

# RICHELIEU CLASS BATTLESHIP

## Briefing

written by

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## KEY INFORMATION

<b>Country of Origin:</b>	France
<b>Manufacturers:</b>	Navy Yard (Brest), Penhoët and Loire (St. Nazaire)
<b>Major Variants:</b>	-
<b>Role:</b>	Ship of the Line, Shore Bombardment
<b>Operated by:</b>	French Navy
<b>First Laid Down:</b>	22 October 1935
<b>Last Completed:</b>	16 January 1949
<b>Units:</b>	<i>Richelieu</i> , <i>Jean Bart</i> , <i>Clemenceau</i> (not completed), <i>Gascogne</i> (cancelled)

## OVERVIEW

After the *Dunkerque* class of capital ships had been authorised, there was considerable resistance to further naval spending by the French government. However, once it was known that the Italians were planning two new 35,000 ton battleships and that Germany was continuing to build beyond their three pocket battleships, France had no choice but to build new battleships or cede control of the Mediterranean to Italy. Normally, years of development and study work preceded capital ship design, refining and optimising the outline to give a sound basis for preliminary design to begin from, simplifying detailed design and increasing the likelihood of the final as-built ship matching the desired characteristics. In this case, France had largely neglected to undertake any preparatory work for a new large battleship and so the study period and preliminary design work had to be cut to the minimum in order to make sure that the ships were completed at the same time as the Italian ships.

Initially, it was hoped to arm the ships with 406 mm (16 in) guns in three triple turrets, however it was found that it would not be possible to fit this within the required 35,000 ton hull. Consideration was given to providing six 406 mm guns, however this was rejected in favour of eight 380 mm (15 in) guns in quadruple turrets as a modern quadruple turret design already existed (in the *Dunkerque* class) and the lead time for triple turrets was unacceptable. The turrets were both placed forward of the accommodation as experience with the *Dunkerque* class had shown that significant weight savings could be achieved by this arrangement, and it had the added advantage of allowing the full weight of fire to be directed forward. Following the practice in the *Dunkerque* class, the potential vulnerability of this arrangement was reduced by having an armoured bulkhead between the two turret halves, and by having separate magazines for each turret half. To address the potential weakness to attacks from astern the superstructure was designed to maximise the arc of fire available to the guns.

Again following the experience in the *Dunkerque* class, the secondary armament was chosen to be dual-purpose HA/LA (high-angle / low angle), allowing the engagement of surface and air targets. These 152 mm (6 in) guns were installed in three triple turrets at the stern of the ship, although loading problems limited the maximum angle to 75 degrees. Originally, five sets of 152 mm turrets were planned, but problems with their design for anti-aircraft use meant that two were deleted during construction in favour of 100 mm (3.9 in) guns in six double mounts. Close-in protection was provided by ten 37 mm cannon in five double mounts, along with 0.5 in (13 mm) machineguns.

Considerable attention was given to armour, and they had a theoretical immunity zone of 18,800 to 29,800 m (20,560 to 32,590 yds) against a 380 mm (15 in) gun, meaning that at ranges below 18,800 m a 380 mm shell could be expected to penetrate the side armour, and above 29,800 m a 380 mm shell could be expected to penetrate the deck armour. It must be stressed that this is a theoretical calculation, as in practice several factors (particularly the sea state) affect the actual resistance to shells at the instant they hit, and the immunity zone is constantly changing as the ship heaves, rolls and pitches. The deck armour was intended to give protection against a 500 kg (1,340 lb) armour-piercing bomb dropped from 4,700 m (15,420 ft).

High speed was seen to be a vital requirement, and she was designed for 29.5 kts at normal power of 150,000 hp (110,322 kW). On her trials she achieved 32.6 knots at overload power of 178,000 hp (130,915 kW), and 31.9 kts at 157,000 hp (115,470 kW), giving her a slight speed advantage over the new Italian ships.

