The

Messerschmitt 262 Jet Fighter

Missed Opportunity or Impossible Dream?

The turbojet powered Me 262, faster than the RAF's meteor jet-fighter. The aircraft with its powerful 30 mm cannon was seen as a significant counter to the swarms of US heavy bombers.

The German Messerschmitt 262 jet aircraft, introduced into service during the final year of World War Two, enjoyed a substantial speed advantage over every Allied fighter type in service including the Royal Air Force's Gloster Meteor. Yet there was a wide gap between what was expected from the Me 262 and what it actually achieved. Some commentators have attributed this to ineptitude on the part of Germany's leaders. It has been said they failed to push the production of this aircraft with sufficient vigour, and compounded this failing by misemploying the aircraft as a bomber instead as a fighter. It has even been suggested that had the Me 262 been employed properly World War II might have taken a different course. Those are weighty assertions, but are they true?

EARLY DEVELOPMENT

The Messerschmitt jet fighter began life in 1938, when the Company initiated studies on an aircraft powered by the new turbojet engine being developed by the BMW company. In March 1940 the Luftwaffe awarded a contract for three prototypes of an interceptor powered by two of the new engines, with the official designation Messerschmitt 262.[1] It was estimated that the aircraft would have a maximum speed of 485 knots.

Work on the airframe moved ahead rapidly but the development of turbojet engine, the axial flow BMW 003, proved more difficult. The turbojet ran at much higher temperatures, and at far greater rotational speeds, than previous types of aircraft engine and engineers had to overcome a host of fundamentally new problems.

By the spring of 1941 the BMW turbojet had still not been flight-cleared, so the prototype Me 262 began flight trials fitted with a piston engine in the nose. Late in 1941 the first flight-cleared BMW 003 turbojets arrived, each rated at 1,015 pounds thrust. The piston engine was retained as a back up. On 25 March 1942 test pilot Fritz Wendel took off on the power of all three engines, but soon after getting airborne both turbojets flamed out. Using the piston engine alone, Wendel took the underpowered aircraft in a wide circuit and made a safe landing. Examination of the jet engines revealed several compressor blades had broken off, due to turbulent air from the propeller entering the engines intakes. The compressor had to be redesigned and the delays incurred meant that the BMW turbojet played no part in the Me 262 story.[2]

Meanwhile Junkers was offering its Jumo 004 turbojet for the new aircraft, with a thrust of 1,850 pounds. Two pre-production units were fitted to the Me 262 and on 18 July 1942 Fritz Wendel took the Me 262 into the air for the first time on jet power alone, from the company's airfield at Leipheim in Bavaria. There were no serious problems during the brief 12-minute hop, and later that day Wendel made another short flight.[3]

During the months that followed the Me 262 slowly built up flying time. In 1942 Luftwaffe senior officers regarded the aircraft as an interesting novelty for which they saw no immediate operational use. The main battlefronts were in North Africa or deep in the Soviet Union. There was no serious threat to Germany itself from daylight air attacks. The rugged and reliable Focke Wulf 190 and Messerschmitt 109 fighters could operate from primitive forward airfields and had the performance to deal with any enemy opposition. Moreover, the German aircraft industry was severely stretched as it tried to build sufficient aircraft to replace those lost in normal attrition. There was little slack in the system to push jet fighter development. A capricious short-range jet fighter, which required long smooth runways and constant attention from maintenance crews, was of little use in the type of war then being fought. To keep abreast of the new technology, however, the Luftwaffe placed an order for fifteen pre-production Me 262s. In October 1942 that order was increased to thirty.

