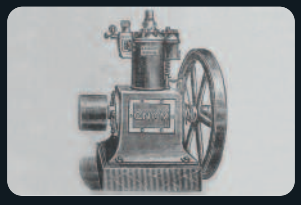
Early last century on the Oberursel factory floor.



1891 The stationary engine that started it all.

1892 The factory dates from 15 January 1892, when W Seck & Co. was founded.

1913 Manufacturing of the Gnome rotary engine begins.

1918 Engines from Oberursel powered the Fokker Dr I triplane.

1943 Bench testing of the full-size Dz 710 engine.

OBERURSEL AT 120

The little creek Urselbach, which flows through the Oberursel grounds, is the source of Motorenfabrik Oberursel in the truest sense of the word. It originally provided power for the machinery on site.

It was here that 22-year-old Willy Seck, eldest son of the founder of the company, began to develop the GNOM stationary engine in 1890. The history of 'Motorenfabrik Oberursel' (The Oberursel Engine Factory) dates from 15 January 1892, the date on which W Seck & Co. was founded. On the back of the successful GNOM, the company grew and kept on growing. Soon, locomobiles, machine saws and generator drives were produced and, from 1901 they were joined by highly successful motor locomotives. Over the next two decades some 2,000 of these were to find their way to destinations all over the world. The German Emperor Wilhelm II, who had visited the engine factory in November 1900, was one of the first customers for the new motor locomotives.

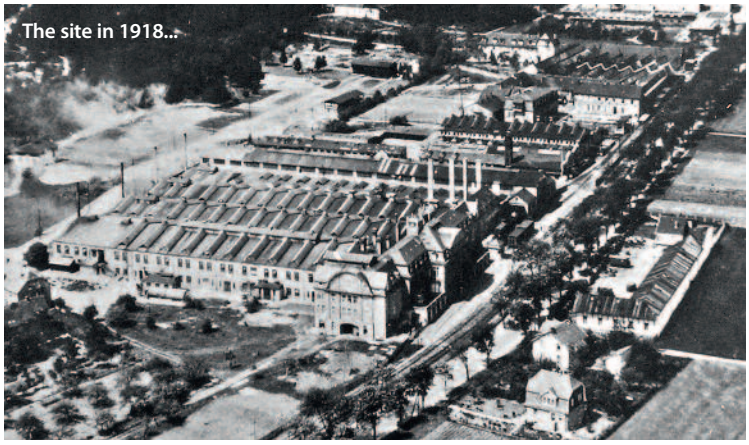
But Willy Seck had already turned his back on the town of Oberursel, as the other shareholders would not let him build his newly developed motor vehicle. This motor vehicle, which was completed at his uncle's premises in Dresden, can still be admired today in the German Museum in Munich. Willy Seck then went on to develop motorcars with four other companies, one of them in Eisenach, the cradle of the future BMW car business.

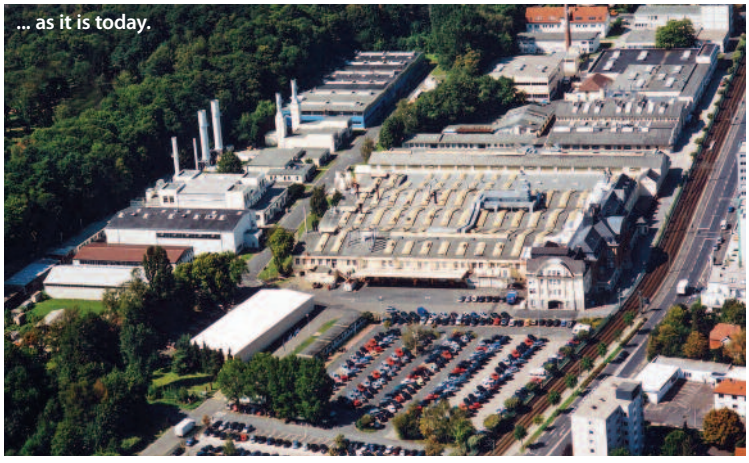
In 1913 a new era began: the production of aero engines. It started with the manufacture of Gnome rotary engines under licence from the Société des Moteurs Gnome.

Its owners, the Seguin brothers, had opened their first factory in Gennevilliers near Paris in 1895 in order to produce the GNOM stationary engine under licence from Motorenfabrik Oberursel. They renamed it Gnome, adopting the French spelling. The Société des Moteurs Gnome was the precursor to the Snecma engine company.

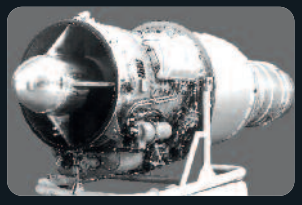
The outbreak of the First World War soon afterwards caused military aviation to develop at a meteoric rate, and a corresponding transformation took place at Motorenfabrik Oberursel. Production was now centred around the various models of Oberursel rotary engine, which themselves were based on the Gnome. Altogether, almost 3,000 of these engines, with seven, nine, 11 or 14 cylinders, were built. As a result Motorenfabrik Oberursel became the third biggest German aero-engine manufacturer. The most well-known application was the Fokker Dr I triplane, for which the British Sopwith triplanes had been taken as the model. This Fokker aircraft owes its fame to Manfred Freiherr von Richthofen, who was the most successful German fighter pilot of the First World War, shooting down no fewer than 80 enemy aircraft. His reputation and the red colour of his triplane meant he was respectfully referred to as the 'Red Baron'. As a privileged ace pilot, Freiherr von Richthofen is said to have himself visited Motorenfabrik Oberursel to select a powerful engine for his use. During the period of economic boom in the early years of the last century, the factory gradually expanded to a size that would not be regained for another five decades. All the impressive and imposing buildings along the Hohemarkstraße, which still mark the outer boundary of the Rolls-Royce plant today, date from those days.

