1949

NEW ZEALAND

STANDARDS COUNCIL

(Department of Industries and Commerce)

ANNUAL REPORT FOR THE YEAR 1948-49

Presented to Both Houses of the General Assembly by Leave

The Hon. A. H. NORDMEYER, Minister of Industries and Commerce.

SIR,—

I have the honour to submit herewith the annual report of the Standards Council for the year ended 31st March, 1949.

I have, &c.,

L. J. MCDONALD,

Executive Officer.

REPORT

MEMBERS OF STANDARDS COUNCIL

DURING the year Messrs. L. Arcus, K. Baxter, C. R. Ford, and G. A. Pascoe retired from the Standards Council and were replaced by Messrs. R. C. Love, J. Thompson, J. I. King, and R. V. Jackson, who represent the Master Builders' Federation, the Federation of Labour, the Institute of Architects, and the Department of Industries and Commerce respectively. At the close of the year the personnel of the Standards Council was therefore as follows:—

Member.	Representing
R. C. Adams	Commissioner of Works.
Mrs. H. Barnicoat	Dominion Federation of New Zealand Women's Institutes.
W. Bryan	Associated Chambers of Commerce of New Zealand.
F. H. Callaghan	Council of Scientific and Industrial Research.
P. Ellerm	Stores Control Board.
J. Ferguson	New Zealand Federation of Labour.
Mrs. M. J. Forde	National Council of Women.
F. W. Furkert	New Zealand Institution of Engineers.
A. R. Galbraith	Municipal Association of New Zealand
W. Gazley	Post and Telegraph Department.
R. V. Jackson	Department of Industries and Commerce
Mrs. P. C. Jordan	Women's Division of Federated Farmers.
J. I. King	New Zealand Institute of Architects.
E. H. Langford	(Special appointment).
G. A. Lawrence	New Zealand Institute of Chemistry.
R. C. Love	New Zealand Federated Builders' and Contractors' Industrial Association of Employers.
D. I. Macdonald	New Zealand Manufacturers' Federation.
L. J. McDonald	(Executive Officer).
W. W. Mulholland	Federated Farmers of New Zealand.
K. Pallo	New Zealand Manufacturers' Federation.
G. S. J. Read	New Zealand Railways.
G. L. Riley	New Zealand Retailers' Federation.
J. E. Salmon	New Zealand Manufacturers' Federation.
J. H. Thompson	New Zealand Federation of Labour.
C. W. Turner	(Special appointment).

MEETINGS

During the year 168 meetings were held as follows: Standards Council 3, Executive Committee 5, Standing committees and formal conferences 137, *Ad hoc* subcommittees and panels 23.

STANDARDS COUNCIL

Standard Specifications

During the year the following specifications were recommended by the Standards Council for declaration as standard specifications by the Minister of Industries and Commerce:—

	New Standards.				Withdrawals: Emergency.
	British.	New Zealand.	American.	Total.	
Building	2	5	..	7	..
Chemical engineering	2	..	..	2	..
Chemicals and scientific apparatus	14	..	..	14	..
Electrical engineering	6	2	..	8	..
Gas and solid fuel	1	..	..	1	..
Household commodities	..	10	..	10	2
Iron and steel	6	..	..	6	..
Illumination and lighting fittings	1	..	..	1	..
Mechanical engineering	14	..	..	14	..
Nomenclature, abbreviations, &c.	1	..	..	1	..
Non-ferrous metals	1	..	..	1	..
Plumbing	5	3	..	8	..
Radio components	..	..	7	7	..
Textiles and clothing	..	1	..	1	1
Miscellaneous	4	3	..	7	..
Government purchasing standards	..	2	..	2	1
Totals	57*	26	7	90	4

* Includes 4 with amendments to suit New Zealand requirements. In addition to the above new standards, the revisions of 7 standards and 41 amendments to 29 standards were recommended for declaration. Also, 44 standard specifications which had been adopted previous to 1st April, 1947, were formally recommended for declaration pursuant to the Standards Act, 1941.

New Zealand standards now total: Regular, 670; Government purchasing, 4; emergency, 140: grand total, 814.

Details of the new standards, revisions, amendments, and withdrawals are shown in an Appendix.

Standardization Projects

The Standards Council or its Executive Committee, after examination of representations from various interests, decided that the following additional projects should be undertaken: Builders' hardware made from zinc-base alloys; paint ingredients; leather travel bags and handbags; felt wood-heel cosy slippers; general by-laws for municipalities; building by-laws for Councils; commercial paper sizes and envelope sizes; hose reels for fire protection purposes; classification and grading of *Pinus radiata*; industrial safety and hygiene; reinforced concrete poles for electrical transmission and traction; rules of procedure for the conduct of business at meetings; domestic electric connector boxes; concrete farm equipment; code of practice for laying tennis courts; elements and thermostats for thermal storage electric water-heaters; antimonial alloy; enamel paints; sizes for children's hosiery; theatre construction; carpenter's levels.

STANDARD MARK

During the year, 164 applications for licences to use the Standard Mark were received from applicants engaged in 8 different industries. Over the same period, 166 licences were issued, bringing the total number granted since 1944 to 1,063. Of these, 61 have been cancelled, in most cases because the licensee has gone out of business. At the close of the year, therefore, there were 1,002 current licences. Table A shows the licences granted during the year, the total licences issued to date, and the industries over which they are distributed:

Table A—Licences to Use the Standard Mark

Industry.	Licences Granted, 1948-49.	Total Licences Granted.
Household furniture	55	551
Motor-car cleaning and lubrication services	105	358
Footwear	..	38
School paper stationery	1	15
Household tinware utensils	..	10
Hearing-aid equipment	..	10
Paua shell jewellery	..	10
Leather dress gloves	..	8
Ready-mixed paints	..	5
Regenerated lubricating-oil	..	5
Cow-covers	..	3
Fire-extinguishers	..	3
Preservative pretreatment of timber	..	3
Plywoods	..	3
Inks	..	3
Milking-machine rubberware	..	3
Shirt and pyjama sizes	..	2
Terazzo work	..	2
Flushing-cisterns	..	2
Creosote for preservation of timber	..	2
Salt glazed-ware pipes	..	2
Soaps	..	2
Flock	..	2
Nylon toothbrushes	..	1
Ceiling roses	..	1
Fish-liver oils	..	1
Men's working garments	..	1
Oily canvas clothing	..	1
Precast concrete drainage pipes	..	1
Precast concrete pressure pipes	..	1
Earthenware roofing-tiles	..	1
Lubricating-cup greases	..	1
Fencing wire	..	1
Electric plugs and sockets and ceiling roses	..	1
Rating and testing of heating elements	..	1
Garden tools	..	1
Joiners' glue	..	1
Asbestos-cement products	..	1
Plugs and sockets and switches	1	1
Vegetables	1	1
Mincers	1	1
Electric kettles and jugs	1	1
School rulers	1	1
Totals	166	1,063

Use of Standard Mark

The extension of the use of the Standard Mark to 5 further industries during the year, and the issue of 161 new licences within the industries previously covered, shows its growing recognition as a hall-mark of quality. It can now be used in connection with 43 classes of commodities, processes, and products. Although, in many cases, only a few licences have been issued in respect of each industry, these cover nearly all units operating within the industry concerned. From this it is clear that use of the Standard Mark is more widespread than might appear from the figures in Table A. In addition, there is ample evidence that trading interests are using the Standard Mark more actively, and consumers are showing more and more appreciation of this attitude on the part of manufacturers.

The inspection of commodities bearing the Standard Mark was continued during the year. Again, it was found that such commodities seldom failed to conform to specification and that the exceptions were generally due to oversight or misunderstanding. The relationship with trading interests using the Standard Mark has continued on a co-operative and constructive basis.

BUILDING STANDARDS

Advantage of Standard Codes.—The adoption by local bodies of standard codes in connection with all aspects of building will do away with the need for manufacturers and merchants to make and stock a wide range of types and sizes, a diversity which tends to reduce output and increase production costs. Similarly it will reduce the service charges of architects, builders, plumbers, and others by eliminating the need to work to varying requirements. Adherence to a national standard will facilitate the manufacture, distribution, and installation of this class of equipment. In addition, the national standard will save great trouble and expense on the part of individual local bodies.

Building Code Sectional Committee

The parent committee has reviewed and co-ordinated the work of the committees under its direction—namely, the Building Code Technical Committee, the Floor Loading Panel, the Fire Prevention Committee, the Fire Doors Panel, the Theatre By-law Sub-committee, and the Panic Prevention By-law Committee. Conferences were arranged to discuss county building by-laws and the Counties Building Code.

Further consideration was given the question of a national survey of existing buildings, but it was decided to defer this matter until the committee was requested to participate in the preparation of a scheme for the classification of buildings.

Chimneys.—The revision of Section IX (Chimneys) of the standard model building by-law, sections I–X, published in 1936 by the original Standards Institution, was completed in draft form during the year, and circulated to interested parties for comment. It is hoped that the review of this part of the code, which will cover all aspects of chimney construction, will be completed this year.

Reinforced Concrete Bearing-wall Construction.—Consideration was given to the suitability of this class of construction for use in buildings not exceeding three stories in height. When the investigation is completed, the finding will be issued as a further part of the Standard Code of Building By-laws. This should be welcomed by architects and builders, because it offers both greater scope and economy of materials.

Fire Prevention By-law.—This by-law, completed during the year, supplements the fire-protection provisions of the Standard Code of Building By-laws by laying down essential requirements relating to the control of fire in its early stages. These provisions, while not part of the building by-laws, are necessary to ensure full protection against fire hazards.

Theatre By-law.—This part of the Standard Code of Building By-laws was completed in preliminary draft form during the year. It incorporates such requirements as are necessary in respect of theatres and places of public assembly which are not dealt with elsewhere in the code. It deals with special constructional requirements, means of egress, lighting, alarm systems, seating, furnishing, and fittings.

Panic Prevention By-law.—Consideration was given to comments received on the draft panic prevention by-law. This entailed so many amendments that it was found desirable to submit a revised draft for further review.

County Building By-laws.—The Statutes Amendment Act, 1947, gave counties and Town Boards the same by-law-making powers as those enjoyed by cities and boroughs. A special conference was called to review the Building Code and decide if any modification was necessary to make it suitable for counties and Town Boards.

Fire-protection By-laws.—Following the recommendations of the Royal Commission set up to investigate the Ballantyne's fire in Christchurch in 1947, a full programme of work was initiated in fire-protection by-laws and was well advanced at the close of the year. The major aim is to establish a comprehensive code which will reduce the risk of fire and control its spread. This code will classify buildings according to hazards, considering class of construction and nature of occupancy. It will also cover, among other things, the protection of openings, the installation of fire-fighting equipment, alarm systems, and measures for evacuation.

The existing Egress Code is being revised as recommended by the Royal Commission, and separate codes and specifications are being prepared for theatre construction, fire-resisting ratings for building materials and structures, and fire-fighting equipment, including sprinkler systems, riser mains, hose reels, and portable extinguishers.

In carrying out the fire-protection programme, invaluable co-operation was extended by the representatives of all interests concerned. Particular mention must be made of the work of Mr. W. E. Aked, Building Superintendent to the Wellington City Council, and Mr. V. R. J. Hean, of the Ministry of Works.

Adoption of Standard Code.—Local authorities have made further progress with the incorporation of Parts I–IX of the Standard Code of Building By-laws in their own by-laws. At the end of the year 68 cities and boroughs had adopted Parts I–VI and 23 were taking the necessary steps. Sixty-two cities and boroughs had adopted Parts VII to IX and 25 others were in the course of adopting them. Parts I–IX had been adopted by four counties. Inquiries showed that the various parts would be even more widely adopted in the coming year.

