

# SPAIN

## Headquarters Appointments

Minister of the Navy:  
 Admiral Excmo Sr Don Gabriel Pita da Veiga  
 Chief of the Naval Staff:  
 Admiral Excmo Sr Don Carlos Buhigas  
 Chief of Fleet Support:  
 Admiral Excmo Sr Don Pedro Durán  
 Chief of the Naval Staff:  
 Vice-Chief of the Naval Staff:  
 Vice-Admiral Excmo Sr Don Guillermo Mateu

## Commands

Commander-in-Chief of the Fleet:  
 Vice-Admiral Excmo Sr Don Luis Arrévalo  
 Captain General, Cantabrian Zone:  
 Admiral Excmo Sr Don Pedro Español Iglesias  
 Captain General, Straits Zone:  
 Admiral Excmo Sr Don Felipe Pita da Veiga  
 Captain General, Mediterranean Zone:  
 Admiral Excmo Sr Don Francisco J de Elizalde  
 Commandant General, Marines:  
 Lieut-General Excmo Sr Don Carlos Arriaga

## Diplomatic Representation

Naval Attaché in London:  
 Captain Don Gabino Aranda  
 Naval Attaché in Washington:  
 Captain Sr Don Adolfo Gregorio Alvarez

## Personnel

(a) 1976: Total 51 200 (4 550 officers, 33 000 ratings, 4 650 civil branch, 9 000 marines)  
 (b) 18 months National Service

## Cruiser

1975 *Canarias* (17 Dec)

## Destroyers

1970 *Almirante Miranda* ("Churruca" Class)

## Frigates

1971 *Magallanes, Vasco Nunez de Balbao, Hernan Cortes* ("Pizarro" Class) *Marte* ("Jupiter" Class)  
 1972 *Eolo, Triton* ("Elo" Class), *Neptuno* ("Jupiter" Class)  
 1973 *Osado* ("Audaz" Class)  
 1974 *Audaz, Furor, Rayo* ("Audaz" Class), *Jupiter* ("Jupiter" Class), *Sarmiento de Gamboa* ("Pizarro" Class)  
 1975 *Meteoro, Relampago, Temerario*, ("Audaz" Class)

## Corvettes

1971 *Descubierta* ("Atrevida" Class)  
 1973 *Diana* ("Atrevida" Class)

## Bases

El Ferrol del Caudillo (Cantabrian Zone)  
 San Fernando, Cádiz (Straits Zone)  
 Cartagena (Mediterranean Zone)

## Naval Air Service

2 Harrier AV-8 (see note)  
 11 Bell 47G helicopters  
 8 AB 204B and AB 212  
 11 Sikorsky SH-3D (see note)  
 11 Hughes 369 HM  
 6 Bell AH-1G "Hueycobra" (see note)  
 4 Sikorsky S-55 (phasing out)

## Notes:

(a) Harrier AV-8 aircraft ordered from US Marine Corps in 1973. Initial order of 8 with possible follow-up of 12 and an additional 4. First two delivered early 1976.  
 (b) It is reported that an additional 12 SH-3D and 12 AH-1G (Hueycobras) are to be ordered.

## US Agreement

Under an Agreement of 6 Aug 1970 the USA agreed to supply 2 submarines, 5 destroyers, 4 MSOs, 3 LSTs, 1 AE and 1 AO. Of this list an LSD was substituted for the AE and the AO was in too poor condition for further service. All now transferred.  
 Under 1976 Agreement US is to provide 4 Minesweepers—Ocean and 1 Repair Ship.

## Mercantile Marine

Lloyd's Register of Shipping:  
 2 667 vessels of 5 433 354 tons gross

## Strength of the Fleet

Type	Active	Building	Proposed
Helicopter Carrier	1	—	1
Destroyers	13	—	—
Frigates	16	4	7
Submarines—Patrol	8	2	2
Submarines—Small	2	—	—
Fast Attack Craft—Torpedo	2	—	—
Large Patrol Craft	11	1	—
Coastal Patrol Craft	11	—	—
LSD	1	—	—
Attack Transports	2	—	—
LST	3	—	—
LSM	2	—	—
LCT	8	—	—
Minor Landing Craft	93	—	—
Minesweepers—Ocean	10	—	—
Minesweepers—Coastal	12	—	—
Survey Ships	6	—	—
Transport	1	—	—
Replenishment Tanker	1	—	—
Harbour Tankers	13	—	—
Training Ship	1	—	—
Auxiliary Patrol Craft	16	—	—
Tugs (Ocean, Coastal and Harbour)	25	—	—
Miscellaneous	38	—	—

## New Construction

Because of financial considerations last year's programme has been cut to the following: 4 Frigates (PF), 2 "Agosta" class submarines, 6 400-ton Large Patrol Craft, 6 140-ton Large Patrol Craft.

Of the above the following are under construction:

4 Frigates  
 2 Submarines  
 6 Large Patrol Craft (400 tons)  
 6 Large Patrol Craft (140 tons)

## DELETIONS

### Submarines

1971 D 2 (S 21), D 3 (S 22), G 7 (ex-U573 VII C)  
 Midget submarines SA 41 (F 1), SA 42 (F 2)

### Minewarfare Forces

1971 *Lerez* ("Bidasoa" Class)  
 1972 *Bidasoa, Nervion, Segura, Tambre, Ter* ("Bidasoa" Class)  
 1976 *Tinto* ("Guardioro" Class) (31 Jan)

### Amphibious Forces

1974 *LSM 3*

### Light Forces

1970 *Arcila, Xauen* (ex-trawlers)  
 1971 *Javier Quiroga* (ex-US PC)  
 1973 *Ciés* (Fishery Protection)  
 1974 *V 2, V 12, V 13, V 18, Candido Pérez, AR 10* (Coastal Launches)

### Survey Ships

1971 *Malaspina*  
 1975 *Tofiño, Juan de la Cosa* (30 Apr)

### Service Forces

1974 *PP 1, 3, 4, PB 5, 6, 17* (tankers)

## LIST OF PENNANT NUMBERS

### Helicopter Carrier PH

01 - *Dédalo*

### Destroyers D

21 *Lepanto*  
 22 *Almirante Ferrandiz*  
 23 *Almirante Valdes*  
 24 *Alcala Galiano*  
 25 *Jorge Juan*  
 41 *Oquendo*  
 42 *Roger de Lauria*  
 43 *Marques de la Ensenada*  
 61 *Churruca*  
 62 *Gravina*  
 63 *Mendez Nuñez*  
 64 *Langara*  
 65 *Blas de Lezo*

### Frigates D and F

D 38 *Intrépido*  
 51 *Liniers*  
 52 *Alava*  
 F 12 *Vulcano*  
 41 *Vicente Yáñez Pinzon*

### Frigates D and F

42 *Legazpi*  
 61 *Atrevida*  
 62 *Princesa*  
 64 *Nautilus*  
 65 *Villa de Bilbao*  
 71 *Baleares*  
 72 *Andalucía*  
 73 *Cataluña*  
 74 *Asturias*  
 75 *Extremadura*  
 81 *Descubierta*  
 82 *Diana*  
 83-5 *New Construction*  
 91-5 *Proposed New Construction*

### Submarines S

31 *Almirante Garcia de los Reyes*  
 32 *Isaac Peral*  
 33 *Narciso Monturiol*  
 34 *Cosme Garcia*  
 61 *Delfin*  
 62 *Tonina*  
 63 *Marsopa*  
 64 *Narval*  
 71-72 *New Construction*  
 SA 51-52 *"Tiburón" class*

### Light Forces P

01 *Lazaga*  
 02 *Aisedo*  
 03 *Cadarso*  
 04 *Villamil*  
 05 *Bonifaz*  
 06 *Recalde*  
 11 *Barceló*  
 12 *Laya*  
 13 *Javier Quiroga*  
 14 *Ordóñez*  
 15 *Acevedo*  
 16 *Candido Pérez*  
 LT 30-31  
 LP 1-5  
 LAS 10, 20, 30  
 W 21 *Pegaso*  
 22 *Procyon*  
 32 *Salvora*  
 33 *Centinela*  
 34 *Serviola*  
 V 1, 4, 5, 6, 9, 10, 11, 17, 21

Amphibious Forces

- TA 11 Aragon
- TA 21 Castilla
- TA 31 Galicia
- L 11 Velasco
- L 12 Martin Alvarez
- L 13 C. de Venadito
- LSM 1-2
- K 1-8 BDK 1-8

Minerwarfare Forces M

- 11 Guadiaro
- 13 Euma
- 14 Almanzora
- 15 Navia
- 16 Guadalhorce
- 17 Eo
- 21 Nalón
- 22 Llobregat
- 23 Jucar

Minerwarfare Forces M

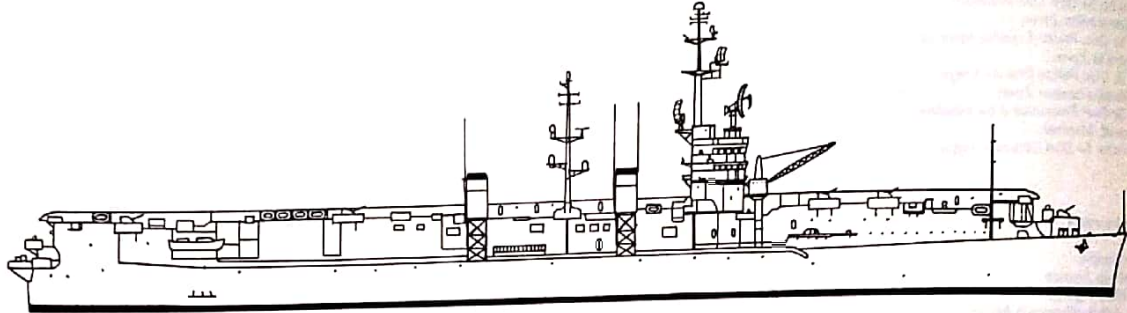
- 24 Ulla
- 25 Miño
- 26 Ebro
- 27 Turia
- 28 Duero
- 29 Sil
- 30 Tajo
- 31 Genil
- 32 Odiel
- 41 Guadalete
- 42 Guadalmedina
- 43 Guadalquivir
- 44 Guadiana

Survey Ships A

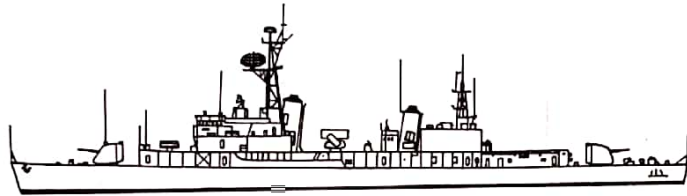
- 21 Castor
- 22 Pollux
- 23 Antares
- 24 Rigel
- 31 Malaspina
- 32 Tofiño
- Juan de la Cosa

Service Forces

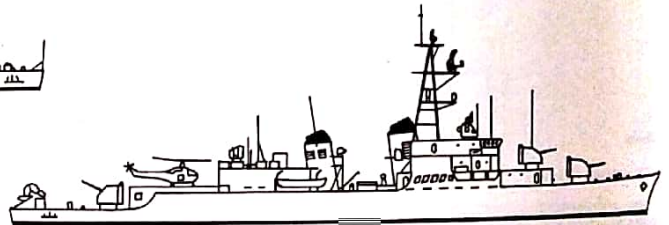
- A 41 Al Lobo
- BP 11 Teide



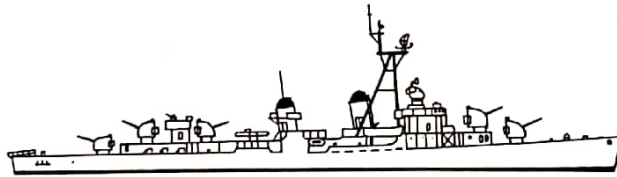
DEDALO



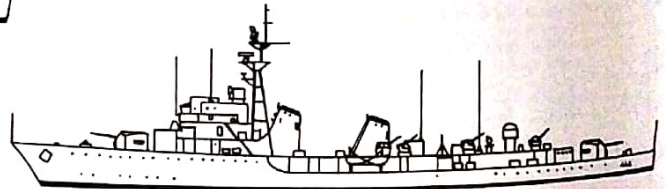
"D 60" Class



"MOD OQUENDO" Class



ALM. FERRANDIZ, LEPANTO and VALDES



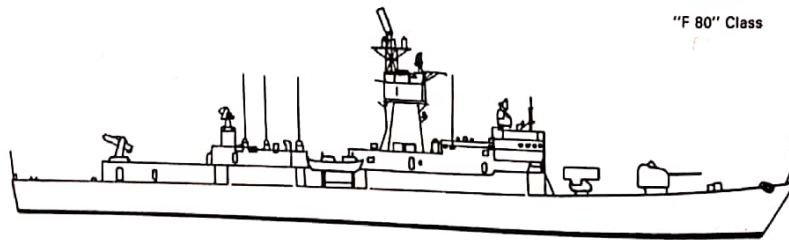
OQUENDO



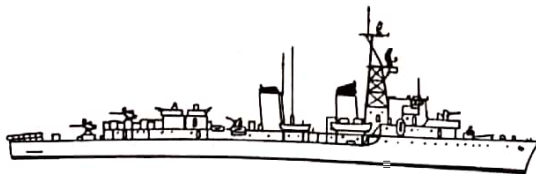
ALCALA GALIANO and JORGE JUAN



"F 80" Class



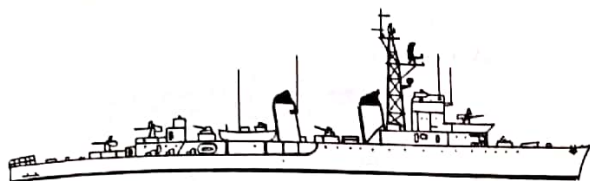
"F 70" ("BALEARES") Class



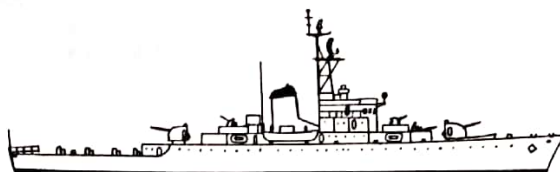
AUDAZ



"P 00" Class



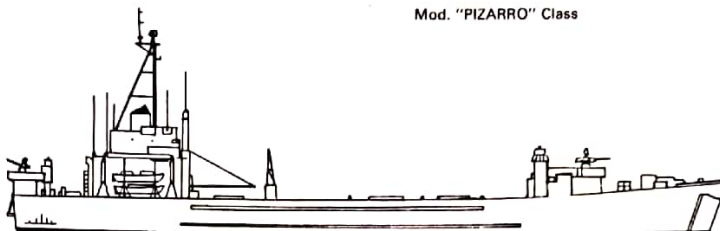
"ALAVA" Class



Mod. "PIZARRO" Class



"P 10" Class



"TERREBONNE PARISH" Class

## HELICOPTER CARRIER

### ALMIRANTE CARRERO

The future design of this ship, the eventual successor to *Dedalo*, is still in the planning stage and no definite decision has yet been reached.

