

272. The Committee considers that some of the courses laid down for Institution membership examinations could, with advantage, be made more specifically applicable to New Zealand conditions, and has recommended the institution of diploma courses with sufficient flexibility in the prescriptions to overcome this disadvantage.

273. The order of reference of the Committee also permitted it to inquire into and make recommendations on any other matters which the Committee considered relevant. The Committee has done this where necessary. The problem of the supply of engineers, for example, has been considered in some detail in Section 8, and in Section 13 recommendations are made about forms of financial assistance considered necessary or desirable.

274. The Committee is conscious, however, of the impossibility of dealing adequately in such a report as this with many important aspects of engineering education. The above report sets out what the Committee considers desirable by way of formal education and training for an engineer. It should be pointed out, however, that this constitutes only a foundation for the successful engineer and merely equips him for entry to the profession. His study and training must continue for many years of his practising professional life if he is to keep abreast of the many changes and improvements which are continually taking place in the engineering world. It must be pointed out also that, although the Committee has set out courses and proposals for improving engineering education, there are many qualifications necessary for a successful engineer which cannot be taught directly in any engineering school. Such characteristics as honesty, integrity, initiative, judgment, common-sense, accuracy, industry, and knowledge of men are considered by many executives to be of equal, if not greater, importance than the technique and practice of the technical side of the profession of engineering. Whilst a full discussion of this aspect may be outside the scope of this report, the Committee is convinced that it ought not to be overlooked. The Committee, for its part, has had such considerations in mind in its recommendations which aim at making the fundamental education of a professional engineer as broad as is reasonably possible.

PART III

SUMMARY OF RECOMMENDATIONS

1. *Section 8: Supply and Demand*

That the number of professional engineers be increased to 850 per million of the population in ten years' time, and thereafter, as opportunity offers to 950 per million during the following fifteen years. (Page 30.)

2. *Section 9: By What Way Should a Professional Engineer Qualify?*

(1) That for intending engineering students there should be no specialization before the end of the School Certificate year. (Page 31.)

(2) That for these entrants instruction at the post-primary stage in technical engineering subjects is not essential. (Page 31.)

(3) That, even at the post-certificate stage, concentration on mathematics and the physical sciences should not exclude English and other cultural subjects. (Page 31.)

(4) That intending entrants for the engineering degree course should spend at least one year in the Sixth Form after qualifying for University Entrance. (Page 31.)

(5) That in future all civil and electrical engineers should qualify by way of a University degree. (Page 35.)