ENGINE TROUBLES

By the end of May 1943 there were three Me 262s flying and these aircraft regularly exceeded 430 knots in level flight. When the Jumo 004 functioned properly the aircraft had a fine turn of

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speed. The turbojets were temperamental, however, and liable to flameout or catch fire if the pilot was over rough with the throttles or if he allowed the aircraft to enter a sideslip.[4]

Quite apart from the problems to be expected with an entirely new production item, the German jet engine designers were limited in the materials they could employ. The Allied economic blockade had left them critically short of several metallic elements, notably nickel and chromium that were essential ingredients for high-temperature-resistant steel alloys.[5]

The turbine blades for the Jumo 004 were manufactured from a steel-based alloy containing some nickel and chromium, though the material used was insufficiently resilient to withstand the very high temperatures and high tensile stresses encountered in that part of the engine. The blades developed "creep", gradually deforming and increasing in length, and when this exceeded a laid-down limit the engine had to be changed.

The flame tubes of the Jumo 004 were formed from mild steel sheet, with an oven-baked spray coating of aluminium to prevent oxidation.[6] This inelegant material did not survive long at the extreme temperatures generated in the hottest part of the 004, and as the engine ran the flame tubes slowly buckled out of shape.

Limited by turbine blade "creep", flame tube buckling and other problems, the pre-production Jumo 004 engines rarely ran for more than ten hours. Then the Me 262 had to be grounded for new engines to be fitted.

THE WAR SITUATION CHANGES

During the first half of 1943 Germany's military situation deteriorated dramatically. On each battlefront in turn, the Luftwaffe had been forced on the defensive. The US Army Air Force had begun mounting daylight attacks on targets in Germany and these had fighter escorts for part of the way. The Me 262, with its powerful armament of four 30-mm cannon, was seen as a strong counter to the US heavy bombers.

With a major development effort now in progress to eradicate the failings of the Jumo 004, the Luftwaffe optimistically anticipated that these problems would soon be solved or at least eased. Accordingly the Me 262 was ordered into large-scale production, aiming for delivery of the first batch in January 1944 and for production to reach 60 aircraft per month by the end of May.[7]

In the spring of 1944 the first pre-production Me 262s were delivered to a service test unit formed at Lechfeld in Bavaria to introduce the Me 262 into service. Still the Jumo 004 had a running life of less than twenty hours, and still the engines required skilful handling. Once the pilot had throttled back on the landing approach he was usually committed to landing. If he advanced the throttles in an attempt to go round again, the slow acceleration of Jumo 004s meant there was a risk of the aircraft hitting the ground before it gained sufficient speed to climb away.[8] During this period the jet engine underwent a number of

incremental changes aimed at curing the various problems. Until that process was complete and shown to effective, the design could not be “frozen” to allow mass production to begin.

HITLER’S EDICT

The Me 262 was still in the service test stage in May 1944, when Adolf Hitler issued his much-publicised order that initially the aircraft was to be employed as a high-speed bomber. To assess the validity of that decision it is necessary to examine the reasons behind it.

Since the previous autumn Hitler had been increasingly worried at the prospect of an Anglo-American invasion of northwest Europe some time in 1944. If the landings succeeded, the German army would be committed to a two-front war against numerically superior enemy forces. Hitler believed, correctly, that if such an invasion was to be defeated it would have to be during the very early stages, before Allied troops could establish defensive positions ashore. If there were fifty or so Me 262s to deliver repeated bombing and strafing attacks on the troops coming ashore, that would add to the inevitable confusion and delay the process of consolidating the beachheads. If the German *Panzer* divisions could then mount counter-attacks before the Allied troops were ready to meet them, it might be possible to hurl the invaders into the sea with heavy losses.

Given the scale of the Allied fighter cover to be expected over the beachhead, only a jet aircraft had the performance to reach the lodgement area and deliver such attacks. The *Fuehrer* had been assured that the Me 262 could carry a couple of 550-pound bombs if required, and consequently the aircraft had come to feature prominently in his anti-invasion plans. With its high speed the Me 262 would have been difficult to intercept, and there can be little doubt that it could have performed the task. At Omaha Beach on D-Day, as portrayed dramatically in the film “The Saving of Private Ryan”, the landing operation did run into severe difficulties. The additional harassment from jet fighter-bombers strafing the troops coming ashore might well have caused that landing to fail.

