

**PCE 1604 SERIES
FRIGATE PANTER**

INTRODUCTION

Between 1954 and 1984 the Royal Netherlands Navy operated six small frigates that were built as Patrol Vessel, Escort* (PCE) in the United States. The ships did serve mainly in the North Sea in an unique branch of the military responsible for an array of maritime duties, from ensuring safe and lawful commerce to performing rescue missions in severe conditions.

The six escort ships were of the PCE 1604 series. A forthcoming design of the PCE 842 class (Admirable class) of World War Two.

* Glossary of US NAVAL ABBREVIATIONS OPNAV 29-PI000 APRIL 1949
5th edition reads: PCE - Patrol Vessel, Escort (180').
In NATO is used: PCE - Patrol Craft, Escort.

PANTER



Coat of arms

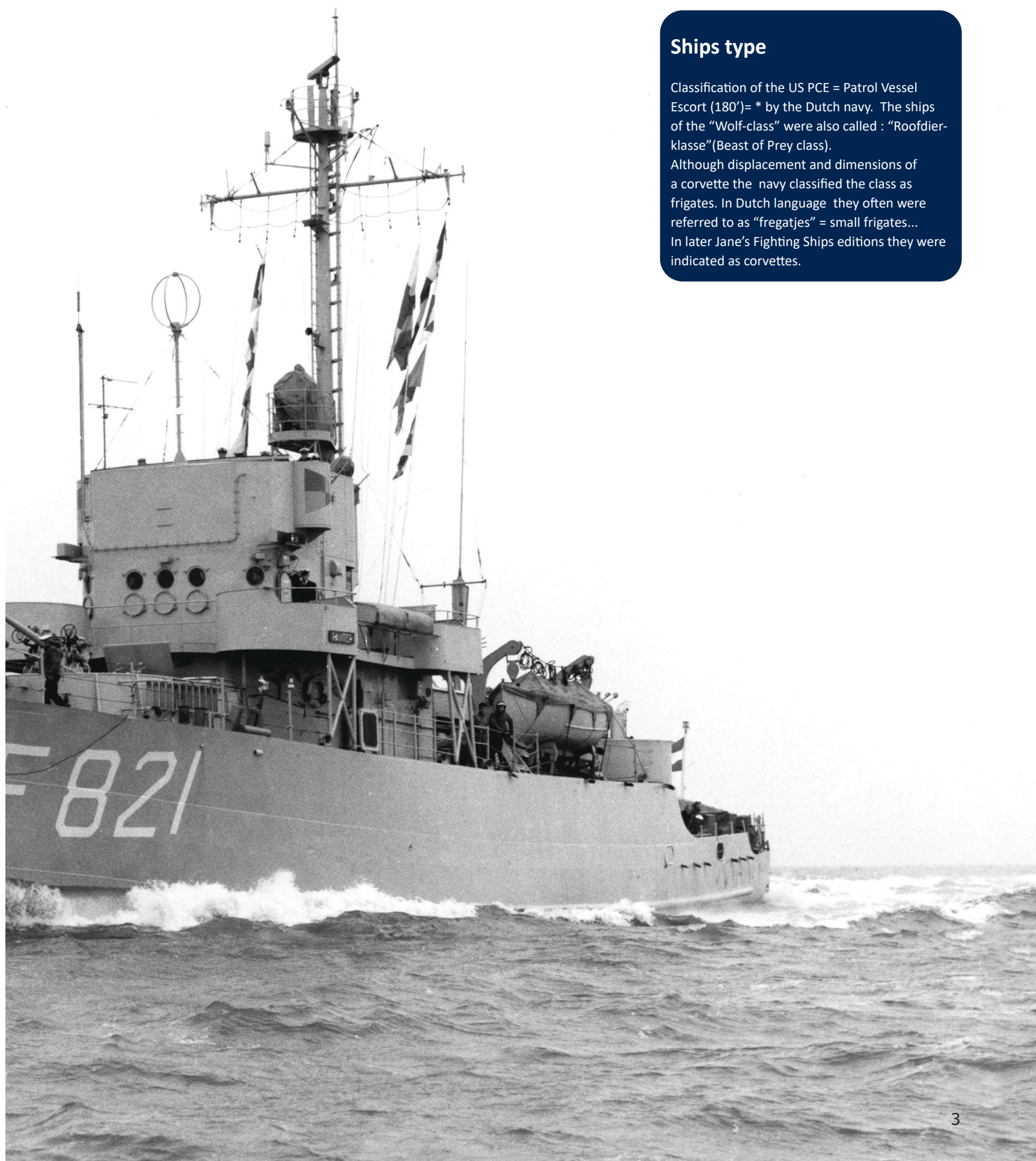
The badge of frigate Panter was assigned in 1955. An azure panther of gold, spotted of sable and tongued with throat, on a base of gold. A Latin motto: 'Semper Invicta' (Always Invincible) with golden letters on an azure banner.