Aircraft were included in the initial design, with hangar space provided for two aircraft, two catapults aft and one crane. The aircraft was to be the Loire 130 floatplane, but none were ever embarked.

Despite the short development period these ships were a good match for their Italian counterparts, being better protected and faster, but mounting one fewer main gun. Nevertheless, their speed of design showed in topweight problems and difficulties with the secondary armament, and the final two ships of the class were heavily redesigned to take account of the lessons learned during the construction of the first two ships. The German invasion of France prevented these ships from being completed as designed, but there is no doubt that had France held out they would have significantly altered the balance of power in the Mediterranean.

## UNITS

<i>Richelieu</i>	Builder	Laid Down	Launched	Completed	Left Service
	Navy Yard (Brest)	22 October 1935	17 January 1939	(15 June 1940) September 1943	December 1967

The *Richelieu* was being completed as the Second World War started, and was still being worked on when Germany invaded France. Although some trials had been run, the main guns were still not capable of being fired. On 18 June she left port for Dakar, arriving on 23 June, where it was intended to complete the necessary work.

After the French armistice with Germany, British demands to move to a British port or be disabled were rejected, and on 7 July 1940 a British launch slipped in to harbour and dropped six depth charges near the *Richelieu*, retiring without being spotted. These did not detonate. Early on 8 July she was attacked by British torpedo bombers, with one torpedo detonating under the stern of the ship and possibly causing the depth charges to also detonate. This severely damaged her, although her main guns remained capable of being completed.

On 23 September 1940 free French forces attempted to persuade the authorities in Dakar to abandon their allegiance to the Vichy government, without success, and the *Richelieu* was then fired on by British battleships. She returned fire with her only operating turret, but the first salvo disabled the turret due to a faulty shell. She was hit once, sustaining minor damage. Her other turret was readied for action, and on 25 September she fired on British battleships approaching the port, scoring one hit on the *Barham*. The British withdrew. She did not oppose the Operation Torch invasions of Africa in late 1942, and after agreeing to join the Allied forces she steamed to New York for repairs, arriving on 16 February 1943.

After considerable work to repair and modernise her, she left port for Mers el Kébir in October 1943, then joined the British Home Fleet in Scapa Flow in November. She was given further anti-aircraft armament, and operated with the Home Fleet until March 1944, when she left to join the British Eastern Fleet. She conducted a shore bombardment of Sabang on 19 April 1944, and continued to provide fire support in Eastern waters until September, when she left for France. After about a week in Toulon, she sailed for Casablanca, where she arrived on 10 October 1944. She was refitted in Gibraltar in January 1945, and rejoined the Eastern Fleet in March 1945. She was involved in the search for the Japanese cruiser *Haguro* in May, moved to South Africa in July, and was back with the Eastern Fleet for the Japanese surrender in August.

<i>Jean Bart</i>	Builder	Laid Down	Launched	Completed	Left Service
	Penhoët and Loire (St. Nazaire)	12 December 1936	6 March 1940	(18 June 1940) 16 January 1949	January 1970

The *Jean Bart* was under construction when the Second World War began. Shortly after her launch, and whilst she was still fitting out, France was invaded by Germany and a desperate race against time began to get the ship in a seaworthy condition to escape capture. After heroic efforts the tricolour was raised on 18 June 1940 and she left port the following day under her own power, with the advancing armies less than 40 miles away. Only four of her eight guns could be brought with her (the others were scheduled to be carried by a cargo ship, but only two could be loaded and the ship was sunk by the Germans), and she had a temporary battery of anti-aircraft guns in place of her secondary armament, but after an epic voyage she reached Casablanca on 22 June. She was completed there as far as was possible, although equipment was minimal, and the main guns were tested on 19 May 1942.

She shot down a British reconnaissance aircraft on 31 July 1942, and on 8 November (whilst still moored in the port) she was in action against American ships preparing for the Operation Torch invasions of Africa. She was hit by one bomb dropped by an aircraft and by five shells fired by the *Massachusetts*, but she was able to fire on ships two days later before being bombed and disabled. After her capture it was decided that immediate repair was not practical, and she was eventually repaired and completed post-war.

