comprising Lieut Gen H. Lal, Director General, BIS (Leader), Shri N. Srinivasan, Deputy Director General, BIS, Grp Capt M. Mukutmoni, Director General, STQC, DOE; Shri S. Desikamani, Director, STQC, took part in the meetings of the IECQ Certification Management Committee (CMC) and Inspectorate Coordinating Committee (ICC) held at Geneva during 8-11 May, 1990.

During these deliberations, the Indian delegation submitted a proposal for extension of its National Statement of Surveillance Arrangement (NSSA) through inclusion of two new areas of technologies, hybrid and integrated circuits; and addition of capability approval procedures for printed circuit boards and hybrid and integrated circuits. As it represented a major change, a specialist from France was appointed to visit the Indian National Supervising Inspectorate (NSI) for this purpose.

IEC System For Conformity Testing To Standards For Safety of Electrical Equipment (IECEE)

The Indian delegation to IECEE meeting held at Gouangzhou (China) during 6-8 June, 1990 comprised Shri S.P. Sachdev, Deputy Director General, BIS (Leader) and Shri Jatinder Kumar, Additional Director, STQC, DOE. The Management Committee (MC) of IECEE accepted India, Singapore and Turkey as members. This brought the total number of member organizations to 34.

It was noted that the IEC Technical Committee for Fans (IEC 43) had completed its mandate more or less and as such the Committee of Action (CA) accepted the proposal for its dissolution. The Secretariat of this Committee was held by India.

ISO/IEC Technical Committees

During the year, Indian delegations participated in selected ISO/IEC technical committees of interest to India. These Committees related to Textiles, Electric Fan for Household and Similar Purposes; Radio Communications; Electrical and Electronic Testing and Measuring Instruments; Systems Accessories Measuring Equipment for Basic Electrical Quantities; Quality Management and Quality Assurance; and Classification of Environmental Conditions.

Seminars

Shri B.C. Kapur, Director, BIS and Shri M.G. Satyendra, Deputy Director, BIS attended 'Customer/Field Services Seminar' organized by the Far Eastern Regional Office of the Canadian Standards Association (CSA) in Osaka Japan, during 5-7 November, 1990.

NAM Countries

India continued to pursue efforts for strengthening cooperation among the countries of Non-Aligned Movement (NAM) in the area of Standardization, Measurements and Quality Control (SMQC). Particularly noteworthy were the developments with regard to (a) Functional Group 2 Quality Control and Quality Certification, and (b) Functional Group 3 Metrology. India is convenor of Functional Group 2 and co-convenor of Functional Group 3.

In accordance with the recommendations in the last meeting of the experts of NAM countries (Cuba, 1989), India initiated preparations for holding the next meetings of

the NAM Group in the sphere of Standardization, Measurement and Quality Control (SMQC) which includes meetings of the Expert Group, and Functional Groups in New Delhi during 20-24 January, 1992. The meeting will be followed by a Symposium on 'Standards, Quality and International Competitiveness-Role of National Standards Bodies as Change Agents'.

INDO-EEC Cooperation

The Indo-EEC Cooperation Programme continued to make reassuring progress during the year. A meeting of the Joint Indo-EEC Working Group was held at Brussels during 2-4 May, 1990 and attended by Shri S. Subrahmanyam, Additional Director General, BIS. The meeting helped in identifying the following long-term projects in the Future Work Programme:

- 1) Upgradation and Modernization of Laboratory Systems:
 - a) Automobile Components
 - b) Processed Food Products
 - c) Domestic Electrical Appliances
- 2) Standard Reference Materials
- 3) Quality System Certification.

As a result of cooperation in these areas; exchange of information, visits of EEC experts, visits of India experts and trainees were organized. Under this programme, 14 experts from EEC countries visited India and 9 Indian experts/trainees visited EEC countries. A Technical Workshop on Automotive Sector was organized with the help of EEC experts at three centres in India. Around 500 delegates representing the Indian automotive industry, test houses, research and development organizations and other related official agencies and departments participated.

Indo-Soviet Cooperation

The 13th meeting of the Indo-Soviet Working Group in Standardization and

Metrology was held in New Delhi during 18-27 June, 1991. A four-member Soviet delegation headed by Mr A.S. Navolotsky, Vice-President, GOSSTANDART, USSR visited India and signed a protocol for 1991-92 for future work under the cooperation programme.

Meetings of Indian and Soviet specialists were held in Moscow during which discussions were held for furthering mutual cooperation and possible alignment of standards in the following fields:

- a) Computerization of standards information,
- b) Energy conservation,
- c) Harmonization of test methods of products of mutual trade, and
- d) Codification of items of mutual trade.

Soviet expert missions India for furthering the progress of cooperation in the fields of Energy Conservation and Metallurgy.

Indo-Polish Cooperation Programme

An agreement for cooperation in the field of applied science and technology was signed between Republic of Poland and

Government of India in Warsaw, Poland on 5 July, 1990. As a follow up, a two-member Polish delegation comprising Dr K. Mordzinski, President and Mr J. Ordon, Director General, Polish Committee for Standardization, Measures and Quality Control (PKNMIJ) visited India during 8-11 October, 1990. The visit helped elaborate the scope and procedures for cooperation between the two sides in the field of standardization besides identifying specific areas for cooperation.

International Training Programmes

During the year, four specialized training programmes in standardization and quality control were organized in New Delhi by the International Relations Department of BIS for eight trainees as under:

Country	Dates	No. of Trainees
Vietnam	4-20 April 1990	3
Mauritius	11 September 1990	3
Nepal	4 October 1990 to 4 January 1991	1
Vietnam	13 February 1991 to 5 April 1991	1



A section of participants at the twentythird International Training Programme in Standardization for Developing Countries. These programmes are organized annually by BIS for the benefit of standards engineers from the sister developing countries of Asia, Africa and Latin America.



Recourse to increased automation of information processing through computers has helped the Bureau to put added speed in its various activities.





COMPUTERIZATION AND OFFICE AUTOMATION

BIS continued its thrust towards automation of its activities with the objective of increasing office efficiency and providing improved service to the users.

Computerization Facilities

During the year, the available facilities were augmented as follows:

Nineteen personal computers (PC-XT's and PC-AT's) were installed in technical support and service departments at the Headquarters and Regional and Branch Offices. With these installations all the departments of the Headquarters and Regional and Branch Offices are provided with at least one PC.

20 PC-AT's, including 2 Computer Aided Design (CAD) Systems, were installed for facilitating formulation of standards and other technical activities of the Bureau.

Two Desk Top Publishing (DTP) Systems were also installed for augmenting the in-house publication activities.

