

## **Gilchrist, Peter Spence** <sup>[1]</sup>

### **Gilchrist, Peter Spence**

by Anna Brooke Allan, 1986

**10 Aug. 1861–31 Dec. 1947**

Peter Spence Gilchrist, chemical engineer and specialist in sulfuric acid and fertilizer plants, was born in Manchester, England. His father, John Gilchrist, a Scotsman, was a chemical engineer and manager of the Manchester Alum Works; his mother, Jessie Stuart Howie Gilchrist of Dundee, was closely related to Peter Spence, who owned the Manchester Alum Works. Spence had initiated radical alterations in the manufacture of alum in 1845 and held numerous chemical patents. Young Gilchrist attended Chalmers Presbyterian Day School and, for three years, the venerable Manchester Grammar School where he excelled in mechanical drawing. He was apprenticed at age sixteen to Wren & Hopkins, an engineering firm, and also continued to develop his skill in drawing, both at night school and at home. In a British Empire competition, with entries from all over the world, he was awarded the Queen's Medal; his prize-winning engineering drawing was displayed in Kensington Museum.

Gilchrist made his first visit to the United States in 1882, when he was sent by his father and Peter Spence to install a pyrites furnace for the W. G. Crenshaw Sulphur Mines Company in Richmond, Va. On returning to England soon after his twenty-first birthday, he was retained by an engineering firm to supervise the construction of Spence burners. Soon afterward he became superintendent of the North Dean Chemical Works, Yorkshire, where he gained experience in the manufacture of sulfuric acid; then, for several years, he was superintendent of the Spence-owned Goole Alum Works, also in Yorkshire.

In 1888, he crossed the Atlantic again to Point Orient on Long Island, N.Y., where for three years he was superintendent of a company that produced sulfuric acid and fertilizers and operated a fleet of menhaden fishing boats. In January 1892, Gilchrist married Ethel Gertrude Porter in Goole and brought her to the United States.

For the next six years he worked as a chemical engineer in Baltimore, Md., and in Charleston, Darlington, and Blacksburg, S.C., the latter place being the site of a gold mine that he operated for a British syndicate. During these years, which included some reverses, his consulting work took him to cities in the Midwest, East, and South; on his travels he also sold the Small Herreshoff Furnace for General Chemical Company of New York and white quartz (used as packing in acid towers) for Fred Oliver of Charlotte, N.C.

In January 1898 Gilchrist settled in [Charlotte](#) <sup>[2]</sup>, where he was to live the rest of his life. From his North Carolina base, he built plants in a large area of the United States and abroad. His specialty was designing, erecting, putting into operation, and improving plants for the production of sulfuric acid and fertilizers. Some of the great phosphate mining operations in Florida were created under his direction. For years he personally handled and carefully recorded much of the detail of his innovative work. Always he was an indefatigable student of technical literature. During the years 1905–10, Gilchrist also had an interest in the Southern Card, Clothing, and Reed Company, manufacturers, and served as its president. He became a director of the Union National Bank of Charlotte when it was established in 1908.

In December 1914 he was one of the organizers of Chemical Construction Company, with headquarters at Charlotte. His associates were Ingenuin Hechenbleikner from Innsbruck, Austria, who had come to the United States as a consultant for [James B. Duke](#) <sup>[3]</sup>; Thomas C. Oliver, a mining engineer, who managed the New York office; and A. Mangum Webb of Charlotte. Gilchrist was president of this instantly successful company of engineers. In the ensuing years it handled contracts for many types of chemical plants and industrial chemical processes in the United States and in more than twelve foreign countries. To ensure the capital needed to maintain worldwide operations, James B. Duke lent his credit with the proviso that he hold 51 percent of the stock. Gilchrist was concurrently vice-president of Oliver Quartz Company, a supplier of massive quartz and acid-proof cement, of Hood Brick Company, which made acid-proof brick and spiral rings; and of Charlotte Chemical Laboratories, research and manufacturing chemists.

