Waiting for Sealion

As German plans to invade Britain were developed during 1940, the reality that there were insufficient and inadequate craft available to attempt a crossing of the English Channel became apparent. **Marc Garlasco** outlines the efforts of a Luftwaffe officer to solve the problem. *ALL images via author (where not mentioned otherwise).*

In the summer and autumn of 1940, Wachtmeister Ernst Großmann was stationed in Antwerp as his unit prepared for *Unternehmen Seelöwe* (Operation Sealion), the planned German invasion of England. As the Luftwaffe prepared its aircraft for the Battle of Britain, it also fell to the Luftwaffe to take a critical role in the physical seaborne invasion. Surprisingly, it was not the Kriegsmarine that developed, deployed, and manned the first operational German amphibious invasion force. It was the Luftwaffe.

In September, Ernst Großmann's unit, Flak Abteilung 253, kitted out its first 'invasion ferries' in Antwerp, on the River Scheldt, with these ferries then being stationed along in ports including Calais, Ostend and Zeebrugge. From these locations, the craft conducted invasion drills, seafaring tests, minesweeping, minelaying, fuel supply and anti-aircraft operations through to 1941, at which point they were redeployed to other fronts.

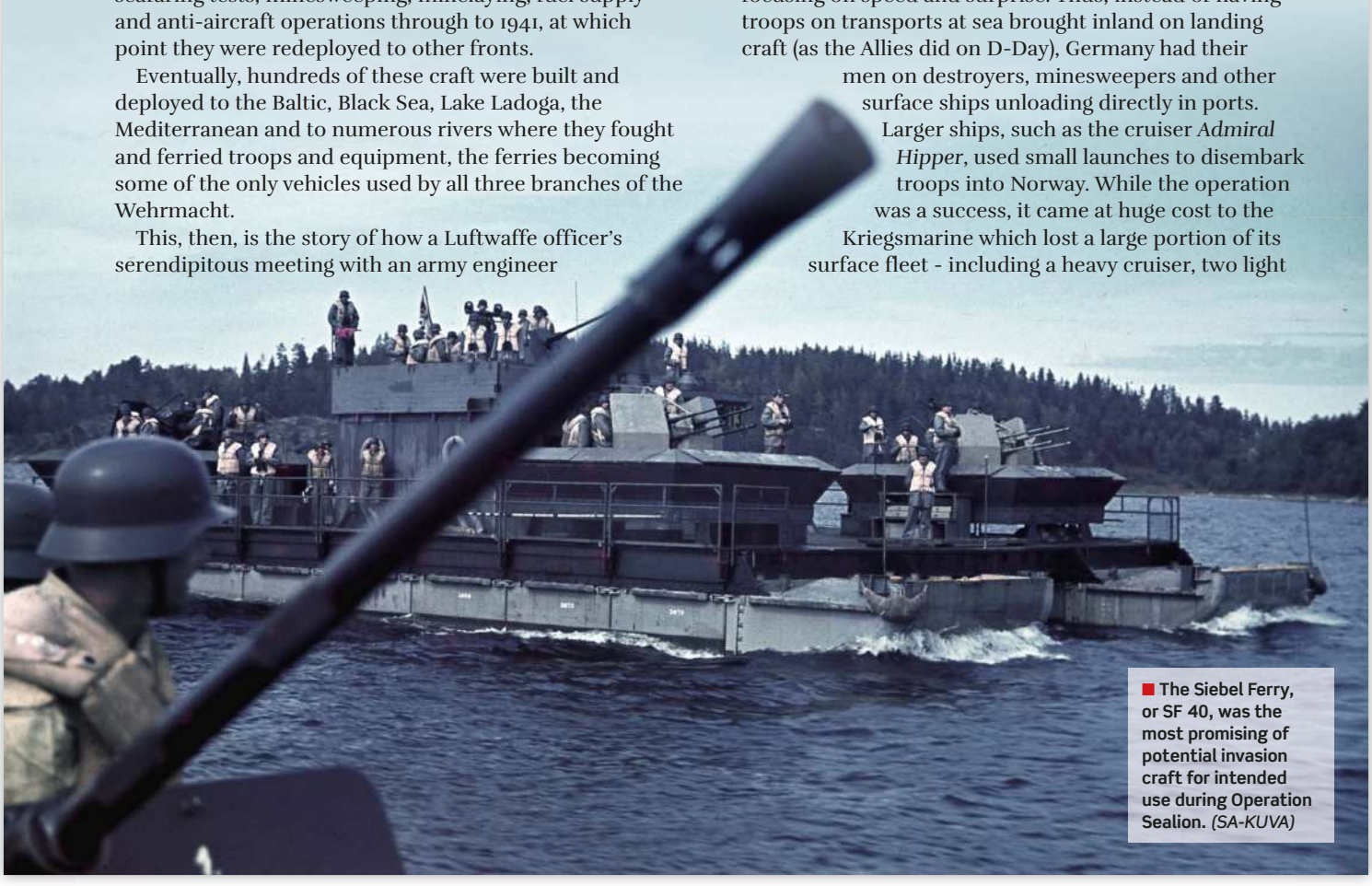
Eventually, hundreds of these craft were built and deployed to the Baltic, Black Sea, Lake Ladoga, the Mediterranean and to numerous rivers where they fought and ferried troops and equipment, the ferries becoming some of the only vehicles used by all three branches of the Wehrmacht.

