

= Colbert @-@ class ironclad =

The Colbert class were a pair of armored frigates built for the French Navy during the 1870s . The ships served as the flagships of the commander and deputy commander of the Mediterranean Squadron for most of their careers . The sister ships took part in the French conquest of Tunisia , notably shelling and landing troops in Sfax in 1881 . They were relegated to second @-@ line roles in 1894 ? 95 before being condemned in 1900 . The ships were finally sold for scrap in 1909 .

= = Design and description = =

The Colbert @-@ class ships were designed by Constructor Sabattier as improved versions of the ironclad Richelieu and were the last ships authorized by the 1857 Naval Program . They reverted to a single propeller shaft to improve their sailing qualities and to lessen the chance of the propellers being fouled by fallen rigging . As central battery ironclads , they had their armament concentrated amidships . Like most ironclads of their era , they were equipped with a plough @-@ shaped ram . The ships ' crew numbered 774 officers and men . Their metacentric height was low , a little above 0 @. @ 6 meters ( 2 ft ) .

The ships measured 101 @. @ 1 ? 102 @. @ 1 meters ( 331 ft 8 in ? 335 ft 0 in ) overall , with a beam of 17 @. @ 57 ? 17 @. @ 7 meters ( 57 ft 8 in ? 58 ft 1 in ) . They had maximum drafts of 8 @. @ 11 ? 8 @. @ 58 meters ( 26 ft 7 in ? 28 ft 2 in ) and displaced 8 @, @ 617 ? 8 @, @ 814 metric tons ( 8 @, @ 481 ? 8 @, @ 675 long tons ) .

While the exact reason for such prolonged construction time is not known , it is believed that reduction of the French Navy 's budget after the Franco @-@ Prussian War of 1870 ? 71 and out @-@ of @-@ date work practices in French dockyards were likely causes .

= = = Propulsion = = =

The Colbert class had a single Wolf three @-@ cylinder horizontal return connecting @-@ rod compound steam engine that drove one propeller . The engine was powered by eight oval boilers and was designed for a capacity of 4 @, @ 700 metric horsepower ; 3 @, @ 400 kilowatts ( 4 @, @ 600 ihp ) . On sea trials the engines produced 4 @, @ 652 ? 4 @, @ 882 metric horsepower ( 3 @, @ 422 ? 3 @, @ 591 kW ) and the ships reached speeds of 14 @. @ 18 ? 14 @. @ 47 knots ( 26 @. @ 26 ? 26 @. @ 80 km / h ; 16 @. @ 32 ? 16 @. @ 65 mph ) . The ships carried a maximum of 620 metric tons ( 610 long tons ) of coal which allowed them to steam for approximately 3 @, @ 300 nautical miles ( 6 @, @ 100 km ; 3 @, @ 800 mi ) at a speed of 10 knots ( 19 km / h ; 12 mph ) . They were ship rigged with three masts and had a sail area around 2 @, @ 100 square meters ( 23 @, @ 000 sq ft ) .

= = = Armament = = =

The Colberts had two 274 @-@ millimeter ( 10 @. @ 8 in ) guns mounted in barbettes on the upper deck , one gun at the forward corners of the battery , with six additional guns on the battery deck below the barbettes . The side of the upper deck were cut away to improve the ability of the barbette guns to bear fore and aft . One 240 @-@ millimeter ( 9 @. @ 4 in ) gun was mounted in the forecastle as a chase gun . The ship 's secondary armament consisted of six 138 @-@ millimeter ( 5 @. @ 4 in ) guns , four forward of the battery and two aft . These latter two guns were replaced in 1878 by another 240 @-@ millimeter gun as a stern chaser . The ship also mounted four above @-@ water 356 @-@ millimeter ( 14 @. @ 0 in ) torpedo tubes .

All of the guns could fire both solid shot and explosive shells . The 18 @-@ caliber 274 @-@ millimeter Modèle 1870 gun fired an armor @-@ piercing , 216 @. @ 0 @-@ kilogram ( 476 @. @ 2 lb ) shell while the gun itself weighed 23 @. @ 21 metric tons ( 22 @. @ 84 long tons ) . The gun fired its shell at a muzzle velocity of 434 m / s ( 1 @, @ 424 ft / s ) and was credited with the ability to penetrate 360 millimeters ( 14 @. @ 3 in ) of wrought iron armor at the muzzle . The armor @-@

piercing shell of the 19 @-@ caliber 240 @-@ millimeter Modèle 1870 gun weighed 144 @.@ 0 kilograms ( 317 @.@ 5 lb ) while the gun itself weighed 15 @.@ 66 metric tons ( 15 @.@ 41 long tons ) . It had a muzzle velocity of 495 m / s ( 1 @,@ 624 ft / s ) and could penetrate 366 millimeters ( 14 @.@ 4 in ) of wrought iron armor at the muzzle . The 138 @-@ millimeter gun was 21 calibers long and weighed 2 @.@ 67 metric tons ( 2 @.@ 63 long tons ) . It fired a 28 @.@ 0 @-@ kilogram ( 61 @.@ 7 lb ) explosive shell that had a muzzle velocity of 466 m / s ( 1 @,@ 529 ft / s ) .

At some point the ship received fourteen to eighteen 37 @-@ millimeter ( 1 @.@ 5 in ) Hotchkiss 5 @-@ barrel revolving guns . They fired a shell weighing about 500 g ( 1 @.@ 1 lb ) at a muzzle velocity of about 610 m / s ( 2 @,@ 000 ft / s ) to a range of about 3 @,@ 200 meters ( 3 @,@ 500 yd ) and had a rate of fire of about 30 rounds per minute .

== Armor ==

The Colbert @-@ class ships had a complete wrought iron waterline belt that was 220 millimeters ( 8 @.@ 7 in ) thick amidships and tapered to 180 millimeters ( 7 @.@ 1 in ) at the stern . It was backed by 89 millimeters ( 3 @.@ 5 in ) of wood . The sides of the battery itself were armored with 160 millimeters ( 6 @.@ 3 in ) of wrought iron , backed by 62 millimeters ( 2 @.@ 4 in ) of wood , and the ends of the battery were closed by transverse armored bulkheads 120 millimeters ( 4 @.@ 7 in ) thick , backed by 480 millimeters ( 18 @.@ 9 in ) of wood . The barbettes were unarmored , but the deck was 15 millimeters ( 0 @.@ 59 in ) thick .

== Ships ==

== Service ==

Colbert served as the flagship of the Mediterranean Squadron from 1879 to 1890 when she was placed in reserve . Trident became the flagship of the second @-@ in @-@ command of the squadron in 1879 . The sisters bombarded port of Sfax on 15 ? 16 July 1881 as the French occupied Tunisia , under the command of Vice Admiral Henri Garnault .

Colbert was recommissioned in 1892 before she was disarmed and paid off in 1895 . Trident was disarmed and placed in reserve in 1886 ? 89 , but was recommissioned in 1889 and resumed her role as flagship until she was again placed in reserve in 1894 . The ship served as a gunnery training ship until she was condemned in 1900 . She was renamed Var in 1904 and was sold for scrap five years later . Colbert was also condemned in 1900 and sold for scrap in 1909 .