= German Type U 66 submarine =

The Type U 66 was a class of five submarines or U @-@ boats operated by the German Imperial Navy (German: Kaiserliche Marine) during World War I. The class is alternately referred to as the U @-@ 66 @-@ class or the Type UD. The class was built by Germaniawerft of Kiel to their 506d design as the U @-@ 7 @-@ class for the Austro @-@ Hungarian Navy. The five boats were sold to the Imperial Germany Navy at the beginning of World War I when it was thought impossible for the submarines to reach the Mediterranean for delivery to Austria @-@ Hungary.

The Austro @-@ Hungarian Navy , after competitively evaluating six submarines of three foreign designs , selected the Germaniwerft 506d or Type UD design over a design from Whitehead & Co. for the U @-@ 7 class . The boats , numbered U @-@ 7 to U @-@ 11 , were designed to be 228 feet (69 m) long and displace between 695 and 885 tonnes (684 and 871 long tons) when surfaced and submerged . They were to be armed with five torpedo tubes and a deck gun . For propulsion the design called for twin diesel engines for surface running and twin electric motors for subsurface movement . The Austro @-@ Hungarian Navy ordered the boats in February 1913 and construction began on the first boats in November .

After the outbreak of World War I in August 1914, the Austro @-@ Hungarian Navy became convinced that delivery of the still @-@ unfinished submarines to the Mediterranean via Gibraltar would be impossible. As a result, they sold the five boats to the Imperial German Navy in November 1914. The German Navy assigned the numbers U @-@ 66 to U @-@ 70 to the five submarines and had them redesigned and reconstructed to their specifications. These changes, which included a larger deck gun, increased the displacement of the U @-@ boats by almost 100 tonnes (98 long tons) surfaced and nearly 50 tonnes (49 long tons) submerged.

All five boats saw active service , and four sank 18 or more ships . Only U @-@ 68 , sunk six days into her first war patrol in March 1916 , had no successes . Two other boats , U @-@ 66 and U @-@ 69 disappeared in 1917 . The remaining two U @-@ boats , U @-@ 67 and U @-@ 70 , were surrendered to the United Kingdom and were broken up by 1921 .

= = Background = =

In 1904, the Austro @-@ Hungarian Navy, after allowing the navies of other countries to pioneer submarine developments, ordered the Austrian Naval Technical Committee (German: Marinetechnisches Komitee or MTK) to produce a submarine design. When the Navy rejected the January 1905 MTK design and other designs submitted as part of a public competition as impracticable, they instead opted to order two submarines each of designs by Simon Lake, Germaniawerft, and John Philip Holland for a competitive evaluation.

Based on the trials results , the Austro @-@ Hungarian Navy determined the characteristics that the next generation of Austro @-@ Hungarian submarines should have . They were looking for a double @-@ hulled submarine of about 500 tonnes (490 long tons) displacement with diesel propulsion . They also wanted a surface speed of 16 ? 18 knots (30 ? 33 km / h ; 18 ? 21 mph) , and for the boat to be armed with between three and five 45 cm (17 @.@ 7 in) torpedo tubes . The Austro @-@ Hungarian Navy selected the Germaniawerft 506d design , also known as the Type UD , for the U @-@ 7 class over the Type 48 design submitted by Whitehead & Co . , primarily because of the lower cost . The Navy ordered five boats on 1 February 1913 .

= = Design = =

The U @-@ 7 class was seen by the Austro @-@ Hungarian Navy as an improved version of its U @-@ 3 class, which was also a Germaniawerft design. As designed for the Austro @-@ Hungarian Navy, the boats were to displace 695 tonnes (684 long tons) on the surface and 885 tonnes (871 long tons) while submerged. The doubled @-@ hulled boats were to be 228 feet (69 m) long overall with a beam of 20 feet 8 inches (6 @.@ 30 m) and a draft of 12 feet 5 inches (3 @.@ 78 m). The Austrian specifications called for two shafts with twin diesel engines (2 @,@ 300 metric

horsepower (2 @,@ 269 bhp ; 1 @,@ 692 kW) total) for surface running at up to 17 knots (31 km / h ; 20 mph) , and twin electric motors (1 @,@ 240 PS (1 @,@ 223 shp ; 912 kW) total) for a maximum of 11 knots (20 km / h ; 13 mph) when submerged .

The boats were designed with five 45 cm (17 @.@ 7 in) torpedo tubes ; four located in the bow , one in the stern . The boats ' armament was to also include a single 6 @.@ 6 cm (2 @.@ 6 in) / 26 deck gun .

= = Construction = =

After the Austro @-@ Hungarian Navy 's 1 February 1913 order , the first two boats , U @-@ 7 and U @-@ 8 , were laid down at Germaniawerft on 1 November . U @-@ 9 was laid down at the end of December , and the final two boats , U @-@ 10 and U @-@ 11 were both begun in February 1914 . Construction of the boats was slated to be complete within 29 to 33 months .

