

HITLER'S NAVY

*A Reference Guide to
the Kriegsmarine 1935-1945*



Jak P Mallmann Showell

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**A REFERENCE GUIDE
TO THE KRIEGSMARINE
1935-1945**

JAK P MALLMANN SHOWELL

With a section on uniforms by Gordon Williamson

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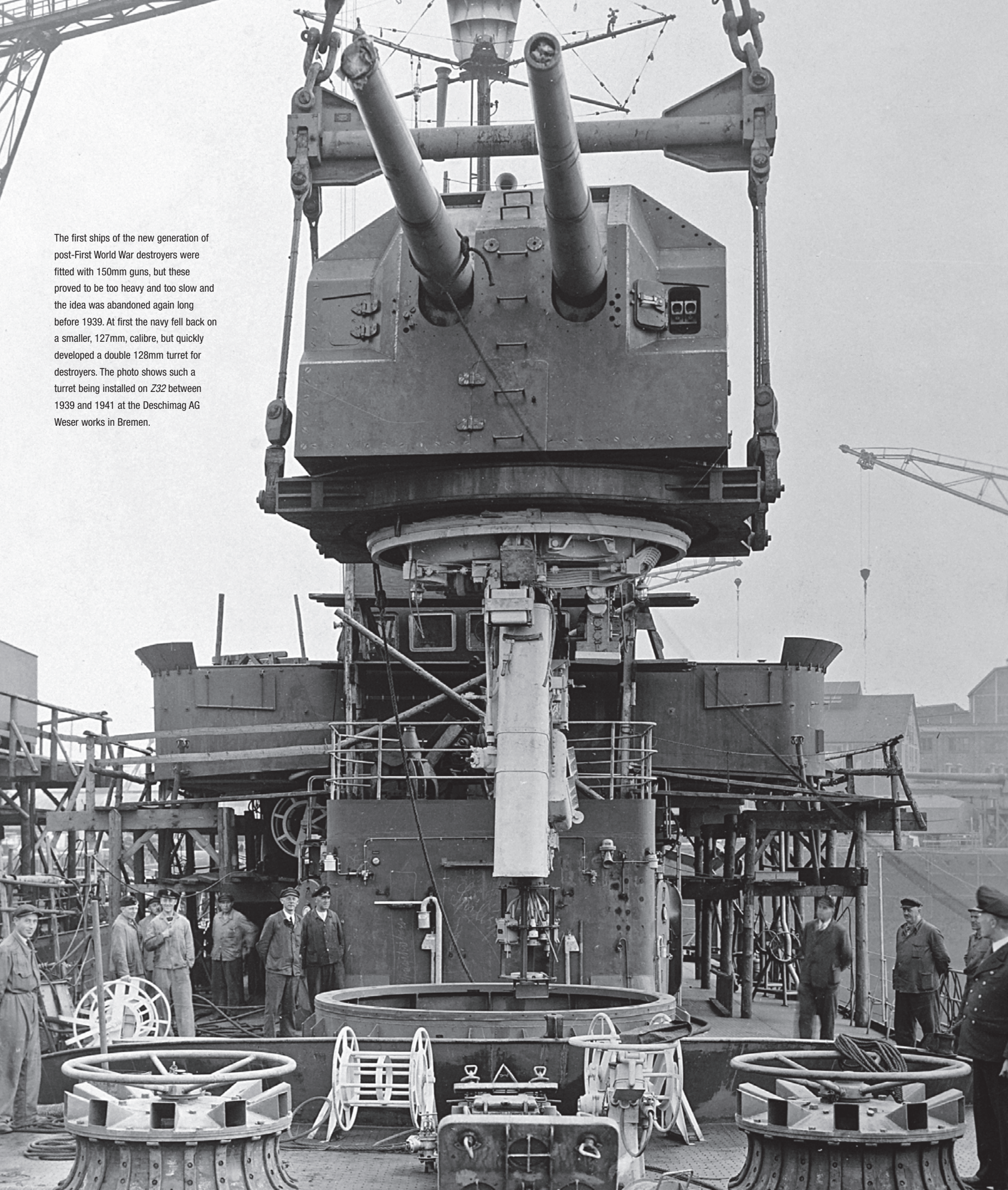
TITLE PAGE The long sleek bows of a Type VIIC with jumping wire running from near the camera to the top of the conning-tower. This served as an aerial and was also intended to help the boat slide under nets, but very few submarines of the Second World War came into contact with such obstructions. It could also be used for attaching personal safety harnesses.

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The first ships of the new generation of post-First World War destroyers were fitted with 150mm guns, but these proved to be too heavy and too slow and the idea was abandoned again long before 1939. At first the navy fell back on a smaller, 127mm, calibre, but quickly developed a double 128mm turret for destroyers. The photo shows such a turret being installed on Z32 between 1939 and 1941 at the Deschimag AG Weser works in Bremen.



INTRODUCTION

Almost thirty years have passed since the first edition was written and now I would like to add the many people who got in touch to correct mistakes or elucidate events about which they have special knowledge. I am most grateful to everybody who has helped and many have not only provided additional information, but also become good friends.

Most of what was written some thirty years ago still applies, despite so much new material having come to light. Naval history is exciting inasmuch as both sides kept diaries, which were written the moment events unfolded and therefore it is possible to reconstruct what actually went on. The younger generations must be urged most strongly to study this material, for it shows that much of what the media bombards us with is terribly one-sided, not really true and many eyewitness accounts are figments of the imagination. I hope this book will inspire younger generations to study original papers of those events and one day write accurate accounts of our most turbulent history.

I am most grateful to Horst Bredow of the German U-boat Museum (formerly the U-boat Archive) for allowing me access to documents, books and photographs from his magnificent collection. Many of the photos for this new edition have come from the museum. I should also like to thank the staff of Bletchley Park, especially John Gallehawk, for allowing me access to their archive.

The following have kindly sent corrections, made positive suggestions, verified facts or provided encouragement during difficult times: Professor Heinfried Ahl (Pilot Officer of *Kormoran*); Margaret Bidmead (Royal Navy Submarine Museum); Jan Bos; 'Professor' Gus Britton (at one time Deputy Director of the Royal Navy Submarine Museum); Bundesarchiv in Freiburg; Commander Richard Compton-Hall (one time director of the Royal Navy Submarine Museum); Ernst-August Gerke (U-boat commander); Captain Otto Giese (officer aboard liner *Columbus*, blockade breaker *Anneliese Essberger* and U-boats); Ursula von Friedeburg; Hans-Karl Hemmer (*Pinguin* and *Adjutant*); Wolfgang Hirschfeld (Radio Operator in U-boats, author and historian); George Högel; Peter Huckstepp; Harry Hutson; Karl Keller; Wes Loney (ex RAAF pilot); Christopher Lowe; Edward McLaughlin; Ian Miller (sons and daughters of US merchant mariners); Heinrich Mueller; Dr Timothy Mulligan; Lionel Leventhal (publisher of the first edition of this book, who provided a great deal of encouragement); Edward Rumpf; Klaus Schäle (S-boats); Torsten Schwenk; Heinz Tischer (photographer aboard *Thor*); Charles Walker (British merchant seaman). Many of these people are now dead, but I am most grateful for their support and should like to apologize to those who have been missed out of this list.

Unless otherwise stated, photographs have come from the author's collection or from Deutsches U-Boot-Museum.

JAK P MALLMANN SHOWELL

Folkestone, England, April 2008

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Gordon Williamson has been responsible for writing the sections on ranks, uniforms, badges and flags, which he has illustrated with his own drawings. I would like to thank him for all the other help he has given me.

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Heinrich Böhm (who served aboard *Admiral Graf Spee* and later became the first torpedo mechanic of *U377*) has been a most willing helper by clarifying details, providing some excellent photographs and a fair volume of new information – all of which has been greatly appreciated.

