

N.Z.S.S. 109 (B.S.S. 566-1934), which had been previously adopted, has since been found not to meet the requirements of local conditions, and, consequently, has been withdrawn from the list of New Zealand standards.

One draft standard specification has also been recommended for adoption.

The sub-committee has performed most valuable work in the preparation of a comprehensive draft Code of Recommended Illumination Values, comprising twenty pages. The provisions were formulated by a representative and expert committee, which, in addition to using its own valuable knowledge and experience, has examined reports of comprehensive investigations carried out in other countries and has examined and investigated actual lighting values for domestic, office, and factory purposes under varying local conditions. The draft provisions, therefore, embody the most reliable authoritative and practical information in regard to most generally satisfactory illumination values for the differing activities and requirements for which they are prescribed.

The draft code has been issued for comment to all affected interests, and this comment will subsequently be submitted to the committee for consideration, when any necessary amendment will be made in accordance with the suggestions received.

Ophthalmological authorities agree that adequate standards for lighting afford the greatest protection from injury to vision, with its associated nervous disabilities, and that much defective eyesight could be avoided if this consideration were given sufficient attention. It is also acknowledged by research workers in older countries that good lighting is an aid to greater efficiency, to the avoidance of accidents, and to the promotion of employee welfare generally.

The code, when finally issued, should therefore be very valuable as a guide concerning the correct illumination required to meet varying conditions.

Mechanical Engineering Divisional Committee (Four Meetings).

Fire-extinguishers Sub-committee 5 meetings.

The draft specifications examined number fifty-two British and four Australian, while twenty-five British standard specifications have also been examined. Five of the standard specifications have been endorsed as New Zealand standard specifications, as follows :—

N.Z.S.S.	B.S.S.	
136	349-1932	Identification Colours for Gas-cylinders.
137	726-1937	Measurement of Air-flow and Free Air delivered by Compressors, Standard Method of.
138	720-1937	Calibration of Carburettor Jets for Petrol-engines (all types), (for Flows not exceeding 2,000 ML. per minute), Standard Method for the.
139	394-1936	Short-link Wrought-iron Crane Chain (excluding Pitched or Calibrated Chain) : subject to slight amendment.
147	739-1937	Machine-tool Elements, Dimensions for.

The Committee has also recommended for adoption thirty-two draft standard specifications covering materials and machinery used in connection with mechanical engineering.

The volume of work performed by this committee in making a detailed examination of the provisions of the eighty-one draft and standard specifications illustrates the importance of standardization to engineering activity.

The advancing mechanization associated with trade and industry, indeed with the whole of social organization, is making demands upon the engineers that cannot be met except by a corresponding increase in the application of the standards principle to their activity. Standards, by predefining dimensions, patterns, strengths, methods of test, construction, and installation, and all related factors and considerations, greatly simplify the complexity of the procedure of designing, manufacturing, installation, and operation.

Standard specifications have, for instance, reduced the number of rolled section material, steel joists, angle bars, and other iron and steel sections to less than one-half of what were previously used, with a corresponding reduction in the cost of manufacture and distribution, accompanied by better service and more carefully selected material for the particular purpose for which it is to be used.

The interchangeability of engineering components has also been greatly assisted by the development of standards for such equipment and material as bolts and nuts, spanners, rivets, pipe threads and flanges, keys, taper pins, &c., providing for standards with minimum and maximum tolerances for limits and fits. The advantage to the user when such parts require replacement is obvious, as also are standards for design, construction, and workmanship from the point of view of safety of the community.

The inconvenience and disadvantage to users were they called upon to develop separate specifications because of the lack of national or uniform standards needs only to be mentioned to be fully appreciated. While local standards for engineering material and equipment now exist, the advantage that accrues could be greatly extended with the adoption of Empire standards, as has been done, for example, in the case of marine boilers for ships.

The work of the committee in carefully examining and co-ordinating New Zealand standards with British standard specifications is making an effective contribution towards this end, and is in accord with the repeated recommendations from successive Imperial Conferences.

A further value of engineering standards is that, in many instances, they replace text-books, as statements of best practice as agreed upon by members of committees chosen for their special qualifications for this work.