∴ TAU BETA PI ∴

Tau Beta Pi, a scholastic Honorary fraternity, composed of Juniors and Seniors who stand in the upper fourth of their class in scholarship and made up of men from all departments of the Engineering College, is one of the oldest Engineering Honorary fraternities in existence. Its purpose is to "mark in a fitting manner those who

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Editor's Note.—It is a custom of Tau Beta Pi to require all pledges to write an essay on some assigned topic as a requirement for initiation. The editor consented to publish the prize winning essay, when approached by the committee of judges of the essays, hence he is in honor bound to publish the essay which won the prize, a silver loving cup. However he may say in justification that he did not even suspect that he would ever be the winner of the cup when he made the promise.

THE ENGINEER AS AN EXECUTIVE

THE Panama Canal is one of the world's greatest engineering feats. All the world benefits by its existence and all of the world honors its builders. Whenever the Panama Canal is mentioned there instantly comes to the mind its builder, the man who could handle men as well as mountains, General Goethals, Engineer and Executive, who knew why others before him had failed, why machinery even then rusted in the jungles, awaiting the touch of a hand on the controls to send it bustling to work. Where others had been only engineers, Goethals was engineer and executive and for that reason able to meet the problem squarely and effect a good solution. The Panama Canal will go down in history as an outstanding achievement of man, a monument to his will and ability.

While each engineer neither desires nor is able to build a great canal, nevertheless there are a very great many places where engineers who can direct men are badly needed. Factory management, requiring a man who has engineering training so that he can understand processes, understand the men who do the actual work and so coordinate the two that they are most effective, requires by its very nature an engineer. Machines will not operate of themselves so men must control them. This introduces another problem, the human element, which is sometimes even more difficult to deal with than that of the machines. It is there that the engineer-executive is needed to coordinate the efforts of the men with the movements of the machine. It is self-evident that only one who knows the theory on which the machine operates and the ways in which the man may be handled will be able to bring about the exact coordination of both.

Another place that is filled only by an engineer who is an executive is in Public Utility work. The present tendency seems toward control and operation of industry by large concerns, under the supervision of the government. Most Public Utility work deals largely with engineering, yet requires executive ability also in the men who are to be in control. A good example of this type of engineer may be found in power work, where the engineer in charge is usually about one-half engineer and one-half executive.

Civil service offers another example of the engineer-executive. A great part of civil service work is government engineering work, requiring engineers who know the technical part of the work and who can direct the operations of others.

The qualities most needed by an engineer who is to be an executive as well as an engineer, are of a rather varied nature. Natural engineering ability and natural executive ability must be given equal consideration. Among the first requirements must also be placed a deep interest in human in general, a liking for ben. This always marks a good executive and should be found in all engineers. Then should come honesty, integrity of purpose and professional ethics. These will be developed by the rigor of an engineering education. The engineering methods of attack, the way an engineer thinks when confronted by a problem, and the ability to master processes and methods rapidly will also be well developed by an engineering education. That is not enough, however, if the engineer must also be an executive. The handling of men requires