Development Of Systems And Data Processing

Various application softwares have been developed with the following objectives:

- To generate management information reports for use in planning, review and monitoring of the various activities.
- To generate feedback information reports for use at operational levels.
- To serve external users (industry and consumers) in the country with quick and reliable information on available standards and certification marking.
- To prepare database on standards for information exchange which will be compatible with database of international standards bodies.

Standards Formulation Activities

The following major activities relating to

standards formulation have been automated:

- A menu driven software package for Programme of Work was developed and the existing system was suitably extended to accommodate additional elements of information.
- A system for preparation of Classified List of Standards directly from the standards database was designed and implemented.

Certification Marks Activities

Softwares were further modified to incorporate facilities for generating printed list of licences granted in a given month and mailing labels for various categories of licensees. A PC-based system for preparing buyer's guide was developed.

Personnel Management

Personnel Management Information System has been maintained and updated periodically for retrieval of various outputs like seniority list, promotion and transfer history, training, foreign travel, etc.

Sales

The existing comprehensive on-line package on cash sale of publications has been further augmented and is being used for on-line preparation and printing of cash memos on daily sales of publications and simultaneously creating database on sale of publications. The system is also used for generating Management Information Reports.

Finance

The financial management and accounting system has been augmented as follows:

The computerized system for maintaining accounts of sundry debtor customers who purchase publications on credit has been further modified to identify the overseas customers. The package is being used for maintaining addresses of all customers and

updating database file on all transactions to individual party's account and reconciliation with general ledger. The system has been developed for monthly follow up through computerized letters to parties for realization of payments and thus keeping a close watch on outstanding dues.

The pay roll system has been fully computerized abandoning the manual system.

Office Automation Facilities

During the year under review, the following additional equipment were added:

- | | |
|--|---|
| a) Large screen video projection system
(compatible with computers) | 1 |
| b) Photocopiers | 5 |
| c) Overhead projectors | 2 |
| d) Slide projector | 1 |



PLAN PROJECTS

The BIS Plan Projects as proposed under the Eighth Five Year Plan (1990-95) envisage an outlay of Rs 354 million for augmenting laboratory and computer facilities, GATT enquiry point, science and technology projects, lab-cum-office buildings, staff housing, etc. During 1990-91, the Government released a grant of Rs 20.7 million, out of which Rs 19 million were utilized. The progress achieved by the various projects is as follows.

Laboratory, Computer And Other Associated Equipment

An outlay of Rs 10.8 million was made available for equipping the various laboratories of the Bureau for testing increasing number of samples, developing calibration facilities, replacing old and obsolete equipment and effecting modernization. Out of this, a sum of Rs 10.6 million was actually spent for procuring sophisticated and other laboratory equipment, personal computers and printers, etc.

Science and Technology Projects

Two projects, namely, Development Programme for Code Implementation for Building and Civil Construction (NCST Project B-7) and Typification of Industrial Structures (NCST Project B-8) were continued during the year on the recommendation of the National Committee for Science and Technology. The NCST Project B-7 aims at preparation of handbooks related to standards referred in the National Building Code (NBC) and other related Indian Standards Codes, extension work to propagate and promote the use of NBC, modification of building bye-laws of various State Governments, etc. The objective of NCST Project B-8 is to establish optimum standard structural designs for structures to conserve scarce materials, such as cement and steel.

Under Project B-7, thirteen handbooks have been published so far.

Enquiry Point Under GATT Standards Code

The Government of India has appointed BIS as the Central Enquiry Point under GATT Standards Code. To meet the obligations, necessary infrastructure has to be established for which an outlay of Rs 2.9 million was approved for procurement of hardware and equipment, etc. The micrographic facilities installed earlier were augmented during the year.

Laboratory Building At Calcutta

Construction work of the building has been completed. Electrical work is to be taken up.

Extension of The Building At Headquarters

Construction of an auditorium has been completed. Installation of fire fighting system, the second component of this project, is underway.

Expansion of Lab-cum-Office Building at Madras

Construction of the building has been completed and efforts are underway to commission the laboratory.

Lab-cum-Office Building At Lucknow

The Uttar Pradesh Government has provided land measuring about 5 647 m² for laboratory-cum-office complex at Lucknow. Steps for construction of the building have been taken and a contract has been signed with the Uttar Pradesh Rajkiya Nirman Nigam to undertake construction on turn key basis.

Laboratory At Gandhi Nagar (Near Ahmadabad)

The Government of Gujarat has agreed to provide a laboratory building at a cost of

Rs 9 million. The construction of the building is complete and efforts are being made to provide the laboratory with the necessary equipment, furniture and fittings.

Staff Housing

During the year, 14 flats, six at Madras and eight at Bombay, were purchased at a cost of Rs 4.6 million for augmenting residential staff accommodation.

Third Meeting of Planning and Development Advisory Committee

The Planning and Development Advisory Committee (PDAC) is responsible for providing guidance concerning policy matters relating to:

- a) Long-term plans including Five Year Plan proposals,
- b) Corporate Planning of the Bureau, and
- c) Other associated matters regarding planning and development.

The Advisory Committee held its third meeting on 20 March 1991 in New Delhi, under the chairmanship of Lt Gen H. Lal, Director General, BIS, and deliberated upon the Annual Action Plan for 1991-92, and the Corporate Strategy of BIS. The BIS Annual Action Plan for 1991-92 covers activities based both on the current operations and future projections envisaged in the perspective Plan and the proposed Eighth Five Year Plan. The emphasis is both on an

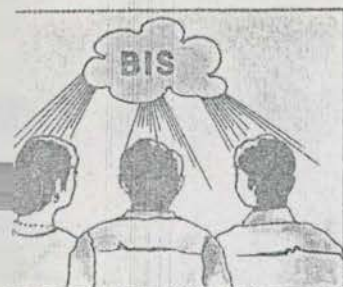
accelerated pace on review of standards to make them up-to-date and creation of a quality systems infrastructure in the industry operating the BIS Certification Marks Scheme.

To meet this objective, a number of proposals were approved covering projects identified for execution during 1991-92, comprising both ongoing projects continuing into the Eighth Plan and new projects funded by the Government and World Bank.

World Bank Project

To meet the challenges of expanding quality upgradation programmes in industry in the nineties, the Bureau succeeded in negotiating a loan of Rs 95.4 million on soft terms from the World Bank. The loan carries no interest but a service charge of 1 percent. In addition, it also carries a commitment charge of 0.25 percent which is payable only on the undrawn amount. The loan amount may be drawn over the next three years from the Industrial Credit and Investment Corporation of India (ICICI) and is payable over the next 15 years with a moratorium of 4 years. The projects to be financed through this loan comprise the following:

- a) Standardization Management and Standards Development,
- b) Upgrading Quality,
- c) Upgrading BIS Laboratory Network,
- d) Strengthening BIS Training Activity,
- e) Strengthening BIS Promotional Efforts,
- f) Technical Assistance to Exporters, and
- g) Standards Information Centres.