Thanks also to the Deutscher Marinebund e.V.; especially to Kurt Reimers and the staff of *U995* for making it possible for me to have two special tours of the boat. Their explanations have been a great help. *U995* is now a museum next to the Naval Memorial at Laboe near Kiel and is well worth a visit.

Old photographs have been identified with help from Peter Cremer, Walter Lüdde-Neurath, Bernhard Rogge, Walter Richter, Professor Friedrich Ruge and Adalbert Schnee.

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MAJOR ASPECTS OF GERMAN NAVAL HISTORY

THE BIRTH OF THE NAVY

Before the unification of Germany, each of the small states paid for its defence alone. Among the poorest of these states were the coastal regions, which could not afford to build fleets on the scale of the larger powers. Instead, they maintained small ships intended to combat piracy rather than fend off organized, armed aggression. Indeed, the first real German navy was not created until almost fifty years after the Battle of Trafalgar, so it is a relatively young force.

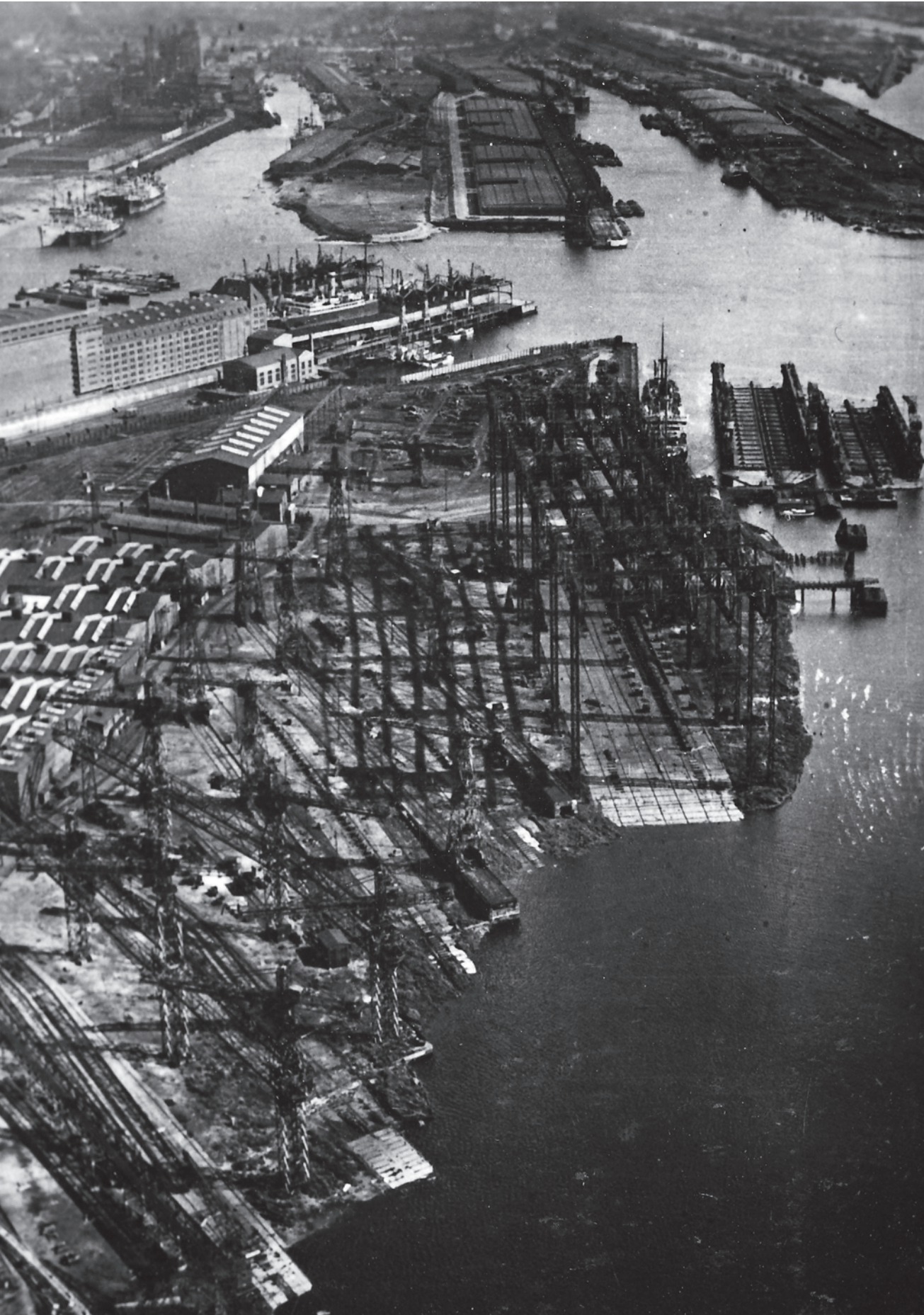
The decision to found a navy was taken at Frankfurt-am-Main in 1848 – during the war against Denmark – after the Danes had declared their intention of blockading German sea ports. This first German Navy was but a modest affair, although there were a few individual efforts of note, such as the construction of Germany's first submarine – *Brandtaucher*. Designed by Wilhelm Bauer, a Bavarian artillery warrant officer, she was launched at Kiel on 18 December 1850 – an event that caused the blockading

Danish ships to leave the bay and anchor farther out in the Baltic. But, on balance, the maritime force, or Bundesmarine (Federal Navy) achieved very little and was disbanded again in 1852. The ships were handed over to the Royal Prussian Navy – also founded in 1848 – and Germany's first great admiral, Rudolf Brommy (original spelling Bromme), who had been the driving force behind the fleet's development, was dismissed (without even a pension).

The first autonomous naval command, or admiralty, of the Royal Prussian Navy was founded during 1853. A year later it came under the command of Prince Adalbert of Prussia, who held the title 'Admiral of the Prussian Coast'. There was still no battle fleet, and the main function of the Navy was still seen as a transport vehicle for the Army. The next major change came in 1866, after Austria's withdrawal from the German Alliance and Prussia had founded the North-German Federation. This resulted in the Navy being renamed Nord-Deutsche Bundesmarine (North-German Federal Navy) during October 1867. But, although this move

The Kaiser Wilhelm Bridge in Wilhelmshaven at the beginning of the twenty-first century. Wilhelmshaven was once a bustling military harbour and the huge bollard in the foreground is a reminder that, at one time, this was the home for massive ships. The bridge, too, reminds present generations of Germany's affluence under the Kaiser. It was the biggest swing bridge in the world when it was built and it still functions today. After reparations at the end of the First World War, all the basins of this harbour looked even emptier than they do today.





Deschimag AG Weser, Germany's biggest shipyard on the river Weser in Bremen, looking forlorn and empty. Determining the exact date of this picture is difficult without local knowledge, but this gives a good impression of how shipyards looked shortly after the First World War, when the Allies had removed equipment and facilities.



After the First World War Germany lost control of the Kiel Canal, which was then administered by an International Commission. This shows the old Imperial Coat of Arms by the locks in Brunsbüttel, at the Elbe estuary side. Locks are necessary on both ends of the canal because the water in it is kept one metre higher than the normal average of the Baltic while the Brunsbüttel locks permit all-tide access into the estuary of the Elbe. This monument was erected in such a way that the Royal Eagle looks out to sea, on the left. The Eagle on the ceiling of the Grand Hall at the Naval Officers' School in Mürwik looks to the right – the wrong way – because the Kaiser felt it was important to emphasize the connection with the sea rather than face the land.



