

PREFACE.

A FEW remarks introductory to this Volume of Proceedings of the ENGINEERING ASSOCIATION OF NEW SOUTH WALES are on this occasion deemed advisable, for the reason that this is the first time that the Association has attempted the task of issuing a volume containing a record of its principal papers and transactions during an entire year, and therefore its publication will, in all probability, subject it to the ordeal of criticism and comparison with similar productions circulated by kindred societies. It is therefore felt that, without in any way attempting an apology for its existence, a brief explanation of the circumstances under which this volume has been prepared, and the difficulties which had to be overcome before such existence was possible, may here be fitly given, notwithstanding the fact that prefatory notices are not usually attached to the publications of professional or scientific societies.

In the first place it is necessary to point out the fact that those members of the Engineering profession who reside in a new country such as New South Wales, partly owing to their isolation from the great European centres of learning and modern scientific thought, and also in very many cases in consequence of the unsettled

and variable nature of their duties precluding the opportunity for frequent contact with their fellow-workers, are not placed in an equally good position to record in suitable language the results of their labour and experience, as are those Engineers who are fortunate enough to be so circumstanced that information and assistance is available from both men and books, and the nature of whose work is such as to tend to the development of the higher or more abstract professional studies. Hence the authors of the various papers contained in this volume have had special difficulties to contend with, for which due allowance should be made.

It is also an almost invariable experience with young institutions that, during their earlier years, formidable impediments to their progress present themselves, and have to be battled with and overcome. One of the most serious of these impediments usually presents itself in the shape of want of funds, and although the finances of the Association are at present in a satisfactory condition, its income is not sufficient to enable it to reach that standard of excellence in the printing of its transactions which is characteristic of older societies. Thus the plates appended to this volume have been lithographed from tracings furnished by each contributor, thereby relieving the Association of what would otherwise have been a necessary and heavy expenditure, but this saving has resulted in a

manifest want of that uniformity of execution, style and finish, which it is so desirable to obtain, and which, it is to be hoped, will be apparent in future volumes of the Association's Proceedings.

For a similar reason some of the discussions on papers do not appear. This has been caused through the omission of speakers to supply a brief written abstract of their remarks to the editor of the volume, failing which, no record is obtained in consequence of the Association not being able to employ the services of short-hand writers.