

STATEMENT OF PURPOSE

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a pair of tickets to a Broadway production of their choosing.

The editorial and advisory boards of the paper thank all who participated in the contest.

LETTERS TO THE EDITOR

From an erstwhile Trainee

I have been a member of the March, 1960 class of the Polarad training program, an orientation course for new engineers, now in progress under the direction of A. E. Martin. The aim is to provide for the new engineer an insight into the organization of Polarad as well as an awareness of the considerations entering into the design of Polarad equipment.

Speakers are invited to lecture on those topics with which they are most familiar. Not all the topics were of immediate interest to me. These were the most non-technical ones: contracts, publications, executive organization. Being interested in the direct engineering field, I found the most useful lectures to be on components and design. The lectures are not quantitative but they are qualitative. The program does not give the know-how to the engineer for his technical work but it does give him an awareness of what he must do to get it and whom he must see to find his information.

All in all, this is, in my estimation, a good program to be continued.

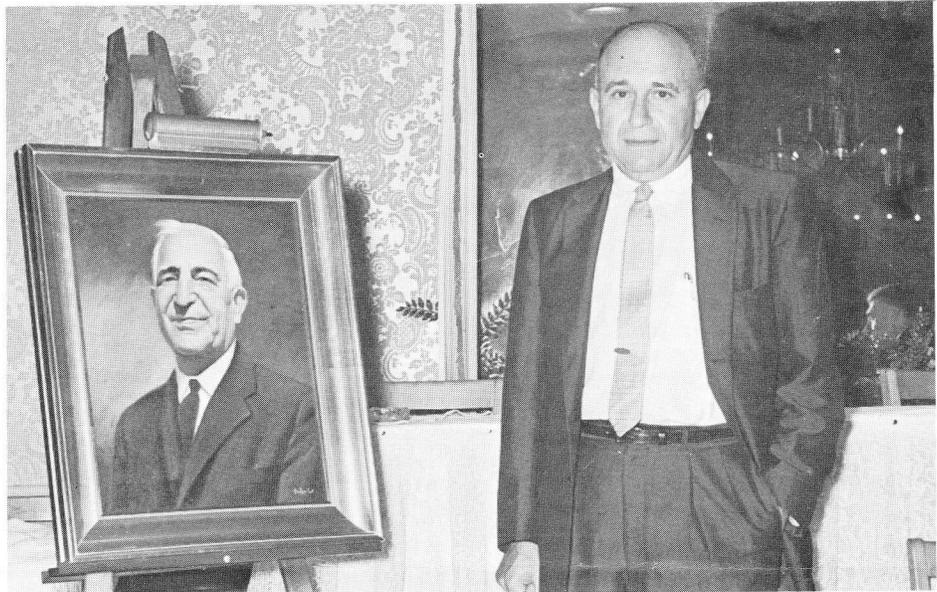
Eli Berlinger

THE LIBRARY CORNER

In checking out the new Periodicals shelf list, it was noted that the library receives an over-abundant supply of assorted copies. These are carefully screened and the excess discarded.

If those who may wish to obtain any specific periodicals before discard will send name, department and preference, such material will be set aside for them whenever possible.

L. D. Cloth



The Harry Jaffe Sunshine Fund presents portrait of the late Harry Jaffe to Dr. D. L. Jaffe at an installation dinner.

WANTED

POLARAD ENGINEERS to present a paper at the 1961 I.R.E. INTERNATIONAL CONVENTION to win a 2-year paid membership in the Institute of Radio Engineers!

Deadline for submission is October 1960.

For further information see your department head or telephone George Kaufer (x-224).

NEW AUTHOR CREDITS

In the belief that many of the younger men at Polarad may have interesting and informative technical material which they would like to submit for publication, George Kaufer of the Engineering Department has issued the "call to the tablet." Early response has already been noted in that both Myron Greenbaum and Irwin Share of Engineering have become author-aspirants. Technical articles they have written were submitted through our Publications Department to Electronics Magazine and Proceedings of the IRE respectively.

The ranks are open to many more.

POLARAD E.Q.S. HEAD TO LECTURE

Stanley Seifer, manager Engineering Quality Surveillance, will give a lecture at the American Management Association's summer headquarters, Colgate University, on July 29, 1960 for a seminar of Quality Control managers. The subject of his lecture will be: Reliability and Quality Assurance and its relationship to Quality Control.

The lecture program is headed by Dr. J. M. Juran.

SAILING TO WINDWARD

While most people appreciate the beauty and grace of a sailboat, relatively few understand how the boat is able to move in directions other than that of the wind. Here as in the case of the iceberg, the most important part of the story is hidden underwater.

Every sailboat possesses some form of projecting keel (fig. 1) be it a centerboard, daggerboard, fixed keel, the twin keels of a catamaran, or the lee-boards of a sailing canoe. Each of these types is a keel: an underwater fin, broad and thin, so as to allow the boat to slip forward through the water with minimum resistance, but greatly resisting any sideways motion (leeward slip). Without this keel, the sail would make the boat go faster, but only in the wind's direction; with it, the power of the wind in the sail can be harnessed to carry the boat in any direction.

To see how this is possible, the problem may be analyzed with the aid of simple force vectors (fig. 2). We shall sail our boat at some angle Θ to the wind's direction, and set the sail out some angle Φ from the centerline of the boat, Φ being smaller than Θ . Now the wind will press against each section of the sail with a force F , which we shall resolve into normal and tangential components to the sail's surface. The tangential component has no sail to react against and may be neglected, leaving us with F_n , perpendicular to the sail, as the only effective force.