Large ships of the Kaiser's High Seas Fleet in the Wilhelmshaven Naval Base before the end of the First World War. This purpose-built, non-tidal harbour was some five kilometres long. (Measuring from the biggest locks to its far end). It had numerous basins for all manner of specialist purposes, a canal connection to Emden and some impressive innovations such as the biggest rotating bridge of the time. Despite its huge size, many ships had to moor side by side because there was not enough quay space to accommodate all who were seeking berths. This hive of activity came to a sudden end in 1918 at the end of the First World War. (WZ Bilddienst, Wilhelmshaven)

was a step in the right direction, the basic problem remained: the Federation's membership still comprised small, independent kingdoms and principalities between which there was little love lost. Indeed, the twenty-five Germanic states had a long history of conflict, not only between themselves but also with neighbouring nations.

The unification of Germany came about quite unexpectedly in 1870, after France had declared war on the largest of these Germanic kingdoms, Prussia. The French hoped that the Catholic princes in the south would help them suppress the Protestant economic development in the north. But this did not happen. Surprisingly, Bavaria, Baden and Württemberg took up arms in support of Prussia, and soon the three armies were heading west, singing as one 'Lieb Vaterland magst ruhig sein, fest und treu steht die Wacht am Rhein' ('Dear fatherland, be peaceful, the guard is standing firm and faithful at the Rhine'). They did not stop at the Rhine, but fought their way to Paris, surrounded the city and crushed all opposition.

The dramatic success of this campaign created a deep feeling of unity among the German people, with even the Catholics of the south calling for King Wilhelm I of Prussia to become emperor of all the German states. For the first time

in Germany's history the majority of those who held the reins of government wanted a united nation. Their wish was granted on 18 January 1871, when the German Empire was born in the Galerie des Glaces in Versailles. The Navy was then appropriately renamed Kaiserliche Marine (Imperial Navy).

The creation of a unified Germany sparked off a chain reaction of reforms, and developments in science and technology were especially rapid. The accession in 1888 of Kaiser Wilhelm II, who had a special interest in ships, brought about a new approach to the Navy. During his reign, it graduated from being a mediocre collection of coastal craft to a powerful battle fleet capable of challenging that of any other nation. The fleet was constructed along the same lines as the British Navy, with powerfully-armed battleships forming the backbone of the force. One of the basic problems of this set-up was that officers and men were trained to come to terms with the rapid technological developments, without too much thought going into how best the monstrous weapons might be used. It was this sort of thing that prompted Grand Admiral Alfred von Tirpitz – the architect of the German Navy – to make the justifiable comment: 'Germany does not understand the sea.'

KAISERLICHE MARINE, REICHSMARINE AND KRIEGSMARINE

Battleships, the Kaiser's greatest symbols of power, played no decisive role in the First World War. Instead, the main burden of the fighting was carried by torpedo-boats, minesweepers, submarines and similar vessels – many of which were developed and built under harsh war conditions. Most of the hard fighting was conducted by young men, not by the admirals, and the fact that many of these sailors were at odds with their High Command was made quite clear by a breakdown of discipline, especially in the larger units. The peak of human obedience to authority had been reached during the early part of the war, when thousands of men, on both sides, faced certain death without questioning the orders of their superiors. But as the war drew to a close, attitudes in the German armed forces changed to such a degree that, rather than face more futile bloodbaths, many men preferred to mutiny.

The Navy found itself in a strange situation after the war, for it had not really suffered a great defeat, but neither had it scored any decisive victory. In addition, many of the ships were still afloat and in fighting condition, although by the terms of the Treaty of Versailles these had to be handed over to the Allies. Despite the ill-feeling against authority, several young officers found this clause humiliating, and wanted to sail into the British surrender ports with guns ablaze and fight to the death. However, this extreme element must have been a small minority, for the Fleet entered the Royal Navy anchorage at Scapa Flow peacefully. It was not until later, while lying at anchor in deep water, that the war flags fluttered once more from the mast heads – an indication that the ships were being scuttled and were on their way to the sea bed. German morale may have been at an extremely low ebb, but the Imperial Navy's old tradition of sinking one's ship before surrendering it was still alive. So, with nearly all ships lost, 1919 saw the end of the Kaiser's Navy. Those not sunk at Scapa Flow were either sunk elsewhere or handed over to the Allies, and the few remaining in German hands were already obsolete.

The foundation day of the new Navy (Reichsmarine) is considered to be 1 January 1921, for by that time Germany had reduced her strength sufficiently to meet the requirements of the peace treaty. The Kaiser's flag was officially hauled down for the last time on 31 December 1921 – some two years after the end of the war. However, new laws relating to the Navy were not finalized until later. The new Reichsmarine flag was hoisted for the first time on 11 April 1921. It consisted of black, white and red horizontal stripes with a large iron cross in the middle, and had a small canton of black, red and gold horizontal stripes in the top left-hand corner. (Later, on 14 March 1933, the canton was removed by order of President Paul von Hindenburg – shortly after Hitler's elevation to chancellor. Unfortunately, this useful aid for determining dates of photographs was rather small; occupying only a minute part of the upper black stripe, and it is often not distinguishable.) The Reichsmarine was renamed Kriegsmarine on 21 May 1935, its new identity being underlined five months later, on 9 November, by the introduction of a new flag bearing a large swastika. This flag was used until it was finally torn down in May 1945.



The old imperial flag was used to commission at least one ship in the war years. During *M18*'s commissioning ceremony, a rolled up flag bearing the printed name 'war flag' was attached to the flag staff. The commander then gave the order to hoist the flag, whereupon the royal eagle and cross unfurled itself to flutter in the light breeze! After the initial panic had died down, a correct flag was hurriedly found and the ceremony continued. Luckily, *M18* had sufficient drinks on board to help make the press and publicity men forget the incident, but the German High Command did eventually learn of the slip-up when it was reported, in depth, by a Swedish newspaper.