The alternative would have been to employ the Me 262 in the air-to-air role over the beachhead. That might have led to lots of exciting but inconclusive fighter-versus-fighter combats. Given

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the overwhelming strength of the Allied Air Forces, however, that fifty or so jet fighters would not have had a decisive impact if used in that way.

Generalfeldmarschall Erhard Milch, the Luftwaffe officer responsible for aircraft production, acknowledged the importance of the Me 262 as a fighter-bomber. Yet he had concentrated his efforts to getting the fighter version into service as quickly as possible. As far as he was concerned, the fighter-bomber version could come later.

On 23 May 1944 Goering, Milch and other senior Luftwaffe officers attended a conference on aircraft production at Hitler's headquarters at Berchtesgaden. When the Me 262 was mentioned the Fuehrer asked, "I thought the 262 was coming as a high-speed bomber? How many of the 262s already manufactured can carry bombs?" Milch replied that to date none had been modified for this purpose, the aircraft was being manufactured exclusively as a fighter. There was an awkward silence, then Milch dug himself further into the pit when he said the new aircraft could not carry bombs unless there were some design changes.[9]

On hearing that Hitler lost his composure and excitedly interrupted his Generalfeldmarschall: "Never mind! I wanted only one 250 kilo [550 pound] bomb." As he considered the implications of what he had been told the Fuehrer became increasingly agitated. Although he had been assured that the Me 262 could carry bombs, none of the early production aircraft could do so. The Allied invasion might be launched in a few weeks and the weapon on which he had pinned his hopes had failed to materialise. Hitler savagely denounced the Luftwaffe officers present, then made Goering personally responsible for ensuring that Me 262 was introduced into service in the fighter-bomber role as rapidly as possible.[10]

The reader should note, however, that at this time the Jumo 004 engine was still not yet ready for mass production. No Me 262s were yet ready to go into action with front-line units in any combat role.

Two weeks after the stormy meeting at Berchtesgaden, on 6 June, Allied troops fought their way ashore at points along the coast of Normandy. By the mid-morning they had established four firm bridgeheads. The opportunity for Me 262 fighter-bombers to play a part in defeating the landings, if it had ever existed, was past.

THE ME 262 GOES INTO ACTION

Hitler still expected the main Allied invasion to fall in the Pas de Calais area, and he demanded that an Me 262 fighter-bomber unit be made available for combat as soon as possible. At the end of June a nine-plane Staffel with these aircraft formed at Lechfeld. On 20 July the unit was declared operational and it transferred to Chateaudun in France. These Me 262s had two of their 30 mm cannon removed, and had racks fitted under the nose to carry two 550-pound bombs.[11] The aircraft were fitted with pre-production engines, however, and poor serviceability kept most of them on the ground for much of the time. To reduce the risk of the new plane being shot down over Allied territory and its secret engines being captured, pilots were ordered not to

descend below 4,000 metres (13,000 feet) while over hostile territory.[12] The aircraft attacked in shallow dives from above that altitude, but this inaccurate form of attack achieved little against battlefield targets such as troop positions, bridges or vehicles.

Also at this time the fighter ace Major Walter Nowotny took command of Me 262 test unit at Lechfeld. Re-named *Kommando Nowotny*, the unit possessed fifteen early-production fighters unsuitable for modification for the fighter-bomber role. Here, too, serviceability was poor and rarely would it have more than four of the jet fighters available to fly. *Kommando Nowotny* carried out test interceptions against Allied reconnaissance aircraft and others flying singly. In the course of August the jet fighter achieved its first kills – two Mosquitoes, a Spitfire, a Lightning and a B-17.[13]