Ships type

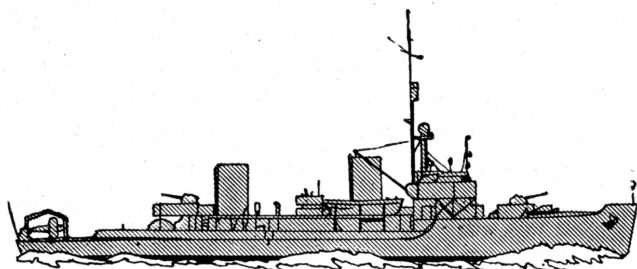
Classification of the US PCE = Patrol Vessel Escort (180')= * by the Dutch navy. The ships of the "Wolf-class" were also called : "Roofdier-klasse"(Beast of Prey class).

Although displacement and dimensions of a corvette the navy classified the class as frigates. In Dutch language they often were referred to as "fregatjes" = small frigates...

In later Jane's Fighting Ships editions they were indicated as corvettes.



ANCESTORS OF THE PCE

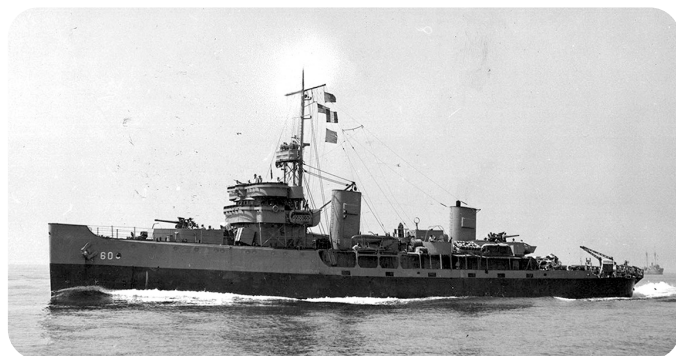


Auk Class (Raven Class similar)

Auk class	
Displacement	890 tons / 1250 tons (fl)
Dimensions	221 ft 9 in oa (67.4 m) x 32 ft 3 in (9.8 m)
Machinery	2 GM diesel electric drive, 3532 bhp. 2 shafts
Performance	3750 nm at 14 kts, max. speed 18 kts
Complement	105
Armament	2 x 3in/50 4 x 20 mm 1 x Hedgehog 4 x DC projectors 2 x DC racks

Auk class

When the U.S.A. was drawn into the Second World War, a crash program of naval construction followed. Including minesweepers with diesel-electric propulsion as alternative to a geared diesel drive. When not engaged in sweeping, the generators could be utilized to provide additional power for the propulsion electric motors and therefore boosted its speed. This significant innovation was incorporated into the *Auk* class and permitted considerable operational flexibility at little extra cost except for a slight increase in displacement. The United States Navy was particularly fortunate in that it was backed by the industrial capacity to install diesel- electric propulsion on a large scale, and therefore was not inhibited in its approach to an optimum design.



USS Nuthatch (AM-60) an Auk-class minesweeper.



*USS Admirable (AM-136) the lead ship of her class.
Note: WWI style dazzle paint camouflage pattern.*

