

WM. MURRAY DEAD; NOTED ENGINEER, 68

His Electrification of the New Haven Railroad Was First High-Tension Work of Kind

MAPPED POWER OF NATION

Head of Firm Here, Builder of Saluda River Dam, Began Career at \$10 a Week



WILLIAM S. MURRAY
Marceau

William Spencer Murray, consulting engineer who supervised the first high-tension electrification of a steam railroad—the New York, New Haven & Hartford—died yesterday after a brief illness at his home, 1140 Fifth Avenue. Mr. Murray, who was chairman of the board of directors of the engineering firm of Murray & Flood, Inc., 7 Dey Street, was 68 years old.

He was born Aug. 4, 1873, at Annapolis, the son of James Daniel Murray, a naval officer, and Elizabeth Spencer Murray. His father later became an admiral in the Navy. Instead of attending the Naval Academy as his father intended, the son entered Lehigh University, where he won his electrical engineering degree in 1895.

His first job, at \$10 a week, was with the Westinghouse Company at East Pittsburgh. He was nearly electrocuted testing a motor, but stuck to his job. Within six years, part of which time was spent as a salesman, he had saved enough money to set up in Boston, Mass., in 1902 as a consulting engineer and by the time he was 32 years old he was earning \$10,000 a year.

Began Project in 1905

In 1905 Calvert Townley, then a vice president of the N. Y., N. H. & H., sought him to take full charge of the work of electrifying that road all the way from New York to New Haven. Mr. Townley offered Mr. Murray an annual salary of \$4,500 for the job. Despite the fact that he was making \$10,000 a year and was about to be married, Mr. Murray took the job because, as he later put it, "there was more to electrifying the New Haven than just the salary."

At that time there were, of course, trolley cars, and the New York Central had electrified for a short distance on its main passenger lines at the New York Terminal, and the Baltimore & Ohio had electric engines in its Baltimore tunnel. Both used 600-volt direct current from a rail.

Mr. Murray was faced with a pioneer problem in electrification. Single phase alternating current engines had not then been built, nor had 1,100 volts been used for transportation.

At a cost of \$25,000,000, and against the advice of several experts, Mr. Murray and his associates went to work. Because of the lack of precedents they made many mistakes—Mr. Murray used to tell how it took him an hour to recount them all—but within two years the road was electrified successfully from New York to New Rochelle. Mr. Murray was in charge of electrification until the entire system was completed in 1917.

After the New Haven work Mr. Murray electrified the Hoosac Tunnel and the New York, Westchester & Boston Railway. In 1913 he returned to private practice. He developed the Housatonic River power for Southern Connecticut, among other assignments.

In 1919, while on a vacation in the Rocky Mountains, he conceived the idea of the so-called Superpower Plan or Survey, of which he became chief engineer. The survey made a comprehensive report in 1922 to the United States Government. This survey mapped the power resources of the country.

In 1913 Mr. Murray and Edwin H. McHenry founded the New York firm of McHenry & Murray, a general railway and electrification concern, although Mr. Murray remained as consulting engineer to the N. Y., N. H. & H. The firm was dissolved in 1917 and in 1921 Mr. Murray and Henry Flood Jr. formed the firm of Murray & Flood. Mr. Murray was made chairman of the board of directors. He was also chairman of the board of Lanora Corporation.

Harnessed Saluda River

Mr. Murray and his associates surveyed for private promoters the possibility of harnessing the floods of the Bay of Fundy, a project which they did not believe feasible. They electrified railroads in Chile, and in 1927-30 they engineered hydroelectric development of the Saluda River in North Carolina. This project included the erection of a huge dam, which formed a lake at one point 14 miles wide which the State of North Carolina named Lake Murray in honor of the engineer.

Mr. Murray was the author of "Superpower—Its Genesis and Future" and many papers for the American Institute of Electrical Engineers. He was a fellow of the American Institute of Electrical Engineers and its vice president in 1913-14.

He leaves a widow, Mrs. Ella Rush Murray, whom he married in 1907; three sons, Lieutenant Richard Rush Murray, U. S. A. Signal Corps; Ensign John Maynadier Murray, U. S. N. R., and William Spencer Murray Jr.; a grandson, Williamson Murray, and a sister, Miss Charlotte R. Murray of Washington.