

## Death Ends Career of Dr. Charles P. Steinmetz, Consulting Engineer of General Electric Company and World Famed Wizard of Electricity

Advancement Rapid after Reaching Shores of America Almost Penniless

**S**HORTLY after eight o'clock on the morning of Friday, October 26th, Dr. Charles Proteus Steinmetz, consulting engineer of our Company and world famed wizard of electricity, died at his home in Schenectady.

When the official announcement had been made the flags in the Works and throughout the city were placed at half mast and remained so placed for one week.

That evening at 7:45 a brief memorial address was given by Martin P. Rice, Manager, Publication Department, over WGY. After which the station was silenced for the evening.

Mr. Rice in paying tribute to Dr. Steinmetz, said:

"Some years ago Dr. Steinmetz was warned of a valvular trouble of the heart, but it made little difference in the energy which he devoted to his favorite studies and investigations. Last night he was reading a scientific work on the physics of the air. This morning we learned the sad news of his death.

"A large part of the world recognized Steinmetz as an outstanding genius in the realm of electrical engineering and mathematics—a worker of spectacular wonders—the superman of an electrical age.

"To a few, however, it was given to know him as a friend and companion of winsome charm—intensely human in his fine appreciation of Nature—happy in the fellowship of children—loving to animals, and trustful of his fellowmen.

"In the scientific world he was a recognized master of mathematical calculation and theory as well as a genius in the practical application of abstract principles to the design of

electrical machinery. A creator of complex formulæ, he possessed the rare gift of translating them into phrases which could be understood even by young students of electrical engineering.

"Dr. Steinmetz was no recluse. Where another man of like attainments might

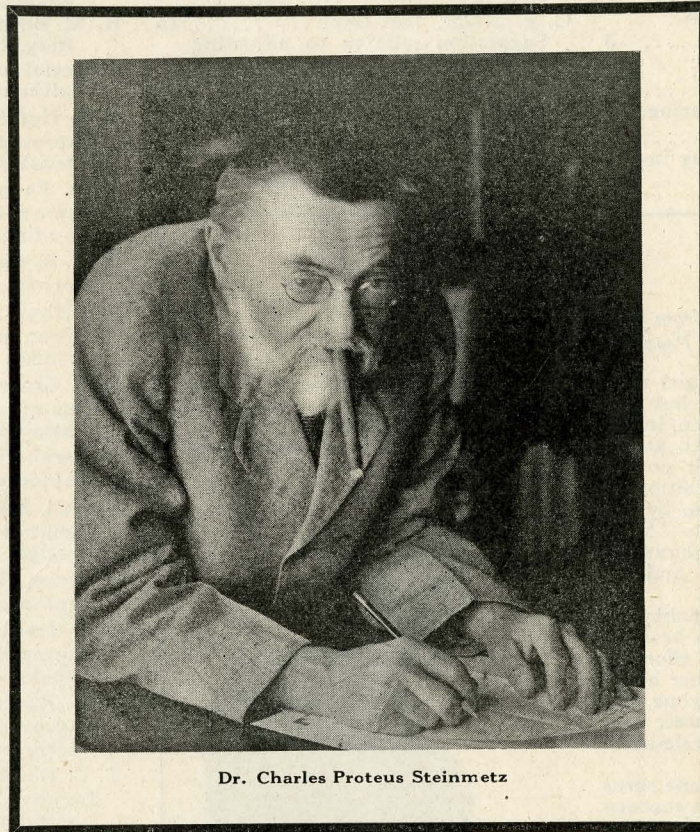
the end of five years was actively engaged in the design of the General Electric Company's apparatus and in its scientific research. More than this he had appeared before the American Institute of Electrical Engineers and had propounded principles that fairly astonished that learned body.

"Dr. Steinmetz was born at Breslau, Germany, April 9, 1865. He studied mathematics, physics and kindred subjects at the University of Breslau. It is curious to relate of this great mathematician that in his younger years he experienced the greatest difficulty in learning the multiplication tables.

"Ever an ardent student of public affairs—ever refusing to be bound by tradition or authority, he espoused the cause of Socialism while at the University and so fell under the ban of the German government. He was forced to leave the University and to flee the country to avoid arrest because of his convictions. In Switzerland he found a refuge where he continued his studies and made a scanty living by writing and teaching.

"Here he heard the call of America—a summons that has reached the

ears of many a great man with its promise of intellectual freedom and of opportunities for scientific recognition. An American student at the Polytechnic at Zurich, who had formed a close friendship with the eager German and who was compelled to return to America, persuaded Dr. Steinmetz to accompany him to the Land of Promise—first by emigrant train and then in the steerage of an ocean liner. Thus there arrived at Castle Garden in New York the scientist whose death is now being



Dr. Charles Proteus Steinmetz

have preferred to remain in the isolation of a laboratory, he went forth to meet men—partly through his many published text books and treatises, and partly through a personal interest in public affairs. The master of scientific attainment was also a daring publicist and participant in matters of economic interest.

"Let me briefly review the career of one who reached the shores of America almost penniless and without knowledge of the English language and who, at



mourned, whose loss to the world of electrical science is now being deplored not only by those competent to appreciate his contribution to the development of electricity but by the multitude who took pride in the accomplishments of his unusual genius.