Admirable class

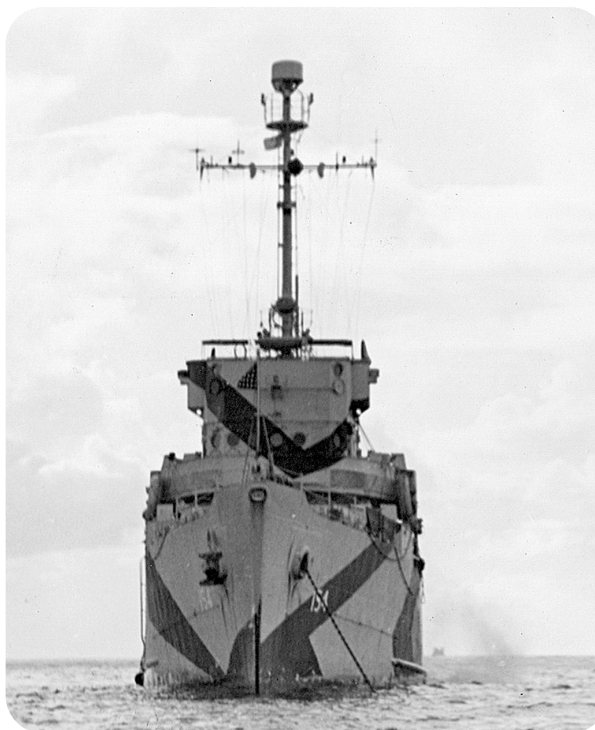
The ships of *Auk* class were relatively complex and difficult to build. Therefore an alternative was designed by the Bureau of Ships. Resulting in the *Admirable* class with better seakeeping qualities, capable to 'keep station' in all kinds of weather. With a simplicity of design to permit production in large numbers with minimum costs in time and money. It became one of the largest and most successful classes of minesweepers ordered by the US Navy during World War II. Typically, minesweepers detected and removed naval mines preceding the mainbody and escorts of the fleet ensuring safe passage. They were also charged with anti-submarine warfare (ASW) duties with quarterdeck mounted depth charge racks and an ahead-throwing Hedgehog mortar on the forecastle deck. Their scrupulous operational accuracy was essential to the safety and success of U.S. naval operations during World War II and the Korean War. These minesweepers were also employed as patrol vessels and convoy escorts.

Admirable class	
Displacement	650 tons / 945 tons (fl)
Dimensions	184 ft 6 in oa (56.24 m) x 33 ft (10 m)
Machinery	2 GM diesel, 1710 bhp, 2 shafts
Performance	5600 nm at 10 kts, max. speed 14.3 kts
Complement	96
Armament	1 x 3in/50 4 x 40 mm 6 x 20 mm 1 x Hedgehog 4 x DC projectors 2 x DC racks

ADMIRABLE CLASS AND PCE

To realize mass production suitable for the *Admirable* class included the abandonment of electric drive in favour of a pair of diesels plus a 720 hp generator, as in the modified PCs; hull design was also simplified, with the double-bottom of the earlier ship abandoned in favour of a hull deepened amidships for greater freeboard and girder strength. It was expected that even the lead ship might be built faster than an *Auk*, for about two-thirds the cost of the more complex design. However when the new design was ready, there was no immediate requirement for more US minesweepers; the design was, therefore, offered to the Royal Navy.

Its bridge was modified to reflect British practice, and therefore resembled that of the contemporary destroyer escort, also intended for British use. The Admiralty rejected it on the ground that the *Bangor*-class of similar size was inadequate; the British wanted (and got) *Ravens* instead. The Bureau now modified its minesweeper into an escort to meet British staff requirements. Meanwhile, the US Navy, too, needed more escorts, and it appeared, in the autumn of 1941, that the need to use PC engines in other classes would preclude production of more PCs (beyond 122 on order) until after January 1944; it appeared that none of the other engines available would fit the PC hull. Although this prediction ultimately proved false, it inspired a suggestion to accept the slow 180ft hull as a substi-



USS Candid (AM-154) was an Admirable-class minesweeper built for the US Navy in 1943. In 1945, she was transferred to the Soviet Union and served in the Soviet Navy as T-283 till 1958.

Middle:

USS Notable (AM-267) was an Admirable-class minesweeper that earned two battle stars in service in the Atlantic and the Pacific during the war. In 1946, she was decommissioned and turned over to the Republic of China for service with the Chinese Maritime Customs Service.



tute PC, and in November the District Craft Board suggested that thirty units be ordered as coastal minesweepers and another twenty as PCs (reclassified PCE); others were ordered as escorts for the Royal Navy. The 180-footer was considered quite inferior to the 173ft PC because of the staff requirement for a 22kt speed in a sub-chaser; ultimately, it proved much more seaworthy and hence a better convoy escort/corvette.

USS Incredible (AM-249) served the US Navy in the North Atlantic and Pacific Ocean. Earned two battle stars in WWII and four in the Korean War.