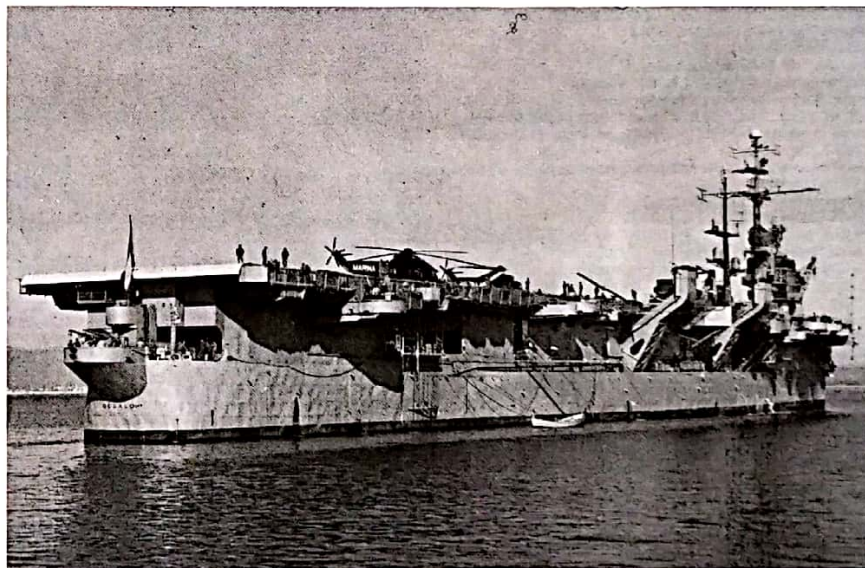
### 1 Ex-US "INDEPENDENCE" CLASS (CVL)

Name	No.	Builders	Laid down	Launched	Commissioned
DÉDALO (ex-USS <i>Cabot</i> , AVT 3, ex-CVL 28, ex-Wilmington, CL 79)	PH 01	New York Shipbuilding Corporation	16 Aug 1942	4 Apr 1943	24 July 1943

Displacement, tons: 13 000 standard; 16 416 full load  
 Length, feet (metres): 600.0 (182.8) wl; 623.0 (189.9) oa  
 Beam, feet (metres): 71.5 (21.8) hull  
 Width, feet (metres): 109.0 (33.2)  
 Draught, feet (metres): 26.0 (7.9)  
 Aircraft: 8 Harriers (6 AV-8A, 2 TAV-8A)  
 20 helicopters (ASW/Sea Kings—Combat/Huey Cobras—  
 Landings specially embarked S55s or Bell 212s)  
 Guns: 26—40 mm (2 quadruple, 9 twin)  
 Armour: 2 to 5 in sides; 2 to 3 in deck  
 Main engines: GE geared turbines; 4 shafts; 100 000 shp  
 Boilers: 4 Babcock & Wilcox  
 Speed, knots: 32  
 Range, miles: 7 200 at 15 knots  
 Oil fuel, tons: 1 800  
 Complement: 1 112 (without Air Groups)

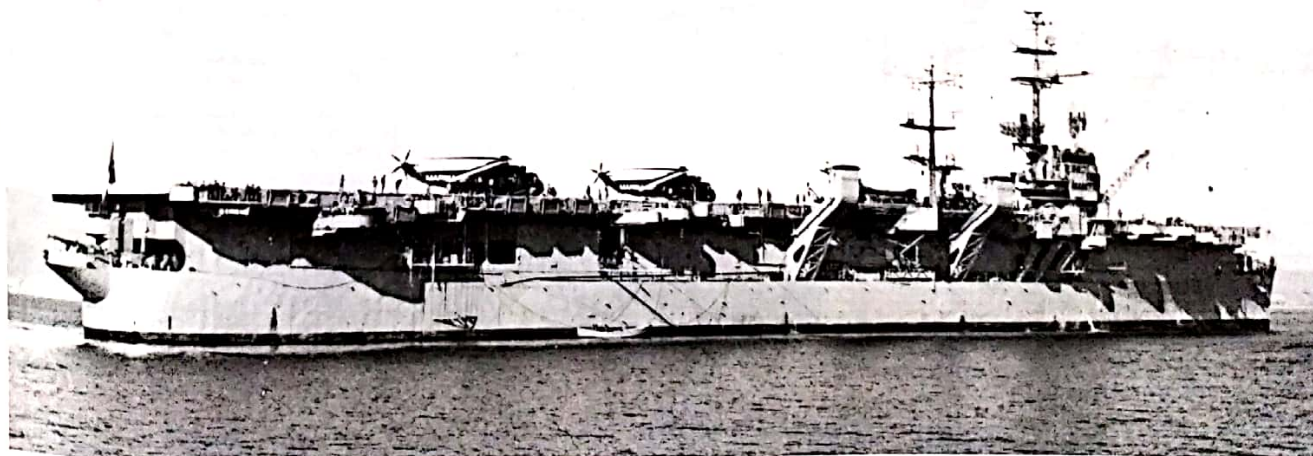
Completed as an aircraft carrier from the hull of a "Cleveland" class cruiser. Originally carried over 40 aircraft. Converted with strengthened flight and hangar decks, large port side catapult, revised magazine arrangements, new electronic gear, with stability corrected to offset the added top-weight. Hangar capacity altered to take 20 aircraft. Flight deck: 545 x 108 feet (166.1 x 32.9 metres).  
 Reactivated and modernised at Philadelphia Naval Shipyard, where she was transferred to Spain on 30 Aug 1967, on loan for five years. Purchased Dec 1973. Fleet flagship.

Radar: Air search: SPS 6 and SPS 40 (SPS 52B to be fitted 12/1976)  
 Heightfinder: SPS 8  
 Tactical: SPS 10  
 Fire control: 4 Sets  
 Tacan



DÉDALO

1974, Michael D. J. Lennon



DÉDALO

1974, Michael D. J. Lennon

## DESTROYERS

## 5 "D 60" CLASS (Ex-US "GEARING" FRAM I CLASS)

Name	No.	Builders	Laid down	Launched	Commissioned
BLAS DE LEZO (ex-USS <i>Noa</i> , DD 841)	D 65	Bath Iron Works Corp'n	1945	30 July 1945	2 Nov 1945
CHURRUCA (ex-USS <i>Eugene A. Greene</i> , DD 711)	D 61	Federal SB & DD Co.	1944	18 Mar 1945	8 June 1945
GRAVINA (ex-USS <i>Furse</i> , DD 882)	D 62	Consolidated Steel Corp'n	1944	9 Mar 1945	10 July 1945
LANGARA (ex-USS <i>Leary</i> , DD 879)	D 64	Consolidated Steel Corp'n	1944	20 Jan 1945	7 May 1945
MENDEZ NUÑEZ (ex-USS <i>O'Hare</i> , DD 889)	D 63	Consolidated Steel Corp'n	1945	22 June 1945	29 Nov 1945

Displacement, tons: 2 425 standard; 3 480 full load  
 Length, feet (metres): 390.5 (119.0) oa  
 Beam, feet (metres): 40.9 (12.4)  
 Draught, feet (metres): 19 (5.8)  
 Guns: 4—5 in (127 mm) 38 cal (twin)  
 A/S weapons: 1 Asroc launcher; 2 Triple Mk 32 tubes; Facilities for Hughes 369 HM helicopter  
 Main engines: 2 geared turbines (GE or Westinghouse) 60 000 shp; 2 shafts  
 Boilers: 4 Babcock and Wilcox  
 Speed, knots: 34  
 Fuel, tons: 650  
 Range, miles: 4 800 at 15 knots (economical)  
 Complement: 264 (17 officers, 247 ratings)

Radar: Air Search: D61 and 62, SPS 40—remainder, SPS 37;  
 Surface Search: SPS 10; Fire Control: Mk 37.

Refits: The first pair were refitted at El Ferrol on transfer. The remainder arrived at El Ferrol on July 23 1974 after refit in the USA.



CHURRUCA

1974, Spanish Navy

Sonar: SQS 23 (hull mounted).

Transfers: All finally purchased 1975.

## 2 "MODIFIED OQUENDO" CLASS

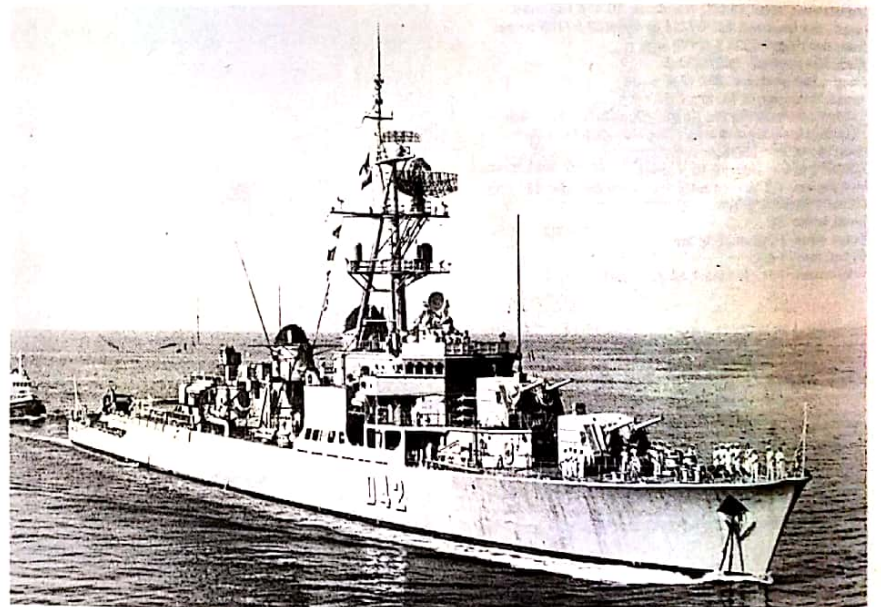
Name	No.	Builders	Laid down	Launched	Commissioned
MARQUÉS DE LA ENSENADA	D 43	Ferrol	4 Sep 1951	15 July 1959	10 Sep 1970
ROGER DE LAURIA	D 42	Ferrol	4 Sep 1951	12 Nov 1958	30 May 1969

Displacement, tons: 3 370 standard; 3 785 full load  
 Length, feet (metres): 391.5 (119.3)  
 Beam, feet (metres): 42.7 (13.0)  
 Draught, feet (metres): 18.4 (5.6)  
 Aircraft: 1 Hughes 369 HM ASW helicopter  
 Guns: 6—5 in (127 mm) 38 cal (3 twin)  
 A/S weapons: 2 triple Mk 32 tubes for Mk 44 A/S torpedoes  
 Torpedo tubes: 2—21 in (533 mm) fixed single Mk 25 tubes for Mk 37 torpedoes  
 Main engines: 2 Rateau-Bretagne geared turbines; 2 shafts; 60 000 shp  
 Boilers: 3 three-drum type  
 Speed, knots: 31  
 Oil fuel, tons: 673  
 Range, miles: 4 500 at 15 knots  
 Complement: 318 (20 officers, 298 men)

Ordered in 1948. Originally of the same design as *Oquendo*. Towed to Cartagena for reconstruction to a new design. *Roger de Lauria* was re-launched after being lengthened and widened on 29 Aug 1967 and *Marqués de la Ensenada* on 2 Mar 1968. Weapons and electronics identical to Gearing Fram II.

Radar: Search: SPS 40.  
 Tactical: SPS 10.  
 Fire Control: One Mk 37 and one Mk 56.

