

Moreover, as a full-time student he is able to devote all his energies to his course instead of having to listen to evening lectures at the end of a long day of hard work. He has the advantage, too, of adequate library facilities. His course lasts for four years, but this is better than spending year after year in part-time study as others have done in the past. With his formal studies behind him the graduate is in a position to read the professional literature available to him and so keep up to date, whereas the person struggling on a part-time basis cannot spare time for this.

129. Then, too, there are the considerable advantages attached to life as a University student. The presence of others of high intelligence in his own faculty is a constant spur and means of inspiration, but it is perhaps not so important as the opportunity of exchanging ideas with able young men training for other professions. For those who wish to take an active part in the activities of the student body there is ample opportunity for developing the powers of organization and leadership so valuable to an engineer.

130. After hearing the evidence and considering the replies to the questionnaire the Committee is firmly of the opinion that the goal to which this country should aspire is to train the great majority of its professional engineers through the University schools of engineering. It thinks that this stage will be reached in the civil and the electrical branches within the measurable future. It considers, too, that the new and rapidly developing fields of aeronautical and radio engineering should endeavour to reach graduate status at an early date.

RECOMMENDATION—

That in future all civil and electrical engineers qualify by way of a University degree.

(5) SPECIAL PROBLEMS OF MECHANICAL ENGINEERING

131. In the general field of mechanical engineering, however, there are special problems to be considered. The view is widely held that early contact with industry is essential, and this has hitherto not been possible for those taking a degree course. This view applies with special force in New Zealand because, in general, firms are small and few are likely to employ more than one professional engineer, and that in an executive capacity. In such circumstances a wrong choice will have a serious effect on the business and most firms, therefore, prefer a man who has grown up with them and who has been selected on account of character and leadership rather than purely technical ability. This view is corroborated by the evidence of one witness approached by the Committee, who stated that, although New Zealand B.E. (Mech.) graduates held positions of high responsibility overseas, New Zealand industry did not appear to want them.

132. On the other hand, the existing method of training is far from satisfactory. The proportion of failures in the Institution examinations is highest in the mechanical branch. Employers state that their trainees have difficulty with their studies though they have time off, and yet in spite of this they wish to continue training their own men. It would be possible to argue that the difficulties in the mechanical branch might be resolved by a greater willingness to accept graduates. It must not be imagined, however, that there has been no increase in the proportion of graduates in the mechanical branch. The proportion at present is, in fact, not very different from that in other branches. Undoubtedly, however, there is less enthusiasm for more graduates among employers in this branch than there is in the civil and electrical branches. The following recommendation sets out the Committee's considered view of the position :—

RECOMMENDATION—

That the policy for development in mechanical engineering be based on the assumption that there will be a demand for some years for engineers who obtain their professional qualifications while employed in industry.