HNLMS Panter

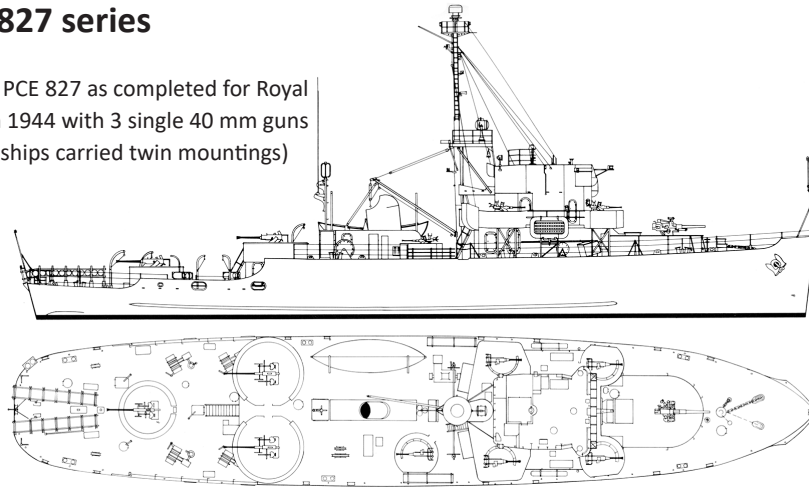
War programmes comprised a total of 174 minesweepers of which the last series (which was cancelled) was to have replaced units transferred to other navies.

By mid-1943 *PCE 842 - 866* and *935 - 946* were ordered modified to a convoy rescue configuration, PCER, but only thirteen (*848 - 860*) were so completed. Others were modified for plane guard and weathership duty off Hawaii. In mid-1945 some became degaussing ships.

- *PCE 878* was converted into a drill minelaying and recovery ship (*Buttress - ACM4*) for the Pacific Fleet.
- *PCE 901* was converted into a transport (*Parris Island - AG72*) to support Navy activities on San Clemente Island off the Californian coast.
- Six, including *873* and *877*, became amphibious control craft (PCEC). The choice of the PCE as an interim ASW craft was ironic, in that production took considerably longer than expected and PCs were built with alternate engines.
- *PCE 861 - 866, 887 - 890, and 905 - 960* were cancelled; of the latter, *905 - 909* became *AM 232 - 236* and *911 - 920* became *AM 351 - 360*, reflecting the higher priority placed on minesweepers for assault, rather than slow escorts.

PCE 827 series

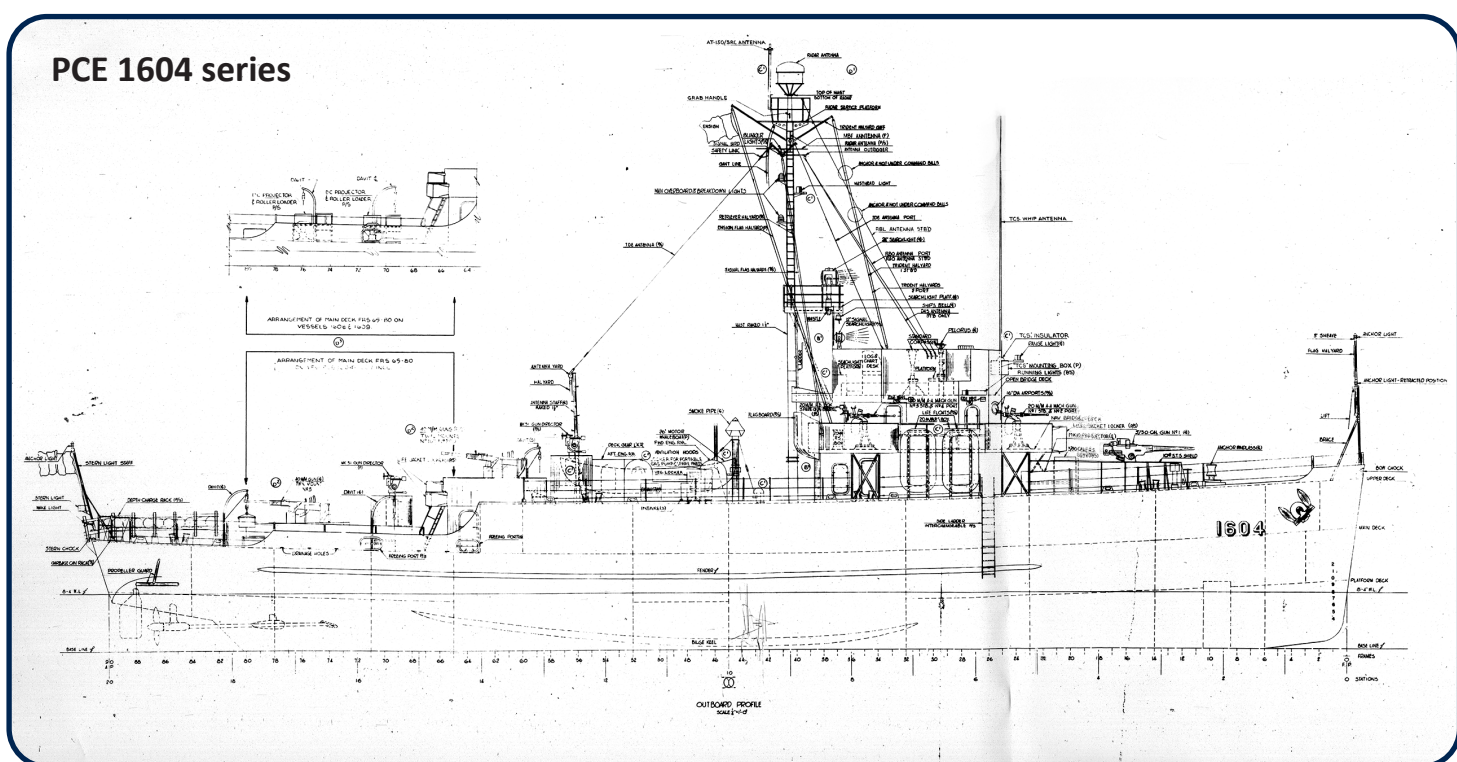
Plan of *PCE 827* as completed for Royal Navy in 1944 with 3 single 40 mm guns aft (US ships carried twin mountings)



