



**TOGETHER**  
*for a sustainable future*

## OCCASION

This publication has been made available to the public on the occasion of the 50<sup>th</sup> anniversary of the United Nations Industrial Development Organisation.



**TOGETHER**  
*for a sustainable future*

## DISCLAIMER

This document has been produced without formal United Nations editing. The designations employed and the presentation of the material in this document do not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations Industrial Development Organization (UNIDO) concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries, or its economic system or degree of development. Designations such as “developed”, “industrialized” and “developing” are intended for statistical convenience and do not necessarily express a judgment about the stage reached by a particular country or area in the development process. Mention of firm names or commercial products does not constitute an endorsement by UNIDO.

## FAIR USE POLICY

Any part of this publication may be quoted and referenced for educational and research purposes without additional permission from UNIDO. However, those who make use of quoting and referencing this publication are requested to follow the Fair Use Policy of giving due credit to UNIDO.

## CONTACT

Please contact [publications@unido.org](mailto:publications@unido.org) for further information concerning UNIDO publications.

For more information about UNIDO, please visit us at [www.unido.org](http://www.unido.org)



**DO 1586**

**ID**

**United Nations Industrial Development Organization**

**Distr.  
LIMITED**

**ID/US. 61/CP.6  
16 September 1970**

**ORIGINAL: ENGLISH**

**Seminar on the Organisation and Administration of  
Industrial Services (for Asia and the Middle East)**

**Tashkent, USSR, 12 - 26 October 1970**

**THE SINGAPORE INSTITUTE OF STANDARDS AND INDUSTRIAL RESEARCH ✓**

**by**

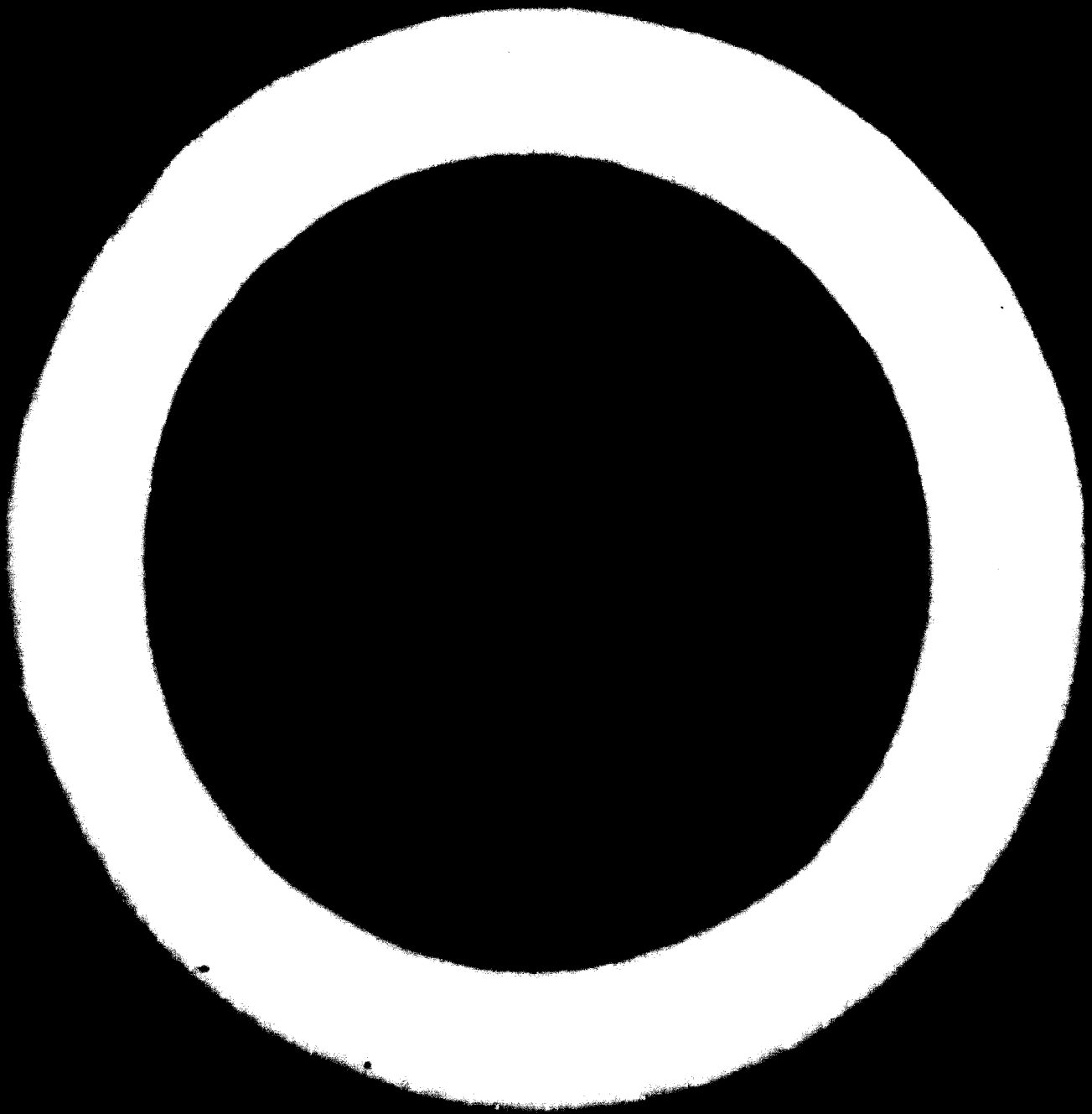
**Choo-Tiong Yew  
Assistant Director**

**Singapore Institute of Standards and Industrial Research**

✓ **The views and opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Secretariat of UNIDO. This document has been reproduced without formal editing.**

**id.70-5201**

We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.