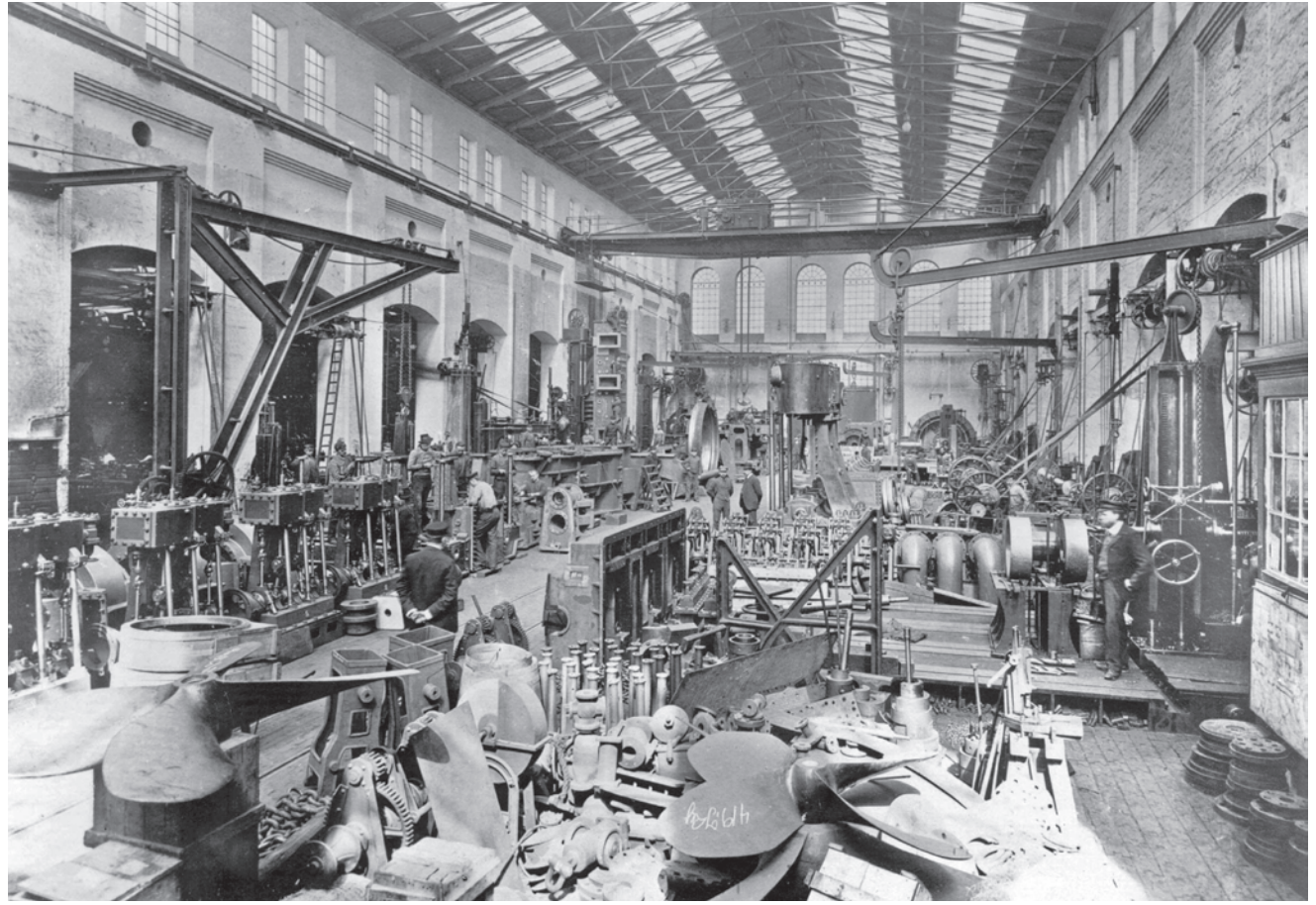
A prefix, like HMS, was also used for ships during the emperor's time: SMS for Seine Majestät's Schiff. In later years, warships were distinguished from merchant vessels by the words Reichsmarine Schiff or Kriegsmarine Schiff. However, the abbreviations RMS and KMS were rarely, if ever, used by the Navy. In the Kriegsmarine it was far more common to prefix warships with their class, for example: Panzerschiff *Deutschland*, Schlachtschiff *Tirpitz* or Torpedo-boot *Möwe*.

THE TREATY OF VERSAILLES

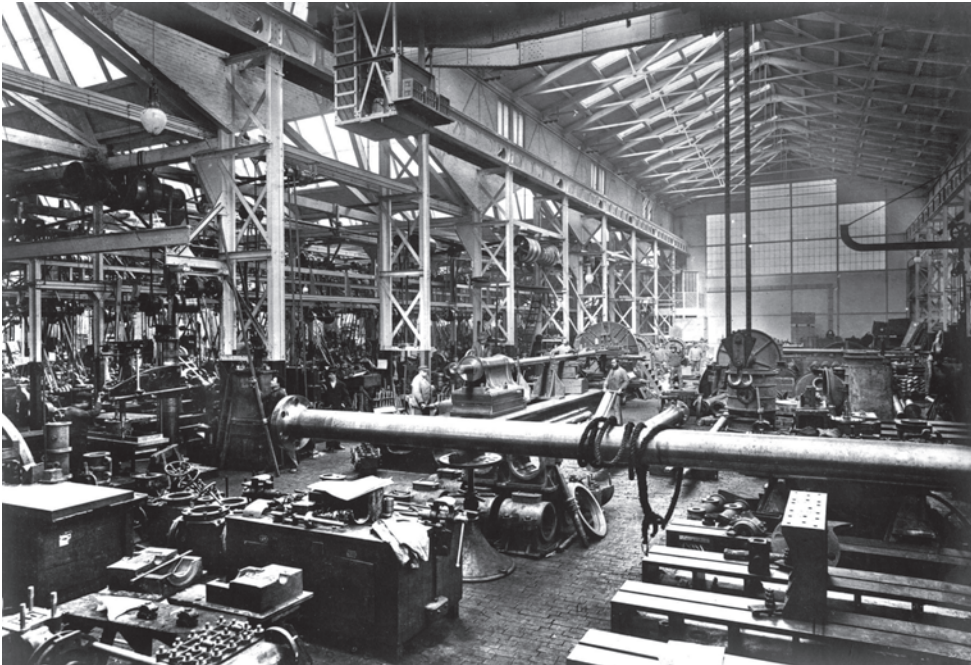
The end of the First World War and the imposition of harsh peace terms forced drastic changes upon the German Navy; perhaps hardest of all was coming to terms with the Treaty of Versailles, the conditions of which were dictated by the Allies. It was a hefty political document with far-reaching effects on the German economy and armed forces. The Navy was affected as follows:

1. a. National conscription had to be abolished.
- b. The armed forces were restricted to volunteers. The Navy was to be restricted to a total of 15,000 men, including 1,500 officers. This figure included crews for

In 1918 Germany lost more than the war and its head of state; it was also left floundering without an identity. The coat of arms and standards that had represented the young country for less than fifty years suddenly turned sour and something new had to be devised. This was not easy because Germany was without a depth of tradition or longstanding institutions. The old Imperial Standard on the right was replaced by a new one representing the Weimar Republic. The main colours (black on the top, white and red) were taken over by the new Republic and a small canton with a black, red and yellow stripe was added to the top left corner. These colours go back further than the Kaiser, to when a small band of soldiers, wearing black uniforms with red edging and golden buttons resisted Napoleon's onslaught through Europe. Despite being old, safe colours, without modern political connections, they did not last long and the canton was removed around the time Hitler came to power, as can be seen on the second flag from the left. The trouble with these new standards was that they also represented defeat and the dishonour associated with the Treaty of Versailles. So the majority of people were pleased when the National Socialists introduced a new flag in 1935; one with a swastika, an ancient symbol representing eternity and success. It gave Germany a new national identity.



These photos were taken at the beginning of the twentieth century at Howaldtswerke in Kiel. They show one of the world's leading shipyards when it was at the cutting edge of technological development. (Photos: HDW, Kiel)



all ships, coastal defence forces and staff for shore stations.

- c. There was to be no naval reserve force.
- d. Volunteers had to sign on for at least twenty-five years in the case of officers and twelve years for other ranks.
- e. Personnel leaving the Navy were not permitted to serve in any capacity in any armed force. Those

remaining had to commit themselves to serve until the age of forty-five.

f. Members of the merchant navy were not allowed to receive military training.

- 2. a. The number of ships had to be limited to:
 - 6 Battleships plus 2 in reserve
 - 6 Cruisers plus 2 in reserve
 - 12 Destroyers plus 4 in reserve
 - 12 Torpedo-boats plus 4 in reserve
 Additional small craft were also limited.
- b. Germany was not permitted to build or own submarines (including merchant submarines), aircraft carriers, heavy artillery or military aircraft.
- 3. Displacements of replacement ships were limited to:

Battleships	10,000 tons
Small cruisers	6,000 tons
Destroyers	800 tons
Torpedo-boats	200 tons

 Ships sunk or destroyed could be replaced, but otherwise, ships had to be between fifteen and twenty years old before a new ship could be built as a replacement. (Neither was Germany permitted to sell a fairly new warship and then build another in its place.) All armament was limited and determined by the Allies.
- 4. Germany had to maintain ships for clearing mines.
- 5. All German warships not in German ports ceased to belong to Germany and all rights to them had to be renounced.
- 6. a. No fortifications could be erected near the Baltic shipping lanes. Existing defence installations had to be



The situation for the average German citizen was dire immediately after the First World War. People were not only faced with rapidly escalating inflation, but also a shortage of almost everything, with many living on starvation diets. Here people search through cinders from factory slag heaps, hoping to find some partly unburned coal.