None of the submarines were complete when World War I began in August 1914. With the boats under construction at Kiel , the Austrians became convinced that it would be impossible to take delivery of the boats , which would need to be towed into the Mediterranean past Gibraltar , a British territory . As a result , the five boats of the class were transferred to the Imperial German Navy on 28 November 1914 after the advance payment of 2 million Kronen had been returned . Germaniawerft was then awarded Kriegsauftrag D , hence the type was known as UD .

After their purchase , the boats were assigned the numbers U @-@ 66 to U @-@ 70 , and the class became known as the U 66 type . The Imperial German Navy had the submarines redesigned and reconstructed to German standards , which increased the surface displacement by 96 tonnes (94 long tons) and the submerged by 48 tonnes (47 long tons) . The torpedo load was increased by a third , from 9 to 12 , and the deck gun was upgraded from the 6 @.@ 6 cm (2 @.@ 6 in) gun originally specified to an 8 @.@ 8 cm (3 @.@ 5 in) one .

U @-@ 66 was launched on 22 April 1915 , the first of the class , and was followed by the other four about one every three weeks , with the last boat , U @-@ 70 , hitting the water on 20 July . The boats were all completed and commissioned into the Imperial German Navy between July and September .

= = Service career = =

All the boats of the U @-@ 66 class saw active service , and all but one boat , U @-@ 68 , had wartime successes ; U @-@ 69 and U @-@ 70 both sank over 100 @,@ 000 tons of Allied shipping . U @-@ 68 was sunk by the British Q @-@ ship HMS Farnborough in March 1916 , and was the first boat of the class to be lost during the war . U @-@ 69 and U @-@ 66 were lost in July and September 1917 , respectively . U @-@ 67 and U @-@ 70 both survived the war and were surrendered to the United Kingdom in November 1918 , and both were broken up by 1921 .

= = Boats in class = =

= = = SM U @-@ 66 = = =

U @-@ 66 , the lead boat of the class , was laid down on 1 November 1913 (yard number 203) by Germaniawerft at Kiel and launched on 22 April 1915 . She was commissioned on 23 July 1915 under the command of Kapitänleutnant Thorwald von Bothmer . During the war , she sank 25 ships totaling 69 @,@ 967 gross register tons (GRT) . The two largest ships she sank were the British steamers Powhatan (6 @,@ 117 GRT) and Bay State (6 @,@ 583 GRT) , both sunk in 1917 . U @-@ 66 was last heard from on 3 September 1917 when she reported her position in the North Sea . Her fate is officially unknown . British records suggest that U @-@ 66 may have struck a mine or been sunk by destroyers , this is not borne out by German records .

U @-@ 67 was laid down on 1 November 1913 (yard number 204) by Germaniawerft at Kiel and launched on 15 May 1915 . She was commissioned on 4 August 1915 under the command of Korvettenkapitän Erich von Rosenberg @-@ Grusczyski . U @-@ 67 sank a total of 18 ships (39 @,@ 937 GRT) and damaged a further three (14 @,@ 766 GRT) . U @-@ 67 was surrendered to the United Kingdom on 20 November 1918 and was broken up at Fareham in 1921 .

U @-@ 68 was laid down on 31 December 1913 (yard number 205) by Germaniawerft at Kiel and launched on 1 June 1915 . She was commissioned on 17 August 1915 under the command of Kapitänleutnant Ludwig Güntzel . Six days into her first war patrol , U @-@ 68 encountered the British Q @-@ ship HMS Farnborough (Q @-@ ship number five) off Dingle and was sunk with all hands . U @-@ 68 sank no ships during her brief service career .

U @-@ 69 was laid down on 7 February 1914 (yard number 206) by Germaniawerft at Kiel and launched on 24 June 1915 . She was commissioned on 4 September 1915 under the command of Kapitänleutnant Ernst Wilhelms . During her service career , U @-@ 69 sank 31 ships with a combined gross register tonnage of 102 @,@ 875 , the largest among them , the 13 @,@ 441 @-@ ton armed merchant cruiser Avenger . U @-@ 69 was last heard from on 11 July 1917 when she reported being off the coast of Norway . Her fate is officially unknown , even though British reports credit her sinking to destroyer HMS Patriot . The dates in German records , however , do not support this claim .

U @-@ 70 was laid down on 11 February 1914 (yard number 207) by Germaniawerft at Kiel and launched on 20 July 1915 . She was commissioned on 22 September 1915 under the command of Kapitänleutnant Otto Wünsche . During the war , Wünsche and U @-@ 70 sank one warship , the British sloop Rhododendron , and 53 civilian ships totaling 137 @,@ 775 GRT . Among the civilian ships was Southland , at 11 @,@ 899 GRT , one of the largest ships hit by U @-@ boats during the war . U @-@ 70 also damaged four ships of 20 @,@ 369 GRT . U @-@ 70 was surrendered to the British on 20 November 1918 and was broken up at Bo 'ness in 1919 ? 20 .