This, then, is the story of how a Luftwaffe officer's serendipitous meeting with an army engineer officer led to the creation of Germany's most successful amphibious craft: the Siebel Ferry.

HUGE COST TO KRIEGSMARINE

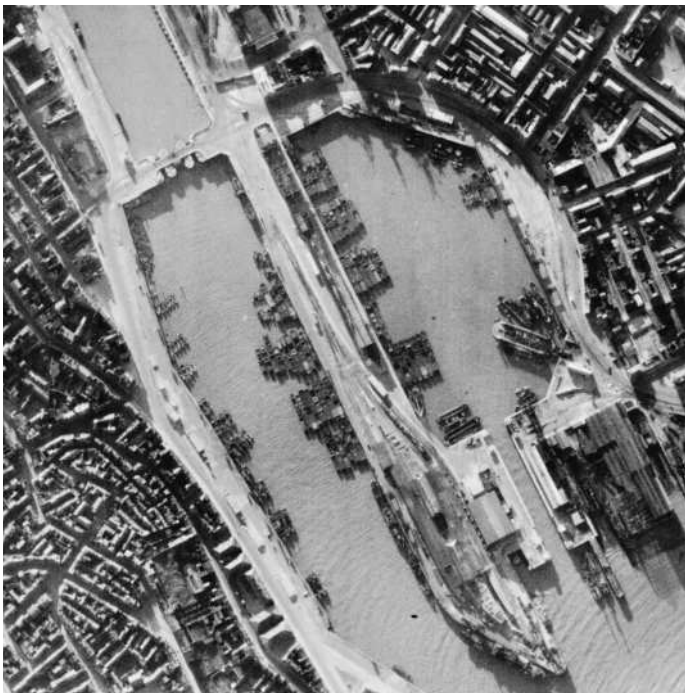
The story of Germany's amphibious forces in the Second World War is one of necessity, trial and error. With no dedicated landing craft at the beginning of the conflict, the German military would have to cobble them together from what was to hand. Being a land power, Germany had never had any need for the kind of landing craft required to invade from the sea. That fact was readily apparent in the approach to *Operation Weserübung*, the invasion of Norway.

In Norway, the Kriegsmarine used the surface fleet, focusing on speed and surprise. Thus, instead of having troops on transports at sea brought inland on landing craft (as the Allies did on D-Day), Germany had their men on destroyers, minesweepers and other surface ships unloading directly in ports. Larger ships, such as the cruiser *Admiral Hipper*, used small launches to disembark troops into Norway. While the operation was a success, it came at huge cost to the Kriegsmarine which lost a large portion of its surface fleet - including a heavy cruiser, two light



■ **The Siebel Ferry, or SF 40, was the most promising of potential invasion craft for intended use during Operation Sealion.** *(SA-KUVA)*

■ *Right:* **A motley selection of invasion craft, comprising barges and fishing boats, photographed by the RAF at Boulogne in the summer of 1940. The vessels assembled by Germany in 1940 were woefully inadequate for the planned operation, with only the Siebel Ferry being up to the task.** *(Andy Saunders)*



■ **Generfeldmarscall Albert Kesselring (right) with Oberst 'Fritz' Siebel during the demonstration of the Siebel Ferry flotilla, 1940.**

cruisers and 10 destroyers. This significantly impacted planning for the invasion of England as these critical vessels were not available for Sealion.

Plans for the invasion had already begun with a November 1939 feasibility study, although the idea was not presented to Hitler until 20 June 1940. Unimpressed, he failed to immediately take to the idea, but the military staff worked out a plan. Consequently, Hitler moved towards the idea of invading the British Isles, setting out his thinking in Führer Directive No. 16 of 16 July 1940:

"As England, in spite of her hopeless military situation, still shows no signs of willingness to come to terms, I have decided to prepare, and if necessary, to carry out, a landing operation against her. The aim of this operation is to eliminate the English Motherland as a base from which the war against Germany can be continued, and, if necessary, to occupy the country completely."

For the invasion, Germany would commit two army groups in multiple waves, with the first wave dedicated to securing a bridgehead on the English coast, supported by airborne forces landing further inland. Follow-on waves would reinforce the bridgehead, pushing further inland as the Luftwaffe and Kriegsmarine provided cover. Facing the much larger Royal Navy, and lacking shallow draft destroyers needed for the Channel, any invasion of England would require an amphibious force that simply did not exist in 1940. Enter Fritz Siebel.

