

Presidential Address

By Mr. K. M. MUKHERJEE, B.A., B.E., M.A.E., M.I.E. (Ind.)

My brother Members,

At the very outset let me thank you most sincerely for electing me as the President of your Association for this session. It is the highest honour for which any member of this Association may justly aspire and be naturally proud of. I do not know whether I have been able so far or shall be able during my office to do justice to the chair which had been held so ably by my predecessors who may be fitly termed as giants in the profession.

It is customary for the Chairman at such a meeting as this, to speak on a subject relating to that particular branch of engineering with which he is closely associated during his professional career and in which he has got personal knowledge and experience ; but as a topic on the subject of the career which I have followed during the last quarter of a century, may interest a small section of the members only. I would rather limit my observations in general terms to the qualifications and duties of an engineer which may be useful to the junior members of the Association.

It is seen that when students enter an Engineering College they generally find that during the preliminary session they are taught mainly Mathematics and purely scientific subjects which they think have got no direct bearing on engineering. I have seen many a student leaving the Engineering College after attending the classes for a couple of months or so in disgust finding that the education they were receiving would be of no use in their career as an engineer. In this they were sorely mistaken. Mathematics is a subject which cannot be left out of an engineering course ; but its use should be limited only to the purpose it has to serve in making up the work expected of an Engineer.

In an Engineering College, the fundamentals only of the several branches of engineering are taught in order to impart

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a clear insight into the several aspects of them ; and the duty of the young engineers should be to choose for himself that branch of engineering as his career in which he finds particular interest and to which he feels a special aptitude. The first and foremost duty of the young engineer, whether in service or in leading an independent career, should be to cultivate and develop in himself the power of observation and to take the minutest interest in the details of any construction works he happens to come across in his daily life. By so doing he would gradually attain perfection to the rudimentary knowledge imparted to him while in college. The culture of this power of observation must not be limited to the works he happens to see in progress of construction only, but should be extended to finished structures also so as to create in him an interest in the culture of the Aesthetic.

The engineer should develop in himself the power of asserting his personality and a courage of conviction in order to have things executed properly, otherwise he will neither be able to satisfy himself with the works done by those under his charge nor will he be able to satisfy his employer.

The engineer should always bear in mind that he has a moral duty to perform in framing the history of the progress of engineering culture and development of the country in the age he lives in ; and the development should be such as would enable his country to find a place in history for posterity, equaling if not excelling that of other countries. This progress and development should keep pace with the demands of the time necessitated by the advance of civilisation, the altered mode of living of the people, the enjoyment of civic facilities, the expansion of the mode of transport, the improvement in the methods of agriculture by different modes of irrigation, the reclamation of swamps and marshy places and converting them into arable lands or utilising them to some useful purposes.

7- It is generally argued that we, Indian Engineers, do not receive sufficient encouragement and support from the Government and other semi-government bodies in matters of employment as we should, except for a very privileged few, so that we could prove our abilities and usefulness in the different branches of our profession. For example we have seen one of the biggest undertakings in engineering as the New Howrah

Bridge costing several millions of rupees, constructed at our very door, but very few of us could claim to be associated with the concern whether in its design or its construction. This may raise rather a matter of controversy which is better avoided in such a gathering. But without going into a controversial matter and leaving aside the Government and semi-government concerns as employers of engineers, I would like to point out to our young engineers that they will always find ample fields open for them if they can utilise the opportunities offered to them from time to time as at present created by the world situation. I have heard of such an opportunity in manufacturing one of the commonest articles of our daily use, namely a kerosene stove at a cost which would be in normal times cent per cent cheaper than imported articles of foreign manufacture.

8. But why should we wait for opportunities created by such a situation as at present? If we engineers be enterprising and always learn to look ahead we shall be able to create ample fields for running big industrial concerns such as the India Electric Co., the Jay Engineering Works, the India Machinery Works, etc., which had been started from a very humble beginning but can now boast of finding a place equaling in rank with any similar enterprise anywhere in the west.

9. The usefulness of engineers in any country at any age is measured by the advancement of the country obtained in these directions through the direct results of their labour. My advice to my brother engineers of this Association is that it should be their aim, however humble their efforts may be, to try to improve upon their engineering knowledge by constant culture in that branch of engineering pursuit which they have chosen as their career so that they may be able to keep a landmark in the great chain of events which may contribute to the gradual uplift of their poor mother land in engineering works so that she may stand side by side with other western countries who are fortunate in this respect and may be ranked as one of their equals.

10. The activities of this association during the last 12 months have been clearly stated by our able Secretary in his report. He regrets that the publication of the official organ of this association had to be restricted to two issues only, during

the year just over on account of the scarcity of paper created by the world situation. Our aims in this direction should be not the number of issues of the journal it has during a session, but the amount of interesting and illuminating subjects dealt with in the journal. My earnest request to the members of the association therefore is that they should try to contribute as many articles on interesting and illuminating subjects to the journal as possible to make its publication useful to the members who live outside and cannot join with the other activities of this institution and consider the journal as the only link of attachment with it.