HUMAN RESOURCES DEVELOPMENT

As on 31 March 1991, a total of 2 397 persons were employed in BIS as against 2 430 in the previous year.

The deployment of personnel in the various activities of the Bureau during the last 2 years is given below:

Activity	Deployment as on 31 March	
	1990	1991
a) Standardization (formulation, publication, sales and distribution of standards and other publications)	585	557
b) Certification and quality systems	828	834
c) Laboratories	361	385
d) Promotional activities (standards promotion, statistical quality, technical information and computer services)	150	98
e) Support services (personnel management, accounts, general services, building maintenance and security).	506	523
Total	2 430	2 397

SC/ST Representation

The strength of the SC/ST in various categories of posts was 390 at the close of the year as against 398 in the previous year. The groupwise break-up for the last 2 years is given below:

Group	No. of SC/ST's as on 31 March	
	1990	1991
A	67	61
B	16	22
C	150	143
D (Excluding Safai Karmachari)	120	120
Safai Karamchhari	45	44
Total	398	390

Training

The number of in-house training programmes organized during the year rose to 32 which received participation from 764

personnel. In addition, 103 officers were deputed to attend 64 different programmes organized by outside agencies. Some of the important training programmes organized during the year are listed in Table 6.

Table 6 Important Training Programmes Organized During 1990-91

Sl No.	Name of Training Programme	Duration	No. of Participants
1.	Office Procedure and Self Improvement	20-22 June 1990	26
2.	3-Tier Managerial Training Programme (Senior Level)	25-26 June 1990	20
3.	3-Tier Managerial Training Programme (Middle Level)	27-28 June 1990	25
4.	3-Tier Managerial Training Programme (Supervisory Level)	2, 3 & 5 July 1990	25
5.	Indian Software	20-24 August 1990	21
6.	Desk Top Publishing System (DTPs) — Applications and Operations	20 August to 20 September 1990	10
7.	Trouble Shooting Techniques in PCs (Virus & Vaccines)	3 to 5 September 1990	10
8.	Productivity Improvement for Group 'D' Personnel	12-14 September 1990	23
9.	Radiographic Interpretation of Welds	6-10 November 1990	12
10.	Induction Training in Laboratory Testing	26 November to 14 December 1990	13
11.	Computer System on Programme of Work, Expediting Formulation of Standards and Referred to Standards	11-12 December 1990	31
12.	Beginners Course in PC	4-26 February 1991	20
13.	PC Computer Training for Senior Executives on One-to-One Basis	19 February 1991 (30 h duration)	3
14.	Inspection and Quality Control	27 February 1991	18
15.	Workshop on Hindi Noting and Drafting	27 March to 3 April 1991	19

Employer-Employee Relations

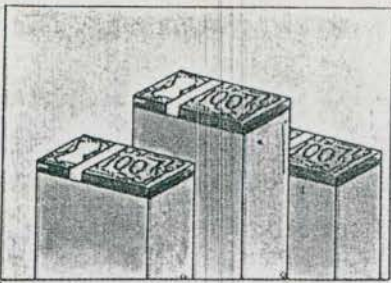
Employer-employee relations continued to be cordial during the year under report. The management amicably sorted out the personnel issues through mutual consultations and discussions with employees.

Staff Welfare

Welfare measures adopted by BIS for the employees were continued, namely, provision of facilities like holiday homes, employee's consumer cooperative store, house building, (interest subsidy) loan scheme and group personal accident insurance scheme for the employees working in the laboratories and other exposed to hazardous environments/working conditions

including those carrying cash. Other welfare activities included grants to sports clubs, BIS Canteens and financial assistance to the needy employees through the staff welfare fund in case of serious illness or extreme distress. Financial assistance was also given to dependents of employees on their death during service through the benevolent fund.

Family welfare programmes introduced by the government have been implemented and employees given cash and other incentives. Dependents of employees who died while in service were provided employment on compassionate grounds. BIS purchased eight flats in Bombay and six in Madras for its employees at a cost of Rs 4.6 million.



FINANCE

For the second consecutive year, the Bureau achieved the goal of self reliance in meeting its non-plan expenditure without any budgetary support from the Government of India.

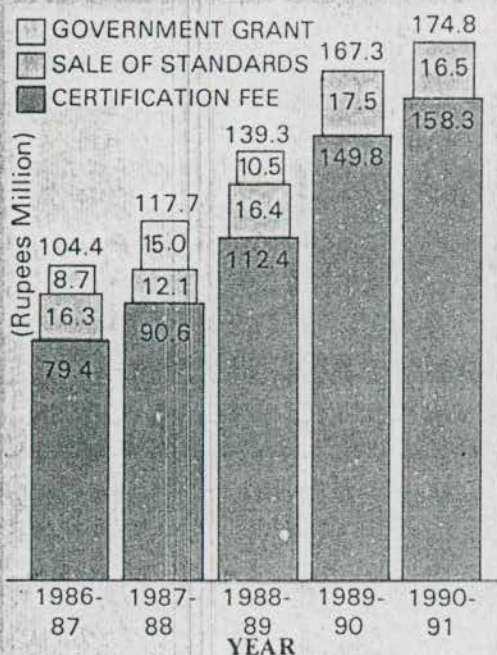
FINANCIAL ANALYSIS

Revenue (Non-Plan)

Income realized during 1990-91 was Rs. 174.7 million against Rs. 167.0 million in 1989-90 registering a growth of 4.6 percent. The increase in income has arisen mainly from certification which stood at Rs. 158.3 million against 149.8 million during previous year.

A graphic representation of the growth of income during the 5 year period ending 1990-91 is given in Fig. 6.

Fig.6 Income (Million Rupees)



Non-plan expenditure during the year was Rs. 181.7 million against Rs. 159.5 million during 1989-90 representing an increase of 13.9 percent. The expenditure of Rs. 181.7 million includes the provision for

depreciation of Rs. 18.8 million on capital assets. After exclusion of this provision which is a non-financial charge, the expenditure works out to Rs. 162.9 million leaving a cash surplus of Rs. 11.8 million (Rs. 174.7 less Rs 162.9 million).

Capital (Plan)

Government allocated Rs. 25.0 million for annual plan 1990-91. Taking into account the progress of various projects Government released Rs. 20.7 million including the unspent grant of Rs. 7.2 million from the previous year. Details of these projects and progress made in respect of each of them is given in chapter on 'Plan Projects'.

