1. Brief history of the *Kriegsmarine*

After the end of the First World War, and in accordance with the strict terms established in the Treaty of Versailles in 1919, Germany was only allowed a small defensive fleet consisting of six battleships of no more than 10,000 tons, six light cruisers, twelve destroyers and twelve torpedo boats. It was allowed neither submarines nor aircraft carriers. Military aviation was likewise prohibited, and therefore naval aviation was not allowed. Naval personnel were limited to 15,000 men. All these units and personnel were integrated in the newly named *Reichsmarine*.

Some of the restrictions in the Treaty were breached from the outset. Naval units were built secretly through German-owned companies. A "dummy company" was set up in The Netherlands to design and develop submarines, the NV *Ingenieurskantoor voor Scheepsbouw (IvS)*, and another in Sweden with a torpedo research program. This was in express violation of article 191 of the Treaty of Versailles, which prohibited Germany from possessing or building submarines for any purpose. The *IvS* designed several submarine for various Navies, including the *Gür* (built by a Spanish shipyard) for the Turkish Navy, which became the basis for the Type I U-Boot, and the Finnish Navy, with the *Vesikko* (built by a Finish shipyard) that became the prototype for the Type II U-Boot.

Under the terms of the Treaty, the *Reichsmarine* was only allowed to build new vessels for replacement purposes. Following this criterion, modern destroyers and light cruisers were built. The late 1920s brought three new ships into commission: the *Königsberg*, the *Karlsruhe* and the *Köln*. The launching of the first *Panzerschiff* in 1931, the *Deutschland*, to replace the old battleship *Preussen,* was the cue for the reconstruction of a modern German fleet. All these new vessels were built in compliance with the terms of the Treaty of Versailles, but the modern *Panzerschiff* caused consternation among the French and the British, who had expected the restrictions set forth in the Treaty to limit replacements for the old battleships to vessels suited only for defensive warfare. In fact, through the use of innovative design and manufacturing techniques, the Germans had built a heavy warship suited to offensive warfare on the high sea.

Even before Adolf Hitler came to power on 30 January 1933, the German government had decided, on 15 November 1932, to launch a naval rearming program including submarines, aircraft and aircraft carriers which were prohibited under the terms of the Treaty of Versailles.

Soon after the Nazis were in power, Adolf Hitler began to ignore many of the restrictions in the Treaty, accelerating the rearming of the German Navy. The Anglo-German Naval Agreement signed on 18 June 1935 allowed Germany to possess a fleet equivalent to 35% of the British tonnage regarding surface vessels, and 45% (extended to 100% in 1938) with regard to the submarine fleet. It was likewise agreed that armored ships would be limited to a maximum of 35,000 tons.

That same year, in May 1935, the *Reichsmarine* was renamed *Kriegsmarine*.

Left: U-boats arriving at their base on the French coast after a war cruise.

Invitations to attend at the Deutsche Werke Kiel *the launching of the first of the* Panzerschiffes, *the* Deutschland, *on May 19, 1931.*

"The Navy calls" (Die Kriegsmarine ruft!) *recruitment poster.*

2. The men of the *Kriegsmarine*

After signing the Treaty of Versailles the mighty *Kaiserliche Marine* was reduced to approximately 15,000 officers and sailors, and therefore only those considered to be the best or the most experienced men were kept in service.

With Hitler's rise to power, military restrictions were systematically and progressively breached and by 1934 the number of men enrolled in the armed forces had tripled. Between 1939 and 1945 over 1,500,000 men approximately served in the *Kriegsmarine.* Active members per year were as follows:

Year	Men
September 1, 1939	105,256
1940	280,000
1941	435,000
1942	569,000
1943	780,000
1944	810,000
1945	700,000

The number of those who died in action totaled 65,029, while a further 105,256 were declared missing in action or captured, and over 21,000 were wounded.

With regard to the character of the men who served in the *Kriegsmarine*, throughout the years of the war only a fraction of Navy personnel deserted compared to other services like the Army.

Recruitment

As compulsory military service was discontinued after WWI, the Navy was only allowed to recruit small numbers of personnel and these had to be volunteers. At a time of severe depression in Germany, with extremely high levels of unemployment, it was possible to make a careful selection from such an abundance of candidates. When mandatory military service was reinstated in 1935, the Navy still remained the smallest branch of the armed forces and maintained its selective recruitment policy, choosing candidates with high technical qualifications, such as mechanics, electricians and other specialized workers.