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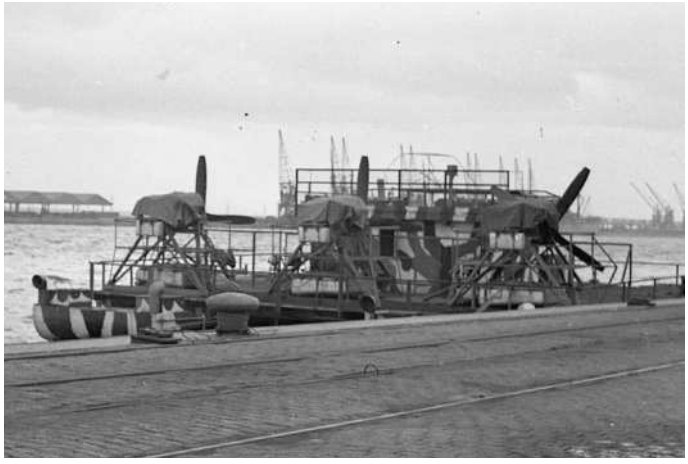
> *Adolf Hitler, Führer Directive No. 16, 16 July 1940.*

MAKESHIFT FERRIES

On 1 May 1940, Luftwaffe Major Friedrich 'Fritz' Siebel, an aircraft designer by trade, was placed in charge of aircraft maintenance facilities near Amiens where he was approached by the commander of an engineering unit in the area requesting surplus aircraft fuel tanks for the construction of rafts to be used in the invasion of England. Siebel, dubious of the seaworthiness of the proposed rafts, began to investigate other options. Although he was not the only one working on efforts to solve the landing craft problem, his eventual design ended up being the most capable.

Frustrated by the lack of landing craft, the Wehrmacht planned to convert inland river barges and numerous makeshift types were under development in July 1940. At about that time, Siebel learned that Pioneer Battalion 47 had begun to construct reinforced ferries from bridging equipment on the banks of the Bray on the central Somme and successfully demonstrated them to the General



■ This Siebel Ferry has three BMW VI aircraft engines with propellers mounted above the ferry for additional power and directional control. These engines were so loud that no voice commands were possible. They were eventually phased out.

■ The stern of a fully loaded transport ferry, this image showing the camouflage patterns applied to the vessels.

of Pioneers on 25 July 1940. However, these proved underpowered and not particularly seaworthy. Given the conditions often prevailing in the English Channel, it would not do to lose the invasion force to a squall. Another solution needed to be found, and in Antwerp, Siebel found bridge-building battalions crafting makeshift ferries from heavy bridge pontoons. Their main problem, though, was propulsion. And this was something aircraft designers knew about!

At that time, the Luftwaffe had an abundant supply of BMW VI aircraft engines that had been used in early variants of aircraft like the Dornier 17-E1. By 1940, these water-cooled V12 engines were no longer suitable for combat aircraft, but Siebel realised they would be perfect if they could be mounted on pontoon barges. In the First World War, he had been on the staff with Ernst Udet who later became Air Minister, and he used his connections with Udet to push his plan and approached the office of the Chief of Supply of the Luftwaffe. In turn, his recommendation was forwarded to the Oberkommando der Luftwaffe.

The plan was to create a new type of auxiliary amphibious vessel, based on catamaran pontoon barges by using heavy bridging pontoons that were readily available and then have them mated to customised superstructures and powered by the BMW VI. The recommendation was approved, the Luftwaffe launching Sonderkommando Siebel – Siebel Special Command with two officers, a chief engineer, an inspector, and 180 NCOs and enlisted men. According to Siebel's post-war interrogation report, the unit was launched at the beginning of July 1940 in Antwerp, but the HMA lists it as 15 August 1940 in Rotterdam, a date which would certainly make more sense.

RAGTAG COLLECTION

Before production began, consultation with the

■ A fully loaded Siebel Ferry pulled by a tug which was to bring the ferries across the English Channel where the craft's own engines would then bring them to the beaches to unload. This ferry is loaded with trucks and men.

■ An 88mm anti-aircraft gun being loaded onto a Sibel Ferry in Antwerp by Flak Abteilung 253. The '88' had a well-earned reputation - with its high muzzle velocity it was deadly to aircraft and was also a formidable tank killer. Onboard the Siebel Ferry they would also have engaged surface vessels.

■ The 4-metre rangefinder used by heavy flak units combined with a fire control computer made the 88mm flak gun accurate and deadly. One of the units is seen here on a Siebel Ferry.

Kriegsmarine ensured there was no duplication, although the naval operations staff rather sniffily replied:

"If a year ago there had been some indication of the now contemplated invasion of England, the Navy would have made some attempts in this direction."