The Municipal Association, at its last annual conference, endorsed the principle of incorporating standards codes in by-laws by citation, as provided by the Standards Act, 1941. Under this procedure the authorities concerned will work from the standard codes as originally issued.

Measurement of Buildings Committee

Comments on the proposed standard method for the measurement of building work received from quantity surveyors, architects, builders, and others confirmed the need for this standard specification. The first eleven parts have been recommended for issue, and the remaining twelve parts are now in circulation for comment.

Building Materials Sectional Committee

As well as co-ordinating the work of sub-committees, the parent committee directed action in connection with three draft British standards and seven British standards relating to building materials.

Timber Sectional Committee

Pinus radiata *Grading Rules.*—Consideration showed that two sets of grading rules were necessary for this timber, to apply before machining and after. These have been completed, the first set being issued as an addition to the National Grading Rules (N.Z.S.S. 169) and the second as a separate standard specification. This completes a series of grading rules covering all uses for *Pinus radiata* in building construction. Steps are now being taken to amend Part IX—Light Timber Construction—of the Standard Code to provide more specifically for the use of *Pinus radiata* as defined in the grading rules.

Kiln-drying Practice.—The proposed standard code of practice for the kiln-drying of timber was revised by a special panel and endorsed for issue. Kiln drying is now used almost universally in place of air drying, and the establishment of standard requirements should be of the greatest value.

Timber Preservation.—The technical Sub-committee reviewed the emergency standard specification for the preservative pre-treatment of timber by the cold-dipping process, and decided that it should be retained in the emergency series until research progressed sufficiently to permit the inclusion of other methods, especially the pressure method. The committee also considered the preparation of a standard code of practice for the preservative treatment of tawa and taraire timbers for use in furniture, as requested by the Household Furniture Committee.

Plumbing Sectional Committee

Plumbing By-laws.—The complete Standard Code of Sanitary Plumbing and Drainage By-laws was discussed by the Plumbing By-laws Committee with city engineers at a conference which endorsed the code and recommended its early publication. The issue of this standard code will be a further valuable contribution towards the modernization and unification of local-body by-laws.

Plumbing Supplies.—During the year the Plumbing Supplies Committee examined 11 British Standards, of which 3 were found to be suitable for adoption as New Zealand standard specifications.

A specification for water-taps was approved for issue subject to certain amendments following comment from the South African Bureau of Standards. A draft specification for non-ferrous (excluding lead) traps and wastes was found unduly restrictive and is being revised.

Electric Water-heaters.—A specification for thermal storage electric water-heaters has been completed and recommended for adoption. It was emphasized by the Electrical Supply Authority Engineers' Association, in sponsoring the specification, that one-third of the total power consumption was used by thermal storage water-heaters. It was estimated that the installation and use of heaters was responsible for the wastage of 8·9 per cent. of the total electric power generated. Proposals for the formulation of a supplementary code of practice for the installation of thermal storage electric water-heaters are shortly to be circulated for comment.

The series of standard specifications relating to immersion heaters and electric water-heaters is to be supplemented by a separate specification for elements. Preliminary attention has also been given to the development of a specification for thermostats.

Ceramics Sectional Committee

A British standard for fireclay sinks (B.S. 1206–1945) was found suitable for local conditions subject to minor amendments, and has been recommended for adoption and inclusion in the Standard Code of Sanitary Plumbing and Drainage By-laws.

Asbestos-cement Sectional Committee

The Committee considered requests from manufacturers that standard specifications be amended, in view of world shortages of asbestos, to allow the substitution of suitable mineral fibre. Tests showed that mineral fibres with a fusion point of not less than 1,200° C. (2,192° F.) are satisfactory, and the specifications were amended accordingly. This will enable greater production of an important building material.

General By-laws Sectional Committee

Following good progress with standard codes of by-laws relating to building construction, plumbing, and related matters, the Municipal Association of New Zealand requested the preparation of a similar standard code of by-laws covering all matters concerning good rule and government which lend themselves to the adoption of uniform requirements. The Association advised that over fifty boroughs wished to participate in the project and would adopt the standard by-laws as soon as they were available. It was likely that many other municipalities would take similar action.

It was estimated that the average cost of preparing such by-laws, were local authorities to operate individually, would be £750, with a total cost of about £90,000. The preparation of the standard code was estimated to cost £5,000. Apart from the cost of preparation, it was impracticable for local authorities to formulate adequate by-laws, as no single one could draw on the wealth of experience which was made available by standardization.

Following a conference of interested parties, the General By-laws Sectional Committee appointed working committees to prepare detailed provisions under the following headings :—

(1) *General.*—Good Rule and Government; Hawkers, Pedlars, and Itinerant Traders; Billiard Rooms; Riding Devices and Shooting Galleries; Household Refuse Purchasers; Libraries; Second-hand Timber.
(2) *Public Health.*—Nuisances; Offensive Trades; Removal of Refuse (Household and Trade); Cemeteries and Crematoria; Sale of Second-hand Clothing and Hiring-out of Same; Eatinghouses; Cordial and Other Food Producing Factories; Butchers, Fishmongers, &c.
(3) *Public Places.*—Public Baths and Swimming Pools; Scaffolding and Deposit of Building Materials; Signs and Hoardings; Carting Over Footways; Street Stalls; Fencing; Street Photographers; Street Names and House Numbers; General and Miscellaneous.
(4) *Waterworks.*—Water Supply; Meters; Water Collection Areas.
(5) *Land.*—Parks and Reserves.
(6) *Stock and Dairies.*—Abattoirs; Milk Vendors.
(7) *Traffic and Vehicles.*—Taxis; Carriers; Stands; Parking; Bicycles.

At the close of the year fifteen parts of the proposed standard code of general by-laws had been completed in draft form for circulation for comments, as follows: Good Rule and Government; Billiard Rooms; Household Refuse Purchases; Shooting Galleries; Hawkers, Pedlars, and Itinerant Traders; Abattoir and Meat Vendors; Offensive Trades; Removal of Refuse; Nuisances; Sale of Second-hand Clothing and Bedding and Hiring Out of Clothing; Cemeteries; Public Baths and Swimming Baths; Street Stalls; Scaffolding and Deposit of Building Materials; Public Places and Miscellaneous.

