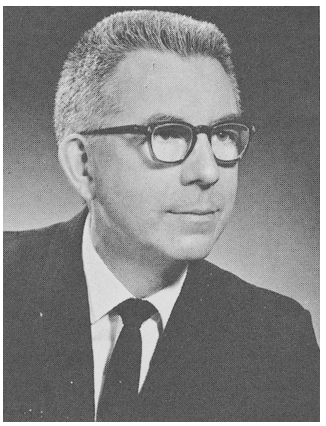
COMMENTARY

CONGRATULATIONS, GENERAL ELECTRIC!



On-the-job training, education in applied science, and re-education to reduce human obsolescence have been the subject of four editorials on these pages (Mar '67, Dec '66, Feb '66, Oct '65). This concern for such problems prompts us to salute General Electric for taking the initiative and actually doing something to solve them.

Last June, four General Electric engineers became the first graduates to receive PhD's in engineering under a unique work-study program combining in-company work, on-the-job training, and formal graduate study. The degrees, awarded by the Polytechnic Institute of Brooklyn, went to Lloyd J. Spafford, Eginhard J. Muth, Brook L. Hunter, and Ozcan Tuncel.

The work-study program, first of its type in industry, permits graduate engineers in General Electric's three-year Advanced Course in Engineering to supplement their work with formal classes leading to advanced academic degrees.

Originally established jointly by Brooklyn Poly and GE's Engineering Services, the program has been expanded to include graduate study at Rensselaer Polytechnic Institute, the University of Cincinnati, and the University of California at Berkeley. Already 45 MS degrees have been awarded.

Under this program, engineers must take the same courses and meet the same degree requirements required of all doctoral candidates. However, there are significant differences between the GE program and the conventional academic program.

Of the four to six years required for the PhD, participants spend only two semesters actually on campus. The remainder of the time is spent at their job location and at GE's main facilities at Schenectady, where they take company and university courses taught by visiting professors and by GE technical specialists accredited for teaching by the university.

Unlike the typical research-oriented postgraduate courses, the work-study program places major emphasis on practical engineering. Homework assignments are taken from actual engineering problems encountered in company plants across the country. An engineering project directly related to the student's job with the company is required. Thus, it would appear that the company derives certain real benefits even during the period of instruction.

This engineering project often becomes the subject of the doctoral thesis. The topics of last June's graduates ranged from turbine bucket frequency (Tuncel) to radar signal processing (Spafford) and from stress analysis in nuclear fuel rods (Hunter) to design of systems that have their own built-in maintenance (Muth).

All expenses, estimated to run around $16 000 per man for the full program, are paid by GE. In addition, the engineer retains his company job full time, is eligible for promotion, and receives full salary.

The program is open to young engineers just out of college as well as to employees who have been with the company for many years and who wish to update their education without the financial strain that might otherwise occur.

The Advanced Course in Engineering, to which the degree program was added in 1963, has been training GE engineers for more than 40 years. More than 1 100 engineers have completed the course. The addition of the degree program is viewed by the company's Engineering Services Section as "one of the most important investments the company can make." We would agree. Graduates of the program are considered ready to assume technical and managerial leadership in the company's world-wide manufacturing facilities.

So, for far-sighted leadership and positive action, congratulations, General Electric!

Louis G. Stang, Jr.