

13TH MARCH, 1913.

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ADDRESS BY THE PRESIDENT.

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G. A. JULIUS, B.Sc., M.E.

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For the third year in succession I have the honor to occupy this chair, and I find it difficult to adequately express my appreciation of the compliment that you have paid me in electing me to this position for another term. Had it not been for the fact that our Association has been so fortunate as to persuade Mr. Harricks to again fill the position of Honorary Secretary I should have hesitated to accept your Presidency for yet another year, as the work involved is possibly more than is realised by the majority of members. I cannot too fully express my sincere appreciation of the willing and able manner in which Mr. Harricks has filled his position during the past year, and I consider that this Association is to be sincerely congratulated upon the appointment. To him alone is due the whole credit of bringing our annual publication up to date again, by sheer hard work, dragging our records from the deplorable state into which they had drifted after the death of our late Hon. Secretary, Mr. Ahrbecker, to the efficient state in which they are to-day.

I cannot let this opportunity pass without also referring to the loyal and conscientious services rendered to the Association by their Secretary, Mr. Hosking. I think no one besides Mr. Harricks and myself can fully

realise the nature and extent of the work done by Mr. Hosking, nor the pleasure it affords any man to be associated with him. Your Council, have, during the past year, by unanimous resolution, increased the honorarium to Mr. Hosking for his services, and I feel absolutely sure that their action will be cordially endorsed by every member of this Association, all of whom must in the past have enjoyed Mr. Hosking's tact and kindly consideration, and appreciated his loyal and conscientious work. With the assistance of Mr. Harriks and of Mr. Hosking, and the co-operation of your Vice-presidents and Council, I trust to be able for yet another year to uphold the dignity of the position in which you have placed me, and to do some good work for our Association.

As is usual, I think it desirable to briefly mention the work done last session. In September, 1911, our membership was 231; to-day it is 245, there being a pleasing increase in both the member and student sections, though, of course, we have lost members by reason of death and absence from the State.

During the Session eight General Meetings were held, with an average attendance of 67 members, and several interesting and instructive papers were delivered and discussed. I cannot let this opportunity pass without again reminding the members that it is the duty of every one of them to assist the Council in the preparation of papers and such other interesting matter which they may be willing to contribute to the Association. There is always the greatest difficulty in obtaining a sufficient number of papers for the Session. With our large membership, amongst whom there are numbers of men fully competent to prepare interesting and instructive matter, we should not encounter this difficulty, and I trust

that a more lively interest will be taken in this direction, so that instead of having to seek for papers there may be a number available from which to arrange those most suitable for the Session.

One other noticeable feature is the lack of critical discussion upon such papers as are delivered. Your Council feels that this may possibly be due to the fact that members hearing a paper read may not feel disposed to at once discuss and criticise the matter put before them, without reference to records and data which they have not with them. To avoid this position it has been decided this year to issue a proof copy of each paper to each member at least several days before the paper is to be read, so that all may have an opportunity of preparing matter for discussion. It is to be hoped, however, that the fact that this proof is in the hands of members before the meeting will not deter them from attending such. I am pleased to be able to report that we have been able to secure a full list of papers for this Session, and a printed circular will be issued to the members, notifying them of the authors' names, the title of each paper and the date upon which it is to be read.

Our financial position is still very sound, and your Council are making the best possible use of the £3,000 which the Association received under the will of the late Sir P. N. Russell, until such time as the members may decide as to the purpose to which this sum is to be put.

In each of my previous addresses I have unhappily had to refer to losses sustained by the Association in the death of old and prominent members, and again one has to report further deaths from amongst our members. In the year 1870, I believe, an Engineer in this State was elected to the position of Honorary Treasurer to the Engineering Association of New South Wales.

This position he held until his sad death in the early part of last year. I refer, of course, to the late Mr. John Sands, a man respected in his profession, admired for his absolute honesty and integrity, and loved by every man with whom he came into close contact. As the result of an accident we lost him and I think I am expressing the opinion of every member of this Association in stating that by his death the Association lost its best-loved member and every member lost a friend. Again, on the 17th April last year, the Association lost one of its oldest members in the person of Mr. H. B. Howe, who for many years had occupied the position of General Works Manager of the Railway Workshops at Eveleigh. Mr. Howe was President of this Association for two years, and frequently contributed to our proceedings. He was a member of many of the leading Engineering Associations in various parts of the world, and was a man respected by all who knew him. His death has caused a gap in our rolls that will be difficult to fill. Two other members who were associated with the early history of this Association died during last session, namely, Mr. W. D. Cruikshank, who was five times President, and Mr. J. R. Thompson. Whilst one must expect the passing away of some of the old members, yet last Session the Association was more than usually unfortunate in the loss of four so well-known and respected ones.

I find it very hard to prepare anything new to put forward in a Presidential address. I have struggled through two years and experience greater difficulty each succeeding year in preparing anything of even local value or interest. Last year I endeavoured to bring home to members the deplorable conditions of affairs relating to some of the great engineering problems that surround the development of Sydney. Such questions as the means of transport both on the land and on the harbour, water supply

and drainage, and electricity supply, were briefly touched upon. To-day the position is practically unchanged, so far as any material improvement is concerned. The roads are in at least as bad, or probably worse, condition, the trams are even more congested, the water supply is still inadequate, and lighting problems are frequently shrouded in gloom. One has very often heard of the Traffic Expert's report with reference to the harbour bridge and tunnel scheme, as well as the City railway, and the tramway problem, but one neither sees nor hears of any definite start being made in the carrying out of these so urgently required works.