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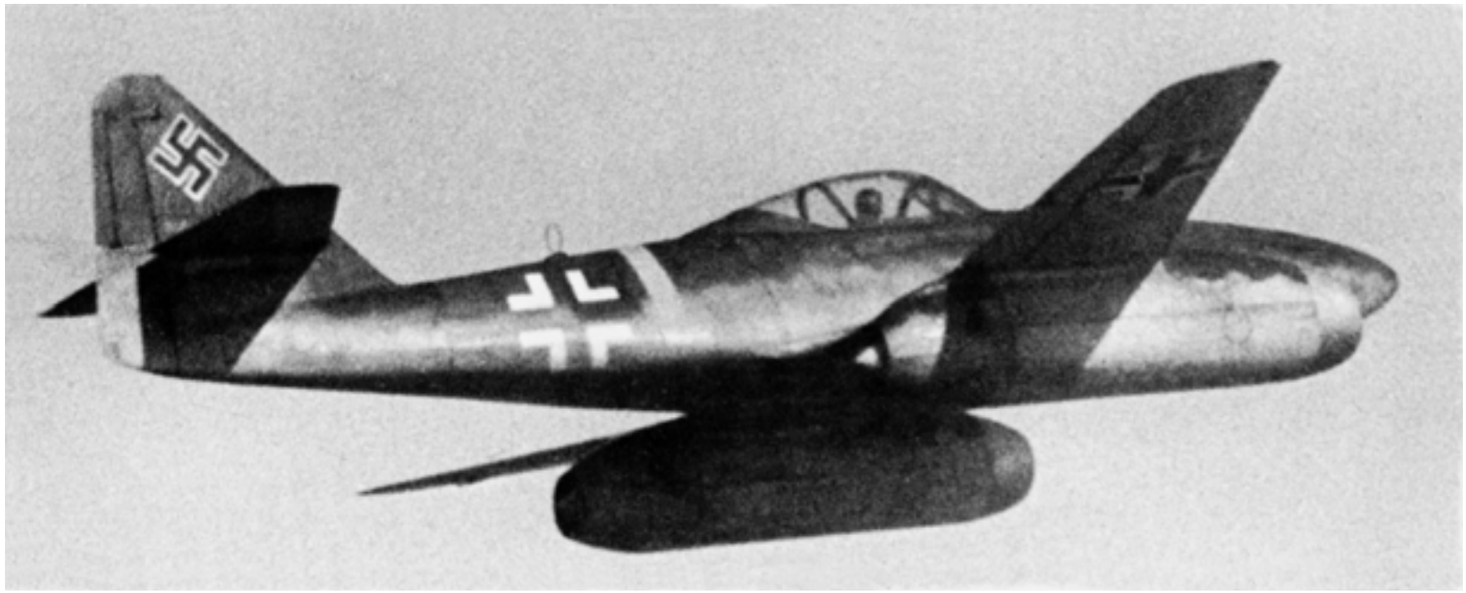

In June 1944, following a series of incremental improvements, the nominal running life of the Jumo 004 at last reached 25 hours. Although the engine's life was still painfully short, given the desperate war situation that was considered sufficient to allow the design to be frozen so mass production could begin. During August and September production engines began to come off the assembly lines in reasonable numbers.[14]

By September 1944 German troops had been evicted from most of France, and it was clear there would be no second invasion. Hitler then rescinded his order that new Me 262s were to be issued only to fighter-bomber units. By then there were more than a hundred Me 262 fighter airframes standing idle awaiting engines, and as the latter became available these aircraft were completed. During that month ninety-one Me 262 fighters and fighter-bombers were delivered to the Luftwaffe, more than in the previous two months put together.[15]

Following the change of policy, *Kommando Nowotny* re-equipped with Me 262 fighters fitted with production engines, and reached a strength of 23 aircraft at the end of September. The unit was declared ready for operations and moved to Achmer

Gun camara shot of Me 262 taken by USAAF P-51 Mustang. Shortly after the German fighter was shot down.

and Hesepe in northwest Germany to operate in the interceptor role.[16] Some published accounts have said that the *Fuehrer's* edict had kept the Me 262 out of the German fighter force for several months, but this was not so. In fact, his decree delayed the operational introduction of the Me 262 in the first fighter unit, *Kommando Nowotny*, by less than three weeks.