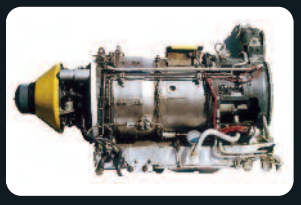
1930 saw the demise of what up to then had been the independent company of Motorenfabrik Oberursel AG. As the 'Oberursel factory', it was


The site in 1918...


... as it is today.


1956 Oberursel factory is returned to the KHD company.


1959 The Orpheus was built under licence from Bristol Siddeley.


1964 T112 auxiliary power units for VSTOL aircraft were produced.


1966 Engines built included the T53 for the UH-1D helicopter.


1969 Development of the APU and gearboxes for the Tornado.

fully absorbed into the new Humboldt-Deutz AG. Two years later the lights went out in Oberursel when the factory was shut down as a result of the global economic crisis. The resulting loss of tax revenues for the town of Oberursel meant that the street lighting had to be switched off. The production facilities and some of the employees were transferred to the Cologne site, which expanded into the company Klöckner-Humboldt-Deutz AG (KHD).

SURVIVED

At the end of 1940, aero engines returned to Oberursel. Bench testing of the first full-size 2,700hp, 16 cyclinder engine known as Dz 710 began at the end of 1943. The factory survived the devastations of World War II undamaged. With the occupation of Oberursel and confiscation of the factory by the US Army in April 1945, over 1,000 employees were thrown out of work. The two completed Dz 710 aero engines were packed up at once and shipped off to the USA.

The Oberursel factory was declared a reparation plant, most of the company documents as well as design and production drawings were destroyed, and all the production and test facilities had been taken away by the end of 1947 in 206 railway wagons, some of them as far away as India.

In the summer of 1956 the US Army returned the Oberursel plant to KHD, completely emptied and somewhat run-down. It took two full years to make good the damage and relocate its workforce that by now numbered 300 workers and apprentices.

Meanwhile a turbine team had already started work on a small, industrial 100hp-class gas turbine in the parent establishment in Cologne. It is said that someone in the Cologne management did not like this 'noisy, stinking machine' and wanted to get rid of it. The fact is that in 1958 this turbine team relocated to Oberursel where there was more space available. This paved the way for re-entry soon afterwards into aviation history. KHD accepted an order to build the engine for the G91 reconnaissance and close air support aircraft for the new German Air Force.

The licensor for this Orpheus engine was a British company, Bristol Siddeley, which was taken over by Rolls-Royce only a few years later. For the factory in Oberursel, this marked the start of three decades, in which aero engines were produced under licence or as a joint venture.

Amongst the engines built were the T53 for the UH-1D helicopter and the Larzac 04 engine for the Franco-German AlphaJet training and reconnaissance aircraft, while support services were provided for a helicopter engine with a name only too familiar in Oberursel – Gnome.

These Rolls-Royce engines have been maintained in Oberursel since 1973. But at the same time the Oberursel engineers also developed their own aeronautical equipment, initially in co-operation with Bristol Siddeley, in the form of the T112 auxiliary power unit (APU) for a vertical take-off and landing aircraft.

ACHIEVEMENT

This was followed soon afterwards by development of the APU and gearboxes for the secondary power system of the MRCA Tornado combat aircraft. But the first jet engine to be developed and enter into service in Germany after 1945, the T117 turbojet for the Franco-German CL289 reconnaissance drone, also came into being in Oberursel. With 1,000 Newtons of thrust it may have been a midget, but it was still some achievement.

In 1990 a brand-new chapter of great importance opened in Oberursel with the establishment of a new company. The German car manufacturer BMW, originally founded in 1916 as an aircraft engine manufacturer, purchased the Oberursel site and together with Rolls-Royce founded the joint venture company BMW Rolls-Royce Aero Engines. The next year saw the start of development of the core engine for the new BR700 family of engines, which in 1993 was continued in the newly built development and assembly centre in Dahlewitz to the south of Berlin. As the first German jet engine to be used for civil applications, the BR710 gained its international certification just three years later in 1996. Since then, over 1,000 long-distance business aircraft from Gulfstream and Bombardier have been fitted with these engines.

The first Boeing 717 passenger aircraft, powered by the sister engine BR715, entered into service in 1999. Shortly before this, the company headquarters had moved from Oberursel to Dahlewitz following relocation of the Board of Management. During the 1990s the Oberursel plant and its production capabilities underwent a far-reaching restructuring and modernisation.

BOOST

A further boost came at the start of 2000 when Rolls-Royce took over the entire company. The Oberursel site of the new Rolls-Royce Deutschland Ltd & Co. KG has since been systematically developed into a modern centre of excellence for the production of rotating engine components.

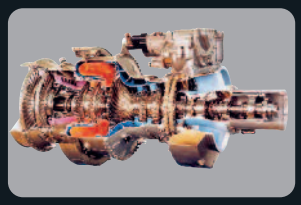
Today Oberursel not only maintains engines from legacy programmes, but, more importantly, it manufactures technically demanding components for a large number of engines for Rolls-Royce.

Author: Helmut Hujer started at the Oberursel site in 1961 as a toolmaker apprentice. In a 50-year career, he headed functions in industrial engineering, military customer support, sales and contracts. Now retired, he is researching the 120-year history of the Motorenfabrik Oberursel.

1975 The Franco-German CL289 powered by the T117 turbojet.

1977 The Larzac 04 engine powered the Franco-German AlphaJet.

1990 BMW Rolls-Royce joint venture start development of the BR700 engine.



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