Sonar: One hull mounted, probably SQS 29; one VDS, probably SOA 10.



ROGER DE LAURIA

8/1973, Commander Aldo Fraccaroli

## 1 "OQUENDO" CLASS

Name	No.	Builders	Laid down	Launched	Commissioned
OQUENDO	D 41	Ferrol	15 June 1951	5 Sep 1956	13 Sep 1960

Displacement, tons: 2 582 standard; 3 005 full load  
 Length, feet (metres): 382 (116.4)  
 Beam, feet (metres): 36.5 (11.1)  
 Draught, feet (metres): 12.5 (3.8)  
 Guns: 4—4.7 (120 mm) 50 cal (2 twin); 6—40 mm, 70 cal (single)  
 A/S weapons: 2 Hedgehogs  
 Torpedo tubes: 2 Mk 4 with 3 Mk 32 homing torpedoes each  
 Main engines: 2 Rateau-Bretagne geared turbines; 2 shafts; 60 000 shp  
 Boilers: 3 three-drum type  
 Speed, knots: 32.4  
 Oil fuel, tons: 659  
 Range, miles: 5 000 at 15 knots  
 Complement: 250 (17 officers, 233 men)

Ordered in 1947. Initially completed on 13 Sep 1960. Completed modernisation on 22 April 1963.

Construction: Designed as a conventional destroyer but modified during construction. Seven 21-inch torpedo tubes and two depth charge throwers were replaced by different anti-submarine weapons.



OQUENDO

1974, Spanish Navy

Radar: Search: British 293 type.  
 Air Search: Marconi SNW 10.  
 Nav: 1 set.  
 Fire Control: British type 275 on Mark 6 DCT and British Type 262 on CRBFD.

### 5 "D 20" CLASS (Ex-US "FLETCHER" CLASS)

Name  
**ALCALA GALIANO** (ex-USS *Jarvis*, DD 799)  
**ALMIRANTE FERRANDIZ** (ex-USS *David W. Taylor*, DD 551)  
**ALMIRANTE VALDES** (ex-USS *Converse*, DD 509)  
**JORGE JUAN** (ex-USS *McGowan*, DD 678)  
**LEPANTO** (ex-USS *Capps*, DD 550)

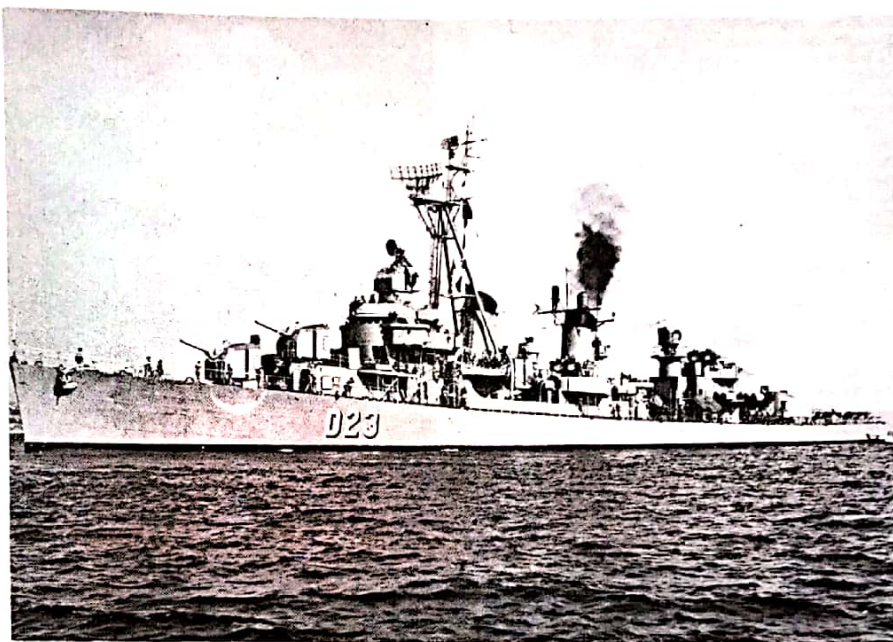
No.	Builders	Laid down	Launched	Commissioned
D 24	Todd Pacific Shipyards	7 June 1943	14 Feb 1944	3 June 1944
D 22	Gulf SB Corpn, Chickasaw, Ala	12 June 1941	4 July 1942	18 Sep 1943
D 23	Bath Iron Works Corp, Maine	23 Feb 1942	30 Aug 1942	8 June 1943
D 25	Federal SB & DD Co	May 1943	14 Nov 1943	20 Dec 1943
D 21	Gulf SB Corpn, Chickasaw, Ala.	12 June 1941	31 May 1942	23 June 1943

Displacement, tons: 2 080 standard; 2 750 normal; 3 050 full load  
 Length, feet (metres): 376 5 (114.8) oa  
 Beam, feet (metres): 39 5 (12.0)  
 Draught, feet (metres): 18 0 (5.5)  
 Guns: D21, D22: 5—5 in (127 mm) 38 cal; Others: 4—5 in (127 mm) single  
 D21, D22: 6—40 mm, 60 cal, (3 twin); 6—20 mm, 70 cal, (single); Others: 6—3 in (76 mm) 50 cal, (3 twin)  
 A/S weapons: 2 Hedgehogs; 6 DCT in D21 and D22, 4 in D23; 2 DC racks in D21, D22, 1 in others  
 Torpedo tubes: 3—21 in (533 mm) in D 21, 22 and 23 only  
 Torpedo racks: 2 side launching Mk 4 each with 3 Mk 32 A/S torpedoes  
 Main engines: Geared turbines; Westinghouse in D21, D22, GE in others; 2 shafts; 60 000 shp  
 Boilers: 4 Babcock & Wilcox  
 Speed, knots: 35  
 Oil fuel, tons: 650  
 Range, miles: 5 000 at 15 knots  
 Complement: 290 (17 officers, 273 men)

*Lepanto*, and *Almirante Ferrandiz*, were reconditioned at San Francisco, Cal, and there turned over to the Spanish Navy on 15 May 1957, sailing for Spain on 1 July 1957. *Valdes* was transferred at Philadelphia on 1 July 1959, *Jorge Juan*, was transferred at Barcelona on 1 Dec 1960 and *Alcala Galiano*, at Philadelphia on 3 Nov 1960, both being of the later "Fletcher" class. Modernisation of A/S equipment is planned. All purchased from US on 1 Oct 1972.

Radar: Search: SPS 6C.  
 Tactical: SPS 10.  
 Fire Control: D 23, 24 and 25—Mk 37 and Mk 56, 2 Mk 63 for 3 inch guns; D 21 and 22—Mk 37.

Sonar: One hull mounted set, SQS-29.



ALMIRANTE VALDES

1974, Wright and Logan

## FRIGATES

### 5 "F 90" CLASS (NEW CONSTRUCTION)

This is a projected class of frigates, similar to the USN "Oliver Hazard Perry" class, planned to be built at El Ferrol. Reported as a fully-automated class with possibility of Westinghouse-Canada VDS and of Elettronica-San Giorgio ECM.

### 4 + 4 + 2 "F 80" CLASS (NEW CONSTRUCTION)

Name	No.	Builders	Laid down	Launched	Commissioned
DESCUBIERTA	F 81	Bazán, Cartagena	16 Nov 1974	8 July 1975	1976
DIANA	F 82	Bazán, Cartagena	8 July 1975	26 Jan 1976	—
—	F 83	Bazán, Cartagena	—	—	—
—	F 84	Bazán, Cartagena	—	—	—
—	F 85	Bazán, Cartagena	—	—	—

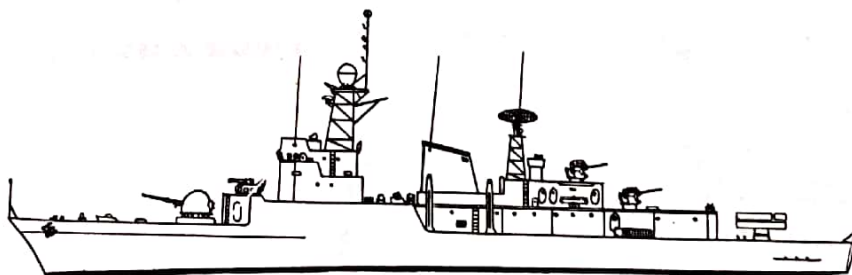
Displacement, tons: 1 200 standard; 1 400 full load  
 Dimensions, feet (metres): 291.3 x 34 x 11.5 (88.8 x 10.5 x 3.5)  
 Missiles: 1 Octuple Seasparrow mounting (16 reloads) (see note)  
 Guns: 1—3 in (76 mm) 82 cal Oto Melara; 2—40 mm 70 cal (singles); 1 or 2 Meroka 20 mm 120 cal (6 barrels non-rotating)  
 A/S weapons: 1—375 mm Bofors twin-barrelled rocket launcher  
 Torpedo tubes: 6 (2 triple) Mk 32 for Mk 44 torpedoes  
 Main engines: 4 MTU-Bazan 16V956 diesels; 16 000 bhp; 2 shafts; cp propellers  
 Speed, knots: 27  
 Complement: approx 100

Similar to the Portuguese "João Coutinho" class being built by Bazán with modifications to the armament and main engines. Officially rated as corvettes. Reported as designed to carry 30 marines.

Class: Four were ordered from Bazán, Cartagena in 1973. Approval for four more received whilst two more are planned.

Electronics: ECM probably Elettronica de San Giorgio co-produced in Spain.

Missiles: Selenia system (Albatros) for Seasparrow. This will be built partly in Spain. SSMs will probably be fitted (Exocet or Harpoon).



"F 80" Class

1974

Radar: Search and fire control: 1 Hollandse Signaal M 22.  
 Air Search: 1 Hollandse Signaal LW-04.  
 Navigation: 1 set.

Sonar: Possibly Raytheon.

5 "BALEARES (F 70)" CLASS

Name	No.
ANDALUCIA	F 72
ASTURIAS	F 74
BALEARES	F 71
CATALUÑA	F 73
EXTREMADURA	F 75

Builders
Empresa Nacional Bazán, El Ferrol
Empresa Nacional Bazán, El Ferrol
Empresa Nacional Bazán, El Ferrol
Empresa Nacional Bazán, El Ferrol
Empresa Nacional Bazán, El Ferrol

Laid down
2 July 1969
30 Mar 1971
31 Oct 1968
20 Aug 1970
3 Nov 1971

Launched
30 Mar 1971
13 May 1972
20 Aug 1970
3 Nov 1971
21 Nov 1972

Commissioned
23 May 1974
2 Dec 1975
24 Sep 1973
9 Dec 1974
1976

**Displacement, tons:** 3 000 standard; 4 177 full load  
**Length, feet (metres):** 415-0 (126-5) pp; 438-0 (133-5) oa  
**Beam, feet (metres):** 46-9 (14-3)  
**Draught, feet (metres):** 25-9 (7-9)  
**Missile launchers:** 1 single for Standard missiles  
**Guns:** 1—5 in (127 mm) 54 cal Mk 42  
**A/S weapons:** 1 eight-tube ASROC launcher  
**Torpedo tubes:** 4 Mk 32 for Mk 44 torpedoes; 2 Mk 25 for Mk 37 torpedoes (stern)  
**Main engines:** 1 set geared turbines; 1 shaft; 35 000 shp  
**Boilers:** 2 high pressure V2M type; 1 200 psi (84-4 kg/cm<sup>2</sup>)  
**Speed, knots:** 28  
**Range:** Over 4 000 miles at 20 knots  
**Complement:** 256 (15 officers, 241 men)

In June 1966 Spain and USA signed an agreement for the construction of five frigates by Empresa Nacional Bazán at El Ferrol with technical and material assistance by USA. Generally similar in appearance to the US escort ships of the "Knox" class but with modified weapons system and other characteristics to meet the requirements of the Spanish Navy. Equipped with weapons and electronic equipment furnished by USA. 2 or 3 more might be built before the "F 90" class.

**Anti-Submarine:** 8 Reloads carried for ASROC.

**Gunnery:** 600—5 inch rounds carried

**Missile system:** Mk 22 launcher with stowage for 16 missiles. Single director with two lines of fire against different targets with MR68 operating.

**Radar:** Search: SPS 52 (3D).  
 Tactical: SPS 10.

**Fire control:** SPS 51 continuous wave for missiles; Mk 68 for guns with continuous wave injection for limited use with missiles.

