

FUNCTIONS OF ENGINEERS' REGISTRATION BOARD

By: R.M. Minja*

1. Background

The principal aim of writing this short article, on the functions of Engineers Registration Board in Tanzania is to convey to the readers very briefly what the Board does. This is thought to be of use for those who are aspiring to become engineers and for those who have already gone through the registration mill, or are in that mill right now, this will serve as a refreshment of their memories. Since the intention of this paper is to educate it will concentrate more on giving the young and aspiring engineers a guide as to what lies ahead in the context of aiming at becoming a professional engineer. To do that it is felt, the primary duty of this paper will be to define the roles of two different bodies which otherwise confuse certain people. These bodies are the "Engineers Registration Board" and the "Institution of Engineers" (Tanzania).

- Engineers Registration Board is a statutory body created by the Engineers (Registration) Act. In the terms of that Act the Board has responsibility for regulating the activities and conduct of engineers in accordance with the functions and powers conferred upon it by the Act.
- The Institution of Engineers (Tanzania) is an association or club of engineers voluntarily constituted to promote the general advancement of the science and practice of Engineering and its applications, and to facilitate the exchange of new information and ideas on those subjects amongst the members of the Institution and otherwise and for that purpose:
 1. To hold meetings of the Institution for reading and discussing communications bearing upon Engineering or the application thereof or upon subjects relating thereto.
 2. To print, publish, sell, lend, preserve or distribute the proceedings or reports of the Institution or any other papers, communications, works or treatises on Engineering or its applications or subjects connected therewith.
 3. To cooperate with Universities, other Educational Institutions and Public Education authorities for the furtherance of Education and Training in Engineering Science and Practice and to maintain contact with the Engineering Industry.

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4. To do all other things which the council of the Institution may think proper, including advising Governments, Public Bodies and other organizations or individuals on matters concerning Engineering and to maintain close relationship with the Engineers Registration Board.
5. To do all other things incidental or conclusive to the attainment of the above objects or any of them.

Speaking crudely, one could simply say that Engineers Registration Board is a machinery by means of which the quality of the professional engineers are controlled whereas the Institution of Engineers could be looked upon as a technological advancement club or association.

The Engineers Registration Board of Tanzania was created by Engineers (Registration) Act No. 49 of 1968. It did not come into operation until 1st March, 1969. The Minister responsible is the Minister of Works who in his capacity as the Minister appoints the Chairman and five other members and amongst them three must be registered engineers in the service of the Government and the other three must be registered engineers who are not in the service of the government. The seventh member of the Board is nominated by the Attorney General from his chambers. The normal tenure of office for the Board is two years, but members could be re-elected.

The above serves as a background information to prepare the reader to appreciate the functions of the Board.

2. Functions and Powers of the Board

There are two main functions of the Engineers Registration Board namely: the Registration of Engineers and the Evaluation of Engineering Degrees.

2.1 Registration of Engineers

Originally this Board was started with the sole aim of considering and register engineers but later on as it will be explained later it also took up the evaluation of engineering qualifications. With regard to Registration of Engineers the qualifications for registration are specified in section 9 of the Act as quoted below:

" 9. -(1) Subject to the provisions of this Act, a person shall be entitled, on making an application to the Board in the prescribed manner and on payment to the Board of the prescribed fee, to be registered under this act and to have his name in the register if he/she is:

- a) a member of an institution of engineers the membership of which is recognized for the time being by the Board as furnishing a sufficient guarantee of academic knowledge of and practical experience in engineering; or

b) a person who has attained the age of twenty five years and who:

(i) is the holder of a degree, diploma or licence of a University or school of engineering which may be recognized for the time being by the Board as furnishing a sufficient guarantee of an adequate academic training in engineering; and

(ii) He had not less than three years practical experience of such a nature as to satisfy the Board as to his/her competence to practice as a professionally qualified engineer or had such practical training in engineering as may be approved by the Board: Provided that of the three years practical experience required by this sub-paragraph not less than two years of such a period shall be after obtaining the degree; diploma or licence specified in sub-paragraph (i).

(2) The Board may require an applicant for registration under this Act to satisfy it that his/her professional and general conduct has been such as, in the opinion of the Board, to make him/her a fit and proper person to be registered under this Act and the Board may direct the Registrar to postpone the registration of an applicant until so satisfied".

The penal provisions of the Act make it an offence punishable by a maximum of Shs. 10,000/= for any person who is not a registered engineer to pretend falsely to be a registered engineer or to use the style or title "registered engineer" or to hold himself/herself out, whether directly or by implication to be a professionally qualified engineer.

