Norman Arland Copeland
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1915–1984

By Robert L. Pigford and Sheldon E. Isakoff

Norman Arland Copeland, a member of the board of directors and retired senior vice-president and member of the executive committee of E. I. du Pont de Nemours and Company, Inc., died on April 30, 1984, at the age of sixty-eight.

He was born on August 16, 1915, in Mercer County, Ohio, and grew up in Findlay, Ohio. He graduated from the Massachusetts Institute of Technology (MIT) in 1936 with a B.S. in mechanical engineering and did postgraduate work at the Swiss Polytechnic Institute in Zurich. Later, he studied at the University of Delaware, from which he received an M.S. in 1948 and a Ph.D. in 1949 in chemical engineering.

Dr. Copeland began his career with the Du Pont Company in 1937 as a development engineer in the Engineering Department. In the next few years, he advanced through assignments in textile fibers and neoprene synthetic rubber plants to become a senior supervisor. After a leave of absence from Du Pont to complete his education, Copeland became a senior design engineer. By 1950 he was managing engineering design for Du Pont's Film Department. He was transferred formally to the Film Department in 1951 and over the next fourteen years was a plant manager, assistant director of manufacturing, assistant director of research and development, and assistant general manager of the department.
In 1965 Norman returned to the Engineering Department as assistant chief engineer. In 1970 he was named chief engineer and from this post directed one of the largest private process design and construction engineering organizations in the world. (The Du Pont Engineering Department had five thousand employees, and there were another ten thousand people on construction contractors' payrolls.)

Under his leadership, the Engineering Department designed and built capital facilities at a cost of more than $2 billion on fifty sites in ten countries. These facilities included what at that time were the world's largest plants for the production of methanol, polyvinyl alcohol, and polyester film. Norman was also a director of the Du Pont affiliate, the Remington Arms Company.

In 1973 Dr. Copeland was named senior vice-president, a member of Du Pont's executive committee, and a director of the company. He served in those capacities until his retirement in 1977, continuing thereafter as a member of the board of directors.

In addition to his election to the National Academy of Engineering in 1977, Norman was a fellow and member of the American Institute of Chemical Engineers, a member of the American Chemical Society, and a member of the Tau Beta Pi honor society. In 1974 he was awarded the Society of Manufacturing Engineers Interprofessional Cooperation Award. In 1976 the Delaware Society of Professional Engineers named him the state's outstanding engineer. He was a registered engineer in Delaware.

Norman Copeland was a proponent of lifelong learning and maintained strong ties with a number of academic institutions. He was a member of the visiting committees for the Department of Mechanical Engineering at MIT and the Department of Chemical Engineering of Lehigh University. In 1969 he established in Du Pont's Engineering Department one of the industry's most ambitious and successful continuing education programs. The program, which is still quite active today, has provided new knowledge and skills over a wide range of engineering topics for thousands of Du Pont
engineers. In addition, as a member of the University of Delaware Research Foundation, Dr. Copeland helped many new faculty members begin work in their chosen research fields.

In Wilmington, Delaware, where Du Pont has its headquarters and where Norman Copeland resided until he moved to Tequesta, Florida, in 1978, he served on the board of directors of the Wilmington Medical Center and was a strong supporter of the Boy Scouts. He was also a member of the board of directors for Community Housing, Inc., a not-for-profit organization that provides housing for moderate-income families.

Dr. Copeland was involved in the development of viscose rayon and of the technology for its manufacture, all of which preceded the commercialization of nylon and other synthetic fibers. In addition, he contributed to the development of neoprene, the first commercial synthetic rubber. During World War II, he helped improve production techniques for the large-scale manufacture of neoprene. Immediately following the war, at the request of the U.S. government, Norman was "loaned" to the U.S. Army in West Germany to assess technical aspects of the German chemical industry.

Following this assignment, he was involved in the development of the first successful polyester film and helped pioneer its use as a high-temperature dielectric and as a base for magnetic tape. He also helped develop polyvinyl fluoride film, which is used in structural building panels, and assisted in the production of polyimide film, which is applied to coat wire for high-temperature use and to insulate cable. It should also be noted that the Kapton polyimide film he helped develop has been widely used in space vehicles.

Dr. Copeland advocated a forceful and responsible approach to air and water protection. He served the National Academies of Sciences and Engineering for two years as a member of the National Research Council's (NRC) Commission on Natural Resources. Norman said, "We must be sure that what we do really improves our environment and is not just a lot of motion ... that pollution control measures we
require are justified and that the benefits gained are commensurate with the costs."

Norman Copeland was an extraordinarily successful engineer in the chemical industry at a time of rapid industrial expansion of facilities for the manufacture of today's successful polymeric materials. He combined a talent for managing the large groups of engineers who were needed for the design of plants and an understanding of the values of an approach to development based on engineering principles.

His management skills were obvious to those who worked with him because he had both the ability to do superior engineering work himself and the kind of personal qualities that attracted loyalty from the members of the organizations of which he was a part. He was a highly compassionate person of the highest integrity. He dealt fairly with individuals under his supervision and had the knack of welding the best talents of his subordinates into an integrated team effort.

Personally, Norman was a private person, a voracious reader of technical and business journals, and a student of many diverse fields including foreign languages, history, and cultures. He loved to travel and did so extensively. He became fluent in German while studying in Switzerland as a young man and maintained this fluency throughout his life. He loved to visit Germany, and he often attended German festivals in the United States. He also enjoyed reading detective novels in French and German.

Dr. Copeland was an avid sports enthusiast, with a particular fondness for golf and, to a lesser extent, shooting and fishing. He belonged to the Wilmington, Du Pont, and Tequesta country clubs and the Biderman, Jupiter Hills, and Pine Valley golf clubs. According to his son Eric, Norman described the course at Pine Valley as "a great builder of character."

He is survived by two sons, Dr. Eric S. Copeland of Wilmington, Delaware, and Dr. Terry M. Copeland of Florence, South Carolina. Norman’s wife, the former Gladys Tucker of Tuscaloosa, Alabama, died in September 1982.