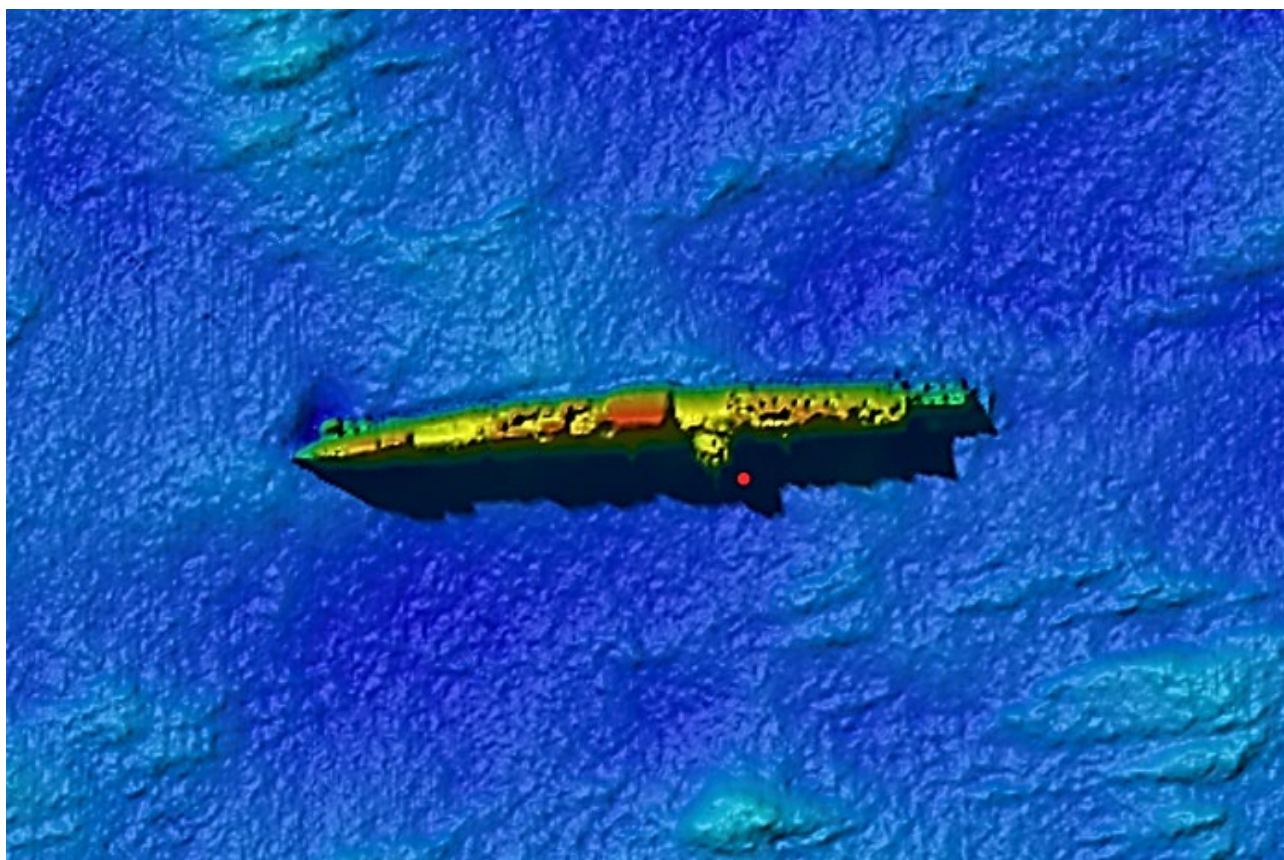




# GERMAN SUBMARINE SM *U-90*



**SM U-90** was a German Type U87 Ocean-going diesel-powered attack submarine, one of only 6 built between 1915 and 1917. Described in the uboat.net website as having "*had excellent seagoing abilities and handled very well. Many arrangements on these boats were also seen on the WWII type IX boats when their design work took place 20 years later*".

It was built by Kaiserliche Werft, commissioned at Danzig on 2 August 1917, and equipped with 12 x 50cm torpedoes fired through 4 bow tubes and/or 2 stern tubes, two 105mm deck guns with 140 rounds, but no mines. It undertook seven patrols operating out of III Flanders Flotilla between 10 September 1917 and 11 November 1918, under three commanders, Kapitänleutnant Walter Remy, Royal House Order of Hohenzollern, from 2 August 1917 to 31 July 1918, Oberleutnant Helmut Patzig, Royal House Order of Hohenzollern, from 1 August 1918 to 31 August 1918, and Kapitänleutnant Heinrich Jeß, Royal House Order of Hohenzollern, from 1 September 1918 to 11 November 1918. Two instances of conditions aboard U-90 are shown in Figure 1.