Early in [World War I](#) <sup>[4]</sup>, Chemical Construction Company built the Gilchrist Plant at Queens Ferry, Wales, the largest sulfuric acid plant in the British Isles. In the United States, the company was involved in the production of essential war materials, the rapid buildup of chemical plants, and the construction of nitric acid and ammonium nitrate plants for the government installations at Muscle Shoals and Sheffield, Ala., and Cincinnati and Toledo, Ohio. The Chemical Construction Company was sold in 1929, before the market crash, to American Cyanamid Company. When the office moved to New York in 1933, Gilchrist, who remained in Charlotte, was retained as consultant. During the 1930s he often traveled in Europe and Latin America, accompanied by members of his family, to investigate chemical possibilities for the company. In his seventies he was actively engaged in the Charlotte Chemical Laboratories and also continued a private practice as consulting engineer.

By 1943 the number of sulfuric acid plants that he had built during his career was reckoned at 66; he also had built 62

fertilizer plants and made additions to 55 others. His son estimated that Gilchrist's engineering files contained between 5,000 and 6,000 drawings that he and his draftsmen had made. He was a member of the American Society of Chemical Engineers <sup>[5]</sup> and the Society of Chemical Industry in England.

For more than forty years Gilchrist participated actively in the life of the community. He was a charter member of the Westminster Presbyterian Church (later merged with Covenant Presbyterian Church), served as an elder, and several times was commissioner to the denomination's General Assembly. He was on the local school board and the board of Queen's College <sup>[6]</sup>, Charlotte; a trustee of the Presbyterian Foundation; president of the Blue Ridge Association; and a director and president (1923–35) of the Charlotte YMCA <sup>[7]</sup>.

Throughout his life in his adopted country, Gilchrist kept in close touch with his homeland, going back to visit and having Gilchrist and Porter relatives come over for extended visits in his household. Though he counted it a privilege to live in America, he did not become a U.S. citizen until 1926, and even then he regretted having to relinquish his English citizenship in the process.

Small of stature, Gilchrist was referred to affectionately by his colleagues in the industry as the "Big Little Chief." He is remembered in Charlotte as a lively, attractive, and sympathetic person, whose handsome, ruddy-pink face reflected frankly his reactions and emotions. Conservative in personal habits and manner of living, he contributed quietly to many philanthropies and took particular pleasure in helping young men who were seeking a college education. It was, finally, his upright and unselfish character rather than his extraordinary career that became the focal point of the tributes paid to him both before and after his death. He died in the house where he had lived for half a century and was buried in Elmwood Cemetery, Charlotte. His children were John W. Stuart, Cecil Waltham, Edith Muriel (m. Herman P. Hamilton), and Peter Spence, Jr. A portrait painted by Peggy Parsley is owned by Peter S. Gilchrist, Jr.

#### References:

*Charlotte Observer*, 27 Mar. 1920, 1 Jan. 1948.

Peter Spence Gilchrist Business Papers (Southern Historical Collection, University of North Carolina, Chapel Hill).<sup>[8]</sup>

Peter Spence Gilchrist, Jr., *My Father, Peter Spence Gilchrist* (1943).<sup>[9]</sup>

A. M. Webb, "Peter Spence Gilchrist," *Industrial Engineering and Chemistry* 25 (September 1933).<sup>[10]</sup>

#### Additional Resources:

"The Gautier-Gilchrist House." Charlotte-Mecklenburg Historical Landmarks Commission. <http://www.cmhpf.org/Properties%20Foundation%20Reports/gautier-gilchrist.html> <sup>[11]</sup> (accessed March 14, 2014).

Gilchrist, Peter S. "Improvements in the Manufacture of Sulphuric Acid." 624-627. *Journal of the American Chemical Society* 15, no. 11 (November 1893). <https://archive.org/stream/journalamerican71socigoog#page/n651/mode/2up> <sup>[12]</sup>(accessed March 14, 2014).

Gilchrist, Peter S. "Trend of Modern Fertilizer Plant Construction." *Industrial Engineering and Chemistry* 15, no. (January 1923). 86–87. <http://pubs.acs.org/doi/abs/10.1021/ie50157a055> <sup>[13]</sup>(accessed March 14, 2014).

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#### Authors:

Allan, Anna Brooke <sup>[18]</sup>

#### Origin - location:

Mecklenburg County <sup>[19]</sup>

Charlotte <sup>[20]</sup>

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Dictionary of North Carolina Biography, University of North Carolina Press.<sup>[21]</sup>

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