World Bank Projects

World Bank has sanctioned a loan of Rs. 95.4 million for execution of certain projects as indicated in chapter 'Policy Planning'. The first instalment of loan of Rs.3.0 million was released in October 90. The loan is repayable in 11 annual instalments commencing from 1994. To provide for the repayment, a World Bank Loan Redemption Fund Account has been established to which an annual contribution of Rs. 5.0 million is made out of non-plan funds. The fund is invested in Bank Deposits so that the accumulations in the fund would be adequate for the repayment of loan.

Loan

During 1990-91, the Bureau received Rs. 2.0 million as conveyance loan from the Government which was given to 119 employees for purchase of vehicles. Under the Home Building Loan (Interest subsidy) Scheme, 39 employees availed the facilities during the year. As many as 114 employees have so far availed the facilities from the date of introduction of the scheme.

Statement of Accounts

Statement of accounts for 1990-91 is given in Annex A.



BALANCE SHEET
1991

ANNEX A

ACCOUNTS FOR 1990-91

(Figures have been rounded off to whole rupee)

BALANCE SHEET AS AT 31 MARCH 1991

		SCHEDULE	CURRENT YEAR	PREVIOUS YEAR
1. SOURCES OF FUNDS				
1.1	Capital Fund	N	116 288 291	99 965 893
1.2	Reserves & Funds	O	56 598 980	145 375 176
1.3	Loans	P	11 175 000	9 950 000
TOTAL			184 062 271	255 291 069
2. APPLICATION OF FUNDS				
2.1	Fixed Assets	Q	84 803 173	77 513 875
2.2	Investments	R	51 997 217	123 868 431
3. WORKING CAPITAL				
3.1	Current Assets, loans & Advances	S	63 189 610	67 121 111
3.2	Less : Current Liabilities	T	15 927 729	13 212 348
			47 261 881	53 908 763
TOTAL			184 062 271	255 291 069

- NOTES : i) Schedules A to T form part of Accounts.
 ii) The closing stock of Indian Standards has not been valued and included in the accounts.
 iii) The Balances of Employees Provident Funds (CPF & GPF) Accounts have not been exhibited in Schedules 'O' and 'R' since these do not form part of funds of the Bureau in terms of Section 18 of the BIS Act and Rule 17(G) introduced in June 90.

Sd/-
 (Lt. Gen. H. Lal, PVSM)
 Director General, BIS

Sd/-
 (Raj K. Satia)
 Dy. Director General, BIS

Sd/-
 (G.V. Ramasubban)
 Director (Fin.), BIS

AUDIT CERTIFICATE

I have examined the Income and Expenditure Accounts for the year ended 31st March 1991 and Balance Sheet as on 31st March 1991 of the Bureau of Indian Standards. I have obtained all the information and explanations that I have required, and subject to observations in the appended Audit Report, I certify, as a result of my 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 Bureau of Indian Standards according to the best of information and explanations given to me and as shown by the books of the organisation.

Place : New Delhi
 Dated : 22.11.1991

Sd/-
 (K. Muthukumar)
 Principal Director of Audit

INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 1991

INCOME

	SCHEDULE	CURRENT YEAR	PREVIOUS YEAR
1. Certification fees		158 298 555	149 807 963
2. Sale of standards	A	13 593 890	14 176 931
3. Other income	B	2 822 275	3 031 186
4. Govt. grant		0	0
TOTAL		<u>174 714 720</u>	<u>167 016 080</u>

EXPENDITURE

	SCHEDULE	CURRENT YEAR	PREVIOUS YEAR
1. Pay and Allowances	C	98 955 345	88 435 533
2. Retirement Benefits	D	565 587	690 982
3. Other staff benefits	E	5 005 311	3 944 739
4. Travelling Expenses	F	6 760 729	6 434 957
5. Subscription to international Organisations	G	5 919 315	5 414 105
6. Production	H	5 162 739	3 972 740
7. Testing	I	10 070 467	8 258 153
8. Publicity	J	1 294 476	1 534 185
9. Office Expenses	K	15 032 000	13 177 444
10. Repairs & Maintenance	L	3 918 471	3 720 214
11. Others	M	5 256 767	5 309 266
12. Depreciation	Q	18 808 183	18 597 554
13. Appropriation to World Bank Redmp Fund		5 000 000	0
TOTAL		<u>181 749 390</u>	<u>159 489 872</u>
14. Surplus/(Deficit)		(-) <u>7 034 670</u>	<u>7 526 208</u>

SCHEDULE A — SALE OF STANDARDS

	CURRENT YEAR	PREV. YEAR
1. Indian Standards	13 059 823	13 406 144
2. Calculation Aids and Binders	59 951	55 867
3. Overseas Publications (Commission)	474 116	714 920
TOTAL	13 593 890	14 176 931

SCHEDULE B—OTHER INCOME

	CURRENT YEAR	PREV. YEAR
1. CGHS Contribution	37 320	37 978
2. Conferences, Consultancy & Training Fees	837 195	787 620
3. Interest from House Bldg. Loan	260 859	376 388
4. Miscellaneous		
a) Other Sources [refer Section 18(i)(c)]	—	—
b) Others	1 686 901	1 829 200
TOTAL	2 822 275	3 031 186

SCHEDULE C—PAY AND ALLOWANCES

	CURRENT YEAR	PREV. YEAR
1. PAY		
Members of the Bureau (Other than Director General)	—	—
Director General	46 614	48 893
Officers	26 665 111	25 173 098
Staff	31 801 767	31 148 564
2. ALLOWANCES		
Members of the Bureau (Other than Director General)	—	—
Director General	26 318	9 218
Officers	16 440 008	12 588 864
Staff	23 975 527	19 466 896
TOTAL	98 955 345	88 435 533

SCHEDULE D—RETIREMENT BENEFITS

	CURRENT YEAR	PREV. YEAR
Contributions to :		
1. Provident Fund	565 587	690 982
2. Pension Fund	—	—
3. Gratuity Fund	—	—
TOTAL	<u>565 587</u>	<u>690 982</u>

SCHEDULE E—OTHER STAFF BENEFITS

	CURRENT YEAR	PREV. YEAR
1. CGHS and other Medical Benefits	1 893 632	2 020 179
2. Staff Welfare	1 390 816	1 237 742
3. Leave Travel Concession	1 720 863	686 818
TOTAL	<u>5 005 311</u>	<u>3 944 739</u>

SCHEDULE F—TRAVELLING EXPENSES

	CURRENT YEAR	PREV. YEAR
1. Overseas	484 882	552 184
2. Officers and Staff	6 186 467	5 807 498
3. Committee Members	89 380	75 275
TOTAL	<u>6 760 729</u>	<u>6 434 957</u>