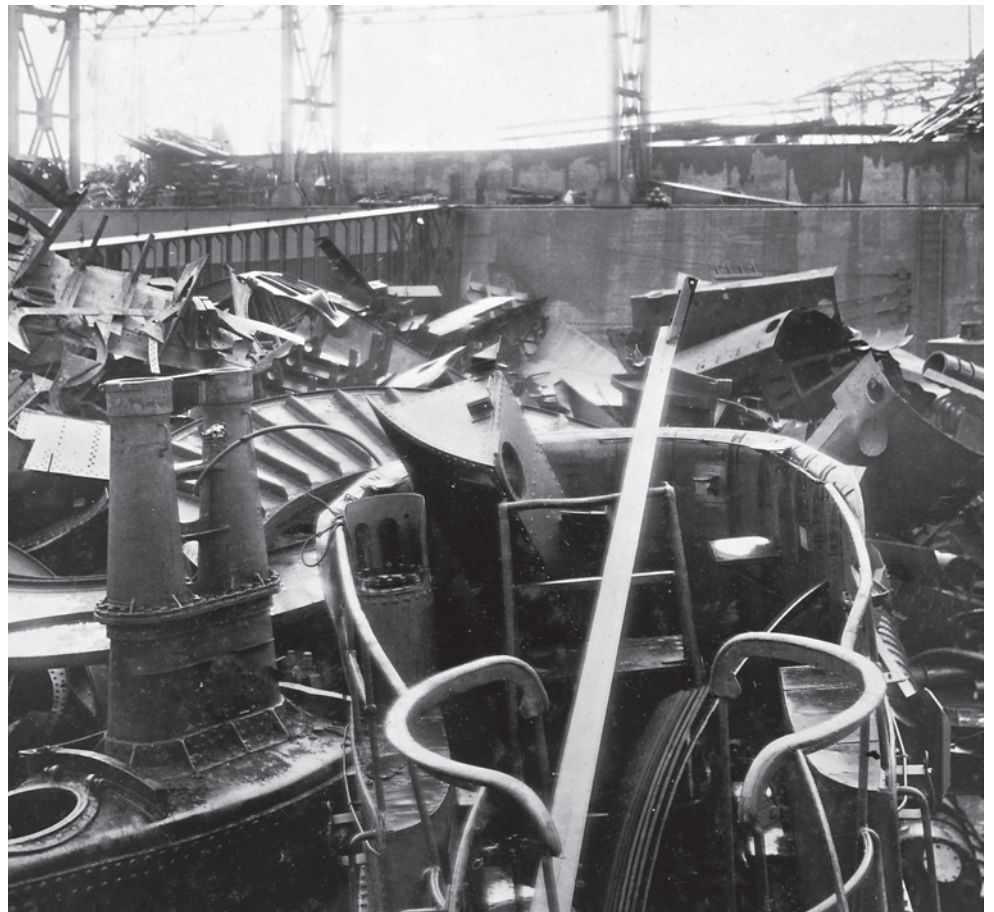
Weapons after the First World War had to be scrapped, and the mountains of waste grew quickly, the Allies ensuring that weapons were rendered useless and that war reparations were paid.

removed. All information about these fortifications, including hydrographic details, had to be made available to the Allies.

b. All fortifications and naval installations (except Heligoland) within 50km (approximately 30 miles) of the German coast or from the German islands were allowed to remain in their end-of-war condition. New fortifications were not permitted within that zone. Armament, both total number of guns and calibre, could not be increased from their 1918 state.

7. The German government had to hand over documents and information to the Allied Naval Control Commission. These included plans, specifications and other details of armaments and of radio communication equipment.
8. Germany had to agree that Germany and her Allies were responsible for all war losses and all war damage.

The main aim of the Treaty was to limit the power of the German nation, whose meagre obsolete fleet was only permitted to meet a possible attack from the East, where the revolution in Russia was still showing signs of political unrest. But, whilst the Treaty severely limited the material aspects, it was a complete failure on the psychological side. Indeed, these harsh terms sowed the seeds of their own undoing, and were a major factor in the events that led to the Second World War. The German Emperor was forced to abdicate, leaving his position of Head of State free for anyone to climb into. And the Treaty of Versailles provided the National Socialists with the ideal ladder. The hatred for authority shown by



German soldiers at the end of the war, the general unrest and the strikes were quickly given direction. Both the Allies and the German government became objects at which the masses could vent their anger and frustration; the former were loathed as suppressors, while the latter were despised for agreeing to the terms of the Treaty.

The sailors' main grudges were not against the material impositions, but the order to hand over the Fleet to the Allied navies, not being permitted a free German defence constitution, and having national defence controlled by an international commission. The majority also disagreed with the clause whereby German soldiers had to face Allied military tribunals; and there was total rejection of the clause by which the men had to consider themselves guilty of all war damage. The Navy did not, as the Allies might have expected, sit down on its wilted laurels and devote the following years to polishing the remains of the Fleet. Germans work well under pressure, and the Treaty of Versailles presented a suitable stimulus to get together and work hard.

Selection for the German Navy was rigorous, with only the best men from the old Imperial Navy accepted. In the 1920s there were thirty to forty applicants for every post, so it was possible to pick and choose. Only candidates with the highest qualifications were admitted to the ranks, making the Navy into an elite fighting force and a special school for warrant officers was established near Kiel. This pool of concentrated talent was put to work finding ways around the restrictions imposed by the Treaty, and a very great deal was achieved. For example, submarines were not permitted, so

in 1922 a 'Submarine Development Bureau' – employing the cream of German submarine designers – was set up in Holland, where it concealed its true purpose by posing as an ordinary Dutch shipbuilding firm. Although guns were limited in size, the problem was neatly side-stepped with the perfection of quick-firing guns and the development of rockets. Radar was invented as a radio direction-finder, in order to make heavy artillery more effective. Germany had working radar sets before Britain started work on the project, yet the idea was never developed to its full potential. As battleships were restricted to 10,000 tons, it was probably expected that Germany would build smaller dreadnoughts, but she went one better and developed the pocket battleship – a new concept in naval warfare. The first product of this idea, Panzerschiff *Deutschland*, was much admired by foreign navies, with some naval commentators heralding her as the warship of the future.

So, step by step, the small naval force of the Reichsmarine slowly and unobtrusively made its limited power much more effective. And some measure of its success can be gauged if one considers that this modestly-sized navy, often with only a handful of operational units in the Atlantic per month, was to keep the world's most powerful fleet on the defensive for some four years. Apart from enjoying a numerical advantage, the British were also in the enviable position of being able to decipher a fair proportion of German secret radio signals. Add to this the support they received from the rapidly expanding United States Navy, and one can see that the small German navy's efforts were no mean achievements.

The Naval Officers' School – the Red Palace by the Sea – at Mürwik (Eckernförde) as seen from the water's edge. This impressive building was opened just a few years before the beginning of the First World War because the Naval Academy in Kiel, now occupied by administration for Schleswig-Holstein, could be expanded no further.





Generalfeldmarschall Paul von Hindenburg visiting the Navy some time before the National Socialists came to power. Born in Posen in 1847, he was elected as Reichspräsident in 1932, and in 1933, he appointed Hitler as Chancellor. On the left, wearing the uniform of a Vice Admiral, is Erich Raeder who became Supreme Commander-in-Chief of the Navy.

major warship, so the prototypes were eventually fitted into the artillery training ship *Bremse*, which was launched in January 1931. The first pocket battleship, *Panzerschiff Deutschland*, splashed into the water on 19 May 1931 and was completed two years later, to be commissioned on 1 April 1933. Her powerful diesel engines gave her a top speed of 26 knots, a range of 10,000 nautical miles, and she carried six 11 inch guns. The designers cheated with her displacement figures, making her a little heavier than she should have been: when empty she displaced 11,700 tons and when fully loaded almost 16,000. Her high top speed enabled her to run away from an enemy battleship; but she could blast a cruiser out of the water from outside the range of the cruiser's guns. It has been suggested that the development of this ship pointed clearly to future merchant raiding but this is far from the mark. It was very much the case of the new ship propulsion systems making merchant raiding a viable proposition. Incidentally, although marine diesel engines have strong roots in Germany, the first diesel-propelled, ocean-going merchant ship, *MS Selandia*, was launched by Burmeister and Wain of Copenhagen (Denmark) before the First World War, in November 1911.

