

## ENGINEERING STANDARDS ORGANIZATION

*The following article has been contributed for the Journal by the Admiralty Standardization Officer, with the concurrence of the Chairman of the Engineering Standards Co-ordinating Committee, to provide a brief outline of the Admiralty and Inter-Service standards organizations which have recently been established.*

The desirability of obtaining standardization in engineering has been appreciated for a long time. A number of standards organizations has been in existence over varying periods, some of the better known of which are the British Standards Institution (B.S.I.), the International Standards Association (I.S.A.), the American Standards Association (A.S.A.), and the American Society for Testing Materials (A.S.T.M.).

The very particular requirements of the Services differ in some respects from normal industrial requirements and, hence, require special Service standards in a number of fields. Wherever possible, however, existing B.S.I. standards are adopted. Service representatives are appointed to those B.S.I. committees that are considering new standards ; this results in Service requirements being taken into account in the eventual B.S.I. specifications or recommendations.

### **Inter-Service Standards Organization**

The Engineering Standards Co-ordinating Committee (E.S.C.C.), was constituted as an Inter-Service body in April, 1947, and is responsible to the Controllers of the three Services. Its terms of reference are as follows :—

- (i) To further the application of a common system of engineering standards between the Services and with Industry, with particular reference, in the first instance, to basic engineering standards and drawing practice ; and to co-ordinate the activities of the relevant Ministries in that field.
- (ii) To further the rationalization and simplification of the design of new common warlike stores, for the purpose of diminishing the diversity of stores and cost of manufacture.

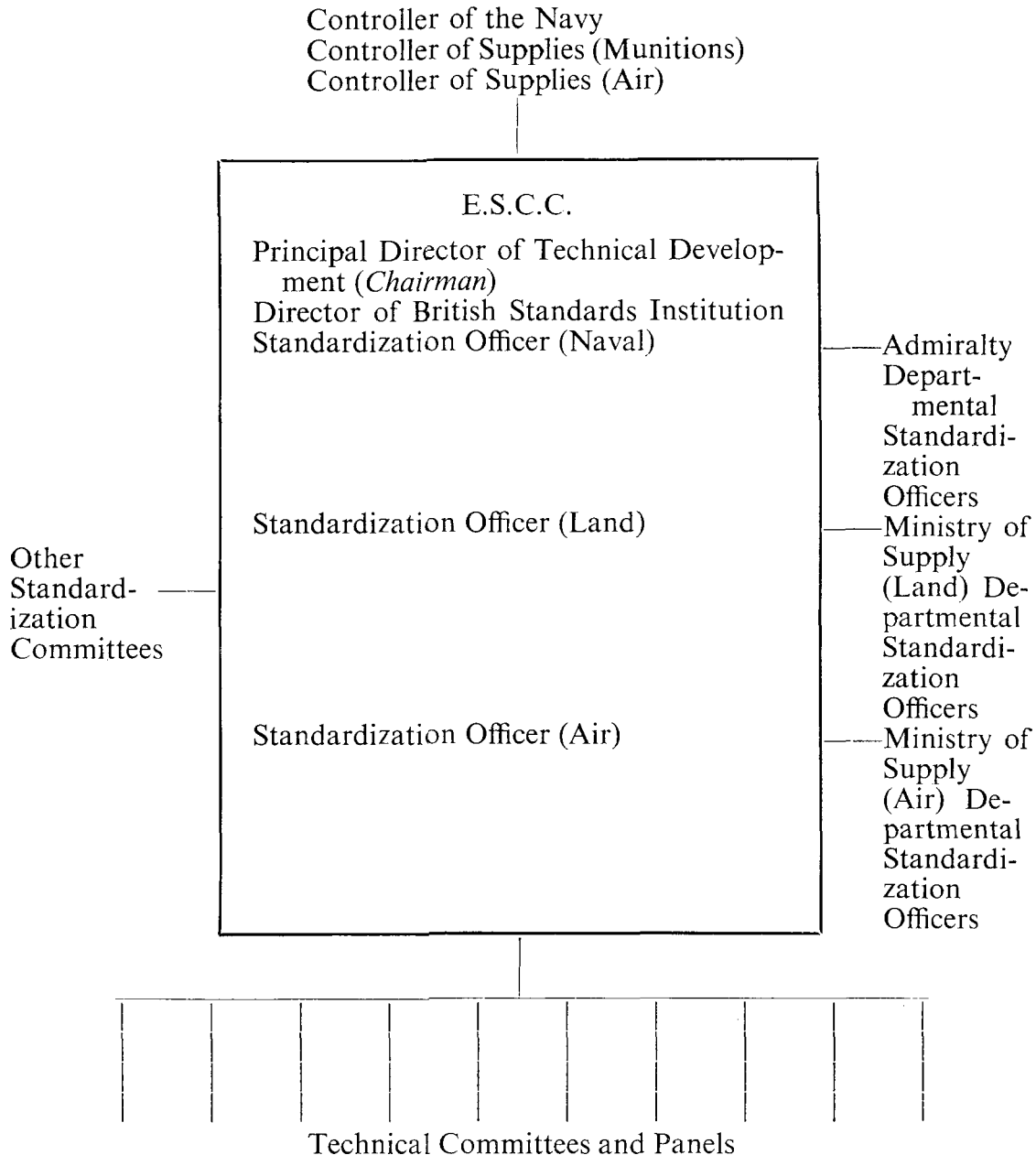
It will be agreed that these objects are most laudable and that every effort should be made by all concerned to facilitate the working of the Committee and to practise the standards which will result from its deliberations.