SCHEDULE G—SUBSCRIPTIONS TO INTERNATIONAL ORGANIZATIONS

	CURRENT YEAR	PREV. YEAR
1. International Standards Organization	3 535 896	3 474 224
2. International Electrotechnical Commission	2 383 419	1 939 881
TOTAL	<u>5 919 315</u>	<u>5 414 105</u>

SCHEDULE H—PRODUCTION

	CURRENT YEAR	PREV. YEAR
1. Standards	3 733 766	2 874 791
2. Bulletin	731 111	570 710
3. Calculation Aids and Binders	68 348	—
4. Other Publications	629 514	527 239
TOTAL	5 162 739	3 972 740

SCHEDULE I—TESTING

	CURRENT YEAR	PREV. YEAR
1. Testing Fees Paid to Outside Labs.	7 365 667	6 545 892
2. Laboratory Apparatus and Stores	2 105 662	1 188 426
3. Market Samples	599 138	523 835
TOTAL	10 070 467	8 258 153

SCHEDULE J—PUBLICITY

	CURRENT YEAR	PREV. YEAR
1. Exhibition	235 431	203 631
2. Advertising	851 592	970 286
3. Audio Visuals and Others	207 453	360 268
TOTAL	1 294 476	1 534 185

SCHEDULE K—OFFICE EXPENSES

	CURRENT YEAR	PREV. YEAR
1. Stationery	2 193 791	1 264 462
2. Postage	1 812 257	1 383 302
3. Telephone and Telex	2 589 141	2 256 373
4. Recruitment	260 569	466 745
5. Refreshment and Entertainment	313 160	285 890
6. Liveries	286 479	247 977
7. Freight and Cartage	278 288	267 660
8. Insurance and Bank Charges	516 589	448 063
9. Miscellaneous	618 063	660 933
10. Rent and Taxes	2 775 659	3 452 341
11. Electricity and Water	3 388 004	2 443 698
TOTAL	15 032 000	13 177 444

SCHEDULE L—REPAIRS AND MAINTENANCE

	CURRENT YEAR	PREV. YEAR
1. Furniture and Equipment	494 865	539 232
2. Building	2 922 910	2 754 071
3. Vehicles	500 696	426 911
TOTAL	3 918 471	3 720 214

SCHEDULE M—OTHER EXPENSES

	CURRENT YEAR	PREV. YEAR
1. Research and Consultation	15 214	12 480
2. Conferences, Consultancy and Training Programme	1 218 923	1 014 862
3. Electronic Data Processing	598 939	718 637
4. Library Subscription and Other Expenses	397 781	559 661
5. Audit Fees and Legal Charges	369 147	538 971
6. Staff Training	923 649	1 209 388
7. Interest on House Building Loan	1 482 676	1 074 133
8. Interest on other loans from		
a) Central Government	220 000	137 500
b) Other Sources	—	—
9. Bad Debts Written Off	30 438	43 634
TOTAL	5 256 767	5 309 266

SCHEDULE N—CAPITAL FUND

	CURRENT YEAR	PREV. YEAR
As per last Balance Sheet	99 965 893	91 788 325
Add :		
i) Cost of assets capitalized (Refer Schedule 'O' Sl No. 1)	23 058 604	14 644 806
ii) Cost of assets capitalized from QAWSM funds (Refer Schedule 'O' Sl No. 3a)	362 853	17 275
iii) Excess of income over expenditure	—	7 526 208
TOTAL	123 387 350	113 976 614
Less :		
i) Excess of expenditure over income	7 034 670	—
ii) Capital investment written off	64,389	10 721
iii) Transfer to Pension Fund	—	14 000 000
TOTAL	116 288 291	99 965 893

SCHEDULE O—RESERVES AND FUNDS

Sl No.	Particulars	As on 31 March 90	Receipts/ Adjustments during the year	Utilisation during the year			As on 31 March 91
				Capital	Revenue	Total	
1. Funds in the process of Capitalization							
(Name of the Projects)							
a)	Laboratory equipment, computer and associated equipment fund	13232880	10316790	14576972	—	14576972	8972698
b)	Central laboratory blg. at Sahibabad	102829	2931	99898	—	99898	—
c)	Calcutta Lab-cum-Office building fund	2914843	5000	719487	—	719487	2190356
d)	S & T Project fund	338965	62854	24962	257149	276111	—
e)	Development of hand book project fund	68218	21143	—	100182	100182	-18821
f)	Staff Housing Project	1500000	3500000	4571735	—	4571735	428265
g)	Madras building fund	2945613	—	1802014	—	1802014	1143599
h)	GATT project fund	414612	—	254932	159680	414612	—
i)	Extention of HQ building	725440	180528	1008604	—	1008604	-102636
j)	Lab building,Lucknow	1980528	80528	—	—	—	1900000
	TOTAL	24215928	13867148	23058604	511011	23569615	14513461
2. Employee Funds							
a)	Gratuity fund	337418	—	—	—	—	337418
b)	Benevolent fund	232728	176882	—	120000	120000	289610
c)	Pension fund	40097523	2457073	—	6752879	6752879	35801717
d)	CP fund	2987845	Ceases to form part of the funds of the Bureau		2987845	2987845	—
e)	GP fund	76421563			76421563	76421563	—
	TOTAL	120077077	2633955	—	86282287	86282287	36428745
3. Other Specific Projects							
a)	QAWSM	468087	2000000	362853	2025146	2387999	80088
b)	Energy Conservation Awareness Programme (Deptt. of Power)	539084	—	—	127944	127944	411140
c)	Consumer Protection Exhibition (Deptt. of Civil Supplies)	75000	80000	—	75000	75000	80000
d)	World Bank Loan Redmp. Fund Account	—	5085546	—	—	—	5085546
	TOTAL	1082171	7165546	362853	2228090	2590943	5656774
	GRAND TOTAL	145375176	23666649	23421457	89021388	112442845	56598980