With the Kriegsmarine now completely out of the picture, so the creation of landing craft for the invasion was placed on a ragtag collection of small special groups throughout northern France. Every type of ship imaginable would partake in the invasion – river barges, dedicated troop transports, cruise ships, sailing vessels, automobile ferries and even fishing boats. But the landing zones would require specialised amphibious craft, and although Germany commandeered some 2,400 river barges throughout Europe, and began modifying them for use by the army, most would fail to make the cut. Some sources note that only 800 were considered suitable, and although Siebel was not the only one working on purpose-built invasion craft, his group would put out the most successful design and one that would eventually be used in multiple theaters of the war.

Sonderkommando Siebel was eventually re-named *Fähre-Sonderkommando*, Ferry Special Command, tasked with producing large numbers of seaworthy landing craft capable of multiple transits of the English Channel. Though they worked in concert with engineers from the army's Engineer Ferry Construction Command I, led by Major Böndel in Antwerp, the ferries would be named after their original patron: Major Siebel.

The craft were to be capable of ferrying hundreds of soldiers and equipment as they plied to-and-fro, with some variants armed with 88mm guns to protect the flotilla. Each ferry, though, could carry 50 infantrymen and their equipment, plus a howitzer or a light tank. The operational concept for the Siebel ferries, as well as the unpowered barges, required a massive number of tugs that would tow landing craft to the English coast, releasing them under their own power for the final assault. The craft would then beach themselves, unload men and material and return to the tugs which would ferry the now empty craft to France and Belgium to reload for a second and third wave.

The Luftwaffe also organised two flotillas to provide flak defence to the first wave: Flakkorps I was assigned to 9th Army (covering Brighton to Portsmouth) and Flakkorps II was assigned to 16th Army covering Ramsgate to Folkestone. Once they had reached the beaches, the anti-aircraft guns would be offloaded and used in the invasion proper. The plan was ambitious, and particularly so when one factors in English defences.

The Kriegsmarine, meanwhile, would have more than had its hands full with the Royal Navy and would depend almost entirely on Luftwaffe aircraft for the bulk of anti-shipping operations. The creation of a diversion to siphon off Royal Navy interference was planned, with feints towards Berwick-upon-Tweed and Blyth. False radio messages were to be initiated, deception exercises worked out and the *Admiral Hipper* and *Admiral Scheer* were to draw the Royal Navy north. Coastal artillery on the French coast opposite the invasion zone was also reinforced from Calais to Boulogne, with some also in Cherbourg. These were further reinforced with railway guns, while a large minefield screen was to be laid to help defend against the Royal Navy.

AMBITIOUS UNDERTAKING

The weakness of the Kriegsmarine, though, was a huge detriment to invasion plans, and particularly due to the losses in Norway. Thus, defensive plans centreing on the

■ This remarkable image shows Dover through the rangefinder of an 88mm anti-aircraft gun during the late summer of 1940. Above the white cliffs, the masts of the RAF CH radar station can be faintly discerned. The Siebel ferries were able to operate with relative impunity in the English Channel throughout 1940 and 1941, but were eventually relocated to Russia, Italy, and North Africa.

■ An excellent view of a heavy flak Siebel Ferry in the English Channel.

■ A clear view of the BMW VI aircraft engine used on a transport Siebel ferry. These were so loud they were eventually removed because it was impossible to hear orders. Noteworthy in this image is the crew member holding his fingers in his ears! In the background are the tugs that would have been used to tow these ferries to the English coast.

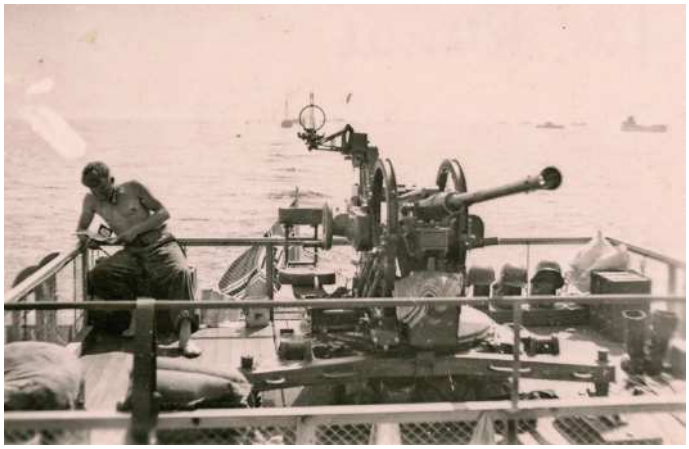
Luftwaffe's ability to engage the Royal Navy were less than optimal, especially considering the Luftwaffe's failure to significantly interdict the Dunkirk evacuation and that, thus far, they had not gained air superiority during the Battle of Britain. However, the conversion of hundreds of river barges, and production by Siebel and others, would have to be completed in weeks if the September invasion date were to be met. All of this, and the German Army had never trained for amphibious assault. It was an ambitious undertaking to say the very least.