TECHNOLOGICAL STANDARDIZATION

Cement and Concrete Sectional Committee

Before the draft standard specification for concrete fencing-posts can be completed it is necessary to check the suitability of a new cantilever test now being examined by the Dominion Physical Laboratory.

The absorption and moisture tests for hollow loading concrete blocks were completed by the Dominion Physical Laboratory and the standard specification for these products is now ready for issue. It is required for citation in Part X—Masonry Buildings of Bearing-wall Construction—of the Standard Code of Building By-laws, which provides for the use of bearing walls of hollow blocks in single-story residences.

Mechanical Sectional Committee

This committee examined 81 draft British standards, 55 British standards, 4 draft Australian standards, 12 draft South African standards, 1 draft Palestine standard, and four amendments to British standards. Four of the British amendments were found suitable for incorporation in New Zealand standard specifications.

Electrical Sectional Committee

As well as reviewing the work of sub-committees, the parent committee has examined 25 draft British standards, 2 British standards, 2 draft Australian standards, 3 draft South African standards, and 7 amendments to overseas standards. Seven British standards were recommended for adoption as New Zealand standard specifications, while 24 British amendments were endorsed for incorporation in New Zealand standard specifications.

The Electrical Accessories Appliances Committee has made further progress with the revision of the existing standard specification for electric plugs and sockets, and with the formulation of a comprehensive series of standard specifications for domestic appliances. Specifications covering electric toasters and domestic electric irons have been completed, while good progress was made with further specifications for immersion heaters and electric cookers.

Preliminary work has been undertaken in connection with the preparation of a standard specification for the connector boxes commonly used in dwellings and similar locations; a specification is also being prepared for appliance connectors, and will make for interchangeability as well as safety and quality.

A special conference, called to discuss insulators, decided that a specification was necessary, and that the British standard for porcelain and toughened-glass insulators could be used as a basis. Affected interests are being circulated to determine its suitability to New Zealand.

Welding Sectional Committee

The Resistance-welding Apparatus Committee has reviewed the draft standard for the electrical performance of resistance-welding apparatus following comments after circulation, and the specification has been recommended for issue. The committee also examined 2 British standards, one of which, dealing with spot welding for light assemblies in mild steel, was recommended for adoption in New Zealand.

Drawing Office Practice Sectional Committee

The Architectural and Building Drawing Practice Committee has carefully examined both the British and Australian standards for architectural and building drawing office practice; the Australian standard was found more suitable to New Zealand requirements, although many of the symbols are different from those used in this country. Consideration is being given to whether the standard can be adopted with suitable amendment, or whether an original New Zealand specification is necessary.

Hearing Aids Sectional Committee

The Hearing Aids Technical Committee has examined a revision of the American standard for hearing aid batteries and the corresponding draft Australian standard. The Dominion Physical Laboratory has been asked to carry out tests to determine the service capacity of different classes of batteries.

Chemical Sectional Committee

Besides reviewing the work carried out under its direction by the Electroplating and Protective Metal Finishes Committee and the Laundry Starch Committee, the parent committee considered 38 draft British standards, 34 British standards, 1 draft South African standard, and 3 amendments to British standards which had been considered previously. Thirteen of the British standards examined were found suitable to New Zealand conditions and were recommended for adoption. The three amendment slips to British standards were also endorsed for incorporation in the corresponding New Zealand standard specifications.

It has been decided to issue separate specifications for electro-deposited metal coatings: (1) Copper, tin, and lead coatings; (2) nickel and chromium coatings; (3) zinc and cadmium coatings; (4) brass (speculum) and bright metal finishes: (5) silver-plating. The first two were completed and recommended for issue, the third was well advanced but is delayed pending comment on the corresponding draft British standard, and the last two have been deferred until corresponding British standards are available.

COMMERCIAL STANDARDIZATION

Packaging Divisional Committee

The Container Marking Sectional Committee considered and endorsed reports from its Dangerous Goods Marking Committee and Commodity Marking Committee, and, as a result, recommended the issue of a code of practice for marking and identification of packages, with special reference to those containing dangerous goods. It is proposed to issue this standard code as part of a comprehensive standard code of practice in respect of packaging generally.

Cost Accounting Terminology Committee

This committee met to consider comments received upon the standard code of cost accounting terminology issued last year. Comments received, particularly those from other countries, endorsed the need for a standard code of terminology and commended the progress which had been made in New Zealand. Typical of these comments is the following extract from a letter received from the Chairman of the Cost Accounting Sub-committee, Institute of Chartered Accountants in England and Wales:—

> There is at present no common language used in the world of costing, so that accountants, all too often, are unable to understand each other. Progress under these conditions is very difficult indeed.
>
> This New Zealand code of cost accounting terminology is therefore a valuable and timely contribution which will help to establish a common language. At the present, progress in this field is, without doubt, hindered by the many different tongues which cost accountants use. Every effort therefore, should be made to establish an agreed terminology.
>
> The code under review is excellent and is obviously the result of careful and skilled research and it will be of great value to all cost accountants and especially to those concerned with the building-up of a common language through the world of costing.

Government Purchasing Standards Committee

A review of the standard specification for paint for use on Service vehicles, originally issued in the emergency series during the war, satisfied the committee that this specification should be retained. Subject to minor amendments, it was recommended for reissue in the Government purchasing series of standard specifications.

Further progress was made with the development of a Government purchasing standard specification for domestic electric ranges sponsored by the Housing Division of the Ministry of Works. The School of Home Science, University of Otago, carried out cooking tests which showed that the tests specified in the relevant British standard were not suitable for New Zealand. Alternative tests have been suggested and are now being examined.