Image Fishdick 1937:14



Fishdick 1937:135

Figure 1: Aboard U-90

Reference: Fischdick, A. 1937. *Uboot Krieg u. Kameradschaft. Uboot 90 Frontfahrten-Erlebnisse*. Gelsenkirchen: W. Wessels.

Kapitänleutnant Walter Remy damaged the British SS *Corton* and sank 23 other ships, including SS *President Lincoln*, a very large American six-masted passenger steamer, with 26 casualties, referred to further below. Oberleutnant Helmut Patzig damaged one ship and sank five others. Kapitänleutnant Heinrich Jeß sank two ships. This resulted overall in 30 ships sunk, totalling 74,175 tons, the two damaged ships totalling 8,594 tons, nationalities being American, British, Danish, French, Norwegian, Portuguese, and Spanish.

Only the *Corton*, which was damaged, was attacked in English waters along the south coast, all eight other English Channel attacks were near the French coast. Remaining attacks were in the North Sea, Irish Sea and mostly in the South Western Approaches.

SM *U-90* was ordered on 23 June 1915 and launched on 12 January 1916. Double skinned, its pressure hull was 50.07m long and 4.18m wide which incorporated twin diesel engines and twin electric motors driving the vessel through twin screws. The submarine carried a nominal complement of 4 officers and 32 men but a total of 42 when attacking USS *President Lincoln* (designated SS prior to war service). It was one of the quicker submarines, 15.6 knots on the surface and 5.8 knots submerged with an impressive range of 11,380 miles at 8 knots surfaced and 56 miles at 5 knots submerged. It was rated for 50m depth but could go deeper if required.

Surviving the war, SM *U-90* surrendered on 20 November 1918, nine days after the Armistice and was handed over to the British who decided that it would be sold for scrap. However, during the war there were notable incidents involving *U-90*.

- Early in the First World War, the Royal Navy erected a signal station on Hirta, St Kilda, Outer Hebrides and daily communications with the mainland were established for the first time in St Kilda's history. In a belated response, the German submarine SM *U-90* arrived in Village Bay on the morning of 15 May 1918 and, after issuing a warning, started shelling the island. Seventy-two shells were fired, and the wireless station was destroyed. The ministers house, church and jetty storehouse were damaged, but no loss of life occurred.
- As a result of this attack, a 4-inch Mark III QF gun was erected on a promontory overlooking Village Bay, but it never saw military use.
- Commander Walter Remy made regular stops at the remote island North Rona for provisions such as fresh mutton.
- On 31 May 1918 two days out of Brest, USS *President Lincoln*, Figure 3, a Belfast built German 32,500-ton liner, interned in America in April 1917 and requisitioned as a troopship, was in convoy to the United States with three other troopships, USS *Antigone*, USS *Rijndam* and USS *Susquehanna*. It was attacked by *U-90*, the escort destroyers having departed the previous evening under the assumption that the so-called submarine danger zone had been left behind. USS *President Lincoln* was struck by three torpedoes and sank soon after with the loss of 26 men out of the 715 aboard,



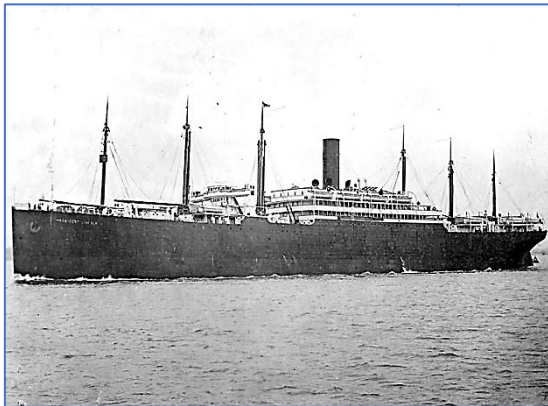
**Figure 2: Mark III QF gun overlooking Village Bay, St. Kilda**