In the event the initial operational fighter deployment of the Me 262 with *Kommando Nowotny* proved a failure, but Hitler's edict had nothing to do with that. Although the production Jumo 004s were somewhat more reliable than their predecessors, they still gave a lot of trouble. Also, the Me 262's airframe had its share of "bugs" to be ironed out. One serious problem stemmed from the use of synthetic and reclaimed rubber, all that was available, in the tyres fitted to the aircraft. The jet fighter touched down at around 100 knots, much faster than other combat types. A heavy landing would cause a tyre to blowout, followed by a departure from the runway which often led to undercarriage damage.[17]

Allied fighter pilots soon discovered the Achilles' heel of the German jet fighter: its vulnerability while flying at low speed immediately after take-off or when committed to the landing approach. The Allies mounted standing patrols over the airfields used by jet fighters, causing almost continual harassment. Moreover, Me 262s climbing to engage Allied bombers were vulnerable to attack from piston-engined fighters diving from above.[18]

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On 7 October 1944 *Kommando Nowotny* scrambled five Me 262s – the largest number it had yet sent into combat – to engage American bomber formations making for targets in central Germany. Cruising over Achmer at 15,000 feet in a P-51 Mustang, Lieutenant Urban Drew of the 361st Fighter Group watched a pair of jet fighters commence their take-off runs. He waited until the enemy planes were airborne, then rolled his fighter on its back and went down in a high-speed dive. With his wingman following, Drew rapidly caught up with the Me 262s and shot down both before they reached fighting speed. Another jet fighter was lost during a separate action with escort fighters. Thus the first multi-aircraft action by *Kommando Nowotny* cost three Me 262s destroyed and one pilot killed, in return for three American bombers shot down.[19]

In the course of its first full month of operations on the western front *Kommando Nowotny* claimed the destruction of four American heavy bombers, twelve fighters and three reconnaissance aircraft. To achieve this the unit lost six Me 262s in combat plus a further seven destroyed and nine damaged in accidents or following technical failures. It was not an auspicious start for the jet fighter's combat career.

Worse followed. On 8 November Walter Nowotny was caught up in a low level dogfight with Mustangs and for reasons that are unclear his Me 262 dived into the ground. The famous pilot was killed.[20] Generalmajor Adolf Galland happened to be on an inspection visit to Achmer that day, to determine why the Me 262s had not achieved more. The fighter commander saw enough to realise that Nowotny had been given an impossible task. The latter was expected to introduce a completely new and revolutionary fighter type into combat, in an area where the enemy held almost total air superiority. In the unit the level of training was low, serviceability of the jet fighters was poor and rarely could more than five sorties be flown in a day.[21]

Galland ordered the *Kommando Nowotny* to withdraw to Lechfeld for further training, and for the aircraft to be modified to overcome many of their defects. Galland saw that it had been a mistake to send the new fighter into combat prematurely and in such small numbers. To achieve the required impact, a far larger force was necessary.[22] The first full *Geschwader*, with an establishment of ninety Me 262 fighters, had started to form but it was far from ready for operations.

Meanwhile, what of the Me 262 fighter-bomber units? By the close of 1944 two *Gruppen* with a total of about fifty jets were operational. The 4,000-metre altitude restriction had been lifted, and flying in ones and twos the Me 262s delivered nuisance attacks on Allied airfields and troop positions in France, Holland and Belgium. Due to the small number of aircraft involved and the small tonnage of bombs carried, however, these attacks achieved little.[23]

DELAYS IN DEPLOYMENT

By the beginning of 1945 there was no shortage of Me 262s. Deliveries to the Luftwaffe had topped the 500 mark and new aircraft, most of them fighters, were leaving the assembly lines at a rate of about 36 per week.[24] Yet the Luftwaffe Quartermaster General's records for 10 January 1945 show only about sixty Me 262s serving with operational units: 52 fighter-bombers, four used as night fighters and five employed for tactical reconnaissance.[25] No Me 262s were then operational in the day fighter role, some four months since Adolf Hitler had rescinded his edict that the Me 262 be employed only in the fighter-bomber role. What had gone wrong?