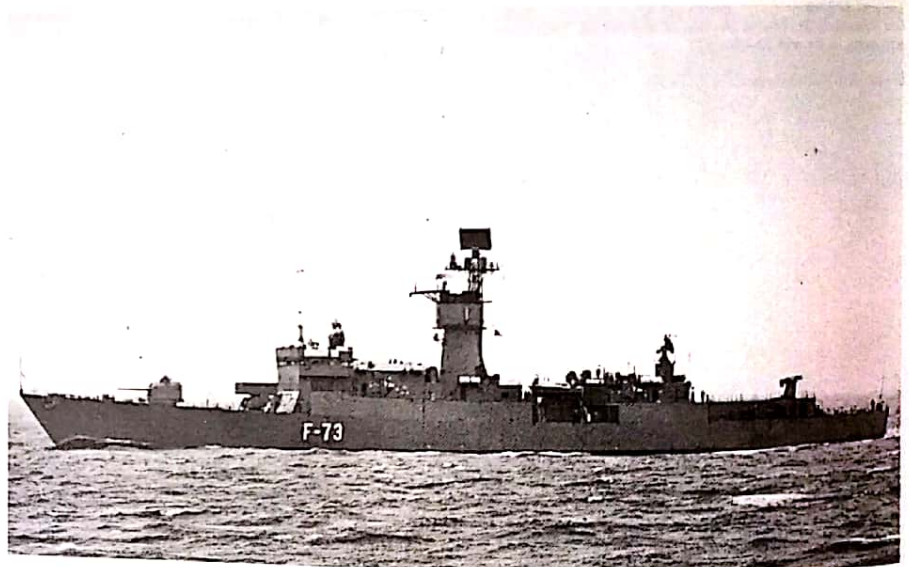
**Torpedoes and tubes:** All are fitted internally. Total of 41 torpedoes carried.

**Sonar:** SOS 23 bow mounted; SOS 35 VDS.



ANDALUCIA (firing Asroc)

1974, J. Taibo



CATALUÑA

9/1975, Dr Giorgio Arra

1 "AUDAZ" CLASS

Name	No.
INTRÉPIDO	D 38

**Displacement, tons:** 1 227 standard; 1 550 full load  
**Length, feet (metres):** 295-2 (90-0) pp; 308-2 (94-0) oa  
**Beam, feet (metres):** 30-5 (9-3)  
**Draught, feet (metres):** 17-1 (5-2)  
**Guns:** 2—3 in (76 mm) 50 cal; 2—40 mm 70 cal  
**A/S weapons:** 2 hedgehogs; 8 mortars; 2 DC racks  
**Torpedo tubes:** 2 side launching for Mk 32 A/S torpedoes (6 torpedoes)  
**Main engines:** Rateau-Bretagne geared turbines; 2 shafts; 28 000 shp  
**Boilers:** 2 La Seine 3-drum type  
**Speed, knots:** 32  
**Oil fuel, tons:** 290  
**Range, miles:** 3 800 at 15 knots, 900 at 32 knots  
**Complement:** 199 (13 officers, 186 men)

Builders
Ferrol

Laid down
14 July 1945

Launched
15 Feb 1961

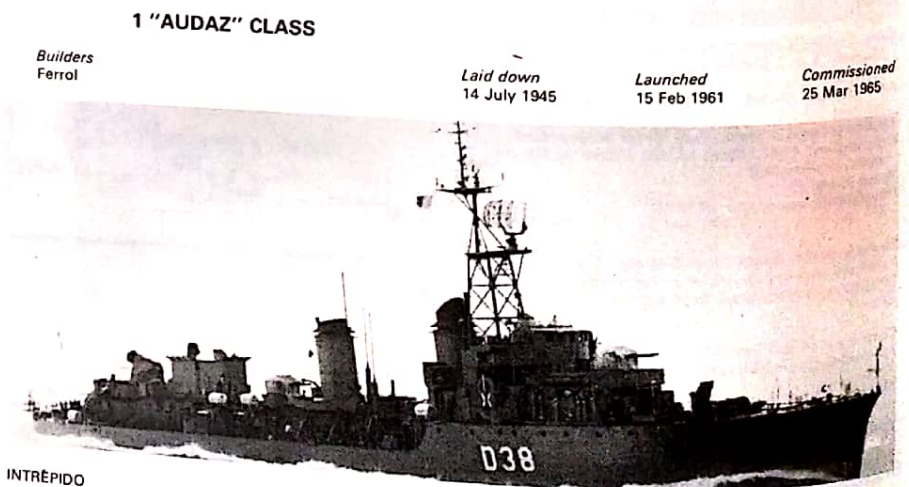
Commissioned
25 Mar 1965

Based on the French "Le Fier" design. Allocated D Pennant number in 1961.

**Engineering:** The boilers are in two compartments separated by the engine rooms.

**Radar:** Surface search, SPS 5B.  
 Air search: MLA-1B.  
 Fire control: one Mk 63.

**Sonar:** One hull mounted-set.



INTRÉPIDO

1969, Spanish Navy

2 "ALAVA" CLASS

**Name**  
ALAVA  
BUILDERS

**No.**  
D 52 (ex-23)  
D 51 (ex-21)

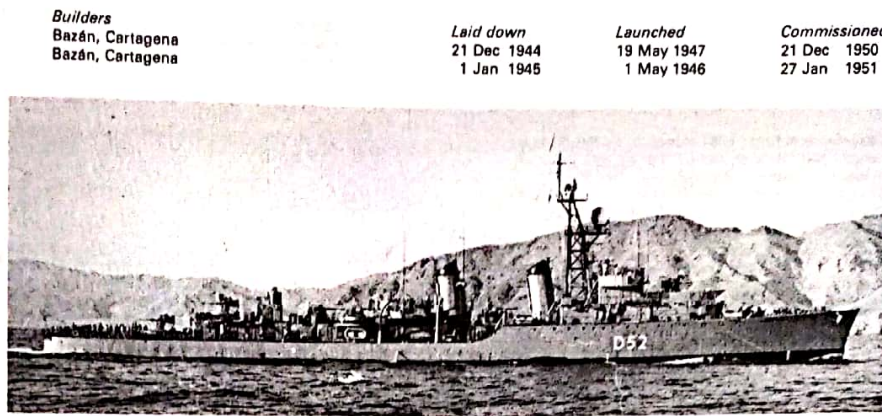
**Builders**  
Bazán, Cartagena  
Bazán, Cartagena

**Laid down**  
21 Dec 1944  
1 Jan 1945

**Launched**  
19 May 1947  
1 May 1946

**Commissioned**  
21 Dec 1950  
27 Jan 1951

Displacement, tons: 1 842 standard; 2 287 full load  
Length, feet (metres): 336.3 (102.5)  
Beam, feet (metres): 31.5 (9.6)  
Draft, feet (metres): 19.7 (6.0)  
Guns: 3—3 in (76 mm) 50 cal, Mk 22; 3—40 mm, 70 cal  
AS weapons: 2 Hedgehogs; 8 DC mortars; 2 DC racks  
Torpedo racks: 2 side launching for Mk 32 A/S torpedoes (6 torpedoes)  
Main engines: Parsons geared turbines; 2 shafts; 31 500 shp  
Boilers: 4 Yarrow 3-drum type  
Speed, knots: 29  
Range, miles: 370  
Fuel, tons: 370  
Range, miles: 4 100 at 15 knots  
Complement: 222 (15 officers, 207 men)



ALAVA

1974, Spanish Navy

Ordered in 1936, but construction was held up by the Civil War. When being resumed, was again suspended in 1940, but started at Empresa Nacional Bazán in 1944.

Radar: Air search: MLA 1B. One surface-search set.  
Fire control: 2-Mk 63.

Tactical: One hull-mounted set, probably SQS-4.

2 MODERNISED "PIZARRO" CLASS

**Name**  
VICENTE YAÑEZ PINZON  
VICENTE YAÑEZ PINZON

**No.**  
F 42  
F 41

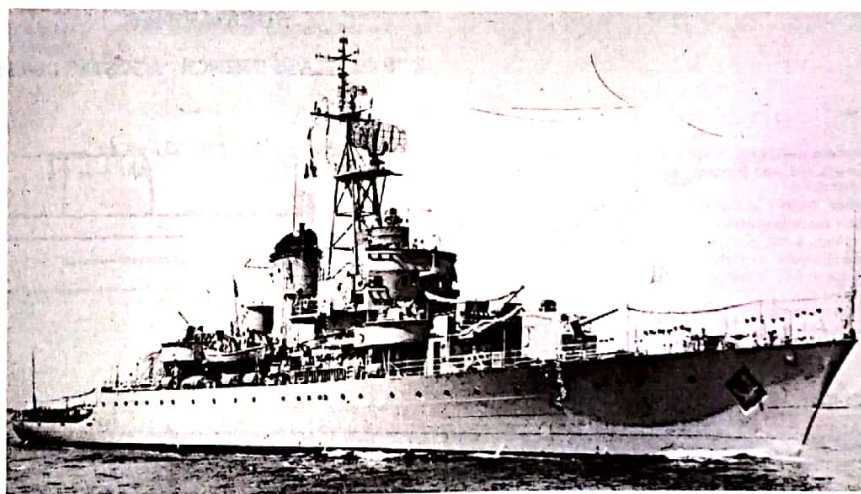
**Builders**  
Ferrol  
Ferrol

**Laid down**  
1943  
1943

**Launched**  
8 Aug 1944  
3 Aug 1944

**Commissioned**  
8 Aug 1951  
5 Aug 1949

Displacement, tons: 1 924 standard; 2 228 full load  
Length, feet (metres): 279.0 (85.0) pp; 312.5 (95.3) oa  
Beam, feet (metres): 39.5 (12.0)  
Draft, feet (metres): 17.7 (5.4)  
Guns: 2—5 in (127 mm) 38 cal; 4—40 mm, 70 cal  
AS weapons: 2 Hedgehogs; 8 mortars; 2 racks  
Torpedo racks: 2 side launching for Mk 32 torpedoes  
Main engines: 2 sets Parsons geared turbines; 2 shafts; 6 000 shp  
Boilers: 2 Yarrow type  
Speed, knots: 18.5  
Range, miles: 3 000 at 15 knots  
Oil fuel, tons: 390  
Complement: 255 (16 officers, 239 men)



VICENTE YAÑEZ PINZON

1974, Spanish Navy

Originally designed to carry 30 mines. Completed modernisation on 14 Jan and 25 Mar 1960 respectively.

Radar: Surface search: SPS 5B.  
Air Search: MLA-1B.  
Fire Control: Mk 52.

1 "JUPITER" CLASS

**Name**  
VULCANO

**No.**  
F 12

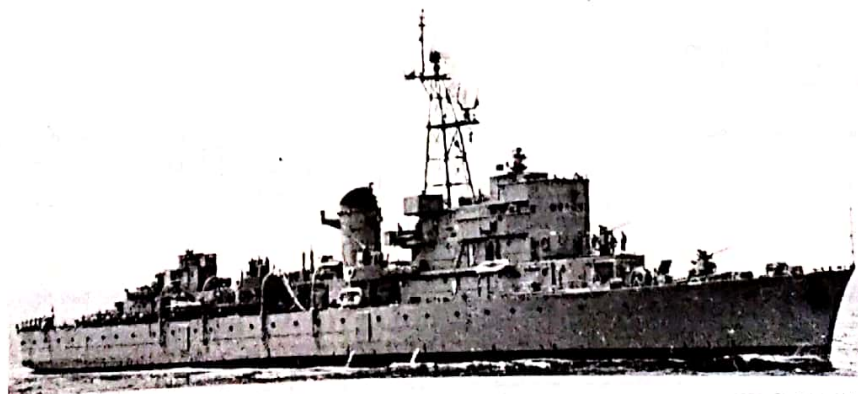
**Builders**  
Sociedad Española de Construcción Naval, El Ferrol

**Laid down**  
—

**Launched**  
12 Oct 1935

**Commissioned**  
1937

Displacement, tons: 2 103 standard; 2 360 full load  
Length, feet (metres): 302.8 (92.3) pp; 328.1 (100.0) oa  
Beam, feet (metres): 41.5 (12.6)  
Draft, feet (metres): 11.5 (3.5)  
Guns: 4—3 in (76 mm) Mk 26 (single); 4—40 mm, 70 cal  
AS weapons: 2 Hedgehogs; 8 mortars; DC racks  
Mines: 238  
Main engines: 2 sets Parsons geared turbines; 2 shafts; 5 000 shp  
Boilers: 2 Yarrow type  
Speed, knots: 17.4  
Oil fuel, tons: 340  
Range, miles: 5 700 at 12 knots  
Complement: 255 (16 officers, 239 men)



VULCANO

1971, Spanish Navy

Vulcano completed modernisation on 28 Feb 1961. Allocated F pennant number in 1961.

Radar: Air Search: MLA-1B.  
Fire Control: MK 51.  
Tactical: SG/6B.

