

NATIONAL REGISTER ELIGIBILITY ASSESSMENT

VESSEL: SS *Bay*



The SS *Bay*'s sistership, SS *Buyer*. Maritime Administration photo.

Vessel History

The SS *Bay* was launched on April 8, 1961 as the break-bulk cargo ship *Export Bay* for the American Export Lines of New York. It was built by the National Steel and Shipbuilding Company of San Diego, California and designed by the J. J. Henry Company of New York. Its keel was laid on June 4, 1960, and the ship was delivered to its owners in December of 1961.

American Export Lines (AEL) was founded in 1919 as the Export Steamship Corporation. In 1960 the company was operating three passenger liners, two combination cargo and passenger vessels, and 17 C-3¹ type cargo ships on services between the Atlantic seaboard of the United States, including the Great Lakes, and Spain, Portugal, the Mediterranean, the Middle East and, via the Suez Canal, southern Asia as far east as Rangoon (former capitol of Burma, now known as Myanmar). The combination vessels and cargo ships had been built between 1939 and 1946, and were nearing the end of their service lives. By the late 1950s AEL embarked on an ambitious, 30-ship fleet replacement and modernization program. In 1962 AEL merged with the Isbrandtsen Company to form American Export-Isbrandtsen Lines (AEIL)². This merger reduced the AEL new vessel construction project to 12 ships, of which the *Export Bay* was the sixth.

¹ The C-3 cargo ship is a standard design type (C stands for cargo), which was designed prior to WWII.

² This relationship continued until the Isbrandtsen interests were dissolved in 1973, after which the company reverted to the name American Export Lines.

The 12 replacement ships were divided into three series of four vessels each; however all 12 shared common hull lines and machinery. The A series employed the classic midships-machinery arrangement, and was designated C3-S-38a under the Maritime Administration design classification scheme; the B and C series were machinery-aft versions of the As and were designated C3-S-46a and 46b. The *Export Bay* was the second vessel of the B series built by National Steel and Shipbuilding. The other ships in the B series were the *Export Banner*, *Export Builder*, and *Export Buyer*. The WWII-era C3 ships they replaced ranged in gross tonnage from 6,536 to 7,052. The new cargo ships ranged in gross tonnage from 10,589 to 11,040.

The four ships of the *Export Bay* series were placed on the company's three trade routes; the Great Lakes to the Mediterranean; the U.S. Atlantic seaboard to the Mediterranean; and the U.S. Atlantic seaboard to the Red Sea, India, Pakistan and Burma. They operated in these trades with the A and C series ships, and with the nuclear-powered merchant ship *Savannah*, which was operated by AEIL for the Maritime Administration from 1963 under a general agency agreement.

In 1965 the *Export Bay* participated in "Operation Steel Pike," an international landing exercise on Spain's southern coast. Military equipment and supplies loaded in U.S. Ports were transferred to landing craft off Spain using the ship's cargo gear. American Export-Isbrandtsen vessels were chartered by the Military Sea Transportation Service (MSTS)³ during the Vietnam War between 1966 and 1971. During the early 1970s American Export-Isbrandtsen (after 1973 American Export Lines), was also operating services to ports on Europe's Atlantic coast as far north as Scandinavia and to ports in the Far East. In 1977 the *Export Bay* was employed in the Far East service.

The replacement ships of the early 1960s were larger, and in many ways more modern, than the ships they replaced, but they were designed and built before anyone fully appreciated the coming impact of containerization. As built, their holds were not practical for the transport of containers. When containers were submitted for carriage they could only be stowed on deck on top of the hatches, two or three high. The available area might be extended on ships with centerline hatches by installing pedestals the height of the hatches on the decks on either side. According to a May 1984 inventory of container carrying capability, the *Export Bay* series vessels were able to accommodate 337 TEU.⁴ By the late 1960s American Export-Isbrandtsen was building their first ships designed to carry only containers. By the 1980s, containerization had

³ MSTS was a post-World War II combination of four predecessor government agencies that handled similar sealift functions. These included the Navy's Naval Transportation Service and Fleet Support Service, the Army Transport Service, and the War Shipping Administration of the United States Maritime Commission. MSTS was renamed Military Sealift Command in 1970.

⁴ A TEU is a unit for describing a ship's cargo carrying capacity, or a shipping terminal's cargo handling capacity, based on the original standard container of 20x8x8, or Twenty-foot Equivalent Unit. The contemporary standard forty-foot (40x8x8 feet) container equals two TEUs.

almost completely transformed the movement of dry cargo by sea and the demand for commercial break-bulk vessels was disappearing.

The company's plan to transform itself went beyond new container ship construction. They invested heavily in road transport for containers and in the development of a container-handling terminal at Howland Hook, Staten Island, New York. However, Isbrandtsen became financially over extended and was forced into receivership. American Export soon filed for bankruptcy and was purchased by Farrell Lines of New York in 1978.

There was now little commercial demand for break-bulk cargo ships. However the vessel type remained in demand for the transportation of military cargo, especially palletized ammunition. Consequently, the four *Export Bay* series vessels, along with all of the A and C series, were acquired by the Maritime Administration for its National Defense Reserve Fleet (NDRF).⁵ The vessels were renamed by dropping the "Export" prefix; the *Export Bay* became simply the *Bay* and was placed in the Maritime Administration's reserve fleet at James River off Fort Eustis, Virginia on June 13, 1977. The *Bay*, along with its 11 sisters, was upgraded to the Ready Reserve Fleet (RRF - later Ready Reserve Force) soon thereafter. It was moved to the NDRF site in Suisun Bay, California in May 1984.