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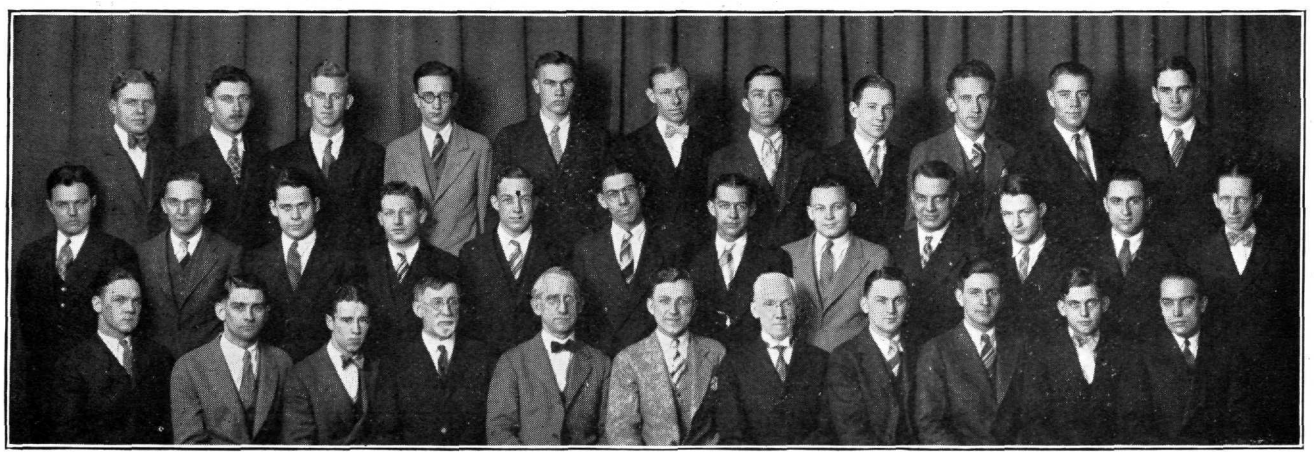

Top Line—S. C. Ackerman, Miller, D. S. Hubbell, R. E. Heuberger, F. B. Weidman, Kenneth Boger, E. C. Sawyer.
Middle Line—T. F. McCormick, H. M. Walker, H. C. White, R. W. Englebry, W. G. Hardy, W. J. Bickmore, A. B. Crawford, P. J. Cole, J. F. Byrne, I. W. Ferguson, E. F. Brooke, L. P. Doyle.
Bottom Line—F. J. Dickerson, U. J. Grant, F. E. Ullerey, Prof. J. E. Boyd, Dean E. A. Hitchcock, L. W. Garver, Prof. Wm. T. Magruder, C. L. Goodlin, M. J. Hegler, H. E. Bohmer, L. P. Sharpe.

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broad-mindedness, the ability to see the other fellow's point of view and to appreciate it, initiative and general managerial ability. This will result only from clean living, a broad education and a deep interest in people because they are people. The executive must take part in a great many outside activities in order that he may better know those who are working with him and over him.

Twenty years ago an engineer did not think it worth his while to bother about the "executive" part of his work, so he did not try to learn the methods of handling men until he got out in the field, several years after he had finished his formal education. Perhaps there was not so great a need for engineers who could fill executive positions as well as those requiring just engineering ability. Today, however, industry demands men who are engineers and who can regulate the affairs of men efficiently. This has developed a new type of engineer. This new engineer may not be an expert in all branches of engineering, or even in all of the intricacies of his own field, but he has a good general knowledge of several fields of engineering and is a specialist in one of them, along with a knowledge of the ways and means of handling men. Mr. Charles F. Kettering once said that the difficult thing was the classification of problems, not their solution, as experts in any line could be hired for twenty-five dollars a week. The same idea holds true in executive work, the difficult thing being to properly handle the men, and not the doing of any one man's work. The engineer-executive, therefore has the problem of classifying problems, then the selection of the right man to solve them.

It would seem that most opportunities for the engineer-executive would then lie along the lines of waste elimination, both through more efficient processes and through the proper placing of his men, toward the efficient adaptation of new discoveries and inventions to existing processes and finally his own ingenuity in getting more out of existing methods. The opportunities for power, the control of large amounts of wealth, energy, or men, most certainly fall to engineers who have executive ability as well as engineering ability.

The future seems very bright indeed for those engineers who possess the natural characteristics that will enable them to control men as well as machines, and it is to these men that we must look for the leaders of tomorrow.

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have conferred honor upon their Alma Mater by a high grade of scholarship as undergraduates, and to foster a spirit of liberal culture in the Engineering Schools of America." Since the membership has been augmented by the men elected to membership last quarter the local chapter (Gamma) now numbers between thirty and forty men as active members, the photograph below showing the present membership, minus a few who were absent when the picture was taken.

Tau Beta Pi was the originator of the Inter-Honorary Dance idea and has done much toward the accomplishment of this project.