

= SM UB @-@ 45 =

SM UB @-@ 45 was a Type UB II submarine or U @-@ boat built for and operated by the German Imperial Navy (German : Kaiserliche Marine) during World War I. UB @-@ 45 operated in the Mediterranean and the Black Seas , and was sunk by a mine in November 1916 .

UB @-@ 45 was ordered in July 1915 and was laid down at the AG Weser shipyard in Bremen in September . UB @-@ 45 was about 37 metres (121 ft 5 in) in length and displaced between 270 and 305 tonnes (266 and 300 long tons) , depending on whether surfaced or submerged . She was equipped to carry a complement of four torpedoes for her two bow torpedo tubes and had an 5 @-@ centimeter (2 @-@ 0 in) deck gun . As part of a group of six submarines selected for Mediterranean service , UB @-@ 45 was broken into railcar @-@ sized components and shipped to Pola where she was assembled and then launched and commissioned in May 1916 .

In five patrols in her six @-@ month career , UB @-@ 45 sank four ships of 15 @-@ 361 gross register tons (GRT) . In early November 1916 , UB @-@ 45 was departing from the base at Varna , Bulgaria , when the U @-@ boat struck a mine and sank rapidly . Fifteen of the twenty men on board were killed in the attack ; one of the five crewmen rescued from UB @-@ 45 later died from his injuries . UB @-@ 45 's wreck was located and raised by the Bulgarian Navy in the 1930s with an eye toward rebuilding the submarine . Engineers from AG Weser determined that restoration of the submarine was feasible , but this was never accomplished . Remains recovered from the wreck were buried in Varna after a funeral procession through town in November 1938 .

= = Design and construction = =

The German UB II design improved upon the design of the UB I boats , which had been ordered in September 1914 . In service , the UB I boats were found to be too small and too slow . A major problem was that , because they had a single propeller shaft / engine combo , if either component failed , the U @-@ boat became almost totally disabled . To rectify this flaw , the UB II boats featured twin propeller shafts and twin engines (one shaft for each engine) , which also increased the U @-@ boat 's top speed . The new design also included more powerful batteries , larger torpedo tubes , and a deck gun . As a UB II boat , U @-@ 45 could also carry twice the torpedo load of her UB I counterparts , and nearly ten times as much fuel . To contain all of these changes the hull was larger , and the surface and submerged displacement was more than double that of the UB I boats .

The German Imperial Navy ordered UB @-@ 45 from AG Weser on 31 July 1915 as one of a series of six UB II boats (numbered from UB @-@ 42 to UB @-@ 47) . UB @-@ 45 was 36 @-@ 90 metres (121 ft 1 in) long and 4 @-@ 37 metres (14 ft 4 in) abeam . She had a single hull with saddle tanks and had a draught of 3 @-@ 68 metres (12 ft 1 in) when surfaced . She displaced 305 tonnes (300 long tons) while submerged but only 272 tonnes (268 long tons) on the surface .

The submarine was equipped with twin Daimler diesel engines and twin Siemens @-@ Schuckert electric motors ? for surfaced and submerged running , respectively . UB @-@ 45 had a surface speed of up to 8 @-@ 82 knots (16 @-@ 33 km / h ; 10 @-@ 15 mph) and could go as fast as 6 @-@ 22 knots (11 @-@ 52 km / h ; 7 @-@ 16 mph) while underwater . The U @-@ boat could carry up to 27 tonnes (27 long tons) of diesel fuel , giving her a range of 6 @-@ 940 nautical miles (12 @-@ 850 km ; 7 @-@ 990 mi) at 5 knots (9 @-@ 3 km / h ; 5 @-@ 8 mph) . Her electric motors and batteries provided a range of 45 nautical miles (83 km ; 52 mi) at 4 knots (7 @-@ 4 km / h ; 4 @-@ 6 mph) while submerged . UB @-@ 45 was equipped with two 50 @-@ centimeter (19 @-@ 7 in) bow torpedo tubes and could carry four torpedoes . The U @-@ boat was also armed with one 8 @-@ 8 cm (3 @-@ 5 in) U L / 30 deck gun .