## THE SINGAPORE INSTITUTE OF STANDARDS AND INDUSTRIAL RESEARCH

### Introduction

The Economic Development Board was established in 1961. It was entrusted with the responsibility to plan and promote rapid industrialisation in Singapore. The Industrial Research Unit (IRU) from which the Singapore Institute of Standards & Industrial Research (SISIR) was evolved, was established in 1963 with the assistance of the New Zealand Government under the Colombo Plan. The Unit was one of the many technical departments within the framework of the Economic Development Board. The first part of this paper deals with the establishment and development of the Singapore Institute of Standards & Industrial Research. The second part gives a brief account of the current standardization activities of the Institute.

In discussing the establishment of SISIR, it is necessary to mention the work of the Industrial Research Unit because the groundwork of standardization in Singapore between the years 1965 and 1968 was carried out by this Unit. It was on the foundation of this Unit that the present Standards Institute was developed.

### The Industrial Research Unit

When IRU was established in 1963, it consisted of 5 Sections, namely, Administration, Mechanical/Civil Engineering, Physics/Electrical, Instruments Repair and the Chemistry Sections. Some of the aims of the Unit were:

- (1) to provide testing and other laboratory facilities and services,
- (2) to survey, study and develop the use of local raw materials,
- (3) to undertake industrial research,
- (4) to service, repair and calibrate industrial instruments and scientific equipment.

For the first 2 years, the Unit was not involved in standardization work. At that time, many of the new industries were having teething problems with their machinery and production. The main activities of the Unit then were therefore, trouble-shooting, testing and calibration of industrial instruments.

#### The Standards Unit

Recognising the importance of industrial standards, a Standards Unit was set up within the Economic Development Board in 1964. The preparation of standards and specifications involves costly and laborious processes. To make full use of the experience and knowledge accumulated by other Standard Institutes of the world, the Standards Unit got in touch with these established organisations and was able to obtain many useful information which are all so important for the preparation of Singapore Standards in the later years. During this period, all laboratory facilities required in connection with the Standards Unit's work were provided by the Industrial Research Unit.

