GEORGE A. ROBERTS

1919–2013

Elected in 1978

“For technological advances, managerial leadership, and continuing role in professional activities.”

BY ROBERT MEHRABIAN

GEORGE A. ROBERTS, 93, who was a pioneer in the field of steel manufacturing and helped turn the Southern California–based Teledyne Corp. into a Fortune 500 firm, died on February 15, 2013, of heart failure at a Dallas hospital.

George was born on February 18, 1919, in Point Marion, Pennsylvania. After high school, he enrolled in the US Naval Academy, where he met Henry Earl Singleton. Two years later he transferred to what is now Carnegie Mellon University and earned a bachelor’s degree in engineering and, in 1942, a doctorate in metallurgy. While at Carnegie Mellon he worked at Bell Laboratories and learned about vacuum melting processes, which he later applied to the production of high-strength/high-temperature commercial alloys.

From 1941 to 1966 he worked at Vanadium Alloys Steel Company, also known as Vasco, where he advanced from research metallurgist to president in 1961 and chairman of the board of directors in 1964. During this period he published a number of papers and books on tool steels and was awarded several patents on alloy steels. He served the technical community in leadership roles—as president of the American Society for Metals (ASM), twice as president of Metal Powders Industries Foundation—made significant financial
contributions to the ASM Materials Education Foundation, and served as its president and subsequently as a trustee. At the time of his death, the Education Foundation was on the threshold of reaching a total of 100 scholarships funded by Dr. Roberts.

He was awarded many honors in his illustrious career, including recognition as a fellow of the ASM, receipt of the ASM Gold Medal, designation as a fellow of the Metallurgical Society, and selection as the Howe Memorial Lecturer. He was elected to the National Academy of Engineering in 1978. He was also elected a trustee of Carnegie Mellon University while at Vasco and continued as a life trustee and then emeritus trustee.

I was privileged to know Dr. Roberts first at ASM, then through the years as a member of the National Academy of Engineering, while I was president of Carnegie Mellon University in the 1990s, and subsequently as a fellow board member and colleague at Allegheny Teledyne. We remained in close contact in the past 13 years as I have been fortunate to continue the Teledyne legacy at Teledyne Technologies.

At Carnegie Mellon we constructed the George A. Roberts Engineering Hall in the early 1990s, made possible through his very generous donation. I will always remember his quotes from the Bible, Andrew Carnegie, Blake, and Polybus at the dedication ceremony of his building. He mused about “surplus” and “enough wealth” and ended the day saying that at least he had avoided Carnegie’s famous quote, “He who dies rich, dies disgraced.”

Dr. Roberts’ corporate career success mirrored his professional and philanthropic life. While at Vasco, he introduced Vasco Supreme, the first super-hard, high-speed steel that revolutionized many metalworking processes. Later, Vasco became the producer of 18 percent nickel maraging steels, which were used in high-strength/high-temperature applications. A number of years later I used liquid metal atomizing processes to study the microstructure of these alloys.

During the 1960s, as was happening at Teledyne (founded by Dr. Singleton in 1960), Dr. Roberts was growing Vasco
through a series of acquisitions that included Allvac Metals Corporation, which specialized in vacuum melted alloys. He had already introduced vacuum melting at Vasco and through this acquisition the company became a major producer of high-purity vacuum melted cobalt, iron, nickel, and titanium-based alloys—vital in many aeronautical, space, and industrial applications. By 1965, the company had over $40 million in sales and was listed on the New York Stock Exchange.

George had maintained a relationship with his close friend Henry Singleton since their days in the Navy and for some time they had been talking about the possibility of combining Vasco metals with Teledyne. In 1966 they agreed to a merger. Dr. Roberts assumed responsibility for all operations of the company in 1966 while Dr. Singleton focused on capital allocation, including diversification into insurance companies, significant investments in a few public companies, and pioneering stock buybacks through major tender offers to Teledyne’s shareholders. The new company ended the year with $257 million in sales. At the same time the pace of acquisitions picked up and by 1970 Teledyne had over $1.2 billion in sales. By the end of the major acquisition programs it was a corporation of some 130 companies, ranging from digital communication, complex metallic alloys, and consumer products to Teledyne Ryan Aeronautical, which produced the most advanced unmanned air vehicles (including the Global Hawk). By 1981 sales exceeded $3 billion and Teledyne continued its growth primarily through internal investments until its merger with Allegheny Ludlum Corporation in 1996.

A detailed history of this amazing company, its merger to form Allegheny Teledyne, and subsequent breakup into three publicly traded companies (Teledyne Technologies, Allegheny Technologies, and Water Pik Technologies in 1999) is detailed in Dr. Roberts’ 2007 book *Distant Force*.

George was closely involved with the many acquisitions that Teledyne made in the early years and able to convince founders of companies that their legacy would be in good hands at Teledyne. A testament to his personable style and leadership is that most of the company founders stayed with
Teledyne after the acquisition, often until they retired. I believe it is also important to recall his contributions to Teledyne through the eyes of his managers and colleagues, with whom I have consulted. He was gracious both with customers and with Teledyne’s employees. His personal warmth was evident and he always showed a genuine interest in the people he met.

George’s memory was legendary throughout Teledyne. At meetings or when visiting the operating companies, he would walk up to individuals, greet them by name, and remind them of prior interactions, even if they occurred many years earlier. It was not unusual for him to have a much better recollection of events associated with a business than the local managers themselves. He augmented his exceptional memory with his small notebooks, which were also legendary; he took careful notes and could refer to them to refresh his memory many years later.

George was a great believer in the value of applying advanced research to Teledyne’s products. In 1975 he introduced the Teledyne Research Assistance Program to promote cooperative research between individual Teledyne companies and institutions of higher education. The companies were encouraged to propose research projects on subjects of interest to them, to be carried out in cooperation with selected universities. If approved, these projects were funded by the corporate office. Under this program, 320 projects were carried out, with participation by 80 Teledyne companies and 112 US universities. Today, Teledyne Technologies maintains this legacy through cooperative research programs with many universities.

George was always focused on planning for the future, but he was equally interested in incorporating lessons from the past. This was exemplified in a talk he gave to the managers of a Teledyne company that had just completed a record year with operating income among the highest in the corporation. He spent about five minutes congratulating the team on their achievements, and devoted the rest of the talk to the subject of change. He noted that market conditions are beyond our control, but good leaders can plan for contingencies and must
react quickly when changes occur. His remarks proved to be prophetic. The Teledyne Company where he spoke primarily served the defense industry, and the talk was given a few years before the end of the Cold War, which ushered in an era of significantly reduced defense spending.

Finally, as George noted at the dedication of the George A. Roberts Hall at Carnegie Mellon University in 1995, he spent 53 years at essentially one company (26 years at Vasco and 27 at Teledyne). He quoted Mark Twain as his teacher when he said “Put all your eggs in one basket—and watch that basket!” We are all grateful that he watched the basket called Teledyne with such care, foresight, and integrity.

I will conclude on a personal note. I wrote to the board of directors of Teledyne Technologies about George’s passing and Frank Cahouet, who has served on the board for several decades, responded with three simple yet elegant words: “A wonderful man.” It is my honor to write about my dear friend, fellow metallurgist, and colleague, Dr. George A. Roberts, as we memorialize his many contributions as a scientist/engineer, business executive, societal leader, and major supporter of science and engineering education. He was truly a wonderful man.

George is survived by his wife Ellen, children, and grandchildren.