SCHEDULE Q—FIXED ASSETS

Sl No.	Description	Block at Cost			Depreciation			Net Block			
		Gross As at 31 March 90	Block Addition	Deduction Sale/written off	As at 31 March 91	Up to 31 March 90	Addition	Deduction Sale/written off	Up to 31 March 91	As at 31 March 91	As at 31 March 90
1.	Building-Headquarters	4921703	—	—	4921703	3043768	93560	—	3137328	1784375	1877935
2.	Building -I Madras	1133556	—	—	1133556	465980	34079	—	500059	633497	667576
3.	Building -II Madras (Capital WIP)	5854368	1802014	—	7656382	—	—	—	—	7656382	5854368
4.	Building -Central Laboratory at Sahibabad	14266062	99898	—	14365960	2416342	698104	—	3114446	11251514	11849720
5.	Building -Bombay	5274900	—	—	5274900	1832074	186193	—	2018267	3256633	3442825
6.	Building -I Calcutta	3112635	—	—	3112635	1144518	107092	—	1251610	1861025	1968117
7.	Building -II Calcutta (Capital WIP)	5988178	719487	—	6707665	—	—	—	—	6707665	5988178
8.	Residential Flats	2392481	4571735	—	6964216	482079	161870	—	643949	6320267	1910402
9.	Xerox Copying Equipment	292000	—	106402	185598	278808	2905	101924	179789	5809	13192
10.	Laboratory Equipment	69016110	14899935	—	83916045	40400851	14271611	—	54672462	29243583	28615259
11.	Furniture and Equipment	17502980	2141012	30713	19613279	8594921	2649980	4902	11239999	8373280	8908060
12.	Vehicles	1598990	118358	118348	1599000	816898	177285	104309	889874	709126	782092
13.	Reprographic Equipment	1311154	—	182225	1128929	771946	164179	136405	799720	329209	539208
14.	Library Books	3952911	826586	—	4779497	—	—	—	—	4779497	3952911
15.	Ext. of HQ Building - Auditorium in Manak Bhavan	1000000	300000	—	1300000	—	261325	—	261325	1038675	1000000
16.	Ext. of HQ Building - Fire Fighting Project	24560	708604	—	733164	—	—	—	—	733164	24560
17.	Lab -cum - Office Building -Lucknow (Capital WIP)	119472	—	—	119472	—	—	—	—	119472	119472
TOTAL		137762060	26187629	437688	163512001	60248185	18808183	347540	78708828	84803173	77513875

SCHEDULE R—INVESTMENTS (AT COST)

Sl No.	Particulars	As on 31 March 90	Additions	Deductions (Sale/ Maturity)	As on 31 March 91
1.	Deposits with Banks				
	a) Account Gratuity Fund	344 000	—	—	344 000
	b) Others	4 010 000	6 834 000	—	10 844 000
2.	Shares of ISI Employees Consumer Cooperative Store	7 500	—	—	7 500
3.	Pension Fund	40 097 523	23 900 000	28 195 806	35 801 717
4.	CPF	2 987 845	Ceases to form part of funds of Bureau	2 987 845	—
5.	GPF	76 421 563		76 421 563	—
6.	World Bank Loan Redmp. Fund Investment Account	—	5 000 000	—	5 000 000
	TOTAL	123 868 431	35 734 000	107 605 214	51 997 217

SCHEDULE S—CURRENT ASSETS, LOANS AND ADVANCES

Sl No.	Particulars	CURRENT YEAR	PREVIOUS YEAR
1.	Stock (at cost)		
	a) Printing paper	1 294 062	842 999
	b) Laboratory apparatus and stores	1 149 480	818 895
	c) Stationery & computer consumables	779 300	901 975
	d) Repair & maintenance consumables	96 930	25 218
2.	Sundry Debtors		
	a) Sale of publications	1 310 797	1 302 673
	b) Certification		
	i) Licence fee	20 560	23 277
	ii) Inspection charges	235 727	458 319
	iii) Marketing fee	4 068 628	4 545 351
	c) Bulletin advertisements, etc	825	825
3.	Loans, Advances and Deposits		
	a) Loans to employees for:		
	i) Purchase of conveyance	3 561 237	1 998 506
	ii) House construction	4 278 059	5 452 361
	b) Advances to employees for:		
	i) Festival	212 285	243 686
	ii) Natural calamities	—	—
	iii) Travelling expenses	1 056 611	911 329
	iv) Leave travel	197 929	246 575
	v) Store purchase	92 754	141 026
	vi) Adjustable advances	607 156	292 363
	vii) Accounts recoverable (others)	1 017 336	727 074
	viii) Fan advance	400	1 680
	c) Advances to:		
	i) Private parties	13 576 070	17 363 444
	ii) Foreign parties	—	—
	iii) Govt. and others	838 526	551 114
4.	Security Deposits	818 392	645 636
5.	Prepaid Expenses	487 605	543 520
6.	Cash and Bank Balances		
	a) With banks	25 935 917	28 168 956
	b) In hand (including imprest)	218 967	225 621
	c) Franking machine	49 157	46 172
	d) Cheques in transit	1 284 900	642 516
	TOTAL	63 189 610	67 121 111

SCHEDULE T—CURRENT LIABILITIES

Sl No.	Particulars	CURRENT YEAR	PREVIOUS YEAR
1.	Sundry Creditors		
	a) Inland	2 025 862	3 751 178
	b) Abroad	3 174 920	380 470
	c) Earnest money	2 208 668	1 822 205
	d) Customer balances (sales)	839 075	480 969
	e) Customer balances (certification)	2 353 521	2 864 934
	f) Customer balances (advertisement)	1 296	1 296
2.	Accounts Payable (employees)	857 688	318 349
3.	Unpaid Salaries and Wages	65 857	68 305
4.	Govt. of Bihar (A/C Lab. Equipment)	483 637	483 637
5.	Govt. of Gujarat (ABO Building A/C)	3 917 205	3 012 589
6.	ITEC	—	5 378
7.	SCAAP	—	23 038
	TOTAL	15 927 729	13 212 348

3. Balance Sheet

3.1 Sundry Debtors — Rs 56.37 lakhs

Sundry Debtors included Rs 56.37 lakhs outstanding against customers, the year-wise break-up of which was as under:

(Rupees in lakhs)

Year	Sale of Publication		Certification fee		Bulletin Advertisement		Total	
	No. of items	Amount	No. of items	Amount	No. of items	Amount	No. of items	Amount
Up to								
1987-88	268	1.37	359	13.73	3	0.01	630	15.11
1988-89	74	0.26	115	3.03	—	—	189	3.29
1989-90	132	0.68	227	4.38	—	—	359	5.06
1990-91	1024	10.80	425	22.11	—	—	1449	32.91
Total	1498	13.11	1126	43.25	3	0.01	2627	56.37

The Bureau did not follow strictly, in all cases, the procedure of advance collection of licence fee, inspection charges, marking fee and testing fee, etc, as laid down in the Certification Marks Manual. It would also be seen from the above that a sum of Rs 15.11 lakhs was outstanding for more than three years but the Bureau could not recover this amount so far.

In reply Bureau (November 1991) stated that procedure for collection of certification marks fees has been streamlined and Rs 23.00 lakhs has been realised up to the end of September 1991. In regard to old outstanding dues, in large number of cases legal proceedings have been initiated.