PCE 800 series

	PCE-827 - PCE-841	Delivered to the Royal Navy on completion and known as the Kil class.
25 ships ordered June 1944 for US Navy	PCE-842 - PCE-847	Initial USN production. The class is therefore often referred to as the PCE-842 class.
	PCE-848 - PCE-860	Completed with hospital facilities as PCE(R)'s. (R for Rescue)
	PCE-861 - PCE-866	Planned as PCE(R)'s but cancelled.
	PCE-867 - PCE-886	Built
	PCE-887 - PCE-890	Cancelled
	PCE-891 - PCE-904	Built
	PCE-905 - PCE-960	Cancelled

PCE 1604 series





12 July 1954. The lead ship Wolf entering Den Helder for the first time. Still showing American visual callsign. Dutch ensign flying at the masthead. International callsign PACN hoisted. The letters "PA" indicate Netherlands warship.

POST WWII

The Marshall Plan and Mutual Defense Assistance Program to support the economics of European countries after World War II resulted in help for 16 countries.

At first the Netherlands Navy hoped to obtain some surplus US destroyers (DD's), but in 1950 transfers started with six smaller Cannon-class Destroyer Escorts (DE's). In 1954, six escort ships (PCE's), two submarines (Balao-class) and a series of minesweepers under lend-lease were handed over.