HITLER AND THE ANGLO-GERMAN NAVAL AGREEMENT

In the early 1930s, the naval leadership was still labouring under extreme difficulties and could not finance all the schemes it would have liked. Many of their clandestine projects were paid for by overcharging on permitted developments and then filtering off the excess to pay for the illicit plans. The first real boost came after Hitler had been appointed chancellor, for he was not only in favour of rearmament, but strongly encouraged it.

Adolf Hitler made his famous proclamation in which he

repudiated the Treaty of Versailles and re-introduced national conscription on 16 March 1935. The words he used, however, were not his own. Parts of this famous speech were word for word those of one written seven years earlier by Defence Minister Groener – Hitler appears to have been the first front line politician prepared to stand up and present it. He certainly expected some repercussions from the Allies, but they were too busy with their own internal affairs and took no notice. It is curious that the Versailles Treaty, which was meant to effectively clip the wings of German power, was allowed to be thrown out by the very people it was designed to control. So, with no trouble at all, Hitler was left free to lay the foundation stone of his mighty war machine. At the same time, he made every effort to maintain good relations with Britain, partly because he expected her to present the biggest problems should difficulties arise. This consideration led to the next major milestone in the development of the German Navy: The Anglo-German Naval Agreement, which was signed on 18 June 1935 by Sir Samuel Hoare for Britain and by Special Envoy Joachim Ribbentrop for Germany. With this agreement, Hitler hoped to show that he had no desire to conduct a war against Britain. Germany volunteered to restrict her naval strength to thirty-five per cent of the Royal Navy; however, submarines were considered as a sepa-



rate case, and a forty-five per cent ratio was agreed. Parity in submarines was also agreed in principle, but in that event Germany would have to sacrifice tonnage in other categories, and Britain would have to approve the move.

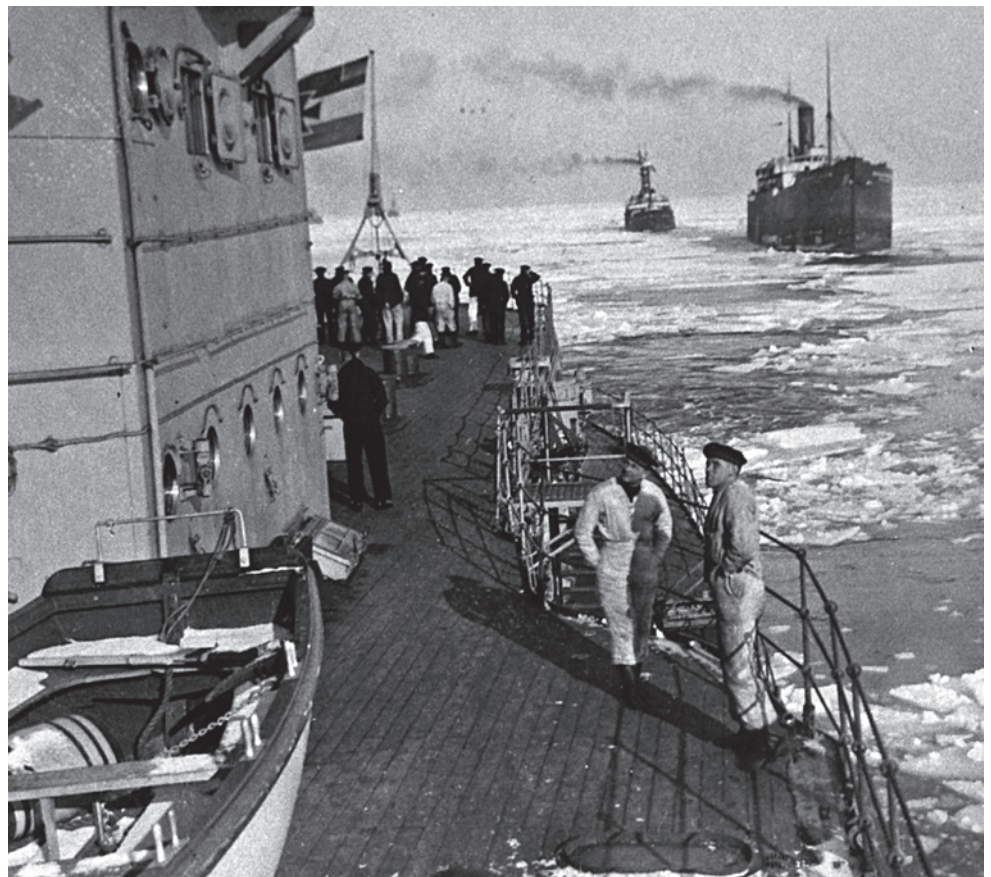
Although the political intrigues and manoeuvrings that took place at this time are beyond the scope of this book, a few observations should be made. There were several reasons for Britain's apparent capitulation to German demands. For various domestic reasons, the British government of the day was not prepared to take a hawkish stance, and the Admiralty were convinced that the British fleet would not be strong enough to take on both Japan and the foremost European naval power simultaneously. Therefore, until terms with Japan could be agreed, they were keen to reach an agreement with Germany that would preclude the possibility of another arms race. Reactions to the agreement were like signs of relief. Earl Beatty, the British Fleet Commander during the latter part of the First World War stated that Britain had at least one country with which they need not conduct an armaments race. And Hitler told Admiral Erich Raeder, Commander-in-Chief of the German Navy, the day the agreement was signed was the happiest of his life – quite understandably, since he had thrown out the Versailles Treaty and had now received international approval for doing so!



LEFT Minesweepers were permitted under treaty provisions, and many of the older, smaller ships were converted to burn oil rather than coal. At the beginning of the Second World War, however, they were converted back again because the valuable oil was more difficult to obtain than home-produced coal. The smoke issuing forth from this flotilla suggests the boats were running on poor-quality coal.

ABOVE Torpedo boat 158 was built in Stettin before 1909 and remained as a unit of the German Navy until the end of the Second World War, to be broken up as late as 1950. This shows the starboard view flying the flag with swastika, which suggests it was taken after 1935. These solid workhorses served along the European coasts under the severest of conditions.

BELOW The battleship *Elsass*, launched at F. Schichau in Danzig in 1903 and broken up in 1936. After the First World War it served as training ship and, as can be seen here, as an ice breaker. Although slow and with a limited range of just over 5000 nautical miles at ten knots, these were seaworthy vessels. The flag flying at the stern is the old one from the Weimar Republic with the canton in the top left-hand corner.