A draft Government purchasing standard specification for carpets was formulated and circulated for comment, and a proposed specification for Government office furniture was further considered by the Government Office Furniture Committee. Particular attention was given the height of typewriter desks by a special Typistes' Desk Panel.

Commercial Stationery Sectional Committee

Sizes for cut and packed duplicator and typewriter paper are provided in a specification which was completed during the year and which will greatly facilitate the handling and filing of office papers.

DOMESTIC COMMODITY STANDARDIZATION

Commodity Divisional Council

The parent committee met to review and direct the work of commodity standardization under its control. It also considered 2 draft British standards and 1 draft Australian standard which were referred to the appropriate committees for consideration.

Textile Sectional Committee

The existing standard specification for men's working garments was reviewed in the light of comments from interested parties and was amended in minor respects to render its provisions more effective.

Further progress was made towards the establishment of a standard range of sizes for women's and girls' underwear. A wall chart illustrating the sizes of the British standard was distributed to appropriate trade groups in New Zealand, and it is hoped that agreement will be secured on a draft New Zealand specification. Representations from women's and consumers' organizations stress the urgent need for standard-size ranges and designations.

Proposals have been formulated for a draft standard specification establishing size designations for girls' frocks, gym frocks, and coats. Garments are being made to the proposed measurements as a practical check of their suitability.

Footwear Sectional Committee

The Wood Heels Committee reviewed the emergency standard specification for heels for women's footwear (N.Z.S.S. E.17) and recommended that this be retained and reissued in the regular series.

The Slippers Committee decided on minimum requirements for men's and women's woolly-lined slippers, and recommended these for incorporation in the main standard specification for footwear. A similar draft standard for women's felt wood-heel slippers was approved for circulation and comment.

The Footwear Survey Advisory Panel examined the fitting of shoes made on trial lasts, and a sub-committee is being set up to make further investigations.

Foodstuffs

The existing standard specifications for vegetable grades were reviewed by a conference of commercial growers and representatives of Government Departments, and later by the Vegetable Grades Committee. Some amendments were made to the

standard grades. Trading interests have expressed their desire to work towards the general adoption of the standard grades under the ægis of the Standard Mark, and discussions have been held to determine how the benefits of standardization can best be gained by all concerned.

While reviewing the existing specification for grades of meat for the local market, the Meat Grades Committee considered the recommendation of the Meat Supplies Commission that provision be made for a super grade of beef. It was decided, however, that the introduction of such a grade would not be advantageous at the present time. The specifications were extended to provide for further cuts and joints and for a classification of carcasses according to weight ranges.

Further attention has been given to the question of bread weights and in particular to the best method of specifying the minimum weights of split loaves. The Bread Approvals Committee continued to examine applications from bakers for recognition of special breads.

Household Equipment

The Carpet Sweepers Committee, the Mincers Committee, the Pressed Steel Household Utensils Committee, and the Dustbins Committee have each met during the year.

The series of standard specifications relating to kitchen equipment has been extended by the issue of a further specification for mincers, bean slicers, and juice extractors. Specifications have also been recommended for carpet sweepers and for pressed steel and enamelled pressed steel utensils and kitchen sinks.

School Stationery and Requisites Sectional Committee

The standard specification relating to school stationery was reviewed, and the provision permitting the use of a lower grade of paper than that normally used (introduced because of the shortage of suitable paper during the war period) was deleted. There had been several amendments to the standard since it was first issued in March, 1942, and the opportunity was taken to consolidate these. The specification was reissued in a revised form.

A draft standard specification for school rulers has been recommended for issue as Part I of the standard specification for school requisites. Two types of rulers have been specified, one with simple gradations and the other with more detailed markings. The work of both teachers and pupils will be made easier by having uniform rulers.

PRIMARY INDUSTRY STANDARDS

Tillage Machinery Parts.—The urgent need for standardization of the wearing parts of agricultural machinery was confirmed by a panel which met to discuss exploratory work which had been carried out in this sphere. Priority is to be given to plough shears and heads.

Milk Bottles.—A proposed specification defining the shapes of bottles, their capacity, and the thickness and quality of glass, has been recommended for issue.

Dairy Sectional Committee

The Dairy Products and Requisites Committee has continued to work in close collaboration with the corresponding committees of the British Standards Institution with the object of adopting uniform dairy standards throughout the British Commonwealth.

Other committees and panels have studied methods for estimating the copper and iron content of butter (standard methods have now been approved for issue), and the possibility of adopting one method of carrying out the reductase test on milk. Draft standards are being circulated for alkaline cleaners and for milk and cream cans.

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

The New Zealand Standards Institute has continued to participate in the work of the International Organization for Standardization (ISO). During the year ISO has greatly expanded its activities. In addition to the 35 international committees which had already been established as indicated in the last report, a further 21 of the committees listed in that report have now been instituted. In addition, the following 2 committees not previously mentioned have also been formed: ISO/TC/68, Standardization in the Sphere of Banking; ISO/TC/69, General Definitions Relating to Chemical and Physical Test Results.

New Zealand has continued to participate whenever practicable in the work of these committees. In particular, arrangements were made for representation at a meeting of ISO/TC/38, Textiles, held in England in 1948. Dr. E. Marsden, Scientific Adviser to the New Zealand Government in the United Kingdom, and Mr. R. V. Peryman, formerly chief chemist, New Zealand Woollen Mills Research Association, ably represented New Zealand. They have also been associated with the work of a number of sub-committees which were set up in this field.

UNIFICATION OF SCREW THREADS

In November, 1948, representatives of the United States, Canadian, and British Governments, and of the national standards organizations in each country, signed a Declaration of Accord concerning the unification of American and British screw threads.

This agreement represents the culmination of some thirty years collaboration and investigation. It has been acknowledged by engineers and industrialists as the most advanced single step taken since the end of the war to ensure over-all savings in production costs. This was confirmed by experience during the war, which provided clear evidence of a direct economic loss of at least 100,000,000 dollars, due to the necessity to duplicate plant in each country, in order to produce and service war equipment to satisfy the needs of all. The economic loss incurred was not, of course, confined to the duplication of plant. Even greater was the incalculable loss which resulted from the confusion and delays caused by the use of equipment requiring the two series of screw threads.