4 "ATREVIDA - F 60" CLASS

Name	No.
ATREVIDA	F 61
NAUTILUS	F 64
PRINCESA	F 62
VILLA DE BILBAO	F 65

Builders
Bazán, Cartagena
Bazán, Cadiz
Bazán, Cartagena
Bazán, Cadiz

Laid down
26 June 1950
27 July 1953
18 Mar 1953
18 Mar 1953

Launched
2 Dec 1952
23 Aug 1956
31 Mar 1956
19 Feb 1958

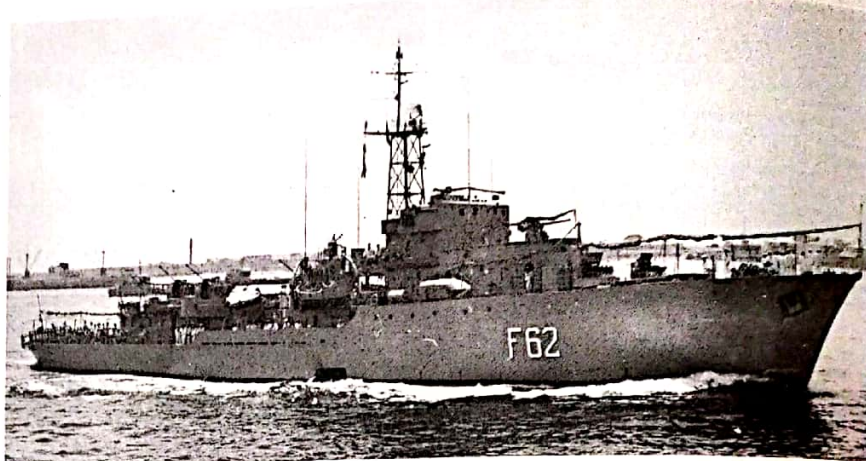
Commissioned
19 Aug 1954
1957
1957
1959

Displacement, tons: 1 031 standard; 1 135 full load  
 Length, feet (metres): 247.8 (75.5) oa  
 Beam, feet (metres): 33.5 (10.2)  
 Draught, feet (metres): 9.8 (3.0)  
 Guns: 1—3 in (76 mm) 50 cal; 3—40 mm, 70 cal  
 A/S weapons: 2 Hedgehogs; 8 mortars; 2 DC racks  
 Mines: 20 can be carried  
 Main engines: Sulzer diesels; 2 shafts; 3 000 bhp  
 Speed, knots: 18.5  
 Oil fuel, tons: 100  
 Range, miles: 8 000 at 10 knots  
 Complement: 132 (9 officers, 123 men)

All have been modernised since 1959. No funnel, the diesel exhaust being on the starboard side waterline. Allocated F pennant numbers in 1961.

Modernisation: Completed: *Atrevida* 14 June 1960; *Nautilus* 15 Dec 1959; *Princesa* 3 Oct 1959; *Villa de Bilbao* 2 July 1960.

Radar: Modified SPS-5B combined air/surface search.



PRINCESA

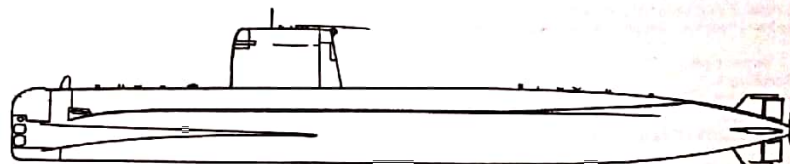
1974, Spanish Navy

SUBMARINES

2 "S 70" CLASS (FRENCH "AGOSTA" CLASS)

S 71 S 72

Displacement, tons: 1 450 surfaced; 1 725 dived  
 Dimensions, feet (metres): 221.7 x 22.3 x 17.7 (67.6 x 6.8 x 5.4)  
 Tubes: 4—21.7 in (550 mm) (16 reloads)  
 Main machinery: Diesel-electric; 2 diesels; 3 600 hp; 1 Main motor; 6 400 hp; 1 cruising motor; 1 shaft  
 Speed, knots: 12 surfaced; 20 dived  
 Range, miles: 9 000 at 9 knots (snorting); 350 at 3.5 knots (dived)  
 Endurance: 45 days  
 Complement: 50



"S 70" Class

1974

Ordered April 1974. To be built by Bazán Cartagena with some French advice. Both laid down 1975, and therefore, probably not operational until 1979. Two more orders are under consideration.

3 "S 30" CLASS (Ex-US GUPPY IIA TYPE)

Name
ISAAC PERAL (ex-USS <i>Ronquil</i> , SS 396)
NARCISO MONTURIOL (ex-USS <i>Picuda</i> , SS 382)
COSME GARCIA (ex-USS <i>Bang</i> , SS 385)

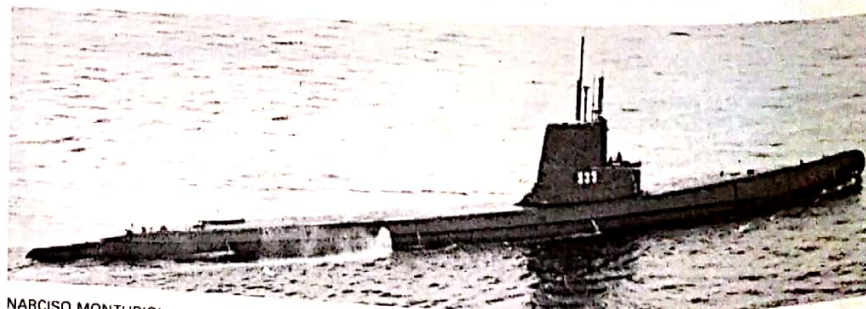
No.	Builders
S 32	Portsmouth Navy Yard
S 33	Portsmouth Navy Yard
S 34	Portsmouth Navy Yard

Laid down
9 Sep 1943
15 Mar 1943
30 April 1943

Launched
27 Jan 1944
12 July 1943
30 Aug 1943

Commissioned
22 April 1944
16 Oct 1943
4 Dec 1943

Displacement, tons: 1 840 surfaced; 2 445 dived  
 Length, feet (metres): 306.0 (93.3) oa  
 Beam, feet (metres): 27.0 (8.2)  
 Draught, feet (metres): 17.0 (5.2)  
 Torpedo tubes: 10—21 in (533 mm) 6 bow, 4 stern  
 Main machinery: 3 Fairbanks-Morse diesels; total 4 800 bhp; 2 shafts; 2 Elliot electric motors; 5 400 shp  
 Speed, knots: 18 surfaced; 15 dived  
 Range, miles: 12 000 at 10 knots  
 Complement: 74

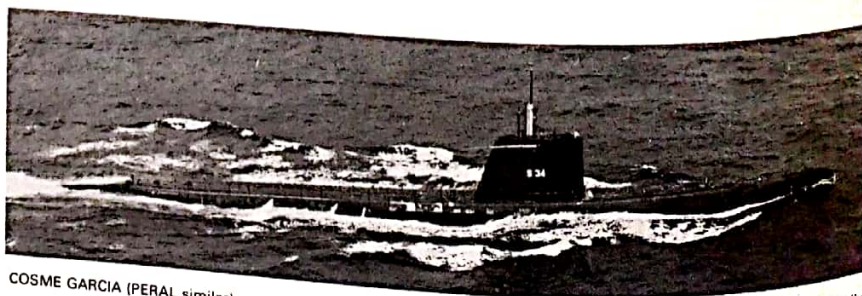


NARCISO MONTURIOL

1974, Spanish Navy

Built by Portsmouth Navy Yard. Transferred to Spain on 1 July 1971 (*Ronquil*) 1 Oct 1972 (*Bang* and *Picuda*). All finally purchased 18 Nov 1974. *Narciso Monturiol* had mechanical defects in 1975 which resulted in *Almirante Garcia de los Reyes* being retained in service with the former's crew. These defects may result in *Narciso Monturiol* being paid off.

Appearance: S 33 has stepped section at forward end of fin.



COSME GARCIA (PERAL similar)

1973, J. Taibo



4 "S 60" CLASS (FRENCH "DAPHNE" CLASS)

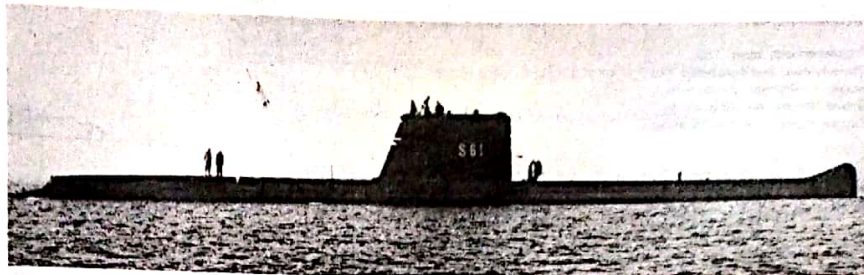
No.	Builders	Laid down	Launched	Commissioned
S 61	E. N. Bazán, Cartagena	13 Aug 1968	25 Mar 1972	3 May 1973
S 62	E. N. Bazán, Cartagena	1969	3 Oct 1972	10 July 1973
S 63	E. N. Bazán, Cartagena	1971	15 Mar 1974	12 April 1975
S 64	E. N. Bazán, Cartagena	1971	14 Dec 1974	22 Nov 1975

Displacement, tons: 870 surfaced; 1 040 dived  
 Length, feet (metres): 189.6 (57.8)  
 Beam, feet (metres): 22.3 (6.8)  
 Draught, feet (metres): 15.1 (4.6)  
 Torpedo tubes: 12—21.7 in (550 mm) (8 bow, 4 stern)  
 Main machinery: SEMT-Pielstick diesel-electric; 1 300 bhp surfaced; 1 600 hp dived; 2 shafts  
 Speed, knots: 16 surfaced and dived  
 Range, miles: 4 500 at 5 knots (snorting)  
 Complement: 47 (6 officers, 41 men)

Locally similar to the French "Daphne" class and built with extensive French assistance in the Cartagena Yard.

Armament: Thompson CSF "Calypso II" plus ECM.

Status: Active, DUUA 1; Passive with rangefinding, DSUV.



DELFIN

1973, J. Taibo

2 "TIBURON" CLASS

51 SA 52

Displacement, tons: 78 surfaced; 81 dived  
 Length, feet (metres): 70.5 (21.5)  
 Beam, feet (metres): 9 (2.7)  
 Draught, feet (metres): 9 (2.7)  
 Torpedo tubes: 2—21 in (533 mm)  
 Main engines: Pegaso diesels; 400 hp. Electric motors; 400 hp  
 Speed, knots: 10 surfaced; 14.5 dived  
 Range, miles: 2 000 at 6 knots (surfaced); 150 at 7 knots (dived)  
 Complement: 8

Engineering: The diesels were built by ENASA (formerly Hispano-Suiza) Barcelona, 200 hp each at 2 000 rpm, with reduction gear on the single screw disposed in a nozzle in continuation of the conic after hull.

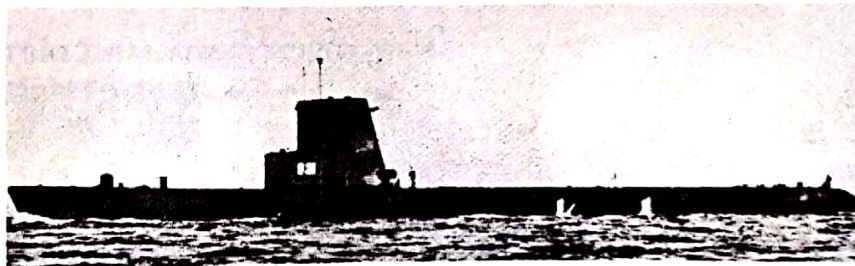
Launched in 1958. Originally rated as *Submarinos Experimentales*, but in 1963 designated Assault Submarines with "SA" numbers.

1 Ex-US "BALAO" CLASS

Name	No.	Builders	Laid down	Launched	Commissioned
ALMIRANTE GARCIA DE LOS REYES (ex-USS <i>Kraken</i> , SS 370)	S 31	Manitowoc SB Co.	—	30 April 1944	8 Sep 1944

Displacement, tons: 1 880 surfaced; 2 160 dived  
 Dimensions, feet (metres): 311.5 x 27.2 x 17.2 (95 x 8.3 x 5.2)  
 Torpedo tubes: 10—(6—21 in (533 mm) and 4 for A/S torpedoes)  
 Main machinery: 4 diesels; 6 400 bhp; 2 main motors; 4 600 hp; 2 shafts  
 Speed, knots: 20 surfaced; 10 dived  
 Oil fuel, tons: 300  
 Range, miles: 12 000 at 10 knots (surfaced)  
 Complement: 80

Transferred 24 October 1959 after modernisation at Pearl Harbor. Although due to be paid off in 1975 retained in service (see note under "S 30" class).



ALMIRANTE GARCIA DE LOS REYES

1969, Spanish Navy

LIGHT FORCES

6 "LAZAGA (P-00)" CLASS (LARGE PATROL CRAFT)

Name	No.	Builders	Commissioned
LAZAGA	P 01	Lürssen Vegesack	16 July 1975
ALSEDO	P 02	Bazán, La Carraca	Oct 1975
CADARSO	P 03	Bazán, La Carraca	Oct 1975
VILLAMIL	P 04	Bazán, La Carraca	Feb 1976
BONIFAZ	P 05	Bazán, La Carraca	Feb 1976
RECALDE	P 06	Bazán, La Carraca	Aug 1976

Displacement, tons: 400 full load  
 Dimensions, feet (metres): 190.2 x 24.9 x 8.5 (58 x 7.6 x 2.6)  
 Guns: 1—3 in 62 cal Oto Melara; 1—40 mm 70 cal; 2—20 mm A/S weapons: DC racks  
 Torpedo tubes: 2 triple Mk 32 mountings  
 Main engines: 2 MTU-Bazan diesels; 9 000 bhp  
 Speed, knots: 29.5  
 Range, miles: 6 100 at 17 knots  
 Complement: 30

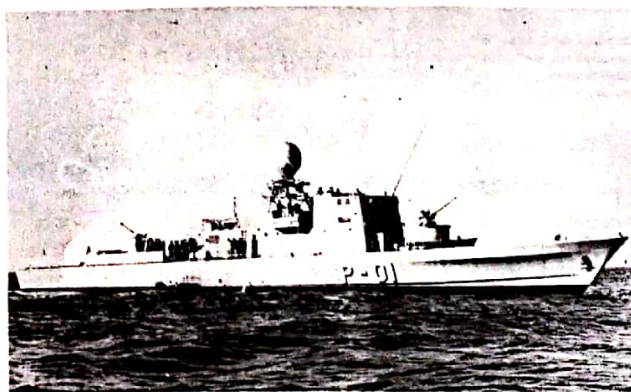
Ordered in 1972, primarily for Fishery Protection duties. Although all will be operated by the Navy half the cost is being borne by the Ministry of Commerce. *Lazaga* launched on 30 Sep 1974. She was steamed to Spain in April 1975 for equipping and arming. Launch dates—02 and 03, 8 Jan 1975; 04 and 05 24 May 1975; 06, 9 Nov 1975.