**Source:** [https://en.wikipedia.org/wiki/QF\\_4-](https://en.wikipedia.org/wiki/QF_4-inch_naval_gun_Mk_1_%E2%80%93_III#/media/File:Gun_D%C3%89n_St_Kilda.jpg)

[inch\\_naval\\_gun\\_Mk\\_1\\_%E2%80%93\\_III#/media/File:Gun\\_D%C3%89n\\_St\\_Kilda.jpg](https://en.wikipedia.org/wiki/QF_4-inch_naval_gun_Mk_1_%E2%80%93_III#/media/File:Gun_D%C3%89n_St_Kilda.jpg) CC By 2.0



most of whom were crew but included sick and wounded soldiers. Survivors, including two paralysed soldiers, took to the boats. In accordance with established practice, the other three transports continued without pause having radioed a message about the sinking. U-90 later surfaced and took prisoner the most senior surviving officer, Lieutenant Edouard V.M. Isaacs. When eventually U-90 departed with Isaacs, the *President Lincoln's* boats and rafts were roped together, Figure 4, to lessen the chances of further loss of life.



**Figure 3: SS Princess Lincoln - 1907**

**Source:**

[https://commons.wikimedia.org/wiki/File:S.S.\\_President\\_Lincoln.jpg](https://commons.wikimedia.org/wiki/File:S.S._President_Lincoln.jpg)

**Public Domain**



**Figure 4: Boats and rafts adrift after USS President Lincoln was sunk**

**Source:**

<https://www.ibiblio.org/hyperwar/OnlineLibrary/photos/images/03000/03275.jpg>

Courtesy the Naval Historical Foundation, Washington, D.C.

**USS President Lincoln Collection**

During the night, the destroyers USS *Warrington* and USS *Smith* picked up all survivors and returned to France by 2 June, having en route depth-charged U-90 but without success. USS *President Lincoln* was the largest US Naval vessel to be lost in the First World War.

The *Sevenoaks Chronicle and Kentish Advertiser* of Friday 17 January 1919 contained this article:

*"A correspondent writes: I have just heard the striking story of the escape from Germany of Lieutenant E.V.M. Isaacs, United States Navy, who was taken aboard the German submarine U-90, after his ship had been sunk on 31 May 1918. He was taken to Germany by way of the Shetlands, the North Sea, the Kattegat to Kiel and then to Wilhelmshaven by way of the Kiel canal. His adventures began off Shetland, when the submarine encountered the American destroyers Smith and Warrington. It submerged to sixty metres, when the American destroyers dropped 22 depth charges, five of which were very close. In*

*this encounter Lieutenant Isaacs collected such important information that he was at once anxious to get back to the United States at all costs. First, he tried to jump overboard in Danish waters, but was caught. He was sent to Karlsruhe, where he again began to attempt to escape, and on one occasion tried to get away by jumping from a train going at forty miles an hour. As soon as he was passably fit again, he conceived the idea of short-circuiting all the lighting circuits of the prison*

*camp and escaping through the barbed wire in the dark. After seven days and nights in the mountains of the Black Forest he succeeded, after a four hours' crawl, in eluding the sentries along the Rhine, which is a torrent between the German and Swiss frontiers. In crossing the river, he was carried several miles downstream by the rapids, but at last reached the opposite shore and gave himself up to the Swiss guards. He reached Washington four weeks after his escape from Germany, but by that time his information had been conveyed to the American Navy and was already bearing fruit". (The spelling of Isaacs name varies between different sites but obviously the same person.)*

Edouard Victor Michel Izac, Figure 5, was awarded the Medal of Honour and his citation reads:

*"When the USS President Lincoln was attacked and sunk by the German submarine U-90, 31 May 1918, Lt. Izac was captured and held as a prisoner on board the U-90 until the return of the submarine to Germany, when he was confined in the prison camp. During his stay on the U-90 he obtained information of the movements of German submarines which was so important that he determined to escape, with a view to making this information available to the U.S. and Allied Naval authorities. In attempting to carry out this plan, he jumped through the window of a rapidly moving train at the imminent risk of death, not only from the nature of the act itself but from the fire of the armed German soldiers who were guarding him. Having been recaptured and re-confined, Lt. Izac made a second and successful attempt to escape, breaking his way through barbed-wire fences and deliberately drawing the fire of the armed guards in the hope of permitting others to escape during the confusion. He made his way through the mountains of southwestern Germany, having only raw vegetables for food, and at the end, swam the river Rhine during the night in the immediate vicinity of German sentries".*