Siebel began work immediately he was authorised do so, the initial production being in St. Omer with the first batch of transport ferries simply called 'kleine fähre', or small ferries. These basic craft used surplus outboard BMW VI aircraft engines with propellers built on mounts above the main deck to provide propulsion. This airscrew propulsion had proved problematic due to high suction, leading to several deaths. Reinforced with protective grilles, they were still so loud that voice commands on the ferries were inaudible. Thus, these engines would only be used for the final assault. Additionally, the noise of the engines would have quickly attracted British attention had they been used directly from the point of setting sail. Not only that, but there would surely have been engine cooling problems during the crossing itself.

Testing the craft took place in July on the Ems estuary and on Rangsdorfer See, a lake near Berlin, with great interest being shown in the Siebel concept within Oberkommando des Heeres (OKH), the army high command. Concerned as to how they would get their soldiers to English beaches without navy ships, Field Marshal von Brauchitsch, Supreme Commander of the German Army, attended the tests along with General Franz Halder, chief of staff of the OKH, General Jakob, the General of Engineers, and General Ernst Udet, the Luftwaffe's head of rearmament. This must have been a defining moment in Major Siebel's career, and luckily the

■ A Siebel Ferry fitted-out with two 88mm anti-aircraft guns. Moored behind are Siebel Ferries equipped with aircraft engine propulsion units.

■ *Left:* The wheelhouse on a heavy flak Siebel ferry. Note the storage for the 88mm anti-aircraft shells in their wickerwork baskets forward of the pilot house, stowed below the steel helmets and gasmask cases.



■ *Right:* A 37mm anti-aircraft cannon mounted on a Siebel Ferry, 1940.

tests went well with Siebel instructed to begin production on this and other improved models with haste. In total, 150 of the ferries were constructed in short order. However, they were insufficient to transport the heavy equipment and large numbers of soldiers needed for the invasion; for this, the Sonderkommando developed a new craft that would become known as the Siebel Ferry 40.

The Siebel Ferry 40 (SF 40), then, were catamaran pontoon boats composed of multiple flat-bottomed and enclosed rectangular pontoons made from 4mm sheet metal, the complete units manufactured by Krupp-Stahlbau Rheinhausen, a bridge construction company in the Lower Rhine near Duisburg. Six pontoons formed each of the two-part body, and another two were slanted at an angle, fore and aft, to allow the craft to be beached for unloading. The two main floats were placed six metres apart, connected by heavy iron bars and covered with corrugated planks 6cm thick, in turn covered with wooden planking. There was a central deckhouse where steering control was located, and on which various anti-aircraft defences and other equipment were mounted, depending on the type. Each ferry had a ten-man crew, but without onboard accommodation, the men had to be housed ashore when not at sea.

SEALION POSTPONED

In early September 1940, with the Blitz in full swing, when a decision on Sea Lion had to be made. It was unclear whether the Luftwaffe would be able to provide protection for an invasion due to mounting losses, but without operational landing craft, Sealion could not go forward, anyway. The status of the 'invasion fleet', therefore, had to be inspected and tested.

Newly promoted Feldmarschall Albert Kesselring travelled to Antwerp to meet with Major Siebel and inspect his work during the late summer of 1940. At this time, the author's grandfather operated the Entfernungsmesser, or

■ *Left:* A fully kitted out heavy flak Siebel Ferry of Flak Abteilung 253, Zeebrugge, 1940. With four x 88mm and two 20mm cannon there is little wonder that the German army called these craft 'Destroyer replacements.' With little or no naval support, these guns would be doing double duty defending the invasion force.

■ The Siebel Ferry, 'Sea Devil'. Although slightly out of focus, it shows the distinctive camouflage scheme the ferries wore.

rangefinder, for an 88mm anti-aircraft battery on one of the first heavy flak Siebel Ferries. He was then part of Flak Abteilung 253, a unit formed in Heilbronn with men from the Stuttgart region. A prolific photographer, Ernst carried a Zeiss Ikon camera throughout the war, documenting his experiences.

Major Siebel and the Field Marshall duly took up position on Ernst's Heavy Flak ferry to observe the exercise, while numerous transport variants of the SF 40 were fully loaded with men and material and escorted by heavy flak SF 40s. Each of the latter were equipped with four x 88mm anti-aircraft artillery pieces. Kesselring was impressed by what he saw, and so long as the sea state was at four or less, then Siebel Ferries were more than capable of transiting the Channel. However, it was hardly an invasion fleet as there were only a handful of completed SF 40 available for the exercise, let alone for any serious invasion attempt. Sealion was thus looking less likely, and as the RAF succeeded in the skies over England, it was also

■ *Above:* **The crew of a Siebel Ferry at sea in the English Channel keep a careful watch for enemy shipping.**

■ **Senior Heer, Kriegsmarine and Luftwaffe officers on board a Siebel Ferry during the operational trials on the Schelde, 1940.**

■ **A heavy flak Siebel ferry with the 4-metre rangefinder placed ahead of the wheelhouse which is being fitted-out. Note the transport ferry having its structure put together alongside the dock. These ferries were modular, easy to move by rail and extremely versatile.**

