



ROMEO RAOUL MARTEL

1890 - 1965

Romeo Raoul Martel, professor of structural engineering and faculty member at Caltech for 42 years, died on February 28, at the age of 74. He joined the faculty in 1918, when the campus was surrounded by orange groves, and retired as professor emeritus in 1960. A native of Iberville, Quebec, R. R. Martel graduated from Brown University in 1912 and taught civil engineering at Rhode Island State College and at the Mechanics Institute in Rochester, New York, before coming west to work for the Atchison, Topeka & Santa Fe Railroad in Amarillo, Texas. In 1918 he joined the Institute faculty and became a full professor of civil engineering in 1930.

Professor Martel was an inspiring teacher who made a lasting impression upon his students. In the classroom and in his office he delighted in subtly unfolding the recalcitrant brains of embryo engineers. He was an artist in knowing what not to say, and what not to explain. He was a master of the short and trenchant remark that might lie dormant for years before developing the brain in which it was lodged. It was his delight to coax, swindle, or frustrate a young mind into thinking for itself, and many of his students are now themselves teaching at universities and are, in turn, trying to influence their students similarly. Many of his former students are playing important roles in the practice of engineering in California, and others are responsible for important engineering works all over the world.

R. R. Martel was a pioneer in the earthquake-resistant design of structures and in earthquake engineering research. He was largely responsible for the earthquake provisions in the first issue of the Uniform Building Code in 1927, and he was active on building code committees for the City of Pasadena, the California State Chamber of Commerce, the State Division of Architecture, and the American Standards Association.

In 1926 he was a delegate to the Council on Earthquake Protection at the Third Pan-Pacific Science Congress in Tokyo, and attended the World Engineering Congress in Tokyo in 1929 in a similar capacity. He was a member of the Advisory Committee on Engineering Seismology for the United States Coast and Geodetic Survey, and was one of the founding members of the Earthquake Engineering Research Institute.

He and his students were responsible for much of the early research on the effects of earthquakes, and the results of this work are embodied in present-day building codes. It is indicative of his interests and influence that much of the knowledge built up in engineering seismology, and most of the provisions against earthquakes in the California Building Code can be traced back to him, or to persons who had come under his influence.

The technical literature on destructive earthquakes is full of the names of his students and many of his students have played active roles in the design of structures to resist earthquakes. He was instrumental in organizing the first meetings of structural engineers in southern California. These developed from a group of 12 men into the Structural Engineers Association of Southern California with 800 members, and later the Structural Engineers Association of Northern California with 400 members, and the Structural Engineers

Association of Central California with 200 members. These associations have had a profound influence upon the development of structural engineering in California.

He was a member of numerous engineering and scientific organizations and derived particular pleasure from his membership in the Société des Ingénieurs Civils de France and the International Association of Bridge and Structural Engineers.

R. R. Martel served as consultant on the design and construction of many important and novel structures. He was consultant on the design and construction of the Mt. Palomar telescope and on the design of the pumps for the Metropolitan Aqueduct, which were unusual in size and capacity. He was consultant on the construction, in 1921, of the Pasadena-San Rafael Bridge and later consulted on the designs of the Linda Vista and Colorado Street bridges. He was consultant to the cities of Pasadena, Glendale, and Los Angeles, to private companies, and the State of California on the design and construction of bridges, dams, reservoirs, gas and oil refineries, and power plants; and to the U.S. Army Engineer Corps in Los Angeles and the cities of Glendale, Burbank, and Riverside on flood-control structures. He served as consultant on the earthquake design of many buildings, in particular the First Trust Building in Pasadena, which is probably the first building in the United States to receive a rational design against earthquakes.

Professor Martel served for many years as *Secretary of the Faculty* and was succeeded in this position by his son, H. C. Martel, associate professor of electrical engineering at the Institute. In addition to his son, he is survived by his wife, Mildred Pray Martel, his daughter, Nancy C. Martel, and five grandchildren.

—George W. Housner