**Figure 5: Edouard Izac**  
**Public Domain. Source:**

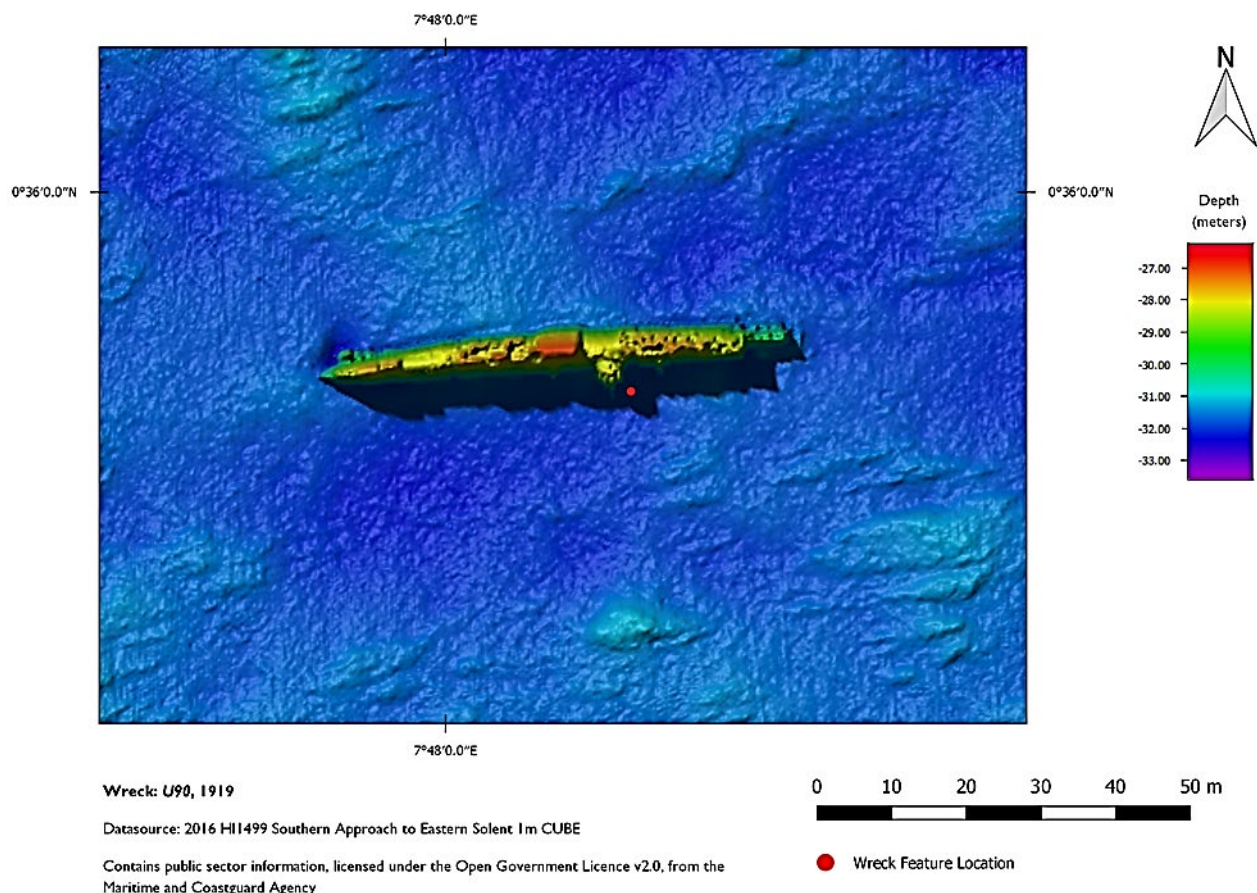
[https://en.wikipedia.org/wiki/Edouard\\_Izac#/media/File:Webb\\_cook.jpg](https://en.wikipedia.org/wiki/Edouard_Izac#/media/File:Webb_cook.jpg)

**Note** - His surname has two different spellings in the sources and have been retained as sourced. His born name was Isaacs but he changed it in 1925 to Izac and when he died, he was the last living recipient of a WW1 Medal of Honor. His personal accounts of the attack, passage in U-90, in captivity, and of his escape are in his book "Prisoner of the U-90".