Raeder himself told his officers they could not have hoped for better conditions for the coming decade. He went on to say that the agreement ruled out the possibility of Germany having to fight another war against Britain. Later, he prohibited any theoretical studies of a conflict with Britain. And the next set of routine battle orders circulated by the High Command

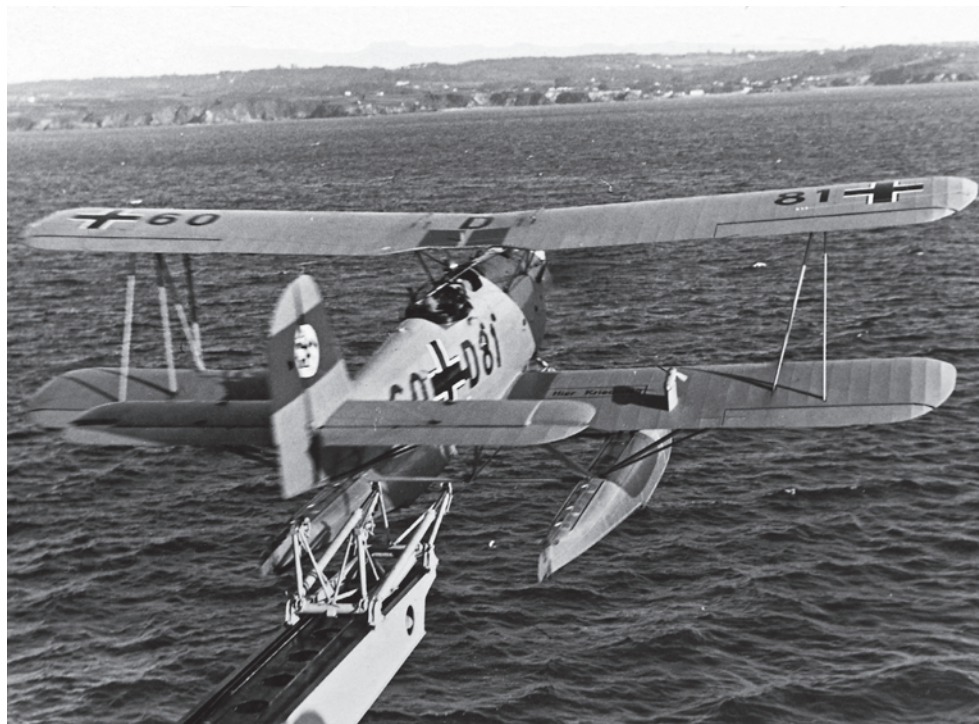
on 27 May 1936 made no mention of Britain – France and Russia were considered as potential enemies.

The Anglo-German Naval Agreement permitted Germany to build and own previously prohibited ship groups, such as submarines and aircraft carriers. The first aircraft carrier, Hull 'A' (*Graf Zeppelin*), was launched on 8 December 1938, but never completed. Hull 'B' was laid down at Germania Works in Kiel and later scrapped at an early stage of construction. The third one, not due to be launched until about 1940, was never started.

THE NAVAL AIR ARM

In 1935, aircraft – also prohibited under the Versailles Treaty – were no longer considered to be auxiliary weapons, but fully integrated tools for naval warfare. Thoughts of engaging aeroplanes had been in the minds of the higher commanders since the First World War, and plans for building a naval air arm were considered long before 1935. A 'private' flying club, with aeroplanes capable of landing on water, had been in existence for some years before Germany was permitted to own military aircraft.

The Naval Air Arm, Luftkreis IV, which was later renamed Luftwaffenkommando See, was founded by the Luftwaffe to work in cooperation with the Navy for coastal defence. In the event of a war, one of its branches, the Marineluftstreitkräfte (later Seeluftstreitkräfte), under the command of Generalmajor Geissler (Führer der Marineluftstreitkräfte or FdL) was to come under the direct command of the Fleet Commander.



ABOVE The creation of a naval air arm was high on the list of priorities for the Reichsmarine, despite the Treaty of Versailles prohibiting Germany from building or owning military aircraft. Plans were made to leave space on the bigger warships for the installation of catapults. However, at the same time as Hitler repudiated the Treaty of Versailles, Göring (later Supreme Commander-in-Chief of the Luftwaffe), declared that everything that flew came under his control. So the Navy was stifled in the developing of the aircraft it needed, though a certain amount of research did go ahead. One major problem was to find ways of launching aircraft and this was one field where civilian authorities were just as much involved as the Navy. An airmail service to South America was in operation long before the start of the war and this long flight involved a mid-ocean refuelling stop, where aircraft landed next to a depot ship, were hauled on board and re-launched with a catapult. This photograph depicts a single-engine Heinkel He 60, which was used as a general-purpose reconnaissance plane with a range of just over 400 miles.

RIGHT Landing aircraft on water can be relatively simple as long as it is calm, but the majority of warships operated out at sea. At first ships dragged a huge, heavy rubber mat while moving at a fair speed to help flatten waves, then an area of calm water inside the 'U', created if a ship turns in a tight circle at speed, was employed. This two-engine Heinkel He 59 was used for training and general reconnaissance, but it was adaptable enough to fly during the Spanish Civil War as a bomber and all-purpose dogbody. It had a crew of four and carried a radio direction finder, the circular aerial which is just visible on the body between the engine and the '60'.



It was considered important to have good naval minds commanding aircraft at sea, so personnel were selected exclusively from the Navy. The training was rigorous, and only a fraction of the men who embarked upon it were accepted for flying duties. The majority returned to ship-based work. In 1935 it was planned to create some 25 squadrons with a grand total of about 300 aircraft.

These squadrons were planned to be equipped with various types of aircraft:

- a. Land-based aircraft – long-range, short-range, multi-purpose and fighters.
- b. Carrier-based: fighters, dive-bombers and general purpose aircraft.
- c. Ship-based reconnaissance aircraft.

The Luftwaffe became more interested in ships, docks and other naval targets as time progressed, and a true naval air arm never materialized. Hermann Göring, Commander-in-Chief of the Luftwaffe and, early on in the war, a close friend of Adolf Hitler, always maintained 'Everything which flies belongs to me!' Nevertheless, small naval air groups did exist, but there were too few in number to have any significant impact on the overall war picture.

SUBMARINES

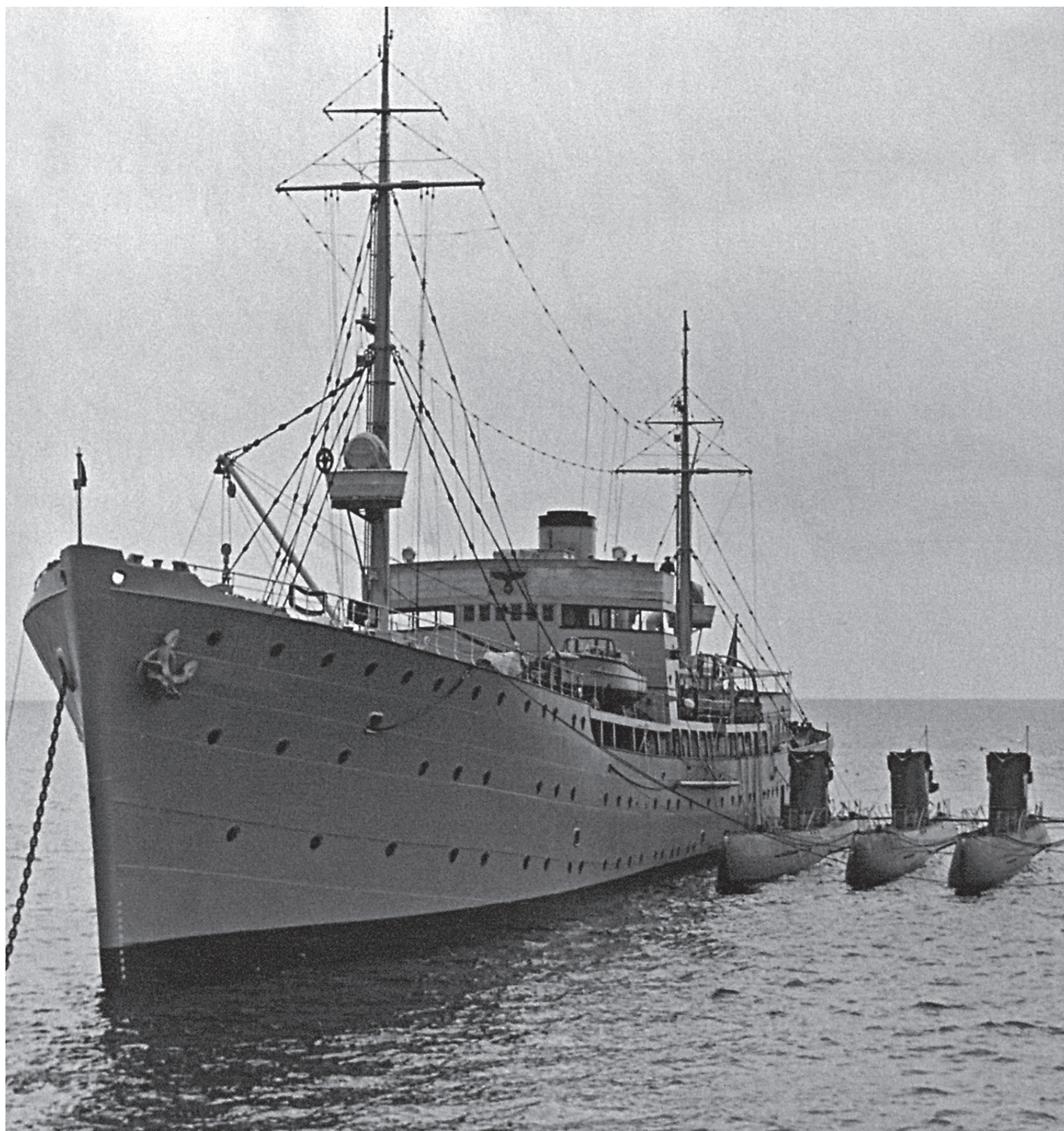
Germany was able to build submarines much faster than cruisers because she had kept abreast of modern technological trends through her 'Development Bureau' in Holland. This 'private' enterprise had built several submarines for foreign countries, whose new vessels were taken on long sea