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In fact three Me 262 day fighter *Gruppen*, each established at thirty aircraft, were being prepared for action. The weather that winter was often poor, and each major US incursion into Germany brought conversion training to a halt. As a result the process of pilot training took much longer than expected. One *Gruppe* had its full complement of aircraft and was working up at airfields in the Berlin area. Two more had also started to form in that area.

Leutnant Walther Hagenah, who converted to the Me 262 early in 1945, described the paucity of the training he received:

> *"Our 'ground school' lasted one afternoon. We were told of the peculiarities of the jet engine, the danger of flaming out at high altitude, and their poor acceleration at low speeds. The vital importance of handling the throttles carefully was impressed on us, lest the engines caught fire. Yet we were not permitted to look inside the cowling at the jet engine itself – we were told they were very secret and we did not need to know about them!"*[26]

During February, Me 262 fighter-bombers went into action several times against Allied troops advancing into Germany. The largest such attack, against British troops near Cleve on the 14th, involved 55 jet fighter-bomber sorties spread throughout the day. Three of the jets were shot down by RAF fighters.[27] The total bomb load carried by the fighter-bombers, about 27 tonnes, inflicted little damage on military targets and the day's attacks received scant mention in British army records.

Early in 1945 the pilots of a bomber unit, *Kampfgeschwader 54*, began converting to the Me 262 to

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operate the aircraft in the *fighter role*. The unit was redesignated *Kampfgeschwader (Jaeger)* 54 and some accounts have linked this diversion of Me 262s from "pure" fighter units to Hitler's earlier insistence that initially the type be used as a fighter-bomber. The issues now were quite different, however. To shorten training time and save resources, trainee pilots earmarked for Luftwaffe single-engined day fighter units did not receive formal training in blind flying. Bomber pilots received blind flying training as a matter of course. Following the heavy losses suffered during the previous year, the fighter force was desperately short of trained pilots. At the same time most conventional bomber units had disbanded, leaving the bomber force with a surplus of pilots. The role of *KG (J) 54* was bad weather interception, for which an ability to fly blind on instruments was essential. The ex-bomber pilots received only a sketchy training in air-to-air combat however, and they would suffer accordingly.[28]

On 9 February *KG (J) 54* scrambled several aircraft to counter a multi-pronged attack by American heavy bombers against targets in central Germany. Escorting Mustangs shot down six Me 262s and killed five of their pilots including the Geschwader commander.[29] For their part the jet fighters inflicted damage on just one B-17. Two weeks later, on the 25th, *KG (J) 54* had another bad day. All told it lost twelve Me 262s: six in air combat, four during an Allied strafing attack on the airfield and two in flying accidents.[30] Thereafter the unit was withdrawn from operations for its pilots to receive further training.

It was late in February before first fully trained Me 262 day fighter *Gruppe* was ready to go into action. On the 21st some fifteen Me 262s fought an inconclusive action with Mustangs over Berlin, without loss to either side.[31]

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THE FINAL BATTLES

Only in March 1945 did the Me 262 day fighter units start to launch large-scale attacks on American bomber formations. On the 3rd of the month there were twenty-six Me 262 sorties in response to the US attacks on Magdeburg, Brunswick, Hannover and Chemnitz. The jet pilots claimed the destruction of seven bombers and two fighters in return for one Me 262 lost. American records list 9 bombers and 8 fighters lost on that day.[32]

During the next few weeks the US heavy bombers confined their activities against targets in western Germany, beyond the reach of Me 262 units based around Berlin. Walther Hagenah described the problems facing his jet fighter unit when he joined it:

> *"By the time I reached [the Gruppe] there were insufficient spare parts and insufficient spare engines; there were even occasional shortages of J-2 fuel. I am sure all of these existed and production was sufficient, but by that stage of the war the transport system was so chaotic that things often failed to arrive at front line units".*[33]

An experienced fighter pilot with training in instrument flying, Hagenah had converted to the Me 262 with little difficulty. The same could not be said for other, less experienced pilots who arrived at the jet fighter unit:

> *"In our unit, flying the Me 262, we had some pilots with only about a hundred hours total flying time. They were able to take-off and land the aircraft, but I had the definite impression that they were little use in combat. It was almost a crime to send them into action with so little training. These young men did their best, but they had to pay a heavy price for their lack of experience."*[34]

The Me 262 fighter units were next in action in force on 18 March, when a large American force made for Berlin. Thirty-seven jet fighters took off to engage the raiders, and 28 went into action.[35] The Me 262s claimed 12 US bombers and one fighter destroyed; from examination of American records it appears that only eight heavy bombers fell to the Me 262s. Two jet fighters were lost during the action. During each of

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the following seven days there were pitched battles between Me 262s and American formations, with a similar ratio of losses between the two sides.

The US heavy bombers were the main targets for the Me 262 attacks but they were not the only ones. By this stage of the war the Royal Air Force also mounted frequent daylight attacks on Germany. On 31 March, a force of 460 Lancasters and Halifaxes set out to strike at the U-boat assembly yards at Hamburg. As the bombers neared the target Me 262s delivered a sharp attack which knocked down three Halifaxes and four Lancasters in rapid succession, before the escorts drove off the assailants.[36] Also that day, more than a thousand US heavy bombers attacked Zeitz, Brandenburg, Brunswick and Halle, and these were also engaged by jet fighters.

Me 262s flew 58 sorties that day, the greatest number ever. On the available evidence it appears they shot down 14 bombers and 2 fighters, for a loss of four of their number.[37] That victory score would mark the high-water-mark of achievement for the Me 262 fighter units, and it would never be surpassed. Yet, even on this most successful of days, the losses they inflicted amounted to less than one percent of the huge Allied forces over Germany. The effect was no more than a pinprick.

Also during this period a few Me 262s served in the night fighter role. Based near Madgeburg, the unit's main targets were the previously invulnerable Mosquitoes delivering almost nightly attacks on the German capital. At first single-seat Me 262s were employed, guided on to their prey by searchlights. Later a few Me 262 two-seat trainers became available, hastily fitted with airborne interception radar. Most, perhaps all, of the thirteen Mosquitoes lost at night in the Berlin area during the first three months of 1945 fell to Me 262s.

Early in April a further Me 262 day fighter unit, *Jagdverband 44* commanded by Generalmajor Adolf Galland in person, became operational near Munich. By now large parts of the Luftwaffe piston-engined day fighter force were confined to the ground for want of fuel. As a result Galland could transfer into his unit several of the "big name" fighter aces.[38]

On 5 April *JV 44* flew its first interception mission, when five fighters took off and claimed the destruction of two enemy bombers.[39] By now Allied ground forces were thrusting deep into Germany and had overrun much of the Luftwaffe fighter control organisation. Harassed from take-off to landing, even the uniquely talented pilots of *JV 44* could achieve little. Rarely did the unit fly more than half a dozen sorties, or shoot down more than a couple of Allied aircraft. *JV 44* made little impact on the rapidly deteriorating war situation.

On 9 April, the last date for which a detailed Orbat is available, Luftwaffe operational units declared 180 Me 262s on the strength. Of these 143 served in four day fighter *Gruppen*, twenty-one served in two fighter-bomber *Gruppen*, nine served with a night-fighter *Staffel* and seven with a tactical reconnaissance unit.[40]

The final large-scale air action to involve Me 262s took place on 10 April 1945, when 55 jets took off to engage more than two thousand US heavy bombers and escorts attacking targets in the Berlin area. The Me 262s claimed the destruction of ten B-17s and seven escorts and these find general support in US records. In achieving this unimpressive score the jet fighter units suffered a fearful drubbing, however. Twenty-seven Me 262s were destroyed, almost half of those committed, with 19 pilots killed and five wounded. Many of the jet fighters were caught as they returned to their airfields short of fuel, after had they slowed down to begin the landing approach. That was a black day for the Me 262 units, and one from which they would never recover.[41]

By now Allied troops were well inside Germany and moving ahead rapidly. One by one the jet fighter bases had to be abandoned. The Me 262 operations underwent a rapid decline and by the end of the month they had virtually ceased.