Mutual Defense Assistance Act

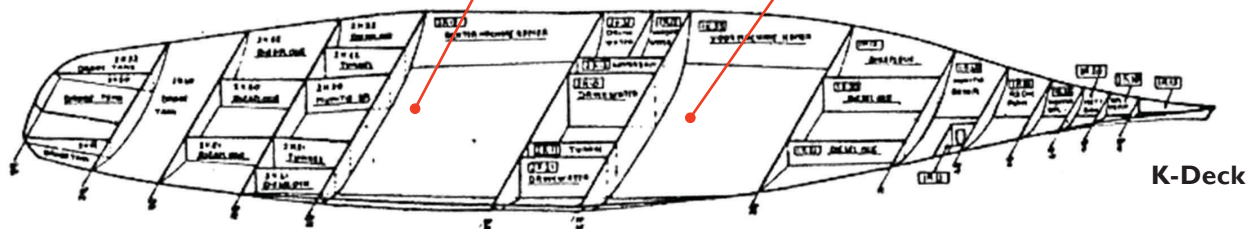
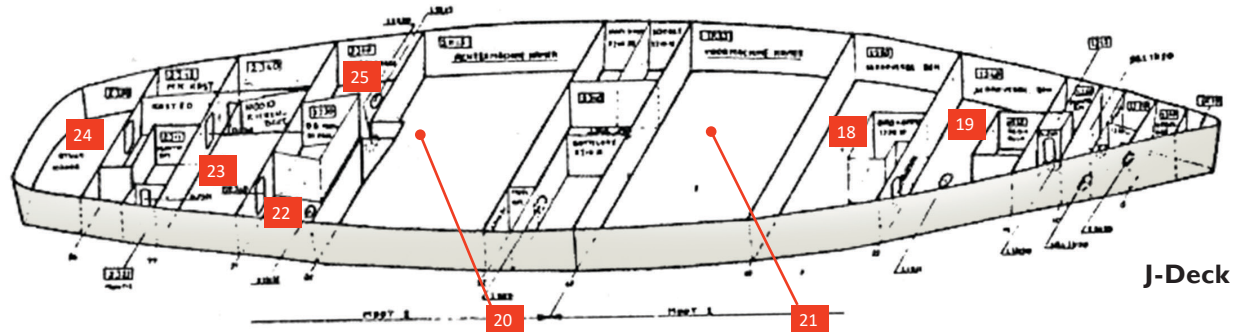
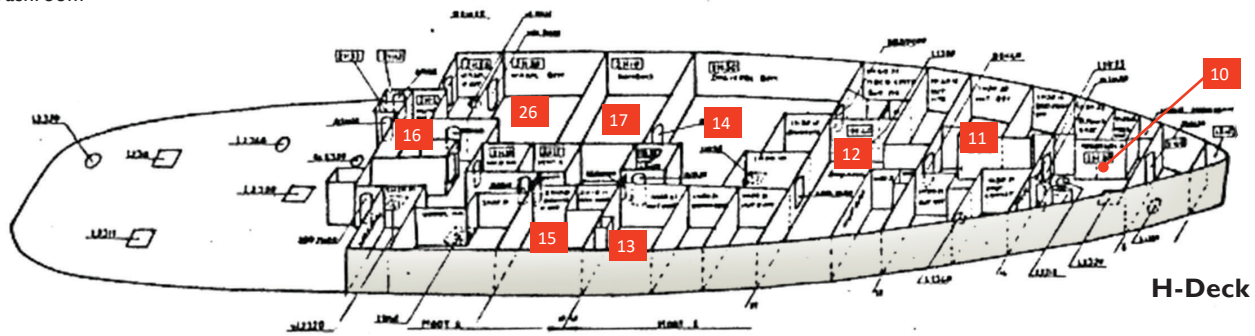
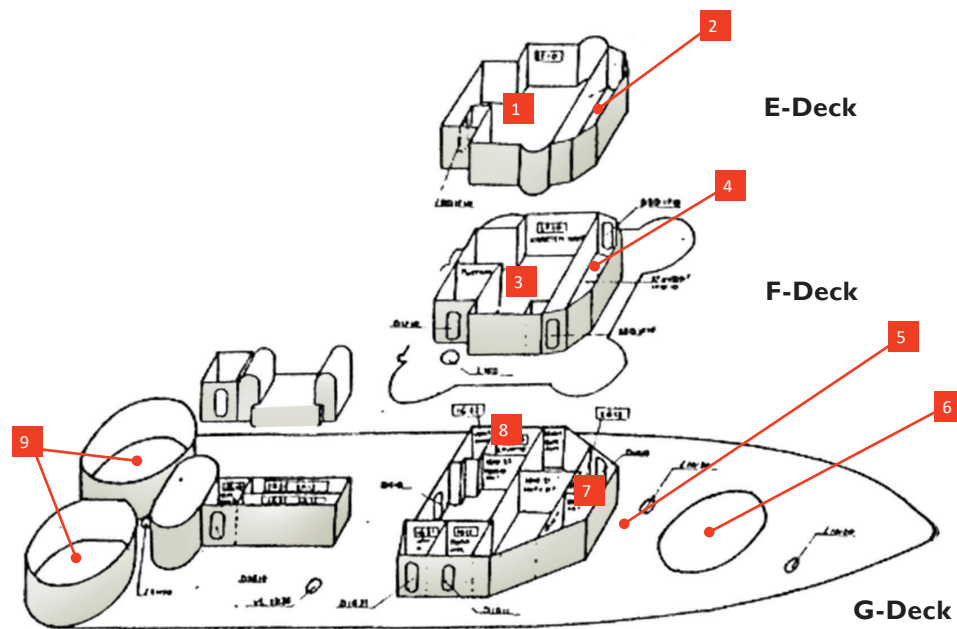
On 6 October 1949 President Harry S. Truman signed a United States Act of Congress for US Foreign policy, the Mutual Defense Assistance Act. It was the first U.S. military foreign aid legislation of the Cold War era, and initially to Europe. The Act followed Truman's signing of the Economic Cooperation Act (the Marshall Plan), on April 3, 1948, which provided non-military, economic reconstruction and development aid to Europe.