## SPECIFICATIONS

	<b>Richelieu</b> <sup>[Note 1]</sup>	<b>Jean Bart</b> <sup>[Note 1]</sup>
<b>Displacement</b>		
- <i>Design</i>	40,270 tons	40,270 tons
- <i>Full Load</i>	44,708 tons	44,708 tons
Length (OA)	247.85 m (813 ft 2 in)	247.85 m (813 ft 2 in)
Length (WL)	242.00 m (794 ft)	242.00 m (794 ft)
Beam	35.54 m (116 ft 7 in) (maximum)	35.54 m (116 ft 7 in) (maximum)
Draft (Design)	9.18 m (30 ft 1 in)	9.18 m (30 ft 1 in)
Draft (Full Load)	10.00 m (32 ft 10 in) (approximate)	10.00 m (32 ft 10 in) (approximate)
Block Coefficient	0.54	0.54
Propulsion	179,000 hp (131,651 kW)	147,950 hp (108,814 kW) (design)
Speed	32.6 kts	31.5 kts (design)
<b>Weapons</b>		
Main Guns	8 x 380 mm (15 in) guns (2 x 4)	4 x 380 mm (15 in) guns (1 x 4) <sup>[Note 2]</sup>
Other Guns	9 x 152 mm (6 in) guns (3 x 3) 12 x 100 mm (3.9 in) guns (6 x 2) 10 x 37 mm (1.5 in) cannon (5 x 2) 24 x 0.5 in (13 mm) machineguns (6 x 4)	10 x 90 mm (3.5 in) guns (5 x 2) <sup>[Note 2]</sup> 5 x 37 mm (1.5 in) cannon (1 x 1, 2 x 2) <sup>[Note 2]</sup> 22 x 0.5 in (13 mm) machineguns <sup>[Note 2]</sup>
Magazine <sup>[Note 3]</sup>	669 rounds of 380 mm (design: 832) 1,400 rounds of 152 mm (design: 2,800) 1,770 rounds of 100 mm (design: 6,500) 2,030 rounds of 37 mm (design: unknown)	Unknown
<b>Armour</b>		
Side Belt	330 - 170 mm (13.0 - 6.7 in) tapering	330 - 170 mm (13.0 - 6.7 in) tapering
End Bulkheads	355 - 233 mm (14.0 - 9.2 in) forward 233 - 145 mm (9.2 - 5.7 in) aft	355 - 233 mm (14.0 - 9.2 in) forward 233 - 145 mm (9.2 - 5.7 in) aft
Magazine (primary only)	170 mm (6.9 in) upper 40 - 50 mm (1.6 - 2.0 in) lower	170 mm (6.9 in) upper 40 - 50 mm (1.6 - 2.0 in) lower
Barbette	405 mm (15.9 in)	405 mm (15.9 in)
Turret	430 mm (16.9 in) face 170 mm (6.9 in) roof 250 mm (9.8 in) rear 300 mm (11.8 in) sides	430 mm (16.9 in) face 170 mm (6.9 in) roof 250 mm (9.8 in) rear 300 mm (11.8 in) sides
Deck	150 mm (5.9 in) upper 40 - 50 mm (1.6 - 2.0 in) lower	150 mm (5.9 in) upper 40 - 50 mm (1.6 - 2.0 in) lower
<b>Miscellaneous</b>		
Aircraft	Up to 3 x Loire 130 seaplanes (never fitted)	Up to 3 x Loire 130 seaplanes (never fitted)
Compliment	1,500 (approximate, design)	1,500 (approximate, design)

Note 1: Data represents the original configuration. Significant changes were made during modernisation.

Note 2: Armament represents that installed when she was in Casablanca during the Second World War, not the design armament.

Note 3: This represent the ammunition that the ships loaded on departure from France in 1940.