"How do I get into the Navy" (Wie komme ich zur Kriegsmarine) *recruitment booklets edited by the* Oberkommando der Kriegsmarine.

Helmsman-Coxswain career (Steuermannsmaat).

Steuermannsobermaat.

Boatswain career (Bootsmannmaat).

Artillery mechanic career (Artilleriemechanikermaat).

Artilleriemechanikerobermaat.

Torpedo mechanic career (Torpedomechanikermaat).

Torpedomechanikerobermaat.

Signals career (Signalmaat).

Rare Signalmaat *wire embroidered sleeve insignia.*

Specialist leader (Sonderführer *with* Bootsmannobermaat *rank*). *Note the gilt anchors on the collar patches.*

Signalobermaat.

Carpenter career (Zimmermannsmaat).

Zimmermannsobermaat.

Auxiliary Cruisers War Badge *(Kriegsabzeichen für Hilfskreuzer)*

Raeder ordered this badge to be created on 24 April 1941 to acknowledge the courage and heroism of the men serving on armed merchant ships acting against Allied supply lines. The design was commissioned to Ernst Peekhaus, in Berlin.

The award criteria were:

- Participating in a long distance cruise.
- Being injured during a cruise.
- Demonstrating exceptional leadership.

Tombak Juncker Auxiliary Cruisers badge.

E-Boats War Badge *(Schnellboot-Kriegsabzeichen)*

Established on 30 May 1941. Up to that date, the crews of this type of vessel were awarded the *Zerstörer-Kriegsabzeichen*. There were two different designs, the second being established in January 1943, and both were designed by Wilhelm Ernst Peekhaus in Berlin. The award criteria were:

- Having completed 12 operations without engaging with the enemy.
- Being injured or killed in action.
- Having served on a ship sunk by the enemy.
- Having participated in a particularly successful war mission.
- Performing a personal act of bravery with no other recompense.

Schnellboot Leutnant *wearing second pattern badge. He has also been awarded with the Iron Cross first class.*

E-Boats first pattern made in tombak by Schwerin, Berlin.

Adolf Scholze (presumably), "AS" in a triangle marked on the reverse, tombak second pattern E-Boats badge.

Zinc made Schwerin & Sohn second pattern E-Boats badge.

The inner lining was usually light blue satin or artificial silk, although caps with removable tops were often lined with light colored silk. A thin white gauze mesh liner separated the lining from the top of the cap. A transparent celluloid shield was sometimes sewn into the center of the liner with the manufacturer's logo and other identification data, city, address... and sometimes the size. A space was usually also provided for adding a tag with the owner's name.

Inside, around the lower edge of the cap band, a brown or grey leather sweatband was sewn in about 3.5-4 cm wide, usually held by a metal stud or a small silk bow at the back. Some makers also provided a tape, in blue or light tan, folded inside the leather for a better fit, and placed a cork or foam rubber shim at the front to ensure the cap pressed against the wearer's forehead.

Officer candidates wore the same style of visor caps as senior NCOs, with no decorated visor.

Senior NCOs and officer candidates blue visor cap, gilt wire hand embroidered wreath, metal national emblem, soft leather visor, ocher artificial silk lining with celluloid shield and artificial leather sweatband with light tan ribbon intertwined for a better fit.

Senior NCOs and officer candidates blue visor cap, Cellon *hand embroidered emblems, soft leather visor, black rayon lining, celluloid shield with maker's label inside (Kranich of Wilhelmshaven) and brown leather sweatband.*

Officials with senior NCO rank blue visor cap, silver wire hand embroidered emblems, black lacquered fiber visor with trimmed edge, cornflower-blue artificial silk lining with celluloid shield and artificial brown leather sweatband.

Vizeadmiral *reefer jacket. Note the rare cloth version of the German Cross in silver sewn on the right side (see page 144).*

Senior NCO wearing the service dress with white topped visor cap and dagger. Note he is wearing a reefer jacket fastened with 5 front buttons.