4. Avoidable expenditure of Rs 8.14 lakhs

The Bureau imported a Universal Testing Machine from a foreign firm for Rs 22.13 lakhs which was received at Bombay Port on 22nd July 1986. The consignment was received at the Central Laboratory, Sahibabad in August 1986 but the crates were opened in November 1986 and certain components were found damaged due to excessive seepage. The claim lodged in September 1988 was finally

rejected by the Insurance Company in July 1991 as the insurance cover was valid up to 22nd September 1986. The Bureau had not requested the Insurance Company for any extension of the date of the Policy. In the meanwhile, the Bureau had to import (November 1988) components worth Rs 8.14 lakhs to make the machine operational. Not taking action within the validity period of the insurance cover resulted in expenditure on purchase of components worth Rs 8.14 lakhs which could have been avoided. In reply (November 1991) Bureau stated that there was no other option but to import the Control System for operating the equipment and the case is being examined for its legal implications to seek redressal through the Court.

5. Idle Machinery

The Bureau purchased equipments worth Rs 36.07 lakhs between December 1979 and May 1988 for improving testing facilities in the Central Laboratory. Though these equipments were installed between December 1979 and June 1989 these had not (September

1991) been put to use due to reasons indicated below:

to Rs 100/- per standard, yet no stock account was being maintained for publications under group 1 to 9 which have been priced between Rs 10/- and Rs 60/- per

Sl No.	Name of the Equipment/ Machine	Value (Rs in lakhs)	Date of Purchase	Date of Installation	Reasons for idleness
i)	Thermal Conductivity Apparatus	2.87	December 79	December 79	Idle since 1983-84 due to unstable power supply
ii)	Vicat Apparatus for cables	1.43	June 1981	1981	Idle since 1986-87 due to non-receipt of samples
iii)	Creep Rupture Testing Equipment	1.13	February 84	N.A.	Out of order since 1986
iv)	Partial Discharge Detector & High Voltage AC Test	10.91	February 86	November 88	It could not be put to use since installation due to difficulty in sample preparation
v)	Impulse Generator	12.37	March 86	August 87	It could not be put to use due to difficulty in samples preparation
vi)	Ozone Test Chamber	4.59	May 1987	June 1988	Idle since installation due to unstable power supply
vii)	Guideline Instrument Head	1.49	March 1988	Not yet commissioned	Received faulty and is under repairs
viii)	Brake Fluid Testing Rig	1.28	May 1988	June 1989	The equipment was purchased in anticipation of compulsory certification of brake fluid but had not been made compulsory so far. Moreover, BIS has no Licence for this at present

6. Non-maintenance of Stock Account of Publications

The publications of the Bureau have been classified into fifteen groups. Although, these publications are priced between Rs 10/-

standard. In the absence of proper stock, in a particular case the official at the sale counter handed over 17 Indian Standards worth Rs 475/- without issuing the cash memo and accepted a sum of Rs 300/- from the customer.

Bureau stated (November 1991) that there was 15 186 standards in force and maintenance of detailed stock account of such large number of standards was a stupendous task requiring large deployment of staff, elaborate storage arrangements and administrative expenditure disproportionate to the benefits likely to accrue from the system.

The reply of Bureau is not acceptable to audit as the Bureau has already switched over to computer technology, it would not be difficult to deploy few additional persons for this work.

7. Complaints Pending for Action

The position of receipt and disposal of complaints received by the Bureau relating to the quality of BIS marked goods during the year 1990-91 was as under:

No. of complaints pending up to 31.3.1990	280
No. of complaints received during the year 1990-91	255
Total No. of complaints available for action	535
No. of complaints settled during the year 1990-91	302
No. of complaints pending as on 31.3.1991	233
Pending for 0 to 6 months	99
Pending for 6 to 12 months	62
Pending for over one year	72

It would be seen from the above that out of 535 complaints available for action, 233 complaints were pending with the Bureau as on 31st March 1991. Of these 233 pending complaints, 72 complaints were outstanding for over one year and 62 complaints for more than six months. Bureau stated (November 1991) that 47 complaints had since been settled up to September 1991 and the unsettled complaints were continuously monitored at the highest level for expeditious settlement.

8. Applications Pending for Action

The position of receipt and disposal of applications received by the Bureau for grant of licence during the year 1990-91 was as under:

No. of applications pending as on 31.3.1990	4299
No. of applications received during 1990-91	1940
Total applications available for processing	6239
Applications processed	3481
a) No. of applications granted licence	1283
b) No. of applications closed	2198
Applications pending as on 31st March 1991	2758
a) Pending due to BIS action	933
b) Pending due to applicants	1825

Out of the total 933 pending applications, the details of only 833 applications were available with the Bureau. These 833 applications included 414 applications pending with the Bureau for over one year and 193 applications for 6 to 12 months. As stated by the Bureau, these applications were pending for want of preliminary inspection, sample under test, finalization of marking fee and formulation of scheme of testing and inspection.

9. Non-settlement of Old Objections/Inspection Reports

Two Inspection Reports with 7 paras were outstanding as on November 1991 for settlement. The year-wise details of outstanding paras are given below:

Inspection Report (Year)	Number of Paras
1988-89	2. (Para No. 6 & 9)
1989-90	5. (Para No. 12, 17, 21, 22 & 24)

Place : New Delhi

Dated : 22.11.1991

Sd/-

(K. Muthukumar)
Principal Director of Audit.

Central Marks	— Shri B.V.H.S. Swamy
	— Shri S.K. Choudhury
	— Shri B.C. Kapur
	— Shri J. Venkatraman
	— Shri M.B. Reddy
	— Shri J.P. Mehta
Chemical	— Shri R.K. Singh
Civil Engineering	— Shri G. Raman
Computer Centre	— Shri N. Shankar
Electronics and Telecommunication	— Shri T.C. Kapoor
Electrotechnical	— Shri S.R. Keshav
Finance	— Shri G.V. Ramasubban
Food and Agriculture	— Shri G.S. Vilku
Foreign Languages	— Shri V.H. Ram
General Administration	— Shri B.G. Sankara Rao
Heavy Mechanical Engineering	— Shri D.K. Agarwal
Hindi Unit	— Smt Sarojini W. Arya
Information Services	— Shri V.P. Vij
International Relations	— Shri A.R. Banerjee
Legal, Enforcement and Co-ordination	— Shri D.K. Singh
Light Mechanical Engineering	— Shri S.K. Nag
Marks (Delhi)	— Shri R.I. Midha
	— Shri Gurcharan Singh
	— Shri J.C. Gera
Medical Equipment and Hospital Planning	
Management and Systems	— Shri S. Krishnamurthy
Metallurgical Engineering	— Shri V.K. Jain
Personnel Management	— Shri B. Mukherji (Personnel)
	— Shri G.V. Rayudu (Establishment)
Petroleum, Coal and Related Products Planning and Co-ordination	— Shri D.K. Datta
Production Engineering	— Shri Sohrab
Printing and Distribution	— Shri V. Subramany
Publications	— Shri M.L. Malik
Public Relations	— Shri J.K. Bhavnani
Quality Systems	— Shri R.S. Malani
River Valley Projects	— Shri S. Chandrasekhran
Science and Technology Project	— Shri K.M. Mathur
Quality Assurance on Water Supply Mission	— Shri Vinod Kumar
Sales	— Shri K. Rajivendran
Standards Promotion	— Shri D.S. Jatar
Textile	— Shri A. Govindan
Training and Consultancy	— Shri K.C. Sharma
Transport Engineering	— Shri Y.K. Bhat
	— Shri N.S. Vijayaraghavan
Eastern Regional Office	
Deputy Director General	— Shri P.S. Das
Directors	— Shri S.K. Bhattacharyya
	— Shri R.L. Reddy

