

Sun Shipbuilding and Dry Dock Co. – 1916 – 1982

A Short History

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In 1916, due to World War I and the destruction of almost 2,000,000 tons of shipping by March of 1916, Sun Oil Co. found it difficult to transport its crude oil from fields in Texas to its refinery in Marcus Hook, PA. Railroads were operating at capacity; pipelines were in a stage of early development and sea going oil tankers were small and unavailable due to a backlog of shipbuilding in both foreign and domestic shipyards brought on by the war.

To solve the problem, the Pew family, owners of Sun Oil Co., decided to build their own tanker ships. The Pews, early practitioners of hands on management, wanted a shipyard on the Delaware River, close to their Marcus Hook refinery and their corporate offices in Philadelphia. They selected a 80 50 acre site in north Chester along the Delaware River and construction began in 1916. Work progressed quickly on a well-designed and compact shipyard of five shipways with boiler shops, machine shops, wet basins, cranes, locomotives, mold lofts, electrical power, and management offices. With the difficulty of obtaining large machinery and engines, due to World War I, the Pews purchased a Chester engine building firm, Robert Wetherill and Company. . Located two blocks west of the new Sun yard, the Pews equipped the Wetherill plant with machines and tools designed for ship engineering work.

During World War I, Sun Ship contributed to the needs of both commerce and the war effort by undertaking many shipbuilding and repair contracts. This resulted in Sun Ship having 16,000 employees, speaking 25 'tongues' during the peak of its World War I production.

On a grey fall morning, Sun Ship's first vessel was launched on Oct. 30, 1917, a 10,500 deadweight ton, single screw tanker. A few weeks later this ship, the Chester Sun, was delivered to Sun Oil Company for work on the Galveston, TX to Marcus Hook, PA run.

Through the 1920s, Sun Ship, as it became known, was the only shipyard in the country which had expanded sixty percent in plant equipment, since the close of World War I. The expansion at a cost of approximately \$1,500,000, included two 10,000 ton dry docks, three larger shipways and additional shops. During this decade 95 vessels were built at Sun. While specializing in tankers, Sun Ship also built barges, Navy minesweepers, cargo ships, ferries, and dredges. Just as the Great Depression was spreading throughout the world Sun Ship revolutionized international shipbuilding with the construction of the first all-welded ocean going vessel, the White Flash. Up to this time, the steel plates were held together with rivets. Riveting a ship, added weight and was very labor intensive. Additionally plates riveted together were more likely to allow seawater in then a solid closed welded seam. In just little over a decade almost all ships would be welded.

The Depression was hard on Sun Ship. Often there was little or no work. At times, men would get only two days work a week. Yet with unemployment nationally at well over 25%, two days work at Sun Ship, for craftsmen's wages, gave a man an income on which he could support his family. Those depression era ship workers would never forget the generosity of the Pews in providing them an income when there was no work elsewhere. In the hard years of World War II they repaid Sun Ship and the Pew family with intense loyalty.

With the advent of WWII, ship orders poured in and to meet the demand for Maritime Commission ship orders, the yard expanded from 8 to 28 shipways. Sun Ship became the largest single shipyard in the World during WWII, extending over 1.5 miles of riverfront, with four contiguous yards; the South Yard, Central Yard, North Yard and 4 Yard. Already the nation's specialist in oil tanker construction, Sun Ship Naval architects and engineers designed a variation on its traditional oil tanker that became the model for the United States Maritime Commission. Called the T-2, American shipyards would build over 500 of these ships. 197 were built at Sun Ship. The T-2 was 503' long, 16,300 deadweight tons and could carry 141,000 barrels of oil at 14.5 knots. At least seven T-2 tankers were still in use as late as 2003. Besides the T-2 tankers Sun Ship built freighters, fleet tankers, barges, car floats, refrigerator ships, railroad car transport vessels and troop transports.

From a 1938 workforce of about 3,000, Sun Ship would hit an employment high on Aug. 14, 1943 of 35,633 workers. Of this number about 2,800 ship workers were women and 12,000 African Americans. About three quarters of the African Americans worked in Sun's 4 Yard . Although 4 Yard was mostly a segregated facility, reflective of American society of the early 1940's, 4 Yard made significant contributions to the war effort and to the economic advancement of the employees. The launching of the S.S. Marine Eagle, the first ship built in 4 Yard, was also the first ocean going vessel in the history of the world to be built entirely by African Americans.

Sun Ship workers contributed many long days to building the ships that would win the war. Forty-three Sun Ship men would die in work place accidents. 18,000 Sun Ship employees would serve in the armed services. Over 380 of these men would die in combat.

With the end of the War, the world market for ships was glutted with vessels built prior to 1945. In the immediate postwar years Sun's primary business was ship repair. In the 1950's the new ship market began rebounding and Sun once again modified the plant to build even larger ships.

Starting in the 1960's Sun designed and built ships with new, more efficient capabilities and increased technology. They built container ships, 'Ro-Ro' ships (roll on-roll off), double hulled tankers for environmental protection and the Glomar Explorer a ship that was built for the CIA through a Howard Hughes corporation to retrieve the hull of a sunken Soviet submarine in the Pacific Ocean. Sun Ship also built the G.T.S. William M. Callaghan (Gas Turbine Ship), first cargo ship with jet engine propulsion. Sun also performed numerous ship conversions that included the S.S. Manhattan, a 1,005 foot-long tanker, that was converted into an ice-breaking tanker that became the first commercial vessel to transit the Northwest Passage from the Atlantic Ocean to Prudhoe, AK. During this time Sun expanded into nontraditional businesses for shipbuilders including the ship leasing/transportation business, entering into the Hydrospace and Aerospace industry with the fabrication of deep-submergence vessels and large rocket engines, large industrial projects as shore-side support anchors for the Verazzano Narrows Bridge in New York and the wind tunnel for Boeing in their Ridley Twp., PA facility.

In 1974-1975 Sun built an entirely new shipbuilding facility, just north of the existing Central Yard at a cost of \$45,000,000. This facility was based on building ships on a flat building slab instead of the traditional inclined sliding ways. This permitted the yard to build either two smaller ships simultaneously or a larger ship in two sections. These ships or ship sections would be transitioned from the slab onto the yard's new dry dock via hydraulic rams and rollers. This new concept achieved shipbuilding economies thereby lowering vessel construction costs, expanded new ship construction capacity by almost a factor of two and expanded ship repair capabilities to large modern vessels. This new facility gave Sun Ship the ability to compete in the shipbuilding arena with the largest yards in the world and Sun built vessels on this facility over 900 feet long and 130,000 deadweight tons.

During the late 1970's a number of factors came together that contributed to the eventual demise of Sun Ship. Among these were increased foreign competition, the canceling of contracts for two liquefied natural gas vessels, business reversals in the ship leasing business, increased fuel costs and a worldwide economic recession which depressed shipping and shipbuilding everywhere. In Feb. of 1982 Sun Ship was sold by its parent company, the Sun Oil Co. to a Texas businessman and shipyard owner, Ed Paden and the yard was renamed 'Pennsylvania Shipbuilding'.

Sun Ship's performance over its 66 year history included employing approximately 100,000 men and women, building over 600 vessels and repairing thousands. It was a pioneer in shipbuilding techniques that changed an industry and positively impacted tens of thousands of families in the Delaware Valley, the United States and the World.

For more information on Sun Ship visit: www.sunship.org

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