"Within two weeks the man who had narrowly escaped rejection at the hands of the immigration officials was devoting his talents to the improvement of electric street cars in the employ of Rudolph Eickemeyer at Yonkers, N. Y. This was one of the most important creative fields in the electrical industry at that time, and the unknown immigrant at once showed his mastery of electrical theory and practice. Soon he was writing on electrical subjects—more especially the laws of magnetism—with an authority and vision that compelled attention among America's foremost electrical engineers.

"When the comparatively small Eickemeyer business was purchased by the General Electric Company in 1892, Dr. Steinmetz was recognized as the most precious part of the transaction and was established at the Lynn Works. He was soon transferred to Schenectady and became a fixed star in the electrical firmament. As a consulting engineer of the General Electric Company his knowledge of electrical phenomena and the mathematical laws governing them was of invaluable service. Other engineers discussed their problems with him and invariably profited by his wisdom and inspiration.

"Meanwhile special honors awaited the mind that had been expelled from Germany. President Eliot, of Harvard University, in conferring the degree of Master of Arts on Dr. Steinmetz in the year 1902, said: 'I confer this degree upon you as the foremost electrical engineer in the United States, and therefore the world.' In 1903 he received the degree of Doctor of Philosophy from Union College at Schenectady with which he has since been connected as Professor of Electrophysics. He has been President of the American Institute of Electrical Engineers, of the Illuminating Engineering Society, and of the National Association of Corporation Schools, and has received recognition in many foreign lands.

"Dr. Steinmetz accounted as one of the most important of his accomplishments his investigations in the field of magnetism. Before he addressed himself to this important part of electrical theory, much apparatus had

been built in the hope that it would operate economically or to quote Dr. Steinmetz's own words: 'The designer of electrical apparatus simply built it, then tested it, and when the loss was too high and the efficiency too low, or the machine too hot, he tried again. This obviously was not a satisfactory way.'

### E. W. Rice, Jr., Mourns The Loss of Dr. Steinmetz

E. W. RICE, JR., honorary chairman of the board of directors of the General Electric Company, who was perhaps more intimately associated with Dr. Steinmetz than any other in the Company, issued the following tribute Friday afternoon, October 26th:

The sudden death of Dr. Steinmetz comes as a great shock to his friends in the General Electric organization, including the directors, officers and every employee. He joined our ranks some thirty years ago and during all this time has rendered services of the most conspicuous character and extraordinary value. He had a world-wide reputation as a scientist, electrical engineer, author and teacher. He was as well known in Europe, South America, Africa, Australia and the Orient as here in his adopted America. Universally acknowledged as one of the world's greatest scientists, he was, if possible, a greater teacher. He was the author of many scientific papers and of a large number of electrical books which have long been the accepted standard text books in colleges, laboratories and workshops everywhere. He possessed marvelous insight into all scientific phenomena and unequalled ability to explain in simple language the most difficult and abstruse problems. Countless electrical engineers now occupying positions of great importance in our company and elsewhere in the world will gladly give testimony of their debt to him. All those who knew him mourn the loss not only of a great teacher and an inspiring personality, but of a cheerful and ever helpful friend.

"Steinmetz's famous paper which astonished the American Institute of Electrical Engineers in 1892, established basic principles that afforded data for all future design.

"Dr. Steinmetz's investigations into the theory of direct and alternating current were so far ahead of the knowledge of his time that when his views were developed by him before the International Electrical Congress held

at Chicago in 1893, many of his hearers were unable to follow him and it was only after several years that his investigations took printed form. Thirty years ago Dr. Steinmetz stood almost alone in his knowledge that has since been embodied in accepted engineering practice.

"The third of the fields of investigation which Dr. Steinmetz adjudged the most important in his life work was the study of the phenomena of lightning. The world knows of his artificially developed lightning bolts, but the world does not know of the painstaking study which he bestowed on the protection of electrical apparatus not only from natural lightning but from the disturbances which it set up in electric circuits and machinery. Dr. Steinmetz has talked at WGY on the theory of lightning.

"These accomplishments may not mean very much to the lay mind, but to the electrical engineer and manufacturer they have marked epochs in the development of the industry.

"The unassuming figure without hat or overcoat that was so well known about the streets of Schenectady, was literally a world power. To him every country looked for authoritative dicta on all matters of electricity. The man who welcomed friends to his summer camp with an almost boyish glee, whose kindly soul went forth in the fondling of a favorite dog, whose life and likings were the most simple—this man was an international figure, a giant in his profession, a conservator of the world's natural resources, and a friend to every user of electricity.

"We mourn his passing, but we are deeply grateful for the wealth of knowledge that he has contributed to the world's progress, and we treasure as a choice possession the memory of an earnest, simple man who devoted his transcendent mind and talents to the service of his fellowmen."

With a simplicity characteristic of his life, the body of Charles Proteus Steinmetz was lowered into a grave in Vale Cemetery, Schenectady, Monday afternoon.

At two o'clock, the hour of the funeral, the whistle of the Schenectady Works gave notification that a five minute suspension of activities in the plant, as well as in all General Electric works, offices and stations throughout the world, was the tribute of the Company to the man.