Northern Regional Office
Deputy Director General
Directors

- Shri P.K. Chatterjee
- Shri S. Banerjee

- Shri S.P. Sachdev
- Shri V.K. Gogna
- Shri R.C. Jain
- Shri Narinderjit Singh
- Shri S.P. Abbey

Southern Regional Office
Deputy Director General
Directors

- Shri M. Raghupathy
- Shri P. Venkataraman
- Shri T.S. Subramanian
- Shri P. Dakshina Murty

Western Regional Office
Deputy Director General
Directors

- Shri C.B. Chandorkar
- Shri L.G. Banerjee
- Shri M. Murugkar
- Shri Harcharan Singh
- Shri K.M. Bhatia

Branch Offices

Ahmadabad
Bangalore
Bhopal
Bhubaneshwar
Coimbatore
Faridabad
Ghaziabad
Guwahati
Hyderabad
Jaipur
Kanpur
Lucknow
Patna
Thiruvananthapuram

Director Incharge

- Shri G.S. Abhayankar
- Shri L. Ramachandra Rao
- Shri V.S. Mathur
- Shri C.K. Bebartia
- Shri C.V. Ravindran
- Shri O.P. Khullar
- Dr R.B.L. Mathur
- Shri P.K. Malik
- Shri M.S. Nagaraja
- Shri B.L. Raina
- Shri D.S. Ahluwalia
- Shri Satish Chander
- Shri Vijai
- Shri P. Rabindranathan

Inspection Offices

Allahabad
Bhillai
Durgapur
Jamshedpur
Nagpur
Pune
Rajkot
Rourkela
Srinagar
Vadodara

Officer Incharge

- Shri J.A. Siddiqui
- Shri K.K. Vashistha
- Shri O.N. Das Gupta
- Shri Nilmoni Mitra
- Shri Gulshan Rai
- Shri B.C. Sinha
- Shri Ram Pal
- Shri Chandra Shekhar
- Shri Ramesh Kaboo
- Shri Jagdish Chandra

ANNEX C

STATE LEVEL COMMITTEES FOR STANDARDIZATION AND QUALITY SYSTEMS

State/Union Territory	Chairman
Andhra Pradesh	Director of Industries, Government of Andhra Pradesh, Hyderabad
Assam	Commissioner, Industries, Government of Assam, Guwahati
Bihar	Secretary Industries Department, Government of Bihar Patna
Delhi	Commissioner of Industries, Delhi Administration, CPO Building, Kashmere Gate, Delhi
Gujarat	Industries Commissioner, Government of Gujarat, Industries, Mines and Energy Department, Sachivalaya, Gandhinagar, Gujarat
Haryana	Chief Secretary, Government of Haryana, Chandigarh
Himachal Pradesh	Commissioner-cum-Secretary, Industries Deptt., Government of Himachal Pradesh, Shimla
Jammu & Kashmir	Additional Chief Secretary (Planning), Government of Jammu and Kashmir, Srinagar
Karnataka	Additional Chief Secretary Government of Karnataka Vidhana Soudha, Bangalore
Kerala	Chief Secretary, Government of Kerala, Thiruvananthapuram
Madhya Pradesh	Secretary, Food & Civil Supplies, Government of Madhya Pradesh, Vallabh Bhavan, Bhopal
Manipur	Secretary, Industries, Government of Manipur, Manipur

Maharashtra	Development Commissioner (Industries), Government of Maharashtra, Bombay
Meghalaya	Chief Secretary, Government of Meghalaya, Shillong
Orissa	Industries Department, Government of Orissa, Bhubaneshwar
Pondicherry	Secretary to Government of Pondicherry, Chamber of Secretary (Industries), Chief Secretariat, Pondicherry
Punjab	Secretary, Industries Department, Government of Punjab Chandigarh
Rajasthan	Secretary, Industry Department, Government of Rajasthan Secretariat, Jaipur
Tamil Nadu	Joint Secretary Industries Department Government of Tamil Nadu, Fort St. George, Madras
Uttar Pradesh	Secretary to Chief Minister, Sachivalaya Annexe, Government of Uttar Pradesh, Lucknow
West Bengal	Chief Secretary, Government of West Bengal Writer's Buildings Calcutta

STATE LEVEL COMMITTEES FOR STANDARDIZATION AND QUALITY SYSTEMS

State/Union Territory	Chairman
Andhra Pradesh	Director of Industries, Government of Andhra Pradesh, Hyderabad
Assam	Commissioner, Industries Department, Government of Assam, Guwahati
Bihar	Secretary Industries Department, Government of Bihar Patna
Delhi	Commissioner of Industries, Delhi Administration, CPO Building, Kashmere Gate, Delhi
Gujarat	Industries Commissioner, Government of Gujarat, Industries, Mines and Energy Department, Sachivalaya, Gandhinagar, Gujarat
Haryana	Chief Secretary, Government of Haryana, Chandigarh
Himachal Pradesh	Commissioner-cum-Secretary, Industries Deptt., Government of Himachal Pradesh, Shimla
Jammu & Kashmir	Additional Chief Secretary (Planning), Government of Jammu and Kashmir, Srinagar
Karnataka	Additional Chief Secretary Government of Karnataka Vidhana Soudha, Bangalore
Kerala	Chief Secretary, Government of Kerala, Thiruvananthapuram
Madhya Pradesh	Secretary, Food & Civil Supplies, Government of Madhya Pradesh, Vallabh Bhavan, Bhopal
Manipur	Secretary, Industries, Government of Manipur, Manipur