■ **The Siebel Ferry 'Loch Ness'. Each ferry was numbered, but also had a name given by the crew. Although slightly out of focus, this image is worthy of inclusion because it shows the name of the craft and its 'monster' teeth.**

TECHNICAL SPECIFICATIONS FOR THE SF 40

- **Crew:** Ten
- **Length:** 24.25m
- **Width:** 13.70m
- **Draft:** 1.20m
- **Capacity:** 100tons
- **Propulsion:** Initially, four inboard Diesel Ford V8 Engines, some variants supplemented by two to three (depending on variant) BMW VI aircraft engines mounted above the main deck with aircraft propellers. Final production SF 40 dispensed with outboard engines, using inboard BMW aircraft engines with reversing gear.
- **Speed:** 8-11 kts (depending on type)
- **Range:** 570km

Each Siebel Ferry was identified by number, but it was not uncommon for the crew to give the vessels names and artistic logos, much like aircraft nose art. Some names noted in photographs and other sources include: *Shark, Dolphin, Pike, Mackerel*, and *Loch Ness*.

SIEBEL FERRY VARIANTS

■ **SF 40 Transport** – The transport ferries had the wheelhouse and superstructure aft to provide maximum room to store vehicles and personnel. It was armed with a 20mm or 37mm AAA atop the superstructure. These were dedicated troop and vehicle transports that maximized open deck space.

■ **SF 40 Light Flak** – These air defense units were armed with 4 20mm AAA or 4 37mm AAA; one on each corner in an armored housing. Note later variants used quad 20mm. Another single AAA gun was centerline atop the superstructure, behind the wheelhouse. These variants bristled with guns and were optimized against low-flying aircraft trying to attack the invasion fleet.

■ **SF 40 Heavy Flak** – These air defence units were armed with 3 or 4 88mm heavy AAA, and 2 20mm light AAA or 2 37mm AAA with one 4-meter-base stereoscopic rangefinder with predictor. These variants packed the invasion fleet's punch. While the 88s could defend against aircraft, they were planned for deployment against the Royal Navy and beach defences.

■ **PiLF 41 Pioneer Landing Ferry** – This variant was designed in 1941 specifically for use by Pioneer units. They had improved engines and a two-storey steel superstructure moved aft and built to be more rugged for close combat.

■ **Although not on the Channel coast, this excellent original colour photograph shows a Siebel Ferry underway.** *(SA-KUVA)*

Note: *Due to numerous sub-variants, which depended on the location of wheelhouse superstructures and variety of power plants used, only the main types are covered here.*

the case that Germany's most capable landing craft were too few.

Time had now run out due to impending autumnal weather that would make any crossing perilous, and Sealion was postponed by Hitler - the reality of the operation's scale becoming clearer and the impending invasion of Russia in 1941 then taking precedence. Still, there was great interest in the SF 40, and they continued to operate in the Channel. Indeed, and although Sealion had by now been called-off, Field Marshal von Brauchitsch inspected the Sonderkommando in Antwerp on 20 September. He deployed on a heavy flak SF 40, being impressed with the vast improvement made since he had seen the first "klein fähre" operating outside Berlin.

The Field Marshall explained that although Sealion had been postponed, the plan had not been given up and he directed Siebel to continue expanding the force and operating in the Channel.

By the end of September 1940, some 27 production SF 40 had been completed, ferried to Antwerp, and kitted out for the invasion force which was still waiting for Sealion. Among them was a mix of transport and heavy flak variants in the first batch, the ferries being so well-received that an immediate order for an additional 200 was issued to Krupp-Stahlbau Rheinhausen.

Regular Siebel Ferry operations in the Channel finally commenced in October 1940, operating from Calais, Dunkirk, Ostend, Zeebrugge and other ports. The

■ **Siebel Ferries at sea during the exercises conducted for the benefit Feldmarschall Kesselring.**

■ **A Siebel Ferry under power during trials in Antwerp Harbour, 1940.**

■ An excellent view of life aboard a Siebel Ferry in the English Channel during 1940.

■ An icy '88' on a Siebel Ferry in the English Channel during January 1941.

Luftwaffe men found their 'sea legs' and became sailors. Of sorts. They conducted coastal patrols and engaged RAF bombers, with minelaying and minesweeping a common duty. In fact, it was not unusual for a Luftwaffe flak gunner to earn the Navy's minesweeping badge before earning his anti-aircraft badge!

A redesign in 1943 led to a longer hull and an all-metal two-story deck house that could be moved fore or aft as required. This provided a more robust ferry for the intense late-war combat, but only 18 were delivered by 14 September 1944, with all further orders cancelled. A final variant, the SF 44 was developed in 1944 with a wheelhouse placed forward of the main deck house, but only one prototype was delivered in February 1945.