The first Working Committee organized by the Standards Unit in 1964 was the Committee on Paint Specifications. Climatic conditions in Singapore are very severe on protective coatings and it was highly desirable from both the manufacturers' and consumers' point of view to have some specifications so that the manufacturers may have some guidance as to what the quality of their products should be. To

assist the Committee in collecting the necessary data and to provide technical services to the paint manufacturers, a special paint laboratory equipped with all necessary instruments for the evaluation of paints was set up in the Industrial Research Unit in early 1964.

The Standards Section within IRU

To allow better co-ordination and to ensure smoother and more efficient organisation of standardization programme, the Standards Unit was incorporated into the Industrial Research Unit in 1965. The placing of standards activities under a common director permitted the Standards Section to have more direct access to the facilities and technical services of the Unit.

The Industrial Research Unit successfully organised a Committee for standardizing the use of timber in Singapore with particular reference to the Building industry in 1965. A "Code of Practice for the Use of Timber in Building Construction" was prepared and published in 1966. This Code of Practice was well received by all in the building industry for at last the chaotic state of the timber industry was brought to order.

Standardization work in Singapore took a big step forward in 1966 when IRU became a member of the International Organisation for Standardization (ISO). The association with this world organisation enabled the Unit to come into better contact with other member standards institutions.

The Singapore Institute of Standards & Industrial Research (SISIR)

In early 1969 the Industrial Research Unit was re-organised to become the Singapore Institute of Standards & Industrial Research<sup>1/</sup>. With this re-organisation, standards activities gained momentum. Besides research programmes, all the activities of the Institute were geared towards standardization. The Institute remains as an agency within the Economic Development Board. In June 1969 the Parliament passed the "SISIR Bill" which gives the institute the legal authority to establish and promote the use of industrial standards in the Republic. With this, standardization programme went into full swing. It also marks the beginning of a new era in Singapore's industrialisation programme.

The Standards Council<sup>2/</sup> whose members consist of representatives from various industries, trade, commerce and Government agencies was formed. The duty of the Standards Council is to advise the Institute on all matters concerning quality control and standardization. It also guides the Institute with policies, programmes and procedures in the preparation and promulgation of Singapore's industrial standards and will promote their adoption by trade and industry. The Industry Standards Committees, Technical Committees, Sub-Committees and Panels<sup>3/</sup> are entrusted with the drawing up of specifications and standards.

In our first year of existence, 49 specifications have been prepared and approved. Several more are expected to be ready by 1971. Our Standards Council enjoys the support of all Sectors in Singapore.

---

<sup>1/</sup> See Appendix I.

<sup>2/</sup> See Appendix II.

<sup>3/</sup> See Appendix III.



The Institute has also intensified its drive to instil quality consciousness in Singapore. In 1969 the Quality Certificate Scheme was launched. This Scheme is aimed to promote quality consciousness among manufacturers. It also, to a certain extent, serves as a third party guarantee that the certified product meets the requirements of a national or international standard. This third party assurance is very important in sales promotion as Singaporeans were well-known for their brand consciousness.

Under this Scheme, a manufacturer who exercises an acceptable quality control programme in his production, and after the product concerned has been found to have met the requirements of certain national or international standard by the Institute, the manufacturer will be eligible to apply for the award of quality certificate. In case a manufacturer does not have adequate quality control in his factory and is keen to apply for quality certificate, he will be given all the necessary assistance by the Institute.

In June 16-18 this year, the Institute together with the National Productivity Centre jointly organised a seminar on "Standardization and Quality Control" to commemorate the Asian Productivity Year. The Institute works closely with the National Productivity Centre in the implementation of quality control programmes in factories. These programmes include the organization of lectures and various courses on quality control.