In accordance with the above requirements of the law and at the beginning the Board had nothing to go by apart from the Act itself. The first and foremost task of the Board was to give the widest publicity to the aims and objects of the Act as well as the functions and powers of the Board. During the initial years efforts were made by the Board to formulate procedures and regulations for registration. In order to establish just and fair procedures extensive consultations in various parts of the world were and still are being made. One of the outcome of these efforts was the compilation of recognized Institutions of engineering of the kind envisaged by section 9 of the Act as quoted above.

2.2 Evaluation of Engineering Degrees

As of today the evaluation of degrees is being done by the Evaluation Committee seated in the Ministry of National Education in Dar es Salaam. However after the establishment of the Engineers Registration Board and according to Section 9 (1)(b)(i) of the Act it became evident that an applicant for Registration

as an Engineer had to be assessed twice as to the suitability of his or her academic qualifications, first by the Evaluation Committee and then by the Engineers Registration Board.

It was later agreed that all the evaluation of Engineering Degrees should be done by the Engineers Registration Board. This, in fact constitutes the biggest task of the Board. Some graduates come from countries or parts of the world where the educational schemes and standards differ from what we have traditionally been used to in this country and yet it is the duty of the Board to assess the equivalent of those qualifications in terms of our East African Standards. This is a very involved exercise and at times it takes a long time to get all the relevant information. The Board scrutinizes the whole educational background starting from primary school through to University and to that effect the applicant is required to submit documentary evidences as to the certificate obtained in all stages of learning.

To give an account of the functions and powers of the Engineers Registration Board without mention of the problems faced is to give an incomplete story. The Board as outlined above had to prepare procedures and regulations for proper and just considerations of the applications. Unfortunately history has not been all that kind in that the majority of all the engineers who qualified for appointment as members of the Board were of the British academic background which dominated the whole of East Africa. Furthermore all of them were either Civil, Mechanical or Electrical Engineers. All that this meant was that the cases of the presented field in the Board were relatively easy to deal with particularly if the applicants came from the same institution as any of the members of the Board. However, what has actually been happening is that quite a number of students qualified in the socialist countries like Yugoslavia, Bulgaria, USSR, etc. It has been very difficult to obtain any helpful information from such countries and the lack of that results to delays in the evaluation of qualifications obtained from such countries. It is a fact that such cases are common in the Board and this naturally is causing frustration on the part of the applicants for both evaluation and registrations.

Appreciating the fact that engineering is relatively a new field in this country as far as the indigenous people are concerned and since the Board was formed at the time when all the expatriates were leaving the country it is true that the majority of the few engineers we have in this country are either Civil, Mechanical or Electrical and as it was pointed out earlier, naturally the Board was mostly formed of those. As time went by other fields of engineering started turning graduates in and these submitted their applications for evaluation/registration consideration. Aeronautical Engineering is one such a field in which to this date we have only one indigenous graduate who is working in Tanzania. Submission of an application from such rare fields, became a difficult task to the Board particularly for registration bearing in mind that such a graduate may be subjected to a situation where the appropriate practical training/experience may not be possible, and although the Board has

got the powers to coopt anybody from anywhere to help it to access any case, sometimes the only person available for cooption is the applicant himself. In such a case the Board will have to write to the institution where the candidate qualified from to get the information necessary for evaluation of the qualification of the applicant.

There are many other problems facing the Board but on the whole the situation is improving everyday and it is hoped that the difficulties the Board has gone through forms a basis for their present experience and an improvement in the future years. However, one thing is obvious and that is that the relationship between the Board and the engineers and the engineering industry is very weak.

Next time a short paper will be submitted explaining briefly how the Board process the Evaluation and Registration of applications.

THE VOCATIONAL TRAINING ACT 1974, BLUEPRINT FOR THE FUTURE

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1. Training by Trial and Error

Before training for skill was formalized in Tanzania, much of the training given was incidental. Young men employed as helpers in the various skills, picked up the rudiments of the skills by watching and thereafter proceed by trial and error. The products of this informal skill training resulted of course in skilled workers who experienced considerable difficulty in knowing where to begin, what he is to do afterwards and how he is to do it. More damaging was the fact that the various methods being copied may consume more time and more effort than is desirable and worse still, what the trainees have learnt will become a habit and the disability may probably continue for the duration of his working life.

2. Formal Vocational Training

Craft training was seriously formalized in the late fourties when a Rehabilitation Centre for ex-Askaris was opened at Mgulani with courses of six months duration in the Engineering and Building trades. Later, an occasion to establish a central vocational training institution presented itself when, after the collapse of a Groundnut Scheme, vocational training facilities

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