Prior to RRF operations, NDRF vessels supported emergency shipping requirements in seven wars and crises. During the Korean War, 540 vessels were activated to support military forces. A worldwide tonnage shortfall from 1951 to 1953 required over 600 ship activations to lift coal to Northern Europe and grain to India. Another tonnage shortfall following the Suez Canal closing in 1956 caused 223 cargo ship and 29 tanker activations from the NDRF. From 1955 through 1964, another 698 ships were used to store grain for the Department of Agriculture. During the Berlin crisis of 1961, 18 vessels were activated and remained in service until 1970. During the Vietnam War 172 vessels were activated. Although 78 RRF ships were activated for service during the first Gulf War, the *Bay* was not among them. The *Bay* was downgraded from RRF status at the end of 1993, and declared non-retention several years thereafter.

⁵ The NDRF was established under Section XI of the Merchant Ship Sales Act of 1946 to serve as a reserve of ships for national defense and national emergencies. A RRF component was established in 1976 as a subset of the NDRF, which is composed of vessels that can be activated on short notice to provide rapid deployment of military equipment during an emergency. When activated, the ships are transferred from the Maritime Administration to the Navy's Military Sealift Command.

Description / Characteristics of Vessel Type

Type: C3-S-46a

Hull Number: 325

Official Number: 286965

Previous name: *Export Bay*

Sister ships: *Export Banner, Export Builder, and Export Buyer.*

Builder: National Steel and Shipbuilding Company of San Diego, California

Year: 1961

Length: 471.9'

Beam: 73.1'

Depth: 32.5'

Draft: 27'

Displacement:

Deadweight:

Gross Tonnage (GRT): 10,659

Speed: 18.5 knots

Main Engine: General Electric Steam turbines, rated at 12,500 shaft horsepower.

Babcock & Wilcox boilers.



The *Bay* at the Suisun Bay Reserve Fleet in Benicia, California in February 2009. Maritime Administration photos.



The 12 replacement ships built by AEL/AEIL all shared common hull form and propulsion machinery. The first class of four ships, the A series (*Export Aide, Adventurer, Ambassador, and Agent*) were constructed along conventional lines, with the propulsion machinery and superstructure located amidships. Cargo holds fore and aft of the machinery space were served by conventional cargo handling gear. Although this arrangement had survived for many years, it had several inherent disadvantages; most notably that it effectively wasted the fullest portion of the hull by occupying it with machinery, not cargo. Among the evolutions in ship design that was taking place in the 1960s was a widespread effort to move machinery further aft. Ships derived from the classic Mariner hull form were being built with machinery moved to the 2/3 or 3/4 aft position. The B and C series for AEL took this a step further by moving the machinery as far aft as possible.

The eight J. J. Henry designed ships of the B and C series were a significant departure from the traditional cargo ship profile. With the engines moved to the stern, a small superstructure containing the navigating bridge and deck officer and crew quarters was located amidships (at the transition point of cargo holds 3 and 4). A larger superstructure was located aft and contained engineering officer and crew quarters, galley and messdecks, and upper machinery spaces. There were six hatches on the centerline serving six cargo holds, three forward of the bridge superstructure and three aft of it. A raised forecastle deck extending aft of No. 1 hatch, and a raised deck aft extending forward of No. 6 hatch, provided additional cargo space in those holds. Moving the engines out of the prime cargo space amidships, and adding the raised deck aft, increased the dry cargo capacity of the B series vessels from the A series figure of 623,008 cubic feet to 732,517 cubic feet.

There were four sets of linked king posts located between the hatches, and two sets of free standing Samson posts; one set on the fore side of the superstructure and one on the aft side. The No. 1 and No. 6 hatches were each served by two 7-ton capacity booms. Each of the other four hatches was served by four booms. No. 3 hatch was also served by a 60-ton heavy lift boom. The No. 6 hatch was provided with two rotating electric cranes with a 5-ton capacity. The cargo winches were operated by electricity and were mounted on the king posts to create more deck space. There were hydraulic folding hatch covers at every deck level. There were living quarters for a crew of 55 and no passenger accommodations.

Statement of Significance

The *Bay* represents a transition point in the evolution of modern ship design. The arrangement features of all-aft machinery and split-superstructure marked significant improvements in cargo handling over more conventional vessels; especially when compared to its near sister of the A series. Other than the location of machinery, however, the *Bay* is an entirely conventional design and typically representative of its contemporaries.

Historical Integrity

The vessel was originally constructed in 1961 and did not undergo any substantial modifications during its service life. The vessel retains its historical integrity, being substantially unchanged from original construction. All (or most) salient design features of structure, machinery and equipment are substantially intact. The vessel's physical integrity is very degraded, and the ship's overall condition is poor. *Bay* represents an obsolete type which has little utility in modern shipping markets.

National Register Eligibility Statement

The SS *Bay* is not yet 50-years-old. The vessel does not possess the significant historical or technological characteristics, or integrity of design and materials necessary for listing.

Date: 18 March 2009

Determination: NOT ELIGIBLE

Sources

Brouwer, Norman. *Bay Ship History*. 2007.

Couper, Alastair. *The Shipping Revolution: The Modern Merchant Ship*. London: Conway Maritime Press, Ltd., 1992.

De la Pedraja, René. *The Rise & Decline of U.S. Merchant Shipping in the Twentieth Century*. New York: Twayne Publishers, 1992.

----- *A Historical Dictionary of the U.S. Merchant Marine & Shipping Industry*. Westport, CT: Greenwood Press, 1994.

Internet Sites

Maritime Administration's Property Management and Archive Record System Website:

<http://www.pmars.imsug.com/detail.asp?Ship=425>

www.pmars.imsug.com/detail.asp?Ship=6434