UB @-@ 45 was laid down by AG Weser at its Bremen shipyard on 3 September 1915 . As one of six U @-@ boats selected for service in the Mediterranean while under construction , UB @-@ 45 was broken into railcar @-@ sized components and shipped overland to the Austro @-@ Hungarian port of Pola . Shipyard workers from Weser assembled the boat and her five sisters at Pola , where she was launched on 12 May 1916 .

= = Service career = =

SM UB 45 was commissioned into the German Imperial Navy on 26 May 1916 under the command of Oberleutnant zur See Karl Palis . UB 45 , Palis ' second U boat command , was assigned to the Navy 's Pola Flotilla (German : Deutsche U Halbflotille Pola) . Although the flotilla was based in Pola , the site of the main Austro Hungarian Navy base , boats of the flotilla operated out of the Austro Hungarian base at Cattaro which was located farther south and closer to the Mediterranean . German U boats typically returned to Pola only for repairs .

In mid July , UB 45 's first success occurred when in three days she sank two steamers . The first , Virginia , was sunk on the 16th while carrying salt destined for Calcutta . Two men on board the 4 , 279 ton British ship were lost when she went down 42 nautical miles (78 km ; 48 mi) off Cape Matapan . Two days later , the French ship Ville de Rouen was sunk 120 nautical miles (220 km ; 140 mi) southwest of Cape Matapan . The 4 , 721 ton Ville de Rouen would be UB 45 's largest victim .

Germany 's conquest of Romania provided the German Imperial Navy with sufficient fuel oil for submarines to operate in the Black Sea . UB 45 and three of her sister ships in the Pola Flotilla were ordered to Constantinople and , en route , had to navigate through the Dardanelles , which had been heavily mined by the Allies in the middle of 1916 . UB 45 joined the Constantinople Flotilla (German : U boote der Mittelmeerdivision in Konstantinopel) on 12 August .

The German submarines in the Black Sea accomplished little , sinking only six ships between August and the end of the year ; UB 45 accounted for two of these while in the Black Sea . On 31 August , UB 45 sank the 2 , 660 ton Italian steamer Tevere off Poti . Tevere had been requisitioned by the Imperial Russian Navy and was in use as a transport ship at the time . Two days later , the U boat torpedoed the 3 , 701 ton Gioconda , another Russian transport , 45 nautical miles (83 km ; 52 mi) off Trebizond . Gioconda was the last ship sunk by UB 45 .

At 14 : 30 on 6 November , UB 45 was departing Varna , Bulgaria , under escort by the Bulgarian torpedo boat Strogi that had cleared a path through Russian mines . At what was thought to be the edge of the minefield , UB 45 swung around Strogi 's port side directly into a second minefield that had been laid by Russian forces the night before . A Hertz horn mine exploded between UB 45 's control room and engine room with enough force to break the boat in half . UB 45 sank so rapidly that the only survivors were three men on the conning tower and two on deck , all of whom were injured ; the other fifteen men on board perished in the attack . One of the survivors died from the severity of his wounds the following day .

In 1932 , the Bulgarian Navy conceived a plan to search for the wreck of UB 45 with the intent of raising it for restoration as a training vessel , or , at the very least , to recover the sunken U boat 's 8 . 8 centimeter (3 . 5 in) deck gun . An additional consideration was the recovery of the remains of UB 45 's crew . On 19 July 1934 , after a two year search , Bulgarian minesweepers discovered the location of the wreck , which was resting at position 43 ° 12 ' N 28 ° 09 ' E , near the then Bulgarian ? Romanian border . UB 45 's wreck was raised in an operation that cost several times less than the cost of a new 8 . 8 centimeter gun . The remains recovered were buried on 26 February 1936 in a Varna cemetery , after a procession through the town .

Engineers from AG Weser , UB 45 's German builder , inspected the hulk and determined that repair of the wreck was feasible . A restoration of the submarine to operating condition , as either a training vessel or a military , would cost 21 million leva (about US \$ 250 , 000 in 1936 dollars) , significantly less than the 56 to 65 million leva (\$ 680 , 000 to \$ 790 , 000) that a comparable new submarine would cost . Ultimately , the Bulgarian Navy opted to order new submarines from Germany rather than repair UB 45 . UB 45 's deck gun was reused , however , and one of the U boat 's diesel engines was restored to operating condition and used on the training ship Assen .

= = Summary of raiding history = =