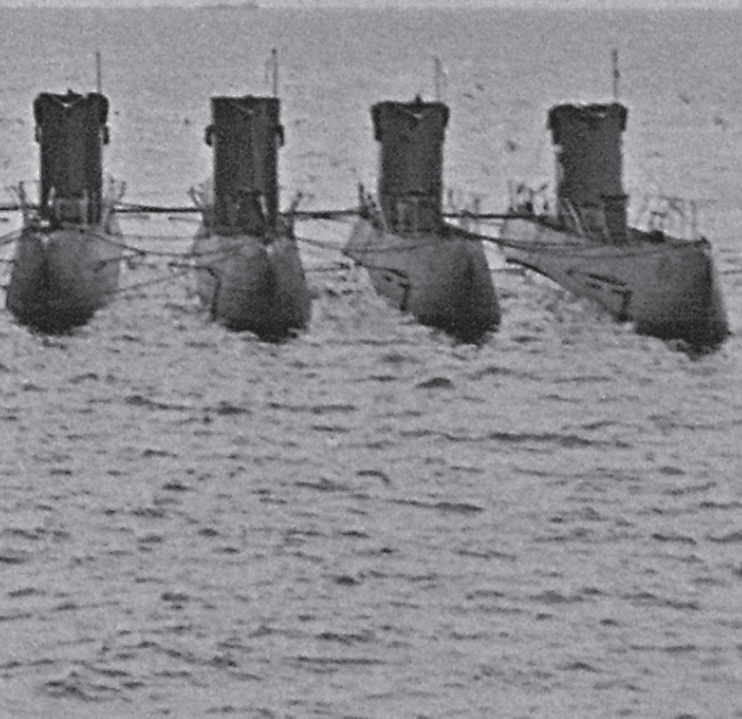
After 1935, when Germany was allowed to build military aircraft again, a number of strange objects were seen in the skies, many of them in out-of-the-way locations. This gyrocopter was photographed during a naval week in Kiel. Helicopters also featured in the naval armoury because the Navy desperately wanted something capable of hovering. The reason for this was that airships played a major role during the First World War in locating mines and the Navy was keen on finding a vehicle that could move slowly to search the sea lanes for obstructions such as newly moored mines. However, despite the urgency, only a few helicopters flew before the end of the Second World War.



In the end, the Arado Ar 95 was given priority over the earlier Heinkel models and it was this type that saw much of the service onboard German warships during the Second World War. This type was almost 60mph faster than the Heinkel, while its range was only marginally less. In addition, it could reach altitudes of 26,000 feet, which was almost 10,000 feet higher. The crew would have had problems breathing at that altitude unless oxygen was carried.



After the First World War, permanent, land-based command centres were phased out and flotillas were supplied with a tender or mother ship. The Royal Navy went one better by providing such vessels with workshop facilities for carrying out repairs as well, but this was not done in Germany, where the surface ship acted only as floating headquarters. This shows the depot ship *Donau* with the 1st U-boat Flotilla. The boats were small, Type IIB coastal versions numbered from *U7* upwards. The Type IIA boats, from *U1* to *U6* went to the Submarine School Flotilla, which came under the jurisdiction of the Torpedo Inspectorate, not the U-boat Commander.



trials by German submarine experts before being handed over. So, by 1935, Germany not only had the technology to construct modern submarines, but the necessary core of trained men to operate them. Despite this technological development many of the characteristics of the U-boats were quite primitive and the boats that emerged after 1935 were lacking even the basic essentials. Among other things, there were no efficient ventilation systems, no food storage facilities and no adequate lavatories.

Several submarines had been partly constructed during 1934, put into a top secret store in Kiel, and were only waiting to be assembled. This advanced state of readiness enabled the first new submarine, *U1*, to be launched two days before the signing of the Anglo-German Naval Agreement. *U1* was commissioned a fortnight later, after which she joined the submarine school's flotilla. Her commander was Kptlt. Klaus Ewerth. The first new 'Front' (operational) U-boat, *U7*, was commanded by Kptlt. Kurt Friewald and commissioned on 8 August. All operational submarines were grouped together in one flotilla – named 'Weddigen', after the First World War submarine hero – and were commanded by Kapitän zur See Karl Dönitz.

Dönitz has often been described as a 'successful First World War U-boat commander', which is most misleading since he had many strings to his bow and was successful at most jobs he tackled. Destiny must have given him a glimpse



Hitler chose Karl Dönitz as Raeder's successor. Raeder's predecessors (Admirals Paul Behnke and Hans Zenker) had been in office for about four years each and Raeder had served for some fourteen years by the time he resigned in January 1943, but he did not have a strong deputy who could easily step into his position. Dönitz was hardly acquainted with the intricacies of the Supreme Naval Command and lacked experience for taking on such a demanding job. The photo shows Dönitz as Rear Admiral, shortly after having been awarded the Knight's Cross, which can be seen around his neck.

Karl Dönitz wearing the uniform of a Vice Admiral presenting an award. Dönitz was the type who led from the front and made a point of meeting as many in-coming U-boats as possible. Being with his men was of utmost importance to him and he had an excellent memory for people. When interviewing ex-U-boat men the author has listened to criticism of Dönitz's command, but never heard anyone question his loyalty to his men and leadership qualities.

The light cruiser *Emden*, the first cruiser built after the First World War, in the third sea lock in Wilhelmshaven. These led from the tidal waters of the North Sea into Germany's largest non-tidal military harbour. One of the main reasons for building this ship in the naval dockyard was to

test whether the infrastructure was capable of tackling such a complicated task. The armament of single gun turrets indicated that performance was not high on the list of priorities. The ensign, flying at the stern, has the small canton in the upper right-hand corner, so this picture was

taken shortly after commissioning. The pair of locks in this picture were the biggest at the time when this photo was taken, but another set was added later to accommodate large battleships. The small locks have now been walled up and only the big ones remain.



The band practising on *Emden's* forecastle. Behind them is the single gun turret while a large range finder is just visible above the small bridge.