In 1951, the Economic Cooperation Act and Mutual Defense Assistance Act were succeeded by the Mutual Security Act, and its newly created independent agency, the Mutual Security Administration, to supervise all foreign aid programs, including both military assistance programs and non-military, economic assistance programs that bolstered the defense capability of U.S. allies.

As the Cold War developed, these acts were part of the American policy of containment of Communism. They importantly provided defence assistance to any ally that might be attacked by the Soviet Union or one of its allies, while other programs provided non-military economic assistance.

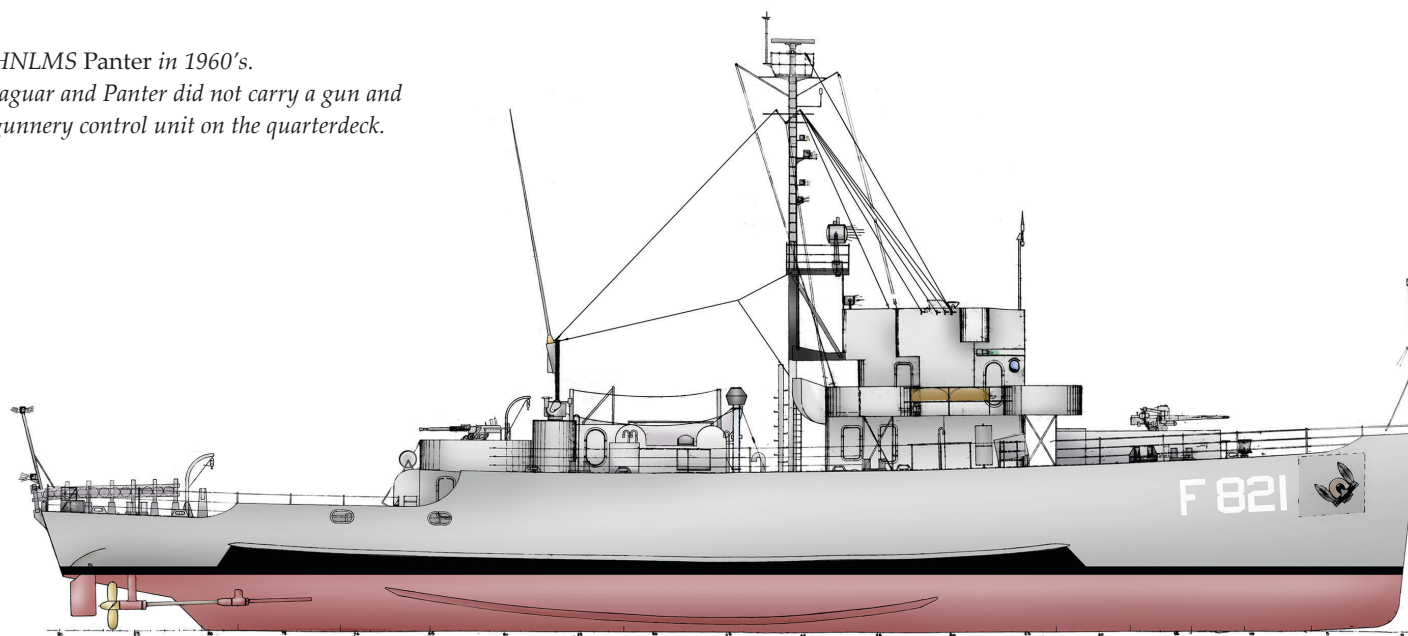
Tecnical data	842 series	1604 series
Displacement:	860 tons	945 tons
Length:	184 ft 6 in (56.30 m) oa	184 ft 9 in (56.30 m)
Beam:	33 ft 1 in (10.08 m)	33 ft 1 in (10.08 m)
Propulsion:	2 shaft diesel engines, 2,000 bhp	2 shaft GM 12-567A diesel engines (800 hp/each = 1600 hp)
Speed:	14.3 kts	14 kts
Range:	8,500 nm (15,700 km) at 12 kts	9,000 nm (17,000 km)
Complement:	96	81
Armament:	1 × 3"/50 caliber gun 6 × Bofors 40 mm guns (twin mounts) 4 × 20 mm guns 1 × Hedgehog anti-submarine mortar Depth charge racks	1 × 3"/50 caliber gun 4 × Bofors 40 mm guns (twin mounts) 2 × 20 mm guns 1 × Hedgehog anti-submarine mortar Depth charge racks Depth charge projectors (K-gun)