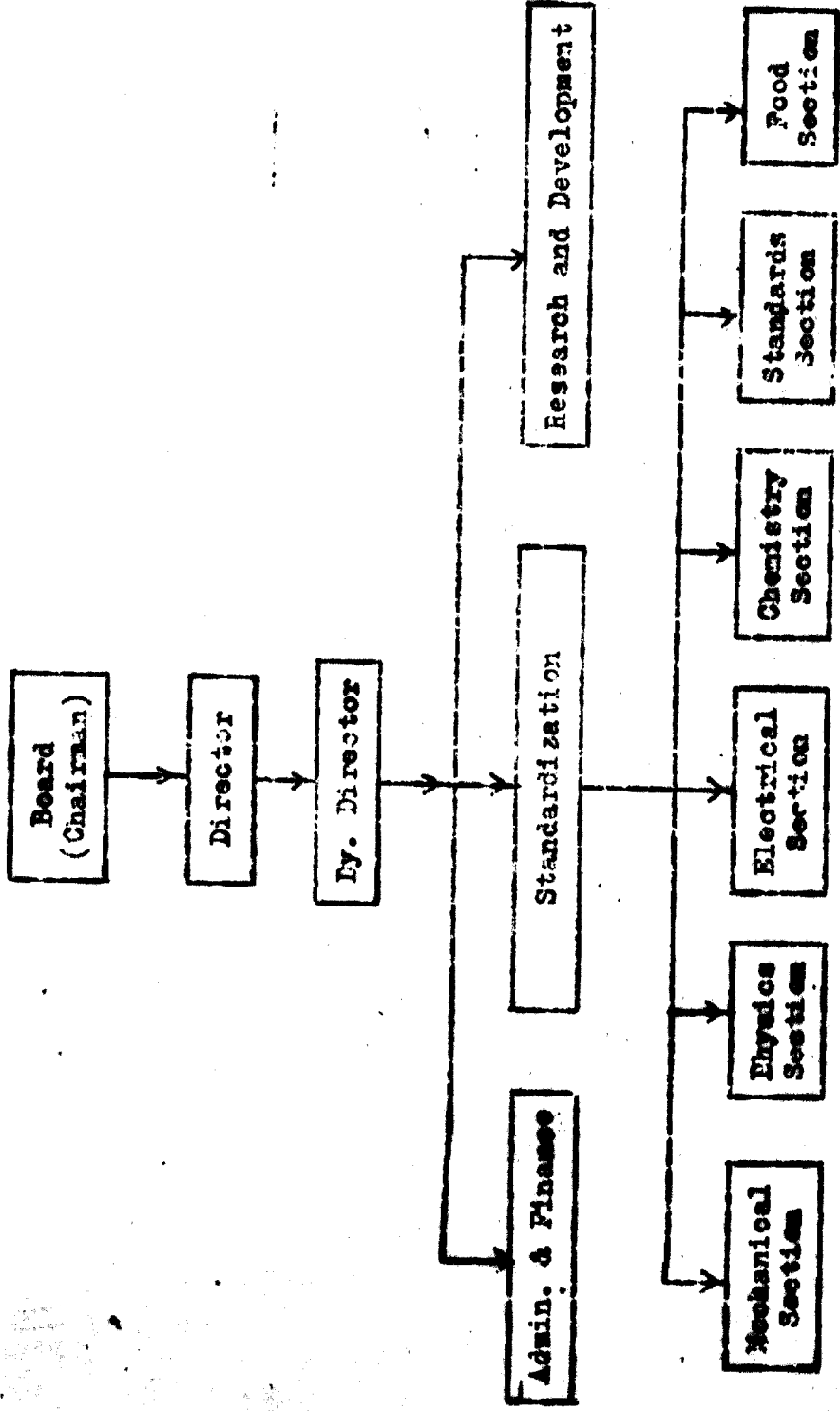
By the end of July 1970, the first 18 manufacturers have been awarded quality certificates. Another 17 firms are under the Pre-certification Scheme and 26 applications for participation in this Scheme are under consideration. The scheme is gaining momentum as more industries appreciate the fact that their very own survival depends on higher technology in production of quality products.