One of the features of the year has been the crisis reached on the question of main road maintenance. As a result of continued outcries in the press and from the general public an Association known as the Good Roads Association was formed, and immediately caught the sympathetic ear of the Minister for Works, who embodied various suggestions from that Association in an appeal which had for its purpose the formation of an organization somewhat on the lines of that now operating in England. The Bill was hastily introduced to a somewhat unprepared public, and the selfish interest of local authorities who felt that their present liberal endowments would be endangered, was sufficient to set a small majority in the House against the measure. However, it had the result of accomplishing its purpose by an indirect method. For the first time in our history we have such a splendid sum as £250,000 to be expended towards the improvement of main road surfaces. As a beginning, this is satisfactory. Viewed with what is being done in the leading countries of the world, it gives us every reason to believe that we are only at the beginning of a proper attack upon the question. No one will more readily admit than yourselves the fact that road improvement cannot merely be

the result of expenditure of money, but must involve engineering knowledge and system. One of the defects of local administration of main roads (however competent that administration may be) is that our main roads become little more than jointed lengths without one common governing plan. No doubt, in the expenditure of the money voted by the Government, such specifications will be framed as will lead to a uniformity in the formation and in the grades. It is also to be hoped that it will lead to a more intelligent method of deciding the local road-making materials in each district, and their relative suitability to meet the existing conditions of traffic. In the consideration of such expenditure members cannot fail to be deeply interested, and they should also be able to render material assistance. In the United States of America the laboratory plays an important part in the tests of those materials. Practically every State has its Road Chemist. The English Road Board, according to the latest advices, has carried out a comprehensive series of tests upon road crusts by laying down lengths of road with the different surfaces advocated by various engineers and authorities. After some months of traffic the cost, durability and general efficiency of each particular surface was carefully tested by expert engineers, and from this data much valuable information has been obtained. This is an application of scientific engineering in respect to road-making which shows a tremendous advance over the slipshod and largely unintelligent methods employed here. Even under the existing inefficient conditions there is little doubt that our roads would not have fallen into the present disreputable state had it not been for the highly effective engines of de-

struction to be found in heavily-laden vehicles with narrow tyres. This State possesses the distinction of being the only one in Australasia without any legislation enabling some relation to be set up between the weight of the load and the width of the tyre. In the 50's we had on our Statute Book a bill which had for its object the encouragement of the use of wide tyres. For some reason or other this Statute was repealed, and that retrograde step has never been retraced. Various efforts have been made to introduce such a measure, but, owing to the pressure of particular trade interests, have always met with defeat. It is true the present Minister for Works now rests under a promise to introduce such a measure "next session," but this is the chronic state of every Minister for the last generation. One can only hope that the Minister, who has taken considerable interest in the question, will be able to carry out his promise. However, now that he is spending such a large annual sum of public money it will surely begin to dawn, even on the public intelligence, that it is foolish to spread so many golden sovereigns on the road to be ground into nothingness by those ploughshare tyres.

Sufficient has been said to show that the field is now ready for a tremendous improvement in road formation and maintenance. It is, of course, apparent that such improvement will call to its assistance the best engineering skill. A large sum of money will no doubt be expended. This expenditure will be watched with the greatest interest by the members of our Association, and we cannot doubt that the people of the State will look to them for assistance in the evolution of a road which will be economical in construction, and at the same time endure the trying conditions of our very severe climate.

Again, I appeal to you all, as members of the great Engineering profession, to take a lively interest in these matters, leaving no stone unturned to assist those who are fighting for improvement, so that even if results are slow and apparently poor, at least we may feel we as engineers have done our best in the interests of the community. And before leaving this question I should like to refer briefly to an article appearing in the columns of one of our local engineering publications. If one looks at the issue of the "Australasian Engineer" dated February 24th, and which is published by that indefatigable worker, Mr. G. A. Taylor, one will read an appeal directed specially to the members of this Association, urging us to wake ourselves up and to undergo a complete overhaul. This article points out that it is our duty to oppose State socialism when it attacks propositions inimical to the engineer rather than to continue to direct our attention solely to academic subjects. The writer of this article has, I think utterly failed to realise the scope and aims of our Association. We, as an Association, are not interested in political problems. We strive only to improve the status of our great profession by assisting and encouraging the interchange of ideas between engineers, by helping forward and assisting in the training of beginners, and by rendering such assistance as we are able, to scientific work generally. It matters not to us as an Association whether engineering works are carried out by Government engineers or by private engineers, so long as these works are carried out with credit to the profession. I feel, therefore, that any suggestion that we as a body should interest ourselves in political problems is directly contrary to the whole nature of our organisation, and should not for one moment be seriously considered.



Again, in the same article, the writer urges us to bring about closer co-operation between engineering bodies generally. He says the time has now arrived for the knitting of the professional bonds, including Civil, Electrical, and what are designated Railway Engineers (I presume he means Mechanical Engineers) so that the profession as a whole can work along uniform lines in most of the matters of common interest. With this suggestion one cannot fail to agree, but again the writer has not grasped the details of our Constitution. We do not represent one branch of the profession only. We welcome as members workers in every branch, and on our rolls are the names of many Civil, Mechanical, Electrical and Railway Engineers.

One other matter the writer refers to is the Registration of Engineers. This problem has been exercising the minds of engineers throughout the world for years past, and no solution, or even partial solution, has been reached. At present the only possibility lies in the formation and development of such Associations as the Institution of Civil Engineers, the Institution of Mechanical Engineers, and many others at home, and, in a smaller way, our own association here; and in the admission to these associations of only, and all such engineers as possess real engineering qualifications. In this way membership could only be attained by the qualified man, and such membership would then be a hall-mark of efficiency. At present any form of Registration, such as is in force in the legal and medical profession, is out of the question. Every fitter, mechanic, or plumber, is an "Engineer." Every dreamer who schemes out a rotary engine, a flying machine, or a perpetual motion freak is also an "Engineer." The only solution would seem to be the adoption of some title