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1901-1988

By Gregory S. Vassell

Eric T. B. Gross, an internationally renowned electric power engineer, author, and educator, died on June 27, 1988, at his home in Schenectady, New York, at the age of eighty-seven. At the time of his death, he was Philip Sporn Professor Emeritus of Engineering at Rensselaer Polytechnic Institute (RPI) in Troy, New York.

Eric Gross was born in Vienna, Austria, on May 24, 1901. After completing his secondary education, he studied electrical engineering at the Technical University of Vienna. Upon graduation "with distinction" in 1923, he embarked on his professional career by finding employment in industry. In 1924 he joined the Union Electric & Manufacturing Company (A.E.G.) in Vienna, Austria. While working as a practicing engineer, he continued his studies at the Technical University of Vienna, receiving a D.Sc. "summa cum laude" in 1932. In 1938 he moved to England, accepting a position as consulting transmission engineer with the A.E.G. Electric Company, Ltd., London.

When Eric Gross arrived in the United States in 1939, he already had earned an international reputation as a distinguished electric power engineer. By that time he had contributed significantly to major advances in high-speed relaying and to lightning protection and grounding of high-voltage transmission networks, and had published extensively in

technical journals in Austria, Czechoslovakia, Germany, France, Switzerland, and the United Kingdom.

After a short stint as an instructor in electrical engineering at the City College of New York and a three-year appointment as assistant professor at Cornell University, Eric Gross joined the faculty at the Illinois Institute of Technology (IIT) in 1945 as professor of electrical engineering. He remained at IIT for seventeen years, establishing at that school the nation's first graduate program in electric power engineering. Over the years, he nurtured this program to a level of excellence that attracted international recognition.

In 1962 Eric Gross came to RPI to become its Philip Sporn Professor of Electric Power Systems Engineering and to found the nation's second graduate program in electric power engineering. The program started with only two full-time graduate students. By the time Professor Gross retired in 1973, he had increased the enrollment to sixty full-time graduate students (all supported by fellowships). In the process, RPI emerged as this country's most prominent graduate school in electric power engineering.

Throughout his career as an educator, Eric Gross remained active as a *practicing* engineer: he maintained close ties with the industry; he was a registered professional engineer in Illinois, New York, and Vermont and a chartered electrical engineer in the United Kingdom; he authored or coauthored more than one hundred technical and scientific papers published in professional journals around the world; he held twelve patents dealing with his inventions in the field of electric power systems protection and grounding; and he served as consultant to several major electric utility companies, equipment manufacturers, and government agencies.

Eric Gross was also generous of his time in participating actively in the work of many professional and academic organizations, such as the Institute of Electrical and Electronics Engineers (IEEE) (and its predecessor organization, the American Institute of Electrical Engineers), American Society

for Engineering Education, American Power Conference, Pan American Congress on Engineering, and the International Conference on Large High Voltage Electric Systems (Paris). He served on numerous committees of these organizations, either as a member or as an officer. He served as the national president (1953-54) of Eta Kappa Nu (electrical engineering honor society) and was a member of Tau Beta Pi (engineering honor society) and Sigma Xi, The Scientific Research Society.

Professor Gross has not lacked formal recognition for his many accomplishments in the art and science of engineering, both as a distinguished practicing engineer and as an outstanding engineering educator: he was elected a fellow of the IEEE, the Institution of Electrical Engineers (London), the New York Academy of Sciences, and the American Association for the Advancement of Science; he was elected a life patron of RPI by its trustees; and he received numerous awards, medals, and citations from a variety of professional and educational institutions.

In 1978 Professor Gross was elected to the National Academy of Engineering for "contributions to electric power system education and pioneering leadership in the development of international educational programs." In 1979 he was awarded the Austrian Cross of Honor for Science and the Arts, First Class, for his career achievements in the field of electric power engineering.

Throughout his life, Eric Gross was a fighter for what he believed in: excellence in engineering, proper balance between theory and practice in engineering education, and preservation of electric power engineering as an essential engineering discipline on U.S. campuses. He held strong views and was prepared to work and fight for them with dedication, tenacity, and courage.

He entered upon the stage of engineering education in the United States during a stressful period, when—during the 1950s and early 1960s—the predominantly practical orientation of the past was being replaced by emphasis on

theory and research. In this process, electric power engineering was getting short shrift on many U.S. campuses and, in fact, was heading for complete extinction. Many engineering educators of that day thought that there were no new insights to be found in the electric power field and no new challenges to be offered in that area to the inquiring minds of young men and women. Professor Gross strongly disagreed. It was in this context that the success of his graduate programs in electric power engineering at IIT and RPI contributed mightily to the preservation of electric power as a field of intellectual challenge for new generations of electrical engineers. Following his example, and through efforts of like-minded educators and industry leaders, some twenty new undergraduate and graduate programs in electric power engineering were established on U.S. campuses during the 1960s.

Eric Gross occupies a very special place among engineering educators. He was a teacher of exceptional talent—an "old world" professor right out of a storybook. His teaching was clear and precise, with a fine blending of theory and practice. He was demanding of his students, yet also supportive of their efforts and free with his praise of good work. He developed strong personal bonds with most of them by showing genuine interest in their careers, and even in their personal lives. This unique relationship continued after a student's graduation. Professor Gross helped his students find jobs of challenge and opportunity and "Eric's boys" were always in high demand by industry. When one of them became a manager, as often happened, Professor Gross would expect him to help assure proper placement and career development for his new crop of graduates.

Students revered Professor Gross. Over the years, many of them achieved distinction of their own in various branches of electric power engineering. Throughout their careers, however, they all remained his "boys." Their feelings toward Eric Gross are well expressed in a comment by one of his former students, who is now a distinguished engineer

in his own right as president of an important consulting firm in the energy field:

I spent only one year under Eric before finishing my studies. Later in life, our paths crossed many times. He never once wavered from his dedication to the education of top quality electric power engineers. I will never forget him and the great good he did me, professionally and personally. Nor will I forget the standard of excellence he led me to expect of myself and of others.