Missiles: Provision has been made for fitting four surface-to-surface missiles (Exocet or Harpoon), involving a change of gun armament.

Radar: Surface search and Navigation; Hollandse Signaal M-20 ECM and IFF

Fire Control: Optical director CSEE.

Sonar: One hull-mounted set.



LAZAGA

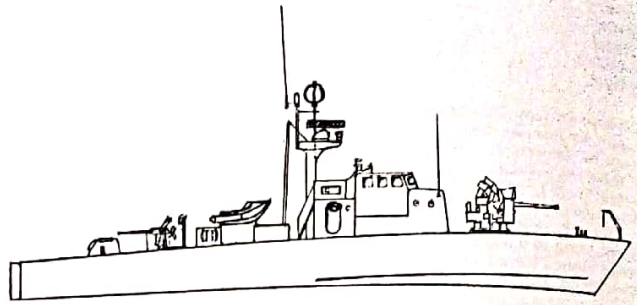
7/1975, Spanish Navy

## 6 "BARCELO (P 10)" CLASS (LARGE PATROL CRAFT)

Name	No.	Builders	Commissioned
BARCELO	P 11	Lürssen Vegesack	Feb 1976
LAYA	P 12	Bazán, La Carraca	Apr 1976
JAVIER QUIROGO	P 13	Bazán, La Carraca	Apr 1976
ORDÓÑEZ	P 14	Bazán, La Carraca	1976
ACEVEDO	P 15	Bazán, La Carraca	1976
CANDIDO PÉREZ	P 16	Bazán, La Carraca	1977

Displacement, tons: 139  
 Dimensions, feet (metres): 118.7 × 19 × 8.2 (36.2 × 5.8 × 2.5)  
 Guns: 1—40 mm; 2—20 mm  
 Speed, knots: 40; 20 cruising  
 Range, miles: 1 200 at 20 knots

Ordered 5 Dec 1973, the prototype, *Barcelo*, to be built by Lürssen, Vegesack with MTU engines. Laid down 1974 for launch in Nov 1975. *Laya* and *Javier Quiroga* launched 18 Dec 1975. All to be manned by the Navy although the cost is being borne by the Ministry of Commerce.



"BARCELO (P 10)" Class

1974

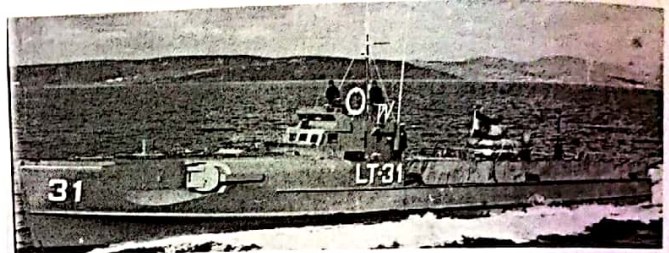
## 2 LÜRSEN TYPE (FAST ATTACK CRAFT—TORPEDO)

Name	No.	Builders	Commissioned
—	LT 30	La Carraca, Cadiz	1956
—	LT 31	La Carraca, Cadiz	21 July 1956

Displacement, tons: 100 standard; 116 full load  
 Dimensions, feet (metres): 114 × 16.8 × 5 (34.8 × 5.1 × 1.5)  
 Gun: 1—20 mm  
 Tubes: 2—21 in  
 Main engines: 3 MTU diesels; 3 shafts; 7 500 bhp = 41 knots  
 Oil fuel, tons: 20  
 Range, miles: 650 at 30 knots  
 Complement: 26

Built to the design of Lürssens of Bremen. LT 32 of this class converted into target vessel for helicopters in Aug 1974, with sea-going capability at 12 knots.

Radar: Decca RM-914.



LT 31

1970, Spanish Navy

## 5 "LPI" CLASS (COASTAL PATROL CRAFT)

LPI 1 LPI 2 LPI 3 LPI 4 LPI 5

Displacement, tons: 25  
 Dimensions, feet (metres): 46 × 15.4 × 3.3 (14 × 4.7 × 1)  
 Guns: 2—7.62 mm

## 3 USCG 83 ft TYPE (COASTAL PATROL CRAFT)

Name	No.	Builders	Commissioned
—	LAS 10 (ex-LAS 1)	E. N. Bazán, Cadiz	1963
—	LAS 20 (ex-LAS 2)	E. N. Bazán, Cadiz	1963
—	LAS 30 (ex-LAS 3)	E. N. Bazán, Cadiz	1964

Displacement, tons: 49 standard; 63 full load  
 Dimensions, feet (metres): 78.0 pp; 83.3 oa × 16.1 × 6.6 (23.8; 25.4 × 4.9 × 2)  
 Guns: 1—20 mm; 2—7 mm (single)  
 A/S launchers: 2 Mousetrap Mk 20 (4 rockets each)  
 Main engines: 800 bhp = 15 knots  
 Complement: 15

Of wooden hull construction.



LAS 30

1974, Spanish Navy

## 3 "AGUILUCHO" CLASS (COASTAL PATROL CRAFT)

Name	No.	Builders	Commissioned
AGUILUCHO	—	J. Roberto Rodriguez e Hijos, Vigo	1973
GAVILAN I	—	J. Roberto Rodriguez e Hijos, Vigo	1975
GAVILAN II	—	J. Roberto Rodriguez e Hijos, Vigo	1976

Displacement, tons: 45  
 Dimensions, feet (metres): 85.5 oa × 16.7 × 4.3 (26.1 × 5.1 × 1.3)  
 Main engines: Diesels; 2 shafts; 2 750 bhp = 30 knots  
 Range, miles: 750 at 30 knots

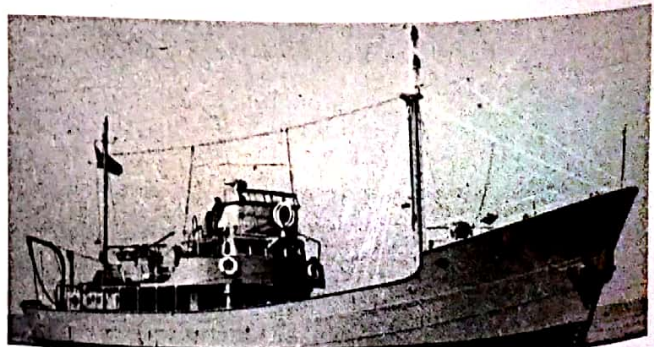
*Aguilucho* launched 19 Feb 1973 for Coastguard duties. *Gavilan I* launched 22 July 1975. Transferred to Naval control.

## 2 FISHERY PROTECTION VESSELS

Name	No.	Builders	Commissioned
CENTINELA	W 33	Ferrol	1953
SERVIOLO	W 34	Ferrol	1953

Displacement, tons: 255 standard; 282 full load  
 Dimensions, feet (metres): 117.5 × 22.5 × 9.8 (36 × 6.8 × 3)  
 Guns: 2—37 mm  
 Main engines: 1 diesel; 430 bhp = 12 knots

Given pennant numbers as above in 1972.



SERVIOLA

1974, Spanish Navy

AW 32

Displacement, tons: 180 standard; 275 full load  
 Dimensions, feet (metres): 107.0 x 20.5 x 9.0 (31 x 6.1 x 2.5)  
 Main engine: 20 mm MG  
 Engines: 1 Sulzer diesel; 400 bhp = 12 knots  
 Range, miles: 24

Launched Dec 1952.  
 Designation RM 914.

3 PATROL VESSELS

RR 19 RR 20 RR 29

Displacement, tons: 364 standard; 498 full load  
 Dimensions, feet (metres): 124.0 x 29.0 x 10.0 (38 x 8.4 x 3)  
 Guns: 1—1.5 in, 85 cal or 1—47 mm; 1—20 mm  
 Main engines: Triple expansion; 1 shaft; 800 ihp = 11.5 knots  
 Boilers: 1 cylindrical, (13 kg/cm)  
 Fuel, tons: 200 coal  
 Range, miles: 620 at 10 knots

Former tugs. All launched in 1941-42. Some have navigation radar.

10 PATROL LAUNCHES

Displacement: 65 tons. Speed: 9 knots  
 Displacement: 4.5 tons. Speed: 5 knots  
 Displacement: 42 tons. Guns: 2—20 mm. Speed: 19.2 knots  
 Displacement: 15.6 tons. Speed: 9 knots  
 Displacement: 11.6 tons. Speed: 9.5 knots  
 Displacement: 11.6 tons. Speed: 9.5 knots  
 Displacement: 110.9 tons. Gun: 1—20 mm. Speed: 10.5 knots  
 Displacement: 16 tons. Speed 17.6 knots

Also V 1, yacht, ex-Azor. Coastal launches employed on surveillance and fishery duties. V 4 is named *Alcatraz*.

V 4

Taken over by Navy on 26 Nov 1970 being a confiscated smuggling craft.

CABO FRADERA

Of 28 tons with 1—7.62 mm gun.

CUSTOMS SERVICE

There are, in addition to the above, a large number of customs launches of similar size operating off the Spanish coast.

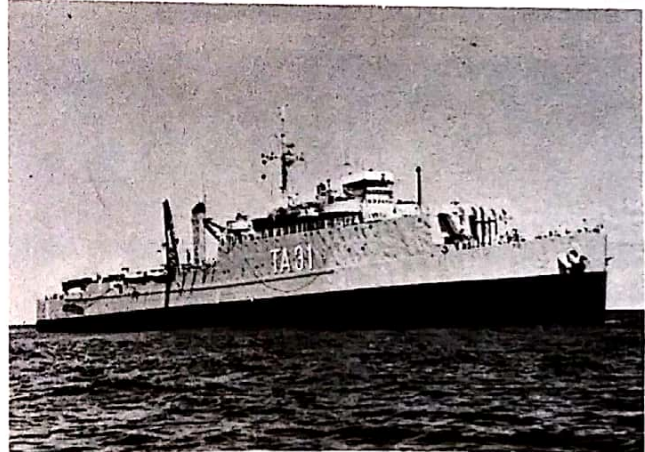
AMPHIBIOUS FORCES

1 Ex-US "CABILDO" CLASS (LSD)

Name	No.	Builders	Commissioned
(ex-USS <i>San Marcos</i> , LSD 25)	TA 31	Philadelphia Navy Yard	1945

Displacement, tons: 4 790 standard; 9 375 full load  
 Dimensions, feet (metres): 475.4 oa x 72.6 x 18.0 (139 x 21.9 x 4.9)  
 Guns: 2—40 mm, 60 cal (2 quadruple, 2 twin)  
 Main engines: Geared turbines; 2 shafts; 7 000 shp = 15.4 knots  
 Range, miles: 8 000 at 15 knots  
 Complement: 265 (15 officers, 250 men)

Transferred to Spain on 1 July 1971. Fitted with helicopter platform. Can carry 3 LCUs or 18 LCMs, 1 347 tons of cargo or 100 2½ ton trucks or 27 M-48 tanks or 11 heavy helicopters. Accommodation for 137 troops (overnight) or 500 for short haul. Surface-search radar.



GALICIA

1972, Spanish Navy

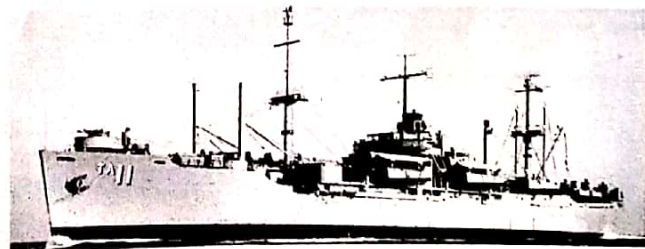
1 Ex-US "HASKELL" CLASS (ATTACK TRANSPORT)

Name	No.	Builders	Commissioned
ARAGON (ex-USS <i>Noble</i> , APA 218)	TA 11	USA	1945

Displacement, tons: 6 720 light; 12 450 full load  
 Dimensions, feet (metres): 455 oa x 63.5 x 24 (133 x 18.9 x 8.6)  
 Guns: 12—40 mm 60 cal (1 quad, 4 twin)  
 Main engines: Geared turbines; 8 500 shp = 17 knots  
 Boilers: 2 Babcock & Wilcox  
 Range, miles: 14 700 at 16 knots

Former US Attack Transport, transferred at San Francisco on 19 Dec 1964. Can carry 1 190 men and 660 tons cargo (or 11 2½ ton trucks and 49 ¾ ton trucks). 24 landing craft.

Radar: Air Search SPS 6; surface search.