---

✓ The National Productivity Centre was set up in 1967 with the dual objective of promoting mutual co-operation between labour and management and ensuring a high level of industrial productivity in local industries.

Singapore is a young nation and there is a long way to go in our standardization programme. We hope to contribute whatever we can in the promotion of standards in this region. At the same time, we would need assistance and advice in all our endeavours in this direction.

ORGANIZATION CHART OF SISIR





The Standards Council

**I. FUNCTIONS**

The functions of the Standards Council shall be as follows:

1. To determine the policies, programme and procedure of SISIR for preparing and promulgating Singapore Industrial Standards and to promote their implementation by industry and trade.
2. To advise the Board of Management of SISIR and guide all SISIR activities in relation to standardization including those in relation to -
  - (i) the constitution and working of the various Industry Committees;
  - (ii) the appointment under the various industry committees of the Technical Committees, Sub-Committees, Panels and Working Groups and their Chairmen to undertake the actual work of preparing Singapore Industrial Standards;
  - (iii) the approval of subjects for standardization and the allocation of priorities;
  - (iv) the receipt of reports and recommendations of the Committees;
  - (v) the approval of draft specifications for publications, the publication of standard specifications, codes of practice, reports, bulletins and other documents;
  - (vi) the maintenance of an over-all supervision of the work of the Industry Committees and the Subordinate Committees.

3. To collaborate in kindred activities with
  - (i) National Standards Bodies and other standardizing agencies and organisations in foreign countries;
  - (ii) the International Organisation for Standardization;
  - (iii) the International Electrotechnical Commission;
  - (iv) other similar organization in the national, regional and international sphere.
  
4. The Standards Council may make rules for all or any of the following purposes:-
  - (i) prescribing the manner in which specifications may be declared to be standard specifications;
  - (ii) regulating the promulgation of standard specifications;
  - (iii) providing for the amendment or withdrawal of any standard specification and regulating the procedure in relation thereto;
  - (iv) regulating the issue of licences to the use of standard marks, prescribing terms and conditions upon or subject to which licences of that kind may be issued and regulating the renewal, suspension or revocation thereof and the procedure from appealing against any such suspension or revocation thereof and the procedure for appealing against any such suspension or revocation;
  - (v) prescribing the sale price or methods of fixing the sale price of copies of standard specifications or any other publications;
  - (vi) prescribing the procedure to be followed at any meeting of the Council or at any meeting of a committee.

## II. PROCEDURES AND PROCEEDINGS OF THE STANDARDS COUNCIL

1. The Standards Council may meet together for the dispatch of business, adjourn and otherwise regulate their meetings, as they think fit, and determine the quorum for the necessary transaction of business. Unless otherwise determined ten shall be a quorum. Questions arising at any meeting shall be decided by majority votes. In case of equality of votes, the chairman shall have a second or casting vote. Every member shall appoint an alternate member. The alternate member so appointed will have the right to vote in the absence of the member.
2. On the request of the chairman or of five members of the Council the secretary of the Council shall at any time summon a meeting of the Council by notice served upon the several members of the Council in accordance to Section 3, hereinafter.
3. Seven clear days' notice at least shall be given of every meeting of the Council, provided nevertheless that the Chairman or any five members may in case of urgency convene a meeting on less than seven days' notice. Every notice convening a meeting of the Standards Council shall specify generally the business to be submitted to the meeting and shall be deemed to have been served on the day next following that on which it shall be posted.
4. A meeting of the Standards Council at which a quorum is present shall notwithstanding any vacancy in their body be competent to exercise all the authorities, powers and discretions for the time being vested in the Standards Council.

5. Any ordinary business, which may be necessary for the Standards Council to perform except such as may be placed before a meeting, may be carried out by circulation among all its members and any Resolution so circulated and approved by majority of the members signing shall be effectual and binding as if such Resolution had been passed at a meeting of the Standards Council.
6. The Council shall cause proper minutes to be kept of its proceedings at each meeting, and any such minutes purporting to be signed by the person presiding at the meeting in question or at the next meeting shall without further proof be evidence of the members present and the business transacted.
7. The Council may from time to time regulate its own procedures, provided that such procedures are not contradictory to the above.



