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EDITORIAL

The Fertilizer plant at Sindri is a project that would greatly aid the "Grow More Food" scheme by producing artificial fertilizers for cultivation of poor soils where natural fertilizers are unavailable and thus relieve to some extent the problem of finding food for the growing population of India and the world. As food is the first need of all mankind, this plant is one of interest to all and the technical features are of particular interest to Engineers. For the benefit of those who were unable to avail themselves of the opportunity provided recently by the Association to visit the plant we publish in this issue some particulars contained in the report of the address by Brig. Cox to the members of the Institute of Engineers on the occasion of their visit and also some notes presented by Professor Dr. J. N. Basu.

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Design of Rê-inforced Concrete Structures is continually undergoing evolution. We publish in this issue a method for consideration.

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Education and training of Engineers is a matter of great anxiety to India at present. Her need of a few highly trained engineers is very great but her ability to train them very limited. The number of technical institutions for theoretical education and the number of engineering firms where proper practical training could be obtained are both very small.

Establishment of educational Institutions is affected by the fear that all the students who complete the course may not obtain suitable employment. The prospect of employment is the guiding factor in the choice of the course of training for which a candidate may desire admission.

Employment for which highly specialised training is required is at present so limited that it is in some cases hard to decide whether national expenditure on establishment of such courses of training at present would be justified by future development. This forms a sort of vicious circle which can only be cut by making a start in a small way and to observe results over a limited period. Another difficulty that has appeared is that in some cases the technical staff required to impart the education is not available locally while it is undesirable to have such staff of foreign nationality where national affairs have to be kept confidential. This indicates that a selection of scholars should be sent abroad for training to suit them for engagement on the teaching staff.

It is generally accepted at present that the most desirable system of training of engineers for employment in the industries is a combined course of practical training as an apprentice in an engineering firm and theoretical education as a student in a technical institution of standard suitable to the responsibility of the post for which the training is required. The university degree standard though not considered essential for all posts is yet regarded as desirable. The glamour of the university "degree" or an Institution's "diploma" is a craving for most students of this country and constant clamour exists in technical institutions where no "diplomas" or "degrees" are issued, regardless of the fact that employment is obtainable without them if the course has been satisfactorily completed there. This craving is reprehensibly traded on by either offering titles of membership of an institution at cheap rates or by holding examinations recognised by Government at high fees.

The fixation of rates and the determination of suitable periods for combining theoretical education with practical training or vice versa are matters that require the earnest consideration of engineers of all branches of the profession. Suggestions from members will be welcome.

It is regretted that an inordinately large number of errors appeared in the last issue. This was due to the unfortunate disorganisation of the press which has gone out of existence. We regret also the delay caused by the necessity to effect a change of press.