For many years British industry has been using a screw thread having an angle of 55° and thread form with rounded crests and roots. United States manufacture has been based on a screw thread with a 60° angle and flat crests and roots. Canadian industry, being closely associated with Britain and the United States, has had to use both threads. The agreement for unification now provides for a standard screw thread at a 60° angle and a rounded root for the threads. The crest may be flat as preferred in the United States, or round as preferred in Britain.

Each of the three countries is preparing standard specifications incorporating the decisions reached. The British standards, when completed, will be considered in New Zealand, as well as in the other Commonwealth countries, and will be formally adopted here with the concurrence of industry, so that we may secure the significant advantages of these advances. The standardization now achieved permits complete interchangeability of interrelated parts of equipment made in the various English-speaking countries. This will yield advantages in the economic field, as well as from the point of view of national security, beyond our capacity to estimate at this stage. Because all mechanisms and structures are held together by fastenings such as bolts, nuts, screws, and rivets, the unification of screw threads will greatly facilitate international trade in these products.

This development is but further evidence of the importance of standardization in the international sphere, which is but the second stage that follows standardization on a national basis. In all countries there is now increasing recognition that the extension

of standardization in the international field will yield much greater benefits than have been conceived in the past and may well open a vast new era of scientific, technological, and industrial progress.

EXCHANGE OF STANDARD SPECIFICATIONS

Under the reciprocal exchange arrangement which exists among the English-speaking and several other countries, copies of all specifications formulated in New Zealand were sent to the standardizing bodies in these countries. In return, during the year under review, New Zealand received 2,060 similar documents from 27 standards and other organizations, as set out in Table B hereunder. This reciprocal arrangement assists to ensure that, in so far as is practicable and desirable, uniform standard specifications are adopted by the countries concerned. Following the increased attention that has been given to international standardization, the exchange of specifications was extended during the year to the national standards organizations in Italy and Japan.

Table B—Specifications Received from Other Countries

Source of Supply.	New, Revised, and Tentative Standards.	Draft Standards.	Total.
National Standardizing Bodies			
British Standards Institution	133	216	349
Standards Association of Australia	38	22	60
Canadian Standards Association	10	..	10
Indian Standards Institution	..	2	2
South African Bureau of Standards	15	71	86
South African Standards Institution	..	1	1
American Standards Association	56	..	56
Association Francaise de Normalisation (France)	237	76	313
Associacao Brasileira de Normas Tecnicas (Brazil)	1	..	1
Dansk Standardiseringsraad (Denmark)	11	3	14
Finlands Standardiserings Commission (Finland)	40	..	40
Hoofdcommissie Voor de Normalisatie in Nederland (Holland)	13	18	31
Institut Belge de Normalisation (Belgium)	12	10	22
Institute for Industrial Research and Standards (Eire)	..	5	5
Instituo Uruguayo de Normas Tecnicas (Uruguay)	58	..	58
Magyar Onszagas Szabnanyok (Hungary)	217	..	217
Osterreichischer Normenausschuss (Austria)	90	..	90
Standards Institution of Palestine	10	5	15
Vsesojuznyj Komitet Standardtov (USSR)	125	..	125
Other Organizations			
American Society for Testing Materials	256	..	256
Canadian Government Specifications Board	106	..	106
Indian Railways Board	10	..	10
National Electrical Manufacturers' Association	2	..	2
Society of Automotive Engineers	15	..	15
Society of Motor Manufacturers and Traders (Britain)	17	..	17
United States Department of Commerce (National Bureau of Standards)	28	..	28
United States Treasury Department (Bureau of Federal Supply)	131	..	131
Totals	1,631	429	2,060

SALES OF STANDARD SPECIFICATIONS

During the year sales of standard specifications totalled 25,201 volumes. Proceeds totalled £3,083 9s.

ACKNOWLEDGMENTS TO MEMBERS OF COMMITTEES AND ORGANIZATIONS

It is desired to record appreciation of the valuable service rendered gratuitously by the members of the Standards Council and all its committees and by the many other people representing Government Departments, local authorities, professional, commercial, industrial, and consumer interests, including the executives of various organizations, all of whom have contributed so generously in time and effort.

Since, due to my retirement, this is the last report I will present as Chairman of the Standards Council, I desire to record my appreciation of the extraordinary progress it has made since its inception. Reference to previous reports will show the outstanding advantages and economies that have been derived from its activities, both on a national and international basis. These benefits, I am confident, will be greatly extended in the future when there is a fuller and better appreciation of the economic importance of standardization, which is already in evidence in this country and overseas.

A. R. GALBRAITH, F.R.S. (Edin.), M.Inst.C.E.,
Chairman, Standards Council.

APPENDIX

NEW ZEALAND STANDARD SPECIFICATIONS RECOMMENDED DURING THE YEAR FOR DECLARATION, REVISION, AMENDMENT, OR WITHDRAWAL

1. New Standards

Building

N.Z.S.S.	
595	Hollow load-bearing concrete masonry blocks.
611	Code of practice for the glazing and fixing of glass for buildings; being B.S. 973–1945.
624	Timber ladders.
631	Classification and grading of *Pinus radiata* (insignus pine).
632	Code of practice for the kiln-drying of timber.
644	Definitions for fire-resistance, incombustibility and non-inflammability of building materials and structures (including methods of test); being B.S. 476–1932.
673	Fire prevention by-law.

Chemical Engineering

600	Nickel anodes (for electroplating); being B.S. 558–1934.
669	Electroplated coatings of nickel and chromium on steel and brass; being B.S. 1224–1945.

