

= Beatrice Hicks =

Beatrice Alice Hicks ( January 2 , 1919 ? October 21 , 1979 ) was an American engineer , the first woman engineer to be hired by Western Electric , and both co @-@ founder and first president of the Society of Women Engineers . Despite entering the field at a time where engineering was seen as an inappropriate career for a woman , Hicks held a variety of leadership positions and eventually became the owner of an engineering firm . During her time there , Hicks developed a gas density switch that would be used in the U.S. space program , including the Apollo moon landing missions .

= = Early life = =

Beatrice Hicks was born in 1919 in Orange , New Jersey , to William Lux Hicks , a chemical engineer , and Florence Benedict . Hicks decided at an early age that she wished to be an engineer . While her parents neither supported nor opposed Hicks ' desired career path , some of her teachers and classmates tried to discourage her from becoming an engineer , viewing it as a socially unacceptable role for a woman . She graduated from Orange High School in 1935 and received a bachelor 's degree in chemical engineering from Newark College of Engineering ( now New Jersey Institute of Technology ) in 1939 , one of only two women in her class . During college , Hicks worked in the treasury office of an Abercrombie & Fitch store as a telephone operator , and in the university 's library . After receiving her undergraduate degree , Hicks stayed at Newark College of Engineering for three years as a research assistant , where she studied the history of Edward Weston 's inventions and took additional classes at night .

= = Career = =

In 1942 Hicks took a job at the Western Electric Company , designing and testing quartz crystal oscillators in Kearny , New Jersey . She was the first woman to be employed by Western Electric as an engineer , and she spent three years working there . Upon the death of her father , she joined the Bloomfield , New Jersey based Newark Controls Company , a metalworking firm that her father had founded . Hicks served as chief engineer and then as vice president in charge of engineering , before purchasing control of the company from her uncle in 1955 . Hicks designed and patented a gas density switch later used in the U.S. space program , including the moon landing , and was a pioneer in the field of sensors that detected when devices were reaching structural limits . Hicks authored several technical papers on the gas density switch . While at Newark Controls Hicks pursued a master 's degree in physics , which she received in 1949 from the Stevens Institute .

In 1950 Hicks and other women based on the East coast of the United States began meeting in an organization , the goal of which was to advance female engineers and increase female participation in engineering . The organization was incorporated as the Society of Women Engineers two years later . Hicks served as the president of the organization for two consecutive terms , from 1950 to 1952 . In 1963 the Society of Women Engineers presented their highest honor , the Society of Women Engineers Achievement Award , to Hicks . Hicks toured the United States , championing the cause of female engineers through outreach and speaking engagements . She believed that while female engineers would initially be closely watched , they would also be quickly accepted .

In 1948 Hicks married fellow engineer Rodney Duane Chipp , who held two director level engineering positions before starting a consulting firm . In 1960 the couple were selected by the National Society of Professional Engineers for a month @-@ long research and speaking tour of South America , which focused on international cooperation between American and South American engineers . When Chipp died in 1966 , Hicks sold off Newark Controls Company and took over her late husband 's consulting business . Hicks was also selected to serve on the Defense Advisory Committee for Women in Services between 1960 and 1963 , was the director of the First International Conference of Women Engineers and Scientists , and represented the United States at four International Management Congresses .

Hicks died on October 21 , 1979 in Princeton , New Jersey .

## = = Awards and professional honors = =

Because of her role in Newark Controls Company , Mademoiselle magazine named Hicks " Woman of the Year in Business " in 1952 . In 1978 Hicks was invited to join the National Academy of Engineering , the highest professional honor in engineering , and became the sixth woman to join the organization . In 2002 Hicks was inducted into the National Women 's Hall of Fame .

Hicks received honorary doctorates from Hobart and William Smith College , Rensselaer Polytechnic Institute , Stevens Institute of Technology , and Worcester Polytechnic Institute . She was the first female recipient of an honorary doctorate from Rensselaer Polytechnic Institute . She was a member of both the American Society of Mechanical Engineers and the Institute of Electrical and Electronics Engineers .