■ This Unteroffizier was stationed on a Siebel Ferry in Calais and wears a Kriegsmarine minesweeper badge. Though rarely seen on a Luftwaffe uniform, minesweeping was standard duty for the ferries in the English Channel.

However, the craft designed to mount a seaborne invasion of Britain was never put to that use or tested in its intended capacity, although author Peter Schenk notes in his book *Operation Sealion, The Invasion of England 1940*, that:

"They were the only 'real' landing craft in the Sealion fleet."

WIDESPREAD USE BY THE WEHRMACHT

The Siebel Ferry was one of the few vehicles used by all three branches of the Wehrmacht, and in all main theaters of operations. Some 400 were built during the war, with Channel operations continuing well into the following year. On 23 September 1941, though, all Sealion preparations finally ceased, just over a year since the Siebel Ferry was fielded in Antwerp.

■ Although photographed later in the war, this image shows a group of Siebel Ferries. Noteworthy are 'kill' rings on the gun barrel, also marked with a Union Jack flag. *(SA-Kuva)*

Easily shipped via rail, and with good seaworthiness, they saw widespread use by the Wehrmacht. They first saw combat in the summer of 1941 in the Black Sea and were widely used on Lake Ladoga, Italy and in North Africa.

In 1942 the Luftwaffe created 5 regional ferry flotillas, or Luftwaffen-Fähren Flottille, that used Siebel ferries to transport troops and material. They were:

• Luftwaffen-Fährenflotille 1 operated 12 Siebel ferries and were transferred from the Channel to the Kertsch strait.

• Luftwaffen-Fährenflotille 2 & 3 operated on Lake

Kesselring on Sealion and Siebel Ferries

"Three victorious campaigns had demonstrated what the German Wehrmacht was capable of. England's expeditionary force had been wiped out in the field. To re-equip it must take months. The RAF had been hit hard, their fighters having reached their nadir on 6 September, and many airfields, including those most favourably situated, having suffered with them.

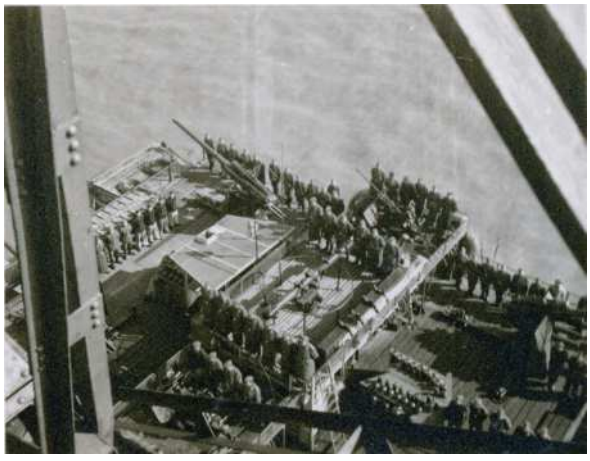
The British had no air-ground support bombers, while their medium bombers, for example the Wellingtons, had paid for their few sorties with very heavy losses. In general, their still available bomber forces could be held in check by flak alone and must sooner or later fall prey to our German fighters, which had long yearned for just this kind of target.

The British fighter forces could be dissipated, softened up and destroyed by appropriate tactics; in addition, parachute troops could be used, in freight-carrying gliders, to shoot up, bomb or otherwise put out of action the radar stations and so deprive home defence of means to direct the battle.

The British could not meet the demands for air supremacy in the classical sense for the simple reason that they had not sufficient air striking power to smash the invasion fleet, if this could be done at all, and what they had could be paralysed.

The Luftwaffe by itself could not deal with the British Home Fleet; that was a task that postulated the employment of all available naval, air and military strength. Great importance had to be attached to minelaying, and to heavy coastal artillery. As the waters off the English coast were very heavily mined, and mines could not be swept in the time available, those stretches of Channel in which the Home Fleet could manoeuvre were greatly narrowed.

Even at that time, and still less later - in the light of my Mediterranean experience - I did not understand our navy's attitude towards coastal artillery. Of course, one had to assume that the enemy coastal batteries would be neutralised, to which end cross-Channel gunfire and bombing raids, to say nothing of smoke-screens, promised good results. Yet to make an invasion



Standing at attention, the crew of this Siebel Ferry help give an excellent perspective to the layout of the heavy flak ferry. Note ammunition storage fore and aft, beneath the steel helmets. Only limited stowage for ammunition was available, however.

Feldmarschall Albert Kesselring (left) talks to Major Siebel (right) on the aft of a heavy flak Siebel ferry in the Scheldt River, September 1940. Kesselring holds his 'Interim Baton', used as a walking out baton for everyday use as opposed to the formal baton.

dependent on the silencing of all the English coastal artillery in the assault corridor and neighbouring sectors was going too far. This demand reminds me of a conversation with the Comando Supremo in 1942 when the Italian navy made any landing on Malta conditional to the destruction of the coastal batteries. I replied that this could not be done, and went on to say that I had seen many assaults where the enemy guns had not been anywhere near neutralized and yet the success of the operation had not been endangered. Even if one or another ship were sunk, not necessarily involving the total loss of the crew, that was a tolerable loss to set against a success which might decide the campaign – indeed, the war.