Chemicals and Scientific Apparatus

613	Carboys and carboy hampers; being B.S. 678–1936.
614	Meteorological thermometers (maximum, minimum, ordinary), sheathed type; being B.S. 692–1936.
637	Graduated measuring cylinders; being B.S. 604–1935.
638	Crow receivers; being B.S. 605–1935.
639	Nessler cylinders; being B.S. 612–1935.
640	Kohlrausch flasks; being B.S. 615–1936.
641	Laboratory incubator, water baths and oven thermometers; being B.S. 619–1935.
642	Cyanides (classes A and B) suitable for electroplating; being B.S. 622–1935.
643	Sugar flasks; being B.S. 675–1936.
726	Ethyl alcohol; being B.S. 507–1933.
727	Report on standard temperature of volumetric glassware; being B.S. 554–1934.
728	Nickel ammonium sulphate and nickel sulphate for electroplating; being B.S. 564–1934.
729	Bacteriological test tubes, Durham fermentation tubes and Dreyer agglutination tubes; being B.S. 625–1935.
730	Flasks with graduated necks, three special; being B.S. 676–1936.

Electrical Engineering

620	Heavy duty flameproof type plug and socket; being B.S. 279–1947.
621	Dimensions and testing of metal sheathed or braided varnished cambric insulated annealed copper conductors for electricity supply; being B.S. 608–1943.
633	Intrinsically safe electrical apparatus and circuits; being B.S. 1259–1945, *amended to suit New Zealand requirements.*
635	Battery-operated electric fences; being B.S. 1222–1945.
679	Track circuit insulation; being B.S. 456–1932.
680	Thirty-ampere flameproof plugs and sockets and cable couplers; being B.S. 1395–1948.
720	Thermal storage hot water heaters.
732	Electrical performance of resistance welding apparatus.

Gas and Solid Fuel

636	Sampling of small fuel up to 3 in., embodying some general principles of sampling (by Dr. E. S. Grumell and Dr. A. C. Dunningham); being B.S. 403–1930.

1. New Standards—*continued*

Household Commodities

N.Z.S.S.	
597	Carpet sweepers.
602	Household tinware utensils. (*Superseding* N.Z.S.S. E.232.)
646	Mincers, bean slicers and juice extractors.
665	Pressed steel frying pans.
666	Enamelled pressed steel stewpans.
667	Enamelled pressed steel pie dishes.
668	Heels for womens' footwear. (*Superseding* N.Z.S.S. E.17.)
683	Non-automatic domestic electric toasters.
733	Electric jugs with non-metallic bodies.
734	Domestic electric irons.

Iron and Steel

617	Terms and definitions relating to the heat treatment of steel: being B.S. 1392–1947.
618	Carbon molybdenum steel castings; being B.S. 1398–1947.
619	High carbon bright steel (silver steel); being B.S. 1407–1947.
657	Hard drawn steel wire for the manufacture of springs; being B.S. 1408–1947.
675	Black heart malleable iron castings; being B.S. 310–1927.
677	Impact test for cast iron: being B.S. 1349–1947.

Illumination and Lighting Fittings

678	Carbon filament electric lamps; being B.S. 33–1930.

Mechanical Engineering

446, Part 2	Galvanized steel wire and strand for signalling purposes—446, Part 2: Galvanized solid steel wire for signalling purposes; being B.S. 163, Part 2–1945.
615	Wrought iron chain slings and rings, links alternative to rings, egg links and intermediate links; being B.S. 781–1938, *amended to suit New Zealand requirements.*
616	Semi-rotary pumps, hand operated, double acting for water; being B.S. 1208–1945.
647	Mild steel shackles: being B.S. 825–1939.
649	Steel fishbolts and nuts for railway rails: being B.S. 64–1946.
650	Bordeaux connections for wire rope and chain for general engineering purposes; being B.S. 461–1932.
651	Thimbles for wire ropes for general purposes; being B.S. 464–1932.
652	Wire ropes of special construction for engineering purposes, inclusive of cranes and lifts and excavators: being B.S. 621–1935.
653	Colliery belt fasteners; being B.S. 660–1936.
654	Testing of mine fans: being B.S. 707–1936.
656	Power driven circulators for heating plants; being B.S. 1394–1947.
674, Part 2	Airscrew hubs and their fixings—674, Part 2: Engine flange fixings; being B.S. 87, Part 2, 1931.
676	Conveyor troughing, for use underground in mines: being B.S. 418–1931.
731	Spot welding for light assemblies in mild steel; being B.S. 1140–1946.

Nomenclature, Abbreviations, &c.

634	Railway signalling symbols— 634, Part 1: Schematic symbols; being B.S. 376, Part 1, 1937. 634, Part 2: Wiring symbols and written circuits; being B.S. 376, Part 2, 1933.

Non-ferrous Metals

655	Sampling and analysis of high purity zinc and zinc alloys for die castings: being B.S. 1005–1942.

Plumbing

606	Drawn lead traps; being B.S. 504–1944.
612	Ceramic lavatory basins (dimensions and workmanship only); being B.S. 1188–1944.
625	Bib pillar hose and globe taps, and stop taps from ¼ in. to 1 in.
627	Schedule of cast iron drain fittings, spigot and socket type, for use with drain pipes; being B.S. 1130–1943.
628	Centrifugally-cast (spun) iron pipes; being B.S. 1211–1945.
658	Fireclay sinks (dimensions and workmanship); being B.S. 1206–1945, *amended to suit New Zealand requirements.*
664	Enamelled pressed steel kitchen sinks.
671	Code of plumbing and drainage by-laws.

1. New Standards—*continued*

Radio Components

N.Z.S.S.	
684	Fixed paper-dielectric capacitors (home-receiver replacement-type); being American War Standard C. 16·6–1943.
685	Dry electrolytic capacitors (home-receiver type); being American War Standard C. 16·7–1943.
686	Fixed mica dieletric capacitors (home-receiver replacement-type); being American War Standard C. 75·3–1942.
687	Fixed composition resistors; being American War Standard C. 75·7–1943.
688	Power type wire-wound rheostats; being American War Standard C. 75·9–1944.
689	Variable wire-wound resistors (low-operating temperature); being American War Standard C. 75·10–1944.
690	Fixed paper-dielectric capacitors, hermetically-sealed in metal cases; being American War Standard C. 75·16–1944.

