Paul Louis Touissant Heroult Biography

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Biography

Born on April 10, 1863, in Thury-Harcourt, Calvaedos, France, Paul-Louis-Touissant Heroult was the son of a tanner. He was influenced early in life by the writings of Henri Etienne Sainte-Claire DeVille (1818-1881) on the process of producing aluminum by sodium reduction from aluminum chloride. As a student Heroult began experiments in producing aluminum through electrolysis using a dynamo from his father's tanning business to generate a continuous electric current. In April 1886 he succeeded in making small amounts of aluminum with alumina (an oxide of aluminum) dissolved in baths of fused salt. A patent was granted to Heroult that same year, although American metallurgist Charles Martin Hall simultaneously made the same discovery. The minor difference was that the carbon anodes in Heroult's process were larger and less numerous than in Hall's technique. With the aid of French, German, and Swiss interests, Heroult was able to spread the use of his technique for aluminum production throughout Europe. However, Hall had the upper hand commercially since he had pursued the business aspect of his discovery more vigorously. A 15-year legal dispute between the two metallurgists ended in a compromise and an eventual friendship. Heroult also became known for his work in the development of electric furnaces for the production of steel. He died off the cost of Antibes on May 9, 1914.