- 1 Navigation bridge
- 2 ASW ops room
- 3 Operations room
- 4 Wheelhouse
- 5 Hedgehog
- 6 7,6 cm gun
- 7 Cabin commanding officer
- 8 Radioroom
- 9 40 mm guns
- 10 Storage
- 11 Officers cabins
- 12 Wardroom
- 13 Sick bay
- 14 Crew Mess (R&R) (Cafeteria)
- 15 Chief Petty Officers mess
- 16 Laundry
- 17 Galley
- 18 Aft sleeping quarter
- 19 Forward sleeping quarter
- 20 Aft engine room
- 21 Forward engine room
- 22 Food storage
- 23 Sleeping quarter
- 24 Emergency steering room
- 25 Petty Officers mess
- 26 Washroom



Lay-out of PCE 1604 series differs in details between the ships.

*HNLMS Panter in 1960's.
Jaguar and Panter did not carry a gun and
gunnery control unit on the quarterdeck.*



The ships of the PCE 1604 series were built in 1952-1954 in the USA and lent under the Mutual Defense Assistance Program to the Netherlands. In the United States they received their pennant number as name. In the Royal Netherlands Navy they were renamed.

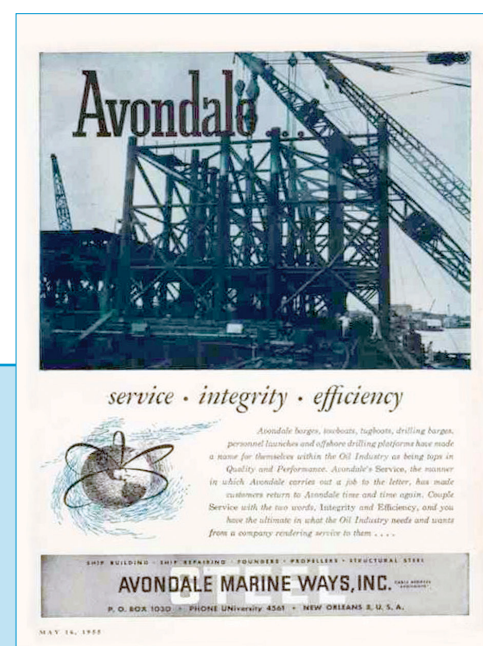
Ships 1604 series				
PCE 1604	General Shipbuilding & Engineering Works, Boston	1954	F 818	Fret
PCE 1605	General Shipbuilding & Engineering Works, Boston	1954	F 819	Hermelijn
PCE 1606	General Shipbuilding & Engineering Works, Boston	1954	F 820	Vos
PCE 1607	Avondale Marine Inc. Ways, New Orleans	1954	F 817	Wolf
PCE 1608	Avondale Marine Inc. Ways, New Orleans	1954	F 821	Panter
PCE 1609	Avondale Marine Inc. Ways, New Orleans	1954	F 822	Jaguar



PCE 1605 (Hermelijn) nearing completion at General Shipbuilding in Boston.

Avondale Marine Ways, Inc.

Avondale Shipyards was founded in 1938 as Avondale Marine Ways by James Grinstead Viavant, Harry Koch, and Perry N. Ellis. It was primarily a repair and barge-construction facility for craft working the Mississippi River. In 1941, the company employed only 200 workers. After World War II, Avondale took advantage of the expansion of the oil industry in Louisiana to build drilling barges and offshore oil rigs. Also other vessels, like fishing vessels were constructed. The company was purchased by the Ogden Corporation in 1959 for \$14 million. The following year, it was renamed Avondale Shipyards, Inc. In 2018, after a takeover, the name was changed in Avondale Marine..



Advertisement of the shipyard in the fifties.



HNLMS Jaguar leaving New Orleans for work-up in spring 1954.



Detail of Wolf, note -20 mm just outside the wheelhouse. - two Carley floats.

Three of the six ships went instantly into reserve / preservation. Jaguar (1609), Fret (1604) and presumably Panter berthed alongside reserve fleet quay.