Two rows of five 2 cm buttons were sewn on the front, one at each side, parallel and aligned vertically in pairs, with the uppermost buttons (which were not buttoned) slightly offset outwards. Another pair of buttons was sewn beneath the join of the collar flap and the collar. There are some models which maintain the *Reichsmarine* style, with five buttons fastened, even though this dropped to four in 1933.

The inside lining was made of black cotton or similar fabric, except for the sleeves which were normally of striped pale white. There was an inside pocket on each side of the jacket, and the tailor's label was usually sewn inside the left-hand pocket showing the owner's name and date. Generally there was an inside button on the left-hand side to fasten the jacket more securely.

Official with Oberleutnant *rank reefer jacket. Note that all insignias and buttons are in silver.*

Offizierkleiderkasse der Kriegsmarine *Kiel label inside the left interior pocket with the name* Oberverwaltungssekretär Scholtys *inscribed.*

Detail of the silver sleeve rank stripes and the intermediate level administrative officials career emblem.

Official with Leutnant *rank. Note the intermediate level for administrative officials career sleeve emblem.*

5.4. Special Uniforms

Leather Uniforms

The most characteristic uniform worn by U-boat crews was the leather uniform, even though this was also used by personnel aboard surface vessels. It was not rare to see them donned by the *Minensuchboot* (Minesweeper), *Schnellboot* (PT boat) and other unit crews. The design underwent only minor changes after the *Kaiserliche Marine* era.

These uniforms gave some protection against dirt and fuel, inside engine rooms, and even against small fires. They also protected against cold weather during deck or watch duties aboard U-boats and surface vessels in the icy north Atlantic waters.

Seaman wearing the grey leather jacket for deck and bridge personnel. Note the clearly visible fifth set of buttons under the collar.

Grey leather uniform for an U-boat Commandant.

Maschinen-Mannschaft *(machine team) personnel wearing the black leather uniform of engine personnel in an engine room.*

They were produced in grey, black and, less frequently, in dark brown color. Both the jacket and trousers were completely lined: the jackets with thick black or dark grey woolen blanket fabric and the trousers could also have this type of material but were usually lined with bluish-grey cotton canvas fabric. The buttons were dull silver on black jackets or grey on grey jackets, but it is not unusual to find uniforms with gold colored buttons.

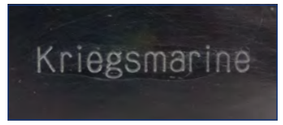
Before being distributed, these garments were stamped on the leather with the *Kriegsmarine* depot control stamp: an eagle above an "M" (sometimes including the date, month and last two digits of the year).

Occasionally officers wore rank shoulder boards. Sailors and junior NCOs wore no distinctions on this type of uniform.

Black leather uniform typical of engine personnel, worn by an artillery gunner-observer in a small vessel.

Typewriter

*Rheinmetall Borsig A.G. model 9 typewriter, black Bakelite keys with white letters including the stylized letter M in lower case over the 3 key. The side of the body is marked "*Kriegsmarine*".*



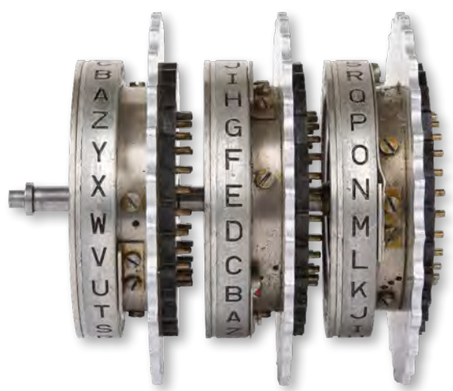
Administrative personnel on a large vessel of the fleet. Note the typewriter and the bulkhead clock (see page 417) in the background.

Enigma Machine

The Enigma machine played a foremost role in the development of WWII. Once one of these machines -together with its accompanying code book- was seized by the Allies, the *Kriegsmarine* coded messages could be intercepted, resulting in great losses for the Germans.

The Enigma machine was an electromechanical device which had both an electrical and a mechanical part. The mechanism consisted basically in a keyboard with the twenty-six letters of the alphabet, a rotor reflector, three rotors –four in the case of the *Kriegsmarine* version– and a panel with each of the twenty-six letters lit up by a tiny lightbulb to signal correspondence. The position of the rotors could exchanged, and initially these were a set of five identified with the roman numerals I to V.

