



Arnaldo Piccolini

Dominick J. Sanchini

1926-1990

By George W. Jeffs

DOMINICK J. SANCHINI, a key engineer and manager in the design, testing, and development of high-performance cryogenic rocket engines, died on November 17, 1990, at the age of sixty-three.

Dom received a B.S. in mechanical engineering in 1951 from Lehigh University. He then concurrently pursued a professional career in aerospace and worked toward a law degree that he received in 1958 from the University of Southern California. He later became a member of the California Bar. Together with his inherent leadership qualities, this educational background well qualified him for the challenges ahead.

In the earliest phase of his career, Dom was a member of the Aerophysics Laboratory of North American Aviation Inc. (NAA), working in the engine analysis and test group. From the Aerophysics Laboratory, a number of the divisions of NAA Inc. were born, including the Rocketdyne Division, and Dom then became a member of the original nucleus of its staff. In addition to working in early engine analysis and design, he participated in developing the basic operating elements of Rocketdyne, including the Santa Susanna Field Laboratory (major test stands and supporting elements) and, of course, the growth of the engineering staff.

In the 1960s he demonstrated his management ability in the success of the 1.5 million-pound-thrust, Lox-JP-fueled F-1 en

gine for the Saturn first stage booster. His family, who shared his interest and enthusiasm for the space program, came to accept the F-1 around the house as his "first baby." His team at the office was continually impressed with his ability to assimilate and effectively use and retain so much information in real time and also with his toughness as a "task master" on himself and his people. Moreover, the National Aeronautics and Space Administration (NASA) recognized him as a technically sound and responsible manager.

The heart of Dom's career was devoted to the development of the space shuttle main engines during the 1970s. He was instrumental in winning the development contract in the beginning, a victory he shared with his family the evening of that announcement—it was a family team celebration. Dom's resilience, dedication, and enthusiasm were instrumental in leading us through the development of this demanding high-performance (3,000 pounds-per-square-inch chamber, pressure-staged combustion cycle engine), reusable (goal was fifty-five flights—rocket engines were normally not recovered), and light-weight (for recovery after attaining orbit in the Shuttle Orbiter) engine. North American Aviation Inc. had merged with Rockwell International, and we were all fortunate to have a knowledgeable, experienced engineer for a chief executive officer. Nonetheless, we encountered some difficulty in convincing him that we would ever get one engine to start and operate through every safety constraint, let alone three engines simultaneously, with astronauts' lives at stake. As a result of hard work, though, solid engineering, and manufacturing and tests accomplished by a cooperative NASA-Rockwell team, the engines have started with repeated precision. It must be mentioned here in passing that in this latter period the Sanchini family kitchen was the site of the failure analysis table, covered with drawings and problem parts that had failed and been scrapped.

In the 1980s Dom became a senior member of management at Rockwell International, initially as executive vice-president of production of the Rocketdyne Division, then as president of the Rocky Flats plant, and finally as corporate vice-president for major programs. In all these assignments, he served with integrity, dedication, and distinction.

Throughout his career Dom made significant, lasting contributions not only to our base knowledge but also more particularly to our understanding of rocket-engine design and operation that have become part of a continuing legacy in our policies, procedures and design, and operational practices. He also left his mark on those of us who worked with him—many of our present propulsion and energy system managers having been members of his teams. Dom received many commendations and honors for his accomplishments, but the two of which he was most proud were his election to the National Academy of Engineering in 1984 for "meeting one of the greatest engineering challenges in aerospace with the design, development, and operation of the Space Shuttle Main Engine" and to receive the NASA Distinguished Public Service Medal for "meritorious contributions" to the space shuttle main engines—an understatement.

Dom spent much time away from home, working at Huntsville, Cape Canaveral, National Space Technology Laboratories, and later Boulder, Colorado, but he always found time to communicate in depth with his team at home, his wife, Claire, and his daughters, Donna and Rae. They shared the everyday status, along with the joy of the first *Columbia* launch and the tragedy of the *Challenger* loss. When his daughter Rae was asked to recall Dom's feeling for the space program, she wrote, "He was proud to have participated in one of the finest endeavors of modern man, and he had a lot of fun with it along the way. Until the very end, I think he considered himself truly blessed."