THE ME 262 SUMMED UP

By the end of April 1945 more than 1,200 Me 262s had been accepted by the Luftwaffe. Many of these were destroyed on the ground.

A few cold statistics will serve to highlight just what this huge industrial effort on the part of the Germans achieved:

Greatest number of Me 262s with front-line units (9 April 1945):	about 180
Greatest number of Me 262 fighter sorties in a single day (31 March 1945):	58
Greatest number of Me 262 victories in a single day (31 March 1945):	16
Greatest number of Me 262 fighter-bomber sorties in a single day (14 Feb 1945):	55

The figures are not particularly impressive, yet in each case they mark the best days in the Me 262's combat career. For the rest of the time the figures for aircraft deployed, sorties flown and victories achieved were even lower. The fighting power of an air force is governed not by the number of planes it has, but by the number of planes it can support effectively in action.

The most important single factor constraining the employment of the Me 262 in operational service was the short running life of the Jumo 004 turbojet. Despite the valiant efforts by Junkers engineers, even by the spring of 1945 the Jumo 004 was not a fully reliable unit.

Some post-war writers have criticised Luftwaffe leaders for failing to get the Me 262 into production early enough. Yet if anything, they initiated production of the aircraft rather too early. In the spring of 1944 Me 262 airframes were coming off the assembly lines before the engine to power them was ready for release for mass production.

66 Modern readers might care to marvel at the pace at which the Germans pushed ahead with their programme to bring the revolutionary new aircraft type into action:

First flight of Me 262 using jet power (a failure)	March 1942
First successful flight of Me 262 on jet power alone	July 1942
Me 262 ordered into large scale production	August 1943
First Me 262 unit operational	July 1944
First large-scale (50 plus sortie) operation by Me 262s	February 1945
Thousandth Me 262 delivered	March 1945

Even today we might find it difficult to match such a time scale!

As a weapon that might have changed the course of the war the Messerschmitt 262 was not a missed opportunity, it was an impossible dream.

NOTES

1 Green, William, “Warplanes of the Third Reich”, Macdonald and Co London, 1970, p 619
2 Ibid
3 Ibid
4 Ibid p 621
5 Morgan, Hugh, “Me 262”, Osprey, London, 1994, p 23 et seq
6 Ibid
7 Green p 622
8 Interview Walther Hagenah, Me 262 pilot.
9 Irving, David, “The Rise and Fall of the Luftwaffe”, Weidenfeld and Nicolson, London, 1973, p 281 et seq
10 Ibid
11 Dierich, Wolfgang, “Kampfgeschwader Edelweis”, Ian Allan, Shepperton, 1974, p 92-94
12 Ibid
13 Data supplied by the German air historian Hans Ring
14 Green p 626
15 United States Strategic Bombing Survey, Aircraft Division Industry Report, Exhibit III.
16 Green p 636
17 Hagenah
18 Interview Guenther Wegmann, Me 262 pilot
19 Foreman, John and Harvey, S, “The Messerschmitt 262 Combat Diary”, Air Research Publications, Walton-on-Thames 1995, p 45-52
20 Ring
21 Ibid
22 Wegmann
23 Ibid
24 Ring
25 USSBS
26 Luftwaffe Quartermaster General’s Report, 10 January 1945
27 Hagenah
28 Foreman p 143-145
29 Interview Hans-Georg Baetcher, Me 262 pilot with KG 54
30 Ring
31 Ibid
32 Ibid
33 Ibid
34 Hagenah
35 Ibid
36 Foreman p 176
37 Ring
38 Ibid
39 Ibid
40 Ibid
41 Luftwaffe Quartermaster General’s Report, 9 April 1945
42 Foreman p 236-244

Sukhoi's Su-27 family represents the most potent fighter/attack aircraft in the Russian inventory, equipping several branches of the Russian military. This Su-27 'Flanker-B' and Su-27UB 'Flanker-C' belong to the Russki Vityazi (Russian Knights) aerobatic team.

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