

Bethlehem Steel: Builder and Arsenal of America. By KENNETH WARREN. (Pittsburgh: University of Pittsburgh Press, 2008. 334 pp. Illustrations, figures and tables, notes, bibliography, index. \$45.)

Bethlehem Steel: Builder and Arsenal of America is the definitive historical analysis of the late Bethlehem Steel Corporation. Written by Kenneth Warren, a noted scholar of the American steel industry, this volume traces the origins, rise, decline, and eventual fall of one of this nation's iconic business organizations.

The origins of the Bethlehem Steel Corporation can be traced back to the Bethlehem Iron Company, which was founded in 1857. At that time, the Lehigh Valley region of Pennsylvania was the center of America's iron industry, and the Bethlehem Iron Company became one of the eighteen large anthracite-fueled blast furnace complexes in this area. The Bethlehem Iron Company was founded by the leaders of the Lehigh Valley Railroad to serve as a source of high-quality wrought-iron rails. Designed and managed by John Fritz, who was one of America's most innovative ironmasters, the Bethlehem Iron Company was able to pioneer or adopt new technologies, which played a vital role in its continuing survival and progress. Due to the resources of the Lehigh Valley Railroad and the inventive genius of John Fritz, the Bethlehem Iron Company was able to begin steel production in 1873. None of the other Lehigh Valley iron makers was able to adapt to changing market conditions, and they had all ceased to operate by the 1920s.

When the Bethlehem Iron Company was unable to compete with the rapidly growing rail mills in western Pennsylvania and the Great Lakes region, it successfully built a super heavy steel forging plant that was well suited to manufacture the ordnance, armor plate, and steam-propulsion machinery for the United States Navy. The warships that were built with these Bethlehem Iron Company products played a crucial role in the American victories at Manila Bay in the Philippines and at Santiago, Cuba, in 1898. These victories were the key to the American triumph in the Spanish-American War and the subsequent recognition of the United States as a world power with an overseas empire.

In 1899, the Bethlehem Iron Company was reorganized as the Bethlehem Steel Company, and in 1901 its founders sold it to Charles M. Schwab, the president of the newly organized United States Steel Corporation. Schwab was a flamboyant, energetic, and innovative executive and industrial empire builder. After his resignation from the United States Steel Corporation, he was able to devote all of his considerable energies to Bethlehem Steel. In 1904, he organized the company and combined it with remnants of the United States Shipbuilding Company to form the Bethlehem Steel Corporation.

According to Kenneth Warren, it was the policies adopted by Charles M. Schwab that would make Bethlehem Steel one of the world's greatest corporations but at the same time plant the seeds of its eventual demise. During 1907

and 1908, Schwab took a huge gamble by authorizing the installation of the “Grey,” or Universal, Mill at the Bethlehem plant. This rolling line could efficiently produce wide-flange steel structural beams that were both cheaper and stronger than other structural shapes. Products of the “Grey Mill” became the structural framework for many of the twentieth century’s most notable skyscrapers and long-span bridges.

The outbreak of World War I in 1914 brought unprecedented prosperity to Bethlehem Steel. It solidified and expanded its position as the world’s second largest manufacturer of ordnance and armor plate. With the bloated profits from this war work, Schwab was able to lead an acquisition program that, within a decade, had the Bethlehem Steel Corporation acquire plants and shipyards at Steelton, Johnstown, and Lebanon, Pennsylvania; Sparrows Point, Maryland; and Quincy, Massachusetts. By 1925, Bethlehem Steel had grown to become the largest steel manufacturer in America.

The policies and corporate leadership that Schwab instituted at Bethlehem Steel sustained and shaped the company as it weathered the Great Depression, confronted violent labor organization activities, and once again served as an arsenal of democracy during World War II. However, during the 1950s, the Bethlehem Steel Corporation began to lose its way. In 1959, an extended strike opened the American market to the products of foreign steelmakers, which utilized advanced technology and cheaper labor to manufacture lower-cost steel. Bethlehem Steel also faced increased competition from American “mini-mills,” which used nonunion labor, electric-arc furnaces, and continuous casters to undercut Bethlehem’s market share. Equally as important, Bethlehem Steel failed to diversify, unlike its great rival U.S. Steel, and instead attempted to concentrate on its basic products. The result was a sustained period of decline, cutbacks, layoffs, and plant closures. Finally, Bethlehem Steel’s inability to finance its pensions brought about the end of its corporate existence in 2003.

Bethlehem Steel: Builder and Arsenal of America is both well written and superbly researched. Because of his earlier works on the rise of the American steel industry and the history of U.S. Steel, Kenneth Warren is able to set the rise and decline of Bethlehem Steel within the larger context of the evolution and dissolution of America’s once-dominant steel industry.

Professor Warren ends his study with the admonition that corporate success can be fleeting and that flexibility and the ability of business leaders to recast their companies radically are vital to survival.