I also had a great belief in our Siebel ferries, in which I had travelled myself, and large numbers of which could easily be assembled. Even though in 1940 I lacked the experience of Tobruk, where two out of four British destroyers were put out of action by 8.8-cm. gunfire alone, or off Anzio-Nettuno, where thickly armoured ships were similarly driven off by weak to medium coastal artillery. I was sure that our air defence could be greatly strengthened, and minefields protected against enemy minesweepers by numerous Siebels armed with three 8.8-cm. flak and light guns. They could also protect the crossing against attack by British light naval forces.

I know the dislike of the navy for any craft whose design has not been based on purely naval considerations, but that does not mean that the ferries, first conceived in Siebel's ingenious brain, or our engineer assault boats, would not have been as excellent a means of transporting troops across the English Channel as, for example, they were to prove in the Straits of Messina and between Sicily and Tunis."

Ladoga in northern Russia with 23 Siebel ferries until transferred to the Mediterranean at the end of 1942.

• Luftwaffen-Fährenflotille 4 & 5 operated between Sicily and North Africa and had 97 Siebel ferries – the most operating in any single location.

In mid-1943, the Kriegsmarine finally took over Siebel Ferry operations from Luftwaffe ferry flotillas, with ferries crewed by naval personnel after that date, although the technical crew members remained Luftwaffe personnel.

Siebel himself rose to the rank of Colonel, spending the remainder of the war working with the ferries he helped design. He traveled to Finland and Lake Ladoga where he commanded Einsatzstab Fähre Ost, drawing heavily on men and equipment from the Channel ferry units. The unit operated seven heavy flak ferries, six light flak ferries, six transport, six repair craft, a hospital and one HQ ferry. The ferries had become so versatile by 1941, that their uses far outstripped the plans first envisioned for Operation Sealion, seeing widespread use in North Africa, Italy, Corsica, and Sardinia. For example, the then Oberst Siebel wrote how his ferries evacuated over 4,000 soldiers and thousands of tons of equipment from Corsica in 1943. Ironically, Siebel was captured by British forces in 1945 - the man who spent so much time working out how to get to England finally captured by its soldiers! After the war, Siebel founded an aircraft company called Siebel Flugzeugwerke ATG but died on 24 April 1954. His company was eventually absorbed by Messerschmitt-Bölkow-Blohm, currently part of Airbus.

Incredibly, then, it would have been the Luftwaffe rather than the Kriegsmarine who would have been at the forefront of transporting men and material across the English Channel in 1940 if Operation Sealion had gone ahead. For that purpose, the Siebel Ferry would clearly have been an ideal vehicle. The problem was, of course, that the ferries were only being delivered in any numbers just at the point that Sealion was finally cancelled.

A flak Siebel Ferry at sea, English Channel 1940/1941.

As with most military operations, whether executed or otherwise, one might pose the question of Sealion: 'What if?'

Ernst Großmann

Wachtmeister Ernst Großmann. *(Portrait colourisation by Johnny Sirlande)*

Ernst Großmann's Zeiss Ikon camera. The majority of images used in this feature were taken on this camera.

The author's maternal grandfather, Ernst Großmann, left the '88s' and Siebel Ferries in 1941 to join a radar operator school outside Berlin. Returning to the western front, he operated Würzburg D early warning radar equipment – a transfer which he credited with saving his life. He knew he would die in England if the invasion had gone ahead as he would have been in the first wave.

He was a simple dentist, with no love of war nor enmity for the British. As the war ground on, his friends in the flak were sucked into Luftwaffe ground forces which saw horrific losses.

However, his technical speciality in radar (while round-the-clock bombing pounded Germany) likely saved his life.

Ironically, the author's father's cousin was waist gunner on a B-17 named Brennan's Circus which was heavily damaged during the Schweinfurt raid. They limped to the English coast where they ditched, the crew rescued by an English vessel.

Ernst met the author's grandmother in Lille, then serving as a Blitzmädel, a signals auxiliary, and they later married.

The author's mother was born during the Battle of the Bulge, his most treasured keepsake being the telegram Wachtmeister Großmann received on the front announcing her birth.

In the final weeks of the war, Ernst was in close combat with Canadian forces as his unit retreated to Wilhelmshaven where he surrendered to Polish forces on 6 May 1945.

In postwar Germany he opened a successful dental practice and lived a long life before passing away in 1998. He left the author his photos, mementos, and stories – material forming the basis of this piece.

Unlike many veterans, Ernst spoke openly about the war, instilling his deep hatred of warfare in the listener.

"I always loved the English" he told the author, adding: "I've never met any other people who loved life and beer as much as I do!"