ARAGON

1971, Michael D. J. Lennon

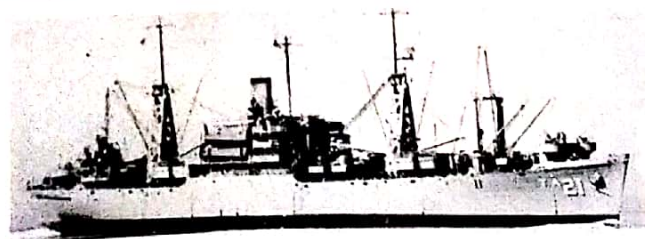
1 Ex-US "ANDROMEDA" CLASS

Name	No.	Builders	Commissioned
CASTILLA (ex-USS <i>Achernar</i> , AKA 53)	TA 21	USA	1944

Displacement, tons: 7 430 light; 11 416 full load  
 Dimensions, feet (metres): 457.8 oa x 63 x 24 (140 x 19.2 x 7.4)  
 Guns: 1—5 in 38 cal; 8—40 mm 60 cal (twins)  
 Main engines: 2 GE geared turbines; 12 000 shp = 16 knots  
 Boilers: 2 Foster-Wheeler

Former US Attack Cargo Ship transferred at New York on 2 Feb 1965. Can carry 98 men, 6 M-48 tanks, 36 2½ ton trucks and 267 Jeeps. 24 landing craft.

Radar: Surface-search.



CASTILLA

1970, Spanish Navy

## 2 Ex-BRITISH LCT (4)

BDK 1 K 1      BDK 2 K 2

**Displacement, tons:** 440 standard; 868 full load  
**Dimensions, feet (metres):** 185.3 × 38.7 × 6.2 (56.5 × 11.8 × 1.9)  
**Guns:** 2—20 mm (single)  
**Main engines:** 2 Paxman diesels; 2 shafts; 920 bhp = 10 knots  
**Range, miles:** 1 100 at 8 knots

Can carry 350 tons or 500 men.

## 3 Ex-US "TERREBONNE PARISH" CLASS (LST)

Name	No.	Builders	Commissioned
CONDE DE VENADITO (ex-USS <i>Tom Green County</i> , LST 1159)	L 13	Bath Iron Works	12 Sep 1953
MARTIN ALVAREZ (ex-USS <i>Wexford County</i> , LST 1168)	L 12	Christy Corpn	15 June 1954
VELASCO (ex-USS <i>Terrebonne Parish</i> , LST 1156)	L 11	Bath Iron Works	21 Nov 1952

**Displacement, tons:** 2 590 standard; 5 800 full load  
**Dimensions, feet (metres):** 384.0 oa × 55.0 × 17.0 (117.4 × 16.7 × 3.7)  
**Guns:** 6—3 in, 50 cal (3 twin, 2 forward, 1 aft)  
**Main engines:** 4 GM diesels; 2 shafts; 6 000 bhp = 15 knots  
**Range, miles:** 15 000 at 9 knots  
**Complement:** 116 (troops 395)

LST 1156 and 1168 transferred on 29 Oct 1971, LST 1159 on 5 Jan 1972. Can carry 395 men, 10 M-48 tanks or 17 LVTP, 4 landing craft.



CONDE DE VENADITO

1974, Spanish Navy

## 2 Ex-US LSMs

LSM 1 (ex-USS *LSM 329*) L 01  
 LSM 2 (ex-USS *LSM 331*) L 02

**Displacement, tons:** 930 standard; 1 094 full load  
**Dimensions, feet (metres):** 196.5 wl; 203.5 oa × 34.5 × 8.3 (59.9; 62.1 × 10.5 × 2.5)  
**Main engines:** 2 diesels; 2 shafts; 3 600 bhp = 12.5 knots

Medium landing ships transferred at Bremerton, Washington, on 25 Mar 1960. In early 1976 both converted for use as alongside accommodation ships.



LSM 2

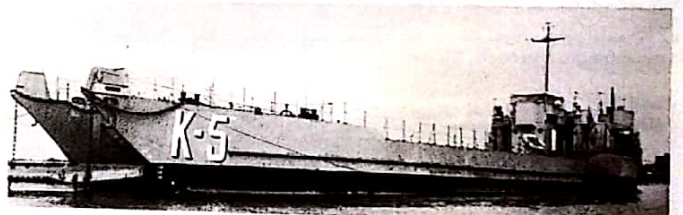
1974, Spanish Navy

## 3 SPANISH BUILT LCTs

Name	No.	Builders	Commissioned
BDK 3	K 3	Bazán, El Ferrol	15 June 1959
BDK 4	K 4	Bazán, El Ferrol	15 June 1959
BDK 5	K 5	Bazán, El Ferrol	15 June 1959

**Displacement, tons:** 902 full load  
**Dimensions, feet (metres):** 186 × 38.4 × 6 (56.6 × 11.6 × 1.7)  
**Guns:** 2—20 mm (singles)  
**Main engines:** 2 M60 V8 AS diesels; 2 shafts; 1 000 hp = 8½ knots  
**Range, miles:** 1 000 at 7 knots  
**Complement:** Complement 20 (1 officer, 19 men)

All commissioned 15 June 1959. Can carry 300 tons or 400 men.



BDK 5

1971, Spanish Navy

## 3 EDIC TYPE (LCT)

Name	No.	Builders	Commissioned
BDK 6	K 6	Bazán, La Carraca	Dec 1966
BDK 7	K 7	Bazán, La Carraca	Dec 1966
BDK 8	K 8	Bazán, La Carraca	Dec 1966

**Displacement, tons:** 315 standard; 665 full load  
**Dimensions, feet (metres):** 193.5 oa × 39.0 × 5.0 (59 × 11.9 × 1.3)  
**Guns:** 1—20 mm; 2—12.7 mm MG  
**Main engines:** 2 diesels; 2 shafts; 1 040 bhp = 9.5 knots  
**Range, miles:** 1 500 at 9 knots

Landing craft of the French EDIC type built at La Carraca. Completed in Dec 1966.

## 6 SPANISH BUILT LCM (8) MODEL I

E 81      E 82      E 83      E 84      E 85      E 86

This new class was ordered from three Spanish yards in 1974. All commissioned in 1975.

**Note:** Total of landing craft (including those attached to *Aragón*, *Castilla*, *Galicia* and LSTs): 14 LCM (3) and (6), 43 LCVP, 21 LCP (L), 1 LCP (R), 2 LCU, 12 various. All of US origin except 8 LCP (L), built at Cartagena.

## MINE WARFARE FORCES

## 4 Ex-US "AGGRESSIVE" CLASS (MINESWEEPERS—OCEAN)

Name	No.	Builders	Commissioned
GUADALETE (ex-USS <i>Dynamic</i> , MSO 432)	M 41	USA	15 Dec 1953
GUADALMEDINA (ex-USS <i>Pivot</i> , MSO 463)	M 42	USA	12 July 1954
GUADALQUIVIR (ex-USS <i>Persistent</i> , MSO 491)	M 43	USA	3 Feb 1956
GUADIANA (ex-USS <i>Vigor</i> , MSO 473)	M 44	USA	8 Nov 1954

**Displacement, tons:** 665 standard; 750 full load  
**Dimensions, feet (metres):** 165.0 wl; 172.0 oa × 36.0 × 13.6 (52.3 × 10.4 × 4.2)  
**Guns:** 2—20 mm (twin)  
**Main engines:** 4 Packard diesels; 2 shafts; controllable pitch propellers; 2 280 bhp = 15.5 knots  
**Range, miles:** 3 000 at 10 knots  
**Complement:** 71 (6 officers, 65 men)

The first three were transferred and commissioned on 1 July 1971. The fourth unit was delivered 4 April 1972. Surface search radar. VDS SQQ 14 with mine classification capability.



GUADALETE

1973, J. Taibo

**12 "NALON" (M 20) CLASS (Ex-US AMS TYPE)  
(MINESWEEPERS—COASTAL)**

Name	No.	Builders	Commissioned
Ex-Spoonbill, MSC 202)	M 28	USA	1956
MSC 269)	M 26	Bellingham SY	1958
MSC 279)	M 31	USA	1958
MSC 220)	M 23	USA	1956
AT (ex-MSA 143)	M 22	USA	1953
MSC 266)	M 25	USA	1953
MSC 139)	M 21	USA	1953
MSC 288)	M 32	USA	1959
MSC 200)	M 29	USA	1956
MSC 287)	M 30	USA	1959
MSC 130)	M 27	USA	1953
MSC 265)	M 24	USA	1958

Displacement, tons: 355 standard; 384 full load  
 Dimensions, feet (metres): 138-0 pp; 144-0 oa x 27-2 x 8-0 (41-5; 43 x 8 x 2-6)  
 Main armament: 20 mm (1 twin)  
 Main engines: 2 Mouse Trap Mk 20 rocket launchers  
 Auxiliary engines: 2 diesels; 2 shafts; 900 bhp = 14 knots  
 Complement: 30  
 Range, miles: 2 700 at 10 knots  
 Endurance, days: 39

Transferred from the USA, *Nalón* on 16 Feb 1954, *Llobregat* on 5 Nov 1954, *Turia* on 1 June 1955, *Ulla* on 24 July 1956, *Miño* on 25 Oct 1956, *Sil* and *Duero* on 16 June 1959, *Genil* on 11 Sep 1959, *Tajo* on 9 July 1959 and *Odiel* on 9 Oct 1959.

Armament: (a) with derrick on mainmast: M 21, 22, 23, 24, 25, 27, 28, 29, (b) with no crane abreast the funnel: M 26, 30, 31, 32.  
 Radar: of various types. AN/UQS-1 sonar.



EBRO, Class B, small crane

1974, Dr. Giorgio Arra



ULLA, Class A, with mainmast

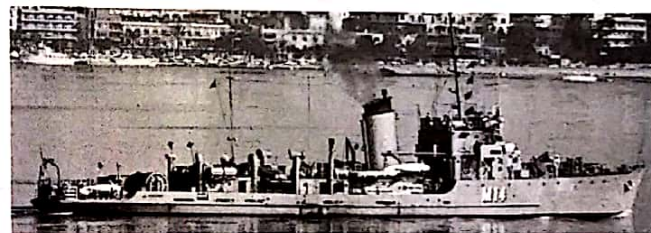
1973, Dr. Giorgio Arra

**6 "GUADIARO" CLASS  
(MINESWEEPERS—OCEAN AS PATROL VESSELS)**

Name	No.	Builders	Commissioned
ALMANZORA	M 14	Cartagena	Nov 1954
EDUCACION	M 17	Cadiz	Mar 1955
EUMEL	M 13	Cartagena	Dec 1953
GUADALHORCE	M 16	Cartagena	Dec 1953
GUADIARO	M 11	Cartagena	Apr 1953
NAVIA	M 15	Cadiz	Mar 1955

Displacement, tons: 671 standard; 770 full load  
 Dimensions, feet (metres): 243-8 x 33-5 x 12-3 (74-3 x 10-2 x 3-7)  
 Guns: 2—20 mm  
 Main engines: Triple expansion and exhaust turbines; 2 shafts; 2 400 hp = 13 knots after modernisation  
 Boilers: 2 Yarrow  
 Oil fuel, tons: 90  
 Range, miles: 1 000 at 6 knots  
 Complement: 79

Modernised in 1959-61. Currently employed on patrol duties. Will be paid off when replaced by "Lazaga" class.



ALMANZORA

1971, Cdr Aldo Fraccaroli

Radar: Decca MTM 626 or RM 914.

**SURVEY SHIPS**

**4 "CASTOR" CLASS**

Name	No.	Builders	Commissioned
CASTOR	A 21	E. N. Bazán, La Carraca	10 Nov 1966
POLLUX	A 22	E. N. Bazán, La Carraca	6 Dec 1966
ANTARES	A 23	E. N. Bazán, La Carraca	21 Nov 1974
RIGEL	A 24	E. N. Bazán, La Carraca	21 Nov 1974

Displacement, tons: 327 standard; 383 full load  
 Dimensions, feet (metres): 111 pp; 125-9 oa x 24-9 x 8-9 (33-8; 38-4 x 3-9 x 2-8)  
 Main engines: 1 Sulzer 4TD-36 diesel; 720 hp = 11-7 knots  
 Range, miles: 3 620 at 8 knots  
 Complement: 39 (A 23 and 24) 37 (A 21 and 22)

*Antares* and *Rigel* ordered summer 1972, launched 1973. Fitted with Raydist, Omega and digital presentation of data.



CASTOR

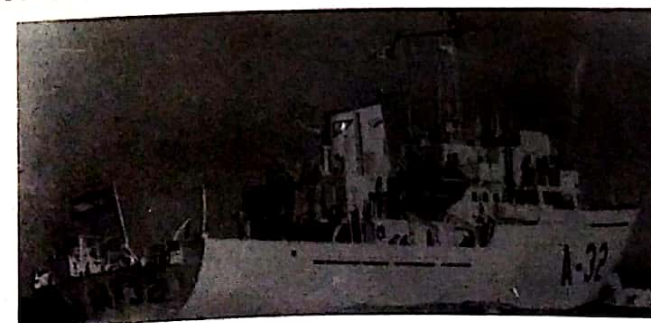
1974, Spanish Navy

**2 "MALASPINA" CLASS (OCEANOGRAPHIC SHIPS)**

Name	No.	Builders	Commissioned
MALASPINA	A 31	E. N. Bazán, La Carraca	21 Feb 1975
TOFIÑO	A 32	E. N. Bazán, La Carraca	1 May 1975

Displacement, tons: 820 standard; 1 090 full load  
 Dimensions, feet (metres): 188-9 x 38-4 x 11-8 (57-6 x 11-7 x 3-6)  
 Guns: 2—20 mm (single)  
 Main engines: 2 diesels; 3 240 bhp; 2 VP propellers = 15 knots  
 Range, miles: 4 000 at 12 knots; 3 140 at 14-5 knots  
 Complement: 63 (9 officers, 54 men)

*Malaspina* laid down early 1973, launched 15 Aug 1973. *Tofiño* launched 22 Dec 1973. Both named after their immediate predecessors.