The *Western Mail* of Friday 13 December 1918 carried an advertisement which touted the arrival at Cardiff of U-90 and U-91 where they would stay for three weeks for viewing by the public, admission to the submarines by ticket, 1s (approx. £3 in 2021), half price to Officers and Men in uniform, Silver Badge holders and children, proceeds to Naval and Mercantile Marine Charities. Some of the surrendered U-Boats were crewed by RN Personnel and sent on tours of UK Ports to show the U-Boats to the public.

SM U-90 was under tow when on 30 November 1919, U-90 foundered and sank. Since the 1980s Martin Woodward, who founded the Shipwreck Centre and Maritime Museum, was interested in the wreck of a submarine south east of St Catherine's Point off the Isle of Wight, and purchased the wreck on 20 April 1994; by 1988 he had established that it was the wreck of SM U-90.

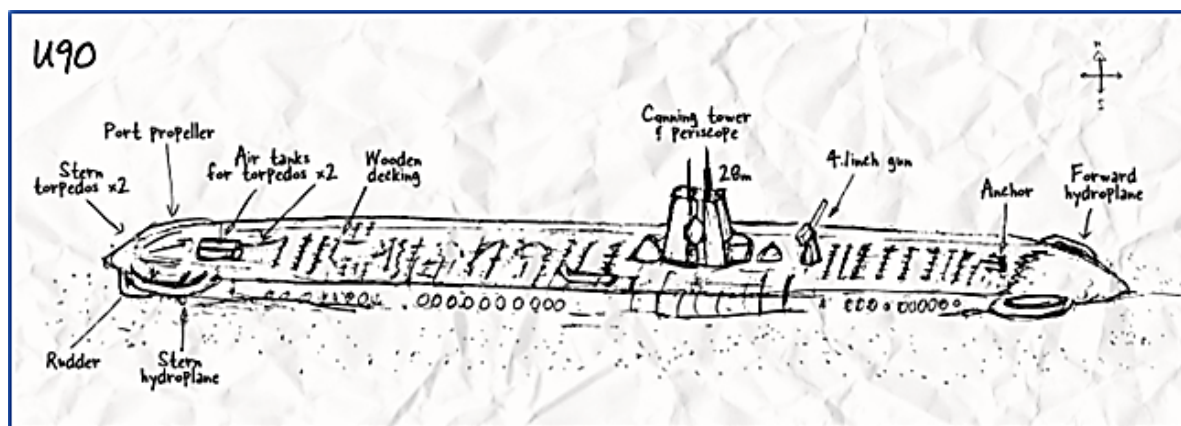
As of 22 December 2015, the wreck was described "*as being in about 35m, with a 45° list to starboard & is pretty much intact. The two large deck guns, one mounted forward of the conning tower & one aft are an impressive sight. The tower has several periscopes visible & they look to be in remarkably good condition considering their time under water. At the stern it is possible to see under the wreck with the starboard propeller and prop shaft clear or the*



**Figure 6: SM U-90 Bathymetry Seabed Image**



*shingle seabed*”. Although frequently visited by recreational divers once its presence became public knowledge, this U-boat wreck presented an excellent opportunity for detailed archaeology and, as part of the Trust’s Forgotten Wrecks of the First World War project, has been studied in detail, including the production of a detailed Site Report which is included on the Maritime Archaeology Trust’s website. It is a popular dive site, and at least four dive videos can be found online (YouTube/ Vimeo). Figures 6 & 7 illustrate the seabed remains.



**Figure 7: SM U-90 - Sketch of Wreck**

**Source: As stated in image, Public Sector Information**

**Source & Courtesy:** <http://indepthphotography.co.uk/wp-content/uploads/2015/11/SCUBA-U90.pdf>

Figures 8 to 15 are of the wreck of SM U-90 with kind permissions as indicated, otherwise MAT.



**Figure 8: Rudder Trailing Edge. Hamish Morrison**



**Figure 9: Starboard Propeller (with cone and aft hydroplane)**



**Figure 10: Port Anchor. Martin Davies**



**Figure 11: Port Propellor (Missing cone). Martin Davies**



**Figure 12: Forward Gun. Martin Davies**



**Figure 13: Forward Gun Platform**



**Figure 14: Retractable Mooring Bollards**



**Figure 15: Forward Circular Starboard Hatch. Hamish**

There are artefacts from U-90 displayed in the Shipwreck Centre and Maritime Museum, including the upper section of the aft navigating periscope, a brass graduated compass ring, and a brass steering wheel from the conning tower.