**I. INDUSTRY STANDARDS COMMITTEE**


**1. The functions of the Industry Standards Committee shall be as follows:-**

- (a) to appoint such Committees as it may think desirable to deal with the work of the various branches of industry included in its terms of reference;**
- (b) to control the work of the technical committees in a section of industry and to take such action as may be considered appropriate for furthering standardisation in that section of industry, and in particular: to authorise the commencement of work upon a Standard, to approve the final draft before submission, and to determine the priorities of the various projects authorised by it;**
- (c) to create technical committees and to appoint their members;**
- (d) to receive and deal with the reports and recommendations of the technical committees of the committee, and to submit recommendations thereon to the Standards Council concerning matters in which the Standards Council's decision is necessary;**
- (e) to take decision on the acceptance of draft ISO, IEC and other recommendations.**

2. An Industry Standards Committee shall contain such representatives of the respective interests of users, manufacturers, Government Departments, Testing and Research Organizations and others concerned with the various branches of Industry as may be decided by the Standards Council establishing such Committees.
3. The Industry Standards Committee shall have power to co-opt additional members.
4. The Chairman of an Industry Standards Committee shall be appointed by the Standards Council. Such appointment shall be for a period of three years and may from time to time be renewed by the Standards Council for such period as the Council may decide.
5. Seven clear days' notice at least shall be given for every meeting of any Industry Standards Committee, but any Chairman of the Committee, or any other members of such Committee may in case of urgency convene a meeting on less than seven clear days' notice. Every notice convening a meeting shall specify generally the business to be transacted by the meeting and shall be deemed to have been served on the day next following that on which it shall be posted, and in proving such notice, it shall be sufficient that the same was properly addressed and posted.
6. Membership of an Industry Standards Committee shall be evidenced by records to be kept by the Secretary of the Committee, which shall at all times contain the names and addresses of all the members thereof.

II. TECHNICAL COMMITTEES, SUBCOMMITTEES AND PANELS (WORKING GROUPS)

1. The function of a Technical Committee shall be to prepare a Standard Specification or to undertake such work as may be referred to it.
2. A Technical Committee shall be responsible to the Industry Standards Committee and the constitution thereof shall be determined by such Industry Standards Committee.
3. A Technical Committee shall consist of representatives of Bodies concerned with the particular work referred to it.
4. Once established, a Technical Committee shall remain in existence until formally dissolved by the Industry Standards Committee and shall act as a standing committee to which may be referred any question related to the standards or other documents prepared by it.
5. Seven clear days' notice at least shall be given for every meeting of any Technical Committees, Subcommittees and Panels (Working Groups), but any Chairman of the abovenamed Committee or Panel, or one-third members of such committee or panel may, in case of urgency, convene a meeting on less than seven clear days' notice. Every notice convening a meeting shall specify generally the business to be transacted by the meeting and shall be deemed to have been served on the next day following that on which it shall be posted and in providing such notice it shall be sufficient that the same was properly addressed and posted.

6. A Technical Committee shall be empowered to co-opt additional members if in its opinion such co-option will make the Technical Committee more fully representative of the interested concerned with its work.
  7. A Technical Committee may appoint Subcommittees and Panels (Working Groups) from among its own members and others, and may invite interested parties to nominate representatives on such Subcommittees and Panels (Working Groups).
  8. Subcommittees and Panels (Working Groups) may co-opt additional members who, by reason of specific attainments, are qualified to assist them in the task allotted to them.
  9. Membership of a Technical Committee, Subcommittee, or Panel (Working Groups) shall be evidenced by record to be kept by the Secretary to the Committee or Panel, which shall at all times contain the names and addresses of all the members thereof.
- 



74

0

0