TOFIÑO

1975, Royal Spanish Navy

## SERVICE FORCES

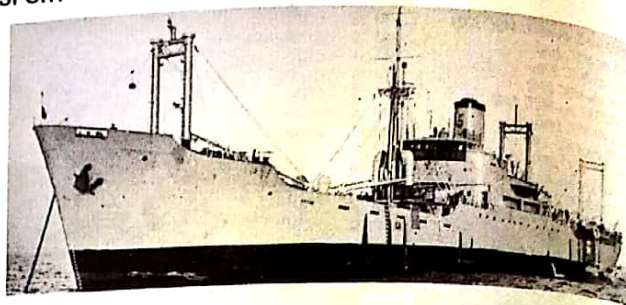
## 1 TRANSPORT

<i>Name</i>	<i>No.</i>	<i>Builders</i>	<i>Commissioned</i>
<b>ALMIRANTE LOBO</b>	A 41	Astilleros Echevarrieta, Cadiz	4 Oct 1954
<i>(ex-Torrelaguna)</i>			

Displacement, tons: 5 662 standard; 8 038 full load  
 Dimensions, feet (metres): 362.5 × 48.2 × 25.7 (103 × 14.6 × 6.8)  
 Gun: 1—1.5 in, 85 cal  
 Main engines: 1 triple expansion; 2 000 ihp = 12 knots

Ex-cargo vessel.

Radar: Navigation: Decca 12.



ALMIRANTE LOBO

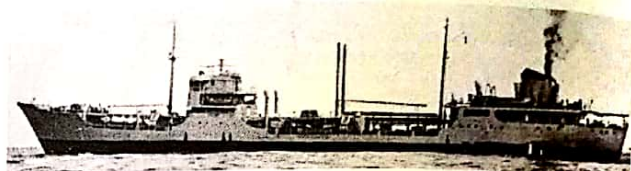
## 1 REPLENISHMENT TANKER

<i>Name</i>	<i>No.</i>	<i>Builders</i>	<i>Commissioned</i>
<b>TEIDE</b>	BP 11	Factoria de Bazán, Cartagena	Oct 1956

Displacement, tons: 2 747 light; 8 030 full load  
 Oil capacity, tons: 5 350  
 Dimensions, feet (metres): 385.5 × 48.5 × 20.3 (117.5 × 14.8 × 6.2)  
 Gun: 1—4.1 in (not mounted)  
 Main engines: 2 diesels; 3 360 bhp = 12 knots

Ordered in December 1952. Laid down on 11 Nov 1954. Launched on 20 June 1955. Modernised in 1962 with refuelling at sea equipment.

Radar: Navigation: Decca TM 707.



TEIDE

1968, Spanish Navy

## 1 HARBOUR TANKER

PP 1

Displacement, tons: 470  
 Dimensions, feet (metres): 147.5 oa × 25 × 9.5 (45 × 7.6 × 2.9)  
 Main engines: Deutz diesel; 220 bhp = 10 knots  
 Complement: 12

Built at Santander and launched in 1939.

## 3 HARBOUR TANKERS

PP 3      PP 4      PP 5

Follow on class of harbour tankers.

## 9 HARBOUR TANKERS

PB 1, 2, 3, 4, 5, 6, 20, 21, 22

Small harbour tankers with capacity between 100 and 300 tons. All built by Bazán between 1960 and 1965.

## 1 SAIL TRAINING SHIP

<i>Name</i>	<i>No.</i>	<i>Builders</i>	<i>Commissioned</i>
<b>JUAN SEBASTIAN DE ELCANO</b>	—	Echevarrieta Yard, Cadiz	1928

Displacement, tons: 3 420 standard; 3 754 full load  
 Dimensions, feet (metres): 269.2 pp; 308.5 oa × 43 × 23 (94.1 × 13.6 × 7)  
 Guns: 2—37 mm  
 Main engines: 1 Sulzer diesel; 1 shaft; 1 500 bhp = 9.5 knots  
 Oil fuel, tons: 230  
 Endurance, miles: 10 000 at 9.5 knots  
 Complement: 224 + 80 cadets

Four masted top sail schooner—sister of Chilean *Esmeralda*. Named after the first circumnavigator of the world (1519-26) who succeeded to the command of the expedition led by Magellanas after the latter's death. Launched on 5 Mar 1927.

Radar: 2 Decca TM 626.



JUAN SEBASTIAN DE ELCANO

1972, US Navy

## 1 ROYAL YACHT

<i>Name</i>	<i>No.</i>	<i>Builders</i>	<i>Commissioned</i>
<b>AZOR</b>	—	E. N. Bazán, El Ferrol	20 July 1949

Displacement, tons: 442 standard; 486 full load  
 Dimensions, feet (metres): 153.0 × 25.2 × 12.5 (47 × 7.7 × 3.8)  
 Main engines: 2 diesels; 1 200 bhp = 12 knots  
 Range, miles: 4 000

Built as the Caudillo's yacht. Launched on 9 June 1949. Underwent an extensive refit, her hull being cut to admit an extension in length.

Radar: Decca TM 626.



AZOR

1970, J. I. Taibo

# 1 BOOM DEFENCE VESSEL

No. CR 1 (ex-G 6)  
 Builders Penhoët, France  
 Commissioned 1955

Displacement: 630 standard; 831 full load  
 Dimensions, feet (metres): 165.5 x 34 x 10.5 (44.5 x 10.2 x 3.2)  
 Main engines: 2 diesels; electric drive; 1 shaft; 1 500 bhp = 12 knots  
 Main armament: 200 at 12 knots

US off-shore order. Launched on 28 Sep 1954. Transferred from the US in 1955 under MDAF. Sister ship of French "Cigale" class.

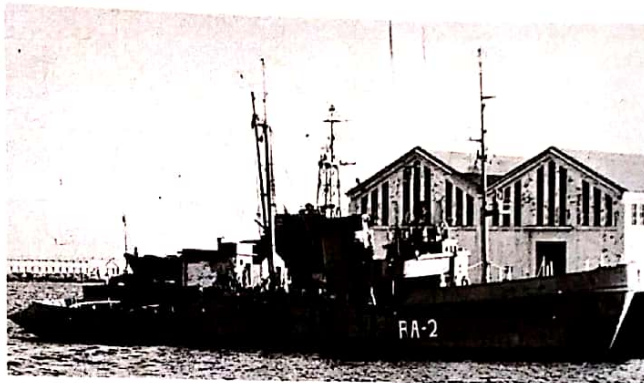
# 1 OCEAN TUG

PR 1-5 Net laying barges.  
 PRA 1-8 Tugs for PBPs and PRs.

RA 3 (ex-Metinda III)  
 Displacement, tons: 762 standard; 1 080 full load  
 Dimensions, feet (metres): 137 x 33.1 x 15.5 (41.8 x 10.1 x 4.5)  
 Main engines: Triple expansion; 12 knots

# 2 OCEAN TUGS

RA 1-2  
 Displacement, tons: 757 standard; 1 039 full load  
 Dimensions, feet (metres): 184 x 33.5 x 12 (56.1 x 10.1 x 3.9)  
 Main engines: 2 Sulzer diesels; 3 200 bhp = 15 knots



RA 2

1974, Reiner Nerlich

# 3 OCEAN TUGS

Name	No.	Builders	Commissioned
POSEIDON	BS 1	La Carraca	1963
—	RA 4	La Carraca	1963
—	RA 5	La Carraca	1963

Displacement, tons: 951 standard; 1 069 full load  
 Dimensions, feet (metres): 183.5 x 32.8 x 15.8 (55.9 x 10 x 4.5)  
 Main engines: 2 Sulzer diesels; 3 200 bhp = 15 knots

RA 4 was renumbered BS 1 when she became a frogman support ship, known as *Poseidon*.

Radar: Decca 707.



POSEIDON

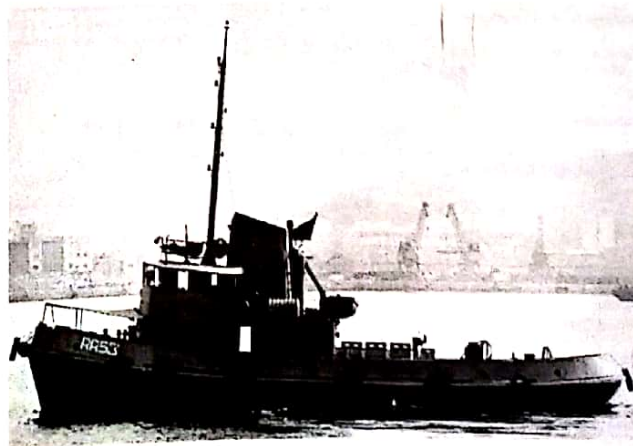
1973, Dr. Giorgio Arra

# 6 COASTAL TUGS

Name	No.	Builders	Commissioned
—	RR 50	Cartagena	1963
—	RR 51	Cartagena	1963
—	RR 52	Cartagena	1963
—	RR 53	Cartagena	1967
—	RR 54	Cartagena	1967
—	RR 55	Cartagena	1967

Displacement, tons: 205 standard; 227 full load  
 Dimensions, feet (metres): 91.2 x 23 x 11 (27.8 x 7 x 3.4)  
 Main engines: Diesels; 1 shaft; 1 400 bhp (53 to 55), 800 bhp (50 to 52)

Radar: Pilot 7D 20 in RR 53, 54 and 55.



RR 53

1975, Dr. Giorgio Arra

# 18 HARBOUR TUGS

NOTE. 5 tug-launches of less than 50 tons:→ LR 47, 51, 67, 68, 69.

RP 1-12  
 Of 65 tons and 200 bhp (diesel). Commissioned 1966-67.

RP 40  
 Of 150 tons and 600 bhp (diesel). Commissioned 1961.

## 418 SPAIN/SRI LANKA

**AB 1, 2, 3, 10, 17, 18**

All of less than 400 tons. Harbour water boats with 200 tons or less capacity.

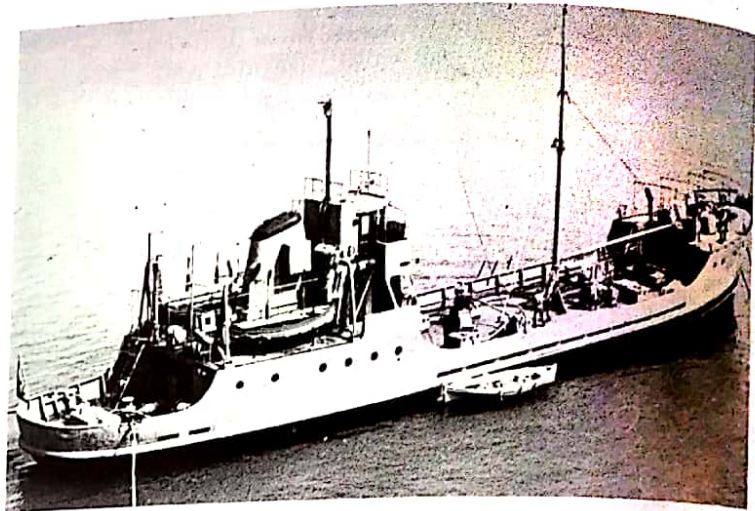
**A1      A 2      A 6      A 8      A 9**

A 1 and A 2 built in 1936, A 6 in 1949, A 8 in 1952, A 9 in 1963. Of 1 785 tons full load with 1 000 tons capacity. Ocean going.

**A 7      A 10      A 11**

Of 610 tons full load with 350 tons capacity. A 10 and 11, completed in 1963, A 7 completed 1949. Have radar Pilot 7 D 20. All oceangoing.

## 14 WATER CARRIERS



A 11

1973, Spanish Navy

## 9 TORPEDO RECOVERY CRAFT

**BTM 1-6**

Built by Bazán 1961-63 of 100-300 tons. To carry torpedoes and mines and, in emergency, can act as minelayers.

**ST 5**

Torpedo tracking craft on range at Alcudia, Majorca.

**LRT 3 and 4**

TRVs built in 1956. Can carry 6 torpedoes. Have stern ramp and crane.

## 6 DIVING CRAFT

**BZL 1, 3, 9      NEREIDA (BZL 10)**

Small self-propelled craft of less than 50 tons.

**BL 10 and 13**

Dumb barges for diving.

## 8 FLOATING CRANES

**SANSÓN GRI (100 tons lift)**

**GR 3, 4 and 5 (30 tons lift)**

**GR 6, 7, 8, 9 (15 tons lift)**