Identification plate number.



As communications were of vital importance to the U-boots, in 1942 the Navy adapted the Enigma with four rotors and various rotor reflectors, adding three further rotors identified as VI, VII and VIII.

The code was established by positioning the rotors, each of which consisted of 26 wires connected to the keyboard; but the first rotor advanced one twentieth of turn after each keystroke, so that the position of the connections was different for each keyboard entry, resulting in a polyalphabetical cypher. In addition, for greater security, the second rotor only turned after the first cylinder had completed 26 rotations and the third rotor only turned after the second had likewise completed 26 turns.

Celestial Star Globe *(Sternfinder)*

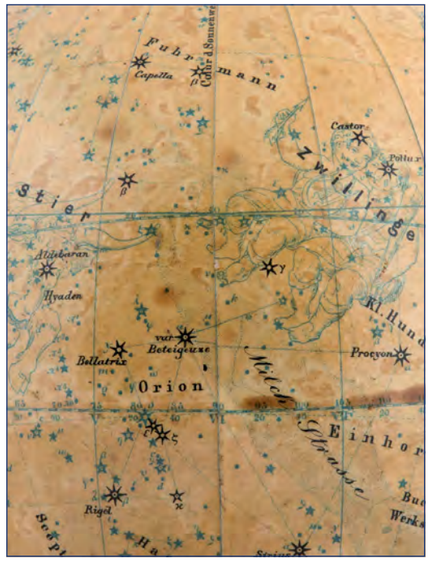
These hard to find globes were used to determine the position of U-boats and surface vessels according to the stars.

A Kriegsmarine *NCO aboard an U-Boot using the* Sternfinder.

It was a sphere, manufactured in brass or copper by Ernest Schotte & Co of Berlin. On the surface of the sphere, thick lacquered card segments show the stars and constellations. The instrument included silvered brass Azimuth and Elevation scales, index pointer to elevation scale, and rotating azimuth scale.

Details of the constellations drawn with great precision on the star globe.

Maker's stamp on the globe.



The star globe was protected for transport and storage using an aluminum dome painted in grey or black, which was screwed down onto the brass base.

Dagger (Marinedolch)

All the parts of the dagger were made of brass with the exception of the blade, which consisted of a 24 cm long nickel-plated double-edged steel blade, stiletto style, bearing the manufacturer's logo on one side; it could be plain or decorated with etchings of anchors and leaf patterns on both sides.

The grip was made of celluloid throughout or wood encased, and sometimes of ivory, with colors that range from white to deep orange. It had a swirled design with twisted wire wrapping applied to the valleys formed by the pattern. The crossguard had a square center with branches extending to the left and right. An anchor was placed in the middle of the obverse and reverse rectangle. A release button centered on the rear controlled the locking mechanism which engaged once the dagger was placed inside the scabbard. Below the crossguard was a gilt metal washer covered by a piece of green or red felt.

Trademark of the manufacturer WKC.

Detail of the crossguard. Note the anchor placed in the middle of the rectangle with the release button to control the locking mechanism.

Standard Kriegsmarine *model 1938 dagger with white celluloid grip, plain blade and scabbard decorated with lineal patterns.*

Note the method of knotting the portepee cord, looped around the upper part of the grip and then laced around the crossguard, with the acorn hanging down by the left side.