The Committee consists of representatives of each of the three Services,\* and the Director of the British Standards Institution. The present Chairman is the Principal Director of Technical Development, Ministry of Supply.

The main committee of the E.S.C.C. has monthly meetings and the Service officers meet informally at weekly intervals. The business of the E.S.C.C. is conducted by panels appointed for particular subjects, and each Service is

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invited to be represented on such panels. The panels are given terms of reference by, and report back to, the Engineering Standards Co-ordinating Committee.

The E.S.C.C. has also assumed responsibility for certain other committees already formed and working in fields of engineering standardization. It is thus hoped to co-ordinate fully the Inter-Service aspect of engineering standards.

In addition to the Service Standardization Officer, each department of each Service has nominated a representative as a Departmental Standardization Officer. The main purpose of such officers is to afford liaison between the Service Standardization Officer and each department.

#### **Promulgation of Standards**

Inter-Service standards will be promulgated on the authority of the respective Controllers, by Standardization Design Memoranda (S.D.M.) for the Land and Air Services, and by means of Admiralty Fleet Orders for the Naval Service. These Orders on standardization will not be issued without prior consultation

with interested departments and every effort is to be made to achieve standardization by means of agreement. In addition to the full distribution of A.F.O.s, it is hoped to provide additional loose-leaf copies which will be distributed to Departmental Standardization Officers for the retention of the personnel who are particularly concerned with any specific standard, together with suitable labels for a folder to enclose them. They should, thus, be readily available to all concerned.

### **Preparation of Service Standards**

The underlying principles governing the preparation of Service standards is the same as for British Standards viz :—

- (i) they shall be in accordance with the needs of Industry (or the Services) and fulfil a generally recognised want,
- (ii) that the interests of both producer and consumer (or user) shall be considered, and
- (iii) that a periodic review shall be undertaken.

The success of Inter-Service standardization depends largely upon the co-operation between the Services, Departments, and Industry. It will be appreciated that a standard to be effective must require designers to refrain from exercising complete latitude in the expression of designed requirements. It is hoped that designers will accept the broad view of this and appreciate that their conformity to standards will have a favourable effect upon national economy and overall efficiency, particularly in time of war or other emergency. Standardisation is not to be regarded as interference with designers. They will be consulted at all stages in the preparation of standards affecting design, but it is then required that the majority view will be accepted by all, as complete uniformity of opinion will be, on many occasions, very difficult, if not impossible, to attain.

Standards will not affect research and development. They should, in fact, make research and development more effective. This will apply, if proven systems, articles, and nomenclatures are accepted and used, until such time as improvement has been devised. The improvement will then replace, or be embodied in, the former standard, and will not be used experimentally to the retardation of industry.

Suggestions for new standards or improvements to existing standards will be welcome at any time, and will receive full consideration.

## **INTER-SERVICE STANDARDS IN COURSE OF PREPARATION**

### **Practices**

*Third Angle Projection for Engineering Drawings* (published as A.F.O. 678/48), *Dimensional Analysis of Engineering Designs*, *Key to Drawing Office Practice*, *Limits and Fits*, *System of Preferred Sizes*, *Electronic Terms*, *Servo-mechanism Terms*, and *Engineering Symbols and Abbreviations*. (It is intended to include an article on the last-mentioned standard in Vol. 2 No. 3 of the Journal—EDITOR).

### **Processes**

*Surface Finish*, *Gauging systems*, *limits and fits*, and *Unified Screw Thread*.

### **Components**

*Radio Components*, *Ball and Roller Bearings*, *Gland and Oil Seals*, *Helical Springs*, *Batteries*, *Thermometers*, *Cranes*, *Jacks*, *Refrigerators*, *Lubricating Nipples and Adaptors*, and *Rubber*—excluding cable insulation.