FACTS ABOUT THE MERRIMAC

The Merrimac, originally the U.S.S. Merrimac, was a steam-powered wooden frigate that belonged to the Union. However, it was scuttled and destroyed by the Union forces upon abandonment of the Gosport Navy Yard at Portsmouth, Virginia in April 1861. Lieutenant Commander Secretary of the Navy of the Confederate States of America, stated in a letter of May 8, 1861, "I regard the possession of an ironclad ship as a matter of first necessity. A vessel of this kind at this time could traverse the entire coast of the United States, prevent all blockades, and encounter, with a fair prospect of success, their entire navy."

CONSTRUCTION OF THE MERRIMAC

When the Confederate authorities took possession of the Gosport Navy Yard, the Merrimac was raised and converted into an iron-plated man-of-war of the most formidable character. She was placed in dry dock. Her hull was cut down to within three feet of her waterline. The gun deck was covered with a bomb-proof casement with sloping sides consisting of 24 inches of wood and two courses of iron four inches thick. Owing to some miscalculation, when launched, the edge of the casement barely reached the surface instead of being two feet below. Despite heavy ballasting, limited by the weakness of her wooden hull, the casement only extended six inches beneath the surface. Her bow and stern were also ironed. A projecting 1600-pound ram of iron was added to the bow to pierce opposing ships under water. She had no mast, and there was nothing to be seen over her casement but the armored pilot house and smoke stack. Her armament consisted of six nine-inch Dahlgren smoothbore guns broadside and two 9.4-inch and two 7-inch Brooke rifles at the bow and stern. On February 17, 1862, she was launched the C.S.S. Virginia, though she continued to be known as the "Merrimac." Her principal characteristics were according to her trial records: displacement 4,120 short tons; length overall 325 feet; extreme beam 51' 2"; draft 20 feet; length on deck 168 feet; height of casement 15' 3"; speed 4 to 5 knots.

FACTS ABOUT THE MONITOR

Sinking and under attack by Confederate gunboats. The Monitor, supposedly at the mercy of the Merrimac, was spared as Buchanan decided not to attempt the middle channel with the shoal tide and approaching night. He thought he could safely wait for the following day to capture the Union Frigate stationed on the shoal water. The Monitor was temporarily blinded by a blast that exploded on the pilot house. The Monitor was moved on to shoal water during the night, the flag was lowered, and the Monitor was again taken by the Confederate gunboat. On March 9, 1862, the Monitor, having left the flagship, the Merrimac would fire intermittently on the Minnesota, and then continue battle with the Monitor until the Minnesota ran aground and under attack by Confederate gunboats. The Monitor, by the way, was the first warship to use a revolving turret.
At the beginning of the Civil War the Union Navy had no immediate plans for armed vessels—a situation which helped to strong-arm the Confederate States into building on the Mississippi. Giuseppe Garibaldi, the foremost secretary of the Navy, pushed through Congress $1.5 million for the construction of ironclads to combat the enemy's growing plans and to blockade their harbors. Of the many proposals for ironclads, three were selected for construction, the Galena, the New Ironclads, and at the last moment, John Ericsson's steam battery, the Monitor. Built in 120 days at the Continental Iron Works, she left New York on her maiden voyage on Tuesday, March 6, 1862, after a flurry of hurried preparations. Surviving a perilous voyage south, she arrived in the approaches to Hampton Roads, Virginia, on the evening of Saturday, March 8, 1862, to the sound of the guns coming from the battle raging between the Merrimac and the helpless Union ships. The weary crew of the Monitor, without sleep for 36 hours, little realized that the next day's action would save the Union fleet from destruction and mark a momentous milestone in naval warfare.

**CONSTRUCTION OF THE MONITOR**

The Monitor was steam-powered and her hull was built of wrought iron. She had the appearance of a long, oval raft, listing only eighteen inches above the water with a low, round turret upon its center. The raft was the upper part of the hull of the vessel, and its sides were armored with five layers of iron plates backed by 27 layers of oak and girded so as to be shot-proof. It proceeded on every side beyond the lower hull which contained the machinery and crew's quarters below the waterline.

The turret was constructed of eight-inch iron plates, and contained a battery of two 11-inch Dahlgren guns. Originally it was to have taper guns but they could not be obtained in time. This was the only armament on the Monitor. The turret was constructed to revolve, bringing the gun to bear upon any point. This turret, nine feet high and twenty-one and a half feet in diameter, and all the armor-plated house rising four feet were all threaded on bolts. The level deck of these devices the ship was made to present a very small target. Her engines, boilers, screw, rudder, and anchor, as well as her crew, were thoroughly protected, and neither man nor projectiles could make much impression on her.

However, there were several defects. The low position of her arm and propeller shafts reduced the vessel's reserve of flotation, thus making it possible for a small influx of water to have destroyed the ship before. The Merrimac, before, took a position alongside the stranded Minnesota, ready with steam up, to slip out and en- counter the Merrimac. At that moment the Con- f ederate exploded on the fires which roused the powder magazines. Early that Sunday, the Merrimac, now under the command of Lieutenant Catesby R. Jones, who replaced the wounded Buchanan, steamed within three miles of the Minnesota, and the Monitor then made its appearance. As the Monitor carried but two guns, while the Merrimac had eight in operation, of course the Monitor received two or three shots for every one she gave. The fight raged hotly for over four hours, with the clashing batteries engaging each other. The Monitor displayed much more maneuverability than the ponderous and battle-scared Merrimac. At times the iron-plated ships were only a few yards apart. The Merrimac took 16 minutes to turn and did not move with the keenness of the Monitor, which could turn in three times her own length. The Monitor also had the advantage of taking choice of position due to her revolving turret and shallow draft. While the great naval battle was go-

**SUMMARY OF THE BATTLE BETWEEN THE IRON-CLADS**

Both of the experimental iron-clads had survived their baptism of fire. The naval battle was a draw as long as the two iron-clads remained afloat. The Monitor had saved the Minnesota, but the Mer- rimac still controlled the James, Nanticoke, and Elizabeth Rivers. She had no chance of seriously damaging the Union ships at Hampton Roads or of capturing the Monitor. Neither had in- flicted serious damage on the other. While the Merrimac had demonstrated the vulnerability of the wooden ship against an armed foe, the Monitor had shown the effectiveness of the turret.

**THE END OF THE MERRIMAC AND THE MONITOR**

Norfolk surrendered to the Union forces May 10, 1862. The Merrimac, drawing too much water to permit her being moved to safety at the James River, was abandoned, set on fire and blown up.

With the evacuation of Norfolk by the Con- federate forces and the removal of the threat of the Merrimac, the Monitor was ordered in December to proceed north to North Carolina to assist in the blockade there. However, she never found that water, as there was no need of her. In the end, the Monitor was sunk in the waters of Pamlico Sound. Under the direction of the Confederate States Navy, the Monitor was put to work as a mining vessel, but it was never used. The Monitor was later scuttled and was never heard from again.

**IMPACT OF THE BATTLE ON WORLD NAVAL CONSTRUCTION**

The legend of the Merrimac became the foil of the Union Navy by the threat of a fleet of ar- med rams under construction by the Con- federates. The Monitor spurred a fleet of similar Union monitors — some sixty had been built by the end of the Civil War.

With the advent of iron-clads, all the great na- tions saw their naval powers reduced. Their wooden naval ships would be threatened by even a second or third-rate nation if they were the first to make a fleet of iron-clads. All the world's great navies rushed to make ships of iron and steel. Naval warfare would never be the same again.