Textiles and Clothing

659	Men's working garments. (*Superseding* N.Z.S.S.E. 139.)

Miscellaneous

622	Calculating the intensities of lighthouse beams and beams from cognite projection apparatus; being B.S. 942–1941.
623	Conditions of tender and general conditions of contract for civil engineering works.
626	Measuring apparatus for photographic processing; being B.S. 1405–1947.
629, Part 2	Code of practice for the commercial marking and identification of packages (Part 2: Code of practice).
661	Method of determining filter factors of photographic negative material; being B.S. 1437–1948 with amendment No. 1. PD. 821.
662	Gymnasium equipment for schools; being B.S. MOE. 25–1947, *amended to suit New Zealand requirements.*
735	Sizes for cut and packed duplicating and bank papers.

2. Revised New Zealand Standards

50	Rubber-insulated cables and flexible cords; being B.S. 7–1946, with amendments Nos. 1 and 2–PD. 540 and PD. 590.
102	Leclanche type primary cells and batteries; being B.S. 397–1946.
175	Fuel oil for burners; being B.S. 742–1947.
380	Flameproof electric lighting fittings for use in coal mines and other places where inflammable gas or vapour may be present in the surrounding atmosphere; being B.S. 889–1947 with Amendment No. 1–PD. 721.
382	Cable glands and sealing boxes for use in mines; being B.S. 542–1947.
282	Mineral fibre cement unreinforced flat sheets and corrugated sheets.
284	Mineral fibre cement spigot and socket rainwater pipes, gutters, spoutings and fittings.

3. Amended Standards

9	Fibre cores for wire ropes; being B.S. 525–1933: Amendments Nos. 1 and 2–PD. 242 and PD. 599.
54	Indicating Ammeters, voltmeters, wattmeters, frequency and power factor meters; being B.S. 89–1937: Amendment No. 5–PD. 619.
75	Electrical performance of industrial electric motors and generators, with Class A insulation. Rating permitting overloads: Amendment No. 4–PD. 652.
76	Electrical performance of large electric generators and motors, excluding alternators of the steam turbine driven type. Rating permitting overloads: Amendment No. 4–PD. 300.
95	Code of Building By-laws: Part IX: Light timber construction: Amendment No. 1.
158	Tungsten filament general service electric lamps; being B.S. 161–1940: Amendment Nos. 1, 2 and 3–PD. 464, PD. 530 and PD. 546.
169	Classification and grading of New Zealand building timbers (National grading Rules): Amendments 1, 2, 3 and 4.
206	Round strand steel wire ropes for cranes; being B.S. 302–1938: Amendments Nos. 1 and 2–CF 8996 and PD. 600.
213	Paper-insulated cables for use in mines; being B.S. 760–1943, *amended to suit New Zealand requirements:* Amendments Nos. 1 and 2–PD. 518 and PD. 606.

3. Amended Standards—*continued*

N.Z.S.S.	
283	Dimensions and workmanship of asbestos cement spigot and socket flue pipes and fittings for gas-fired appliances; being B.S. 567–1934, *amended to suit New Zealand requirements:* Amendment No. 2–PD. 607.
334	Hand hammers; being B.S. 876–1939: Amendment No. 2–PD. 607.
386	Vulcanized fibre (natural colour) rods and tubes for electrical purposes; being B.S. 934–1940: Amendments Nos. 1 and 2–PD. 640 and PD. 710.
387	Flexible cords for miners' cap-lamps; being B.S. 937–1940: Amendments Nos. 1 and 2–PD. 210 and PD. 688.
412	Traction lamps (series burning); being B.S. 867–1939: Amendment No. 3–PD. 550.
446, Part 1	Galvanized steel wire strand for signalling purposes; being B.S. 163, Part 1, 1943: Amendment No. 2–PD. 700.
469–484	Vegetables— 469, Swedes: Amendment No. 1. 471, Parsnips: Amendment No. 1. 473, Pumpkins and squash: Amendment No. 1. 474, Cabbages: Amendment No. 1. 475, Silver beet: Amendment No. 1. 476, Cauliflower and broccoli: Amendment No. 1. 479, Beans (excluding broad beans): Amendment No. 1. 483, Tomatoes: Amendment No. 1.
491	Synthetic-resin bonded-paper sheets for use as electrical insulation at power frequencies; being B.S. 1137–1943: Amendment No. 1–PD. 711.
524	Cold rolled copper sheets and strip (half-hard and annealed) for general purposes (up to and including 3 S.W.G. [0·252 in.] thick and 42 in. wide); being B.S. 899–1940: Amendment No. 1–PD. 659.
525	Dial gauges for linear measurements, excluding black plunger type: Amendments Nos. 1 and 2–PD. 445 and 497.
536	Manilla ropes for general purposes (excluding manilla ropes used for lifeboat falls and for working cargo); being B.S. 431–1946 *with amended title:* Amendments Nos. 1 and 2–PD. 561 and PD. 620.
E.79	Grades of meat for sale on the local market, and definitions of joints and cuts: Amendment No. 5.
E.168	Cotton-braided fabrics for the reinforcement of rubber-hose; being B.S. 1103–1943: Amendment No. 1–PD. 689.

4. Government Purchasing Standards

GP.3	Paint for use on Service vehicles. (*Superseding* N.Z.S.S. E.140.)
GP.4	Domestic electric radiators.

5. Emergency Standards Recommended for Withdrawal

E.17	Heels for women's footwear. (*Superseded by* N.Z.S.S. 668.)
E.139	Men's working garments. (*Superseded by* N.Z.S.S. 659.)
E.140	Paint for use on Service vehicles. (*Superseded by* N.Z.S.S. GP. 3.)
E.232	Household tinware utensils. (*Superseded by* N.Z.S.S. 602.)

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