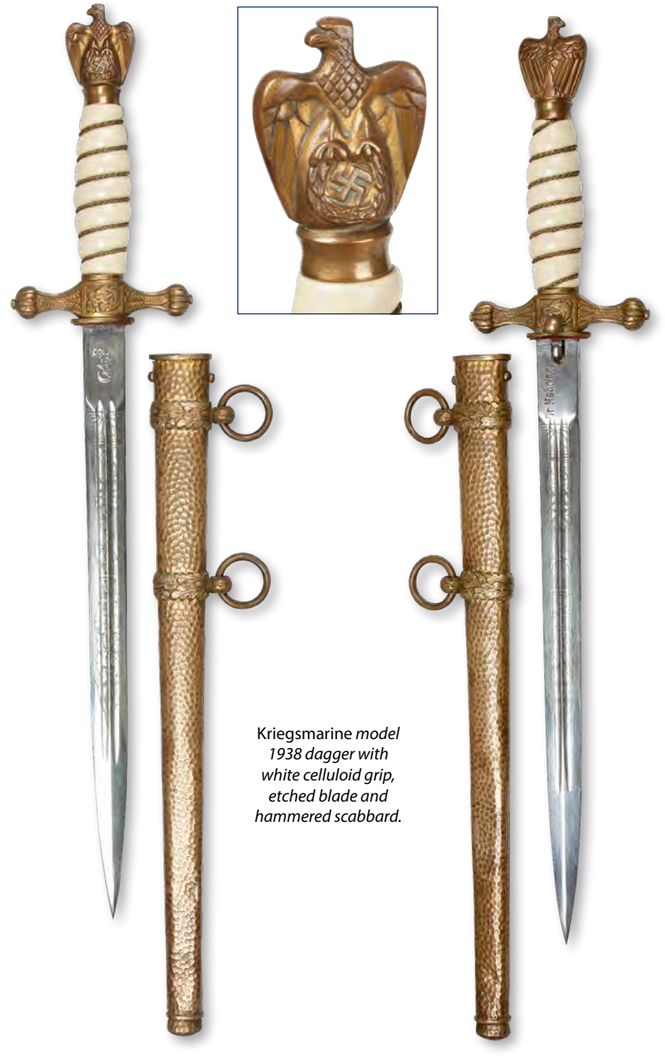
National eagle pommel model 1938.

The pommel for the *Reichsmarine* dagger, known as the "flaming ball" due to its design, was employed from 1919 to January 1938. After that, a new design was adopted: the national eagle with retracted wings and the head looking to the right, clutching a wreath with a swastika in the center.

The front and back of the 28 cm long scabbard were decorated with a lineal pattern executed in four different sections, but it was not uncommon to find them adorned with a dimpled finish, known as "hammered scabbard". The scabbard had two bands, one near the throat and the other close to the mid-body, with a suspension ring attached to each one. From 1938, dagger pattern bands were in the shape of raised oak leaves and acorns, while the previous pattern consisted of knotted ropes.

As in the case of the saber, official issue specimens bore the inventory number on the obverse of the scabbard and on the blade, identifying the depot stores of the Baltic Naval Station at Kiel with an "O" or the North Sea Naval Station at Wilhelmshaven with an "N".

Detail of the usual decorated blade with anchors and leaf patterns on both sides.



Kriegsmarine *model 1938 dagger with white celluloid grip, etched blade and hammered scabbard.*

Detail of the "hammered scabbard".

Marinestabartzt *d.R. Carl Eugen Mehring (1912-1974), the original wearer of this dagger, with his wife Colette and their first baby, Patrick, in a photograph taken in Münster in late 1940s. After the war, Mehring was held prisoner in Normandy.*

9.3. Flare Pistols *(Signalpistolen)*

Leuchtpistole Walther Mod. *Heer* 1934

In December 1926 the manufacturer Waffenfabrik Walther Zella-Mehlis patented the design for a new flare gun for the Army, which would become the *Heer* 26 model whose production began in 1928. In 1934 a new model, evolved from its predecessor, came into production and was manufactured with minor modifications until the end of the war. The first units were made of stainless steel with wooden grips, as the previous model, but were soon made of duralumin, an alloy mainly composed of aluminum, copper and magnesium, which reduced their weight to 730 grams, with black or brown Bakelite grips.

War production Leuchtpistole *Walther Mod.* Heer *1934, not dated and without any maker identification mark. On the right side it is stamped with the* MWaA MIII/3 *and the frame and barrel proof stamps, and on the left side with the serial number 32459 L.*

Anodized Leuchtpistole *Walther, made of duralumin that partially prevents internal corrosion of gunpowder residue. In this model the trigger was extended so that the gun could be used with a gloved hand in unfavorable weather conditions. The flare gun was opened by pushing forward the lever in front of the trigger.*

Waffenfabrik Walther Zella-Mehlis (Thüringen), Walther marks and serial number 26308 L.

Detail of the frame, barrel proof markings and the MWaA *stamped on the right side. Note the code* MIII/